

CONTRACT SPECIFICATIONS

DEPARTMENT OF TRANSPORTATION
& PUBLIC WORKS
DESIGN AND ENGINEERING DIVISION

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

CONTRACT NO. MCC 7040 Plan - CICC 7040-0/07

RPQ No.: TP-0000008861

PROJECT NO.: IRP151

MAY 2023



RPQ No.: TP-0000008861

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1
PROJECT NO. IRP151
RPQ NO. TP-0000008861

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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

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USS EQUIPMENT REPLACEMENT - PHASE 1

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INVITATION TO BID

Department of Transportation and Public Works

Capital Improvements Division

111 NW 1 Street, Suite 1410

Miami FL 33128

**MIAMI-DADE COUNTY, FLORIDA****REQUEST FOR PRICE QUOTATION (RPQ)**Contract No: MCC 7040 Plan - CICC 7040-0/07RPQ No: TP-0000008861**INVITATION TO BID**

A RPQ has been issued for the work identified below. If you are interested in submitting a bid for this project, please submit your bid via Sealed Envelopes, attention to Clerk of the Board at 111 NW 1 Street, Suite 1710 no later than 6/14/2023 at 02:00 PM. If you have any questions, contact KATHERINE FERNANDEZ at (305) 375-2726.

This RPQ is issued under the terms and conditions of the Miscellaneous Construction Contracts (MCC) Program MCC 7040 Plan.

RPQ DETAILED BREAKDOWN

Bid Due Date:	6/14/2023	Time Due:	02:00 PM	Submitted Via:	Sealed Envelopes	SBE-Con. Level:	3
Estimated Value:	\$3,104,504 (excluding Contingencies and Dedicated Allowances)						
Project Name:	Unit Substation Equipment Replacement - Phase 1						
Project Location:	Multiple Locations - See below						
License Requirements:	Primary:	Electrical Contractor					
Scope of Work:	<p>(Contractor must obtain and submit all permits prior to performing any work).</p> <p>Work under this Contract includes furnishing of all supervision, labor, materials, tools, equipment and performing all operations required to construct the Work in accordance with the Contract Documents.</p> <p>Replace Unit Substation equipment located at four (4) Metro Rail stations, and Unit Substations (2) equipment located at William Lehman Center.</p> <p>Miami-Dade, Department of Transportation and Public Works (DTPW) is replacing the Unit Substation equipment at four Passenger Stations, and at the William Lehman Center in Phase 1. The Unit Substation equipment at these locations has exceeded its life expectancy (30 years), the failure rate and associated maintenance cost has increased exponentially, and spare parts are no longer available.</p>						
Document Pickup:	Contact:	Capital Improvements Division	Phone No:	(305) 375-2930	Date:	5/11/2023	
	Location:	111 NW 1 Street, Suite 1410					
Pre-Bid Meeting::	YES	Mandatory:	No	Date:	5/24/2023	Time:	10:00 AM
	Location:	5949 Sunset Drive South, Miami, FL 33143 (See Note Below)					
Site Meeting:	YES	Mandatory:	No	Date:	5/24/2023	Time:	10:00 AM
	Location:	5949 Sunset Drive South, Miami, FL 33143 (See Note Below)					
Bid shall be submitted to:	Contact:	Clerk of the Board					
	Address:	111 NW 1 Street, Suite 1710					
	Email:		FAX # :				
Type of Contract:	Single Trade			Method of Award:	Lowest Responsible Bidder		
Method of Payment:	Scheduled Monthly Payments			Insurance Required:	YES		
Additional Insurance Required:	YES			If Yes - Minimum Coverage:	\$1,000,000.00		
Performance & Payment Bond Required:	YES			Bid Bond Required:	YES		
Prevailing Wage Rate Required:	Building Construction	Davis Bacon:	NO	Maintenance Wages:	NO	AIPP:	NO
						Amount:	
SBE-Con. Requirements:	YES	Percentage:	100.00%	SBD Certificate of Assurance Form Required:	NO		
DBE Participation:	NO	Percentage:	0.00%	DBE Subcontractor Forms Required:	NO		
CWP Requirements:	NO	Percentage:	0.00%				
SBE-S Requirements	NO	Percentage:	0.00%				
SBE-G Requirements	NO	Percentage:	0.00%				
Liquidated Damages:	YES	\$\$ Per Day:	\$2,045.84				
Trade Set-a-side:	NO	If Yes, Trade =					
For RPQ's less than \$10,000, if no LD rate is specified, the County reserves the right to assess actual damages in lieu of LDs.							
Design Drawing Included:	NO	Shop Drawing Included:	NO	Specifications Included:	YES		
Anticipated Start Date:	10/9/2023			Calendar Days for Project Completion:	1825		

Comments:	<p>EMPLOY MIAMI-DADE PROGRAM In accordance with Section 5.02 of the Miami-Dade County Home Rule Amendment and Charter, Section 2-8.1 of the Code of Miami-Dade County, and Administrative Order No. 3-63, all contractors and subcontractors of any tier on (i) construction contracts valued in excess of one million dollars (\$1,000,000) for the construction, demolition, alteration and/or repair of public buildings, or public works; or (ii) contracts or leases valued in excess of one million dollars (\$1,000,000) for privately funded construction, demolition, alteration or repair of buildings, or improvements on County-owned land. The awarded Contractor is hereby notified that the County will consider whether the Contractor made its best reasonable efforts to promote Employ Miami-Dade on this contract, as defined in A.O. 3-63, as part of the County's evaluation and responsibility review of the Contractor for new County contract</p> <p>RESIDENTS FIRST TRAINING AND EMPLOYMENT PROGRAM In accordance with Section 2-11.17 of the Code of Miami-Dade County and Implementing Order No. 3-61, all contractors and subcontractors of any tier on (i) construction contracts valued in excess of \$1 million for the construction, demolition, alteration and/or repair of public buildings, or public works; or (ii) contracts or leases valued in excess of \$1 million for privately funded construction, demolition, alteration or repair of buildings, or improvements on County-owned land shall comply with the following: (i) prior to working on the project, all persons employed by the contractor or subcontractor on the project to perform construction have completed the OSHA 10-hour safety training course, and (ii) the contractor will make its best reasonable efforts to have 51% of all construction labor hours performed by Miami-Dade County residents.</p> <p>Pursuant to Section 2-8.10 of the Code of Miami-Dade County, this Contract is subject to a user access fee under the County's User Access Program (UAP) in the amount of two percent (2%). All construction services provided under this contract are subject to the 2% UAP. This fee applies to all Contract usage whether by County Departments or by any other governmental, quasi-governmental or not-for-profit entity. From every payment made to the Contractor under this contract (including the payment of retainage), the County will deduct the two percent (2%) UAP fee provided in the ordinance and the Contractor will accept such reduced amount as full compensation for any and all deliverables under the contract. The County shall retain the 2% UAP for use by the County to help defray the cost of its procurement program. Contractor participation in this pay request reduction portion of the UAP is mandatory.</p> <p>Provided, however, UAP shall not be applicable for total contract values, inclusive of contingency and allowance accounts, of less than five hundred thousand dollars (\$500,000.00).</p> <p>SMALL BUSINESS ENTERPRISE-CONSTRUCTION PROGRAM REQUIREMENTS: In accordance with Sections 2.25 and 2.33 (E) of CICC 7040-0/07 this Project is considered a single trade or primarily single trade project. Primary Trade related work shall not be subcontracted. If ancillary (trade) work is required to complete this Project you may contract with a subcontractor with approval from the contracting Department and the Internal Services Department, Small Business Development Division (SBD). All subcontractors must be certified SBE-CONS firms and approval given by SBD prior to any work beginning. Bidders must submit a completed Certificate of Assurance (COA) form along with the Bid Submittal Package identifying the Small Business Enterprise (SBE) measure. By submitting a completed COA the bidder acknowledges the Small Business Enterprise (SBE) measures applied to the project. This project is a single trade with no subcontractor requirements. The firms are not required to complete a UP in the Business Management Workforce System (BMWS). Place the completed COA on top of the bid package so that it can be readily identified by the Department during the bid opening.</p> <p>LOCATION OF WORK: DLS – Dadeland South unit substation – 9090 South Dixie Hwy, Miami FL DLN – Dadeland North unit substation – 8310 South Dixie Hwy, Miami FL SMI – South Miami unit substation – 5801 South Dixie Hwy, Miami FL UNV – University unit substation – 5400 Ponce de Leon Blvd, Coral Gables FL PYD – Lehman Center unit substations 1 and 2 – 6601 NW 72nd Ave, Miami FL</p> <p>The exact location and limits of construction are as shown on the Specifications accompanying these Contract Documents.</p> <p>INSURANCE REQUIREMENTS: A. Worker's Compensation Insurance for all employees of the Contractor as required by Florida Statute 440. B. Commercial General Liability Insurance in an amount not less than \$1,000,000 per occurrence, and \$2,000,000 in the aggregate, not to exclude Products and Completed Operations. Miami-Dade County must be shown as an additional insured with respect to this coverage. C. Automobile Liability Insurance covering all owned, non-owned and hired vehicles, in an amount not less than \$1,000,000 combined single limit per occurrence for bodily injury and property damage. D. Umbrella Liability Insurance in an amount not less than \$3,000,000 per occurrence, and \$3,000,000 in the aggregate. a. If Excess Liability is provided must be follow form of the General Liability coverage. E. Installation Floater on an "all risk" basis in an amount not less than one hundred percent</p>
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(100%) of the replacement value of the equipment and materials. The policy shall list Miami Dade County as a Loss Payee A.T.I.M.A.

CONTRACTOR CERTIFICATE OF COMPETENCY REQUIREMENT:

1. At the time of Bid and pursuant to the requirements of Section 10-3 of the Code of Miami-Dade County, Florida and these Solicitation and Contract Documents, the Bidder must hold a valid, current, and active:

a. Certificate of Competency from the County's Construction Trades Qualifying Board as an Electrical Contractor. or;

b. Certification, as an electrical contractor provided by the State of Florida Electrical Contractors' Licensing Board, pursuant to the

provisions of Section 489.511 of the Florida Statutes (F.S.); or;

2. Pursuant to Section 255.20, F.S. and in lieu of the above, the County may consider a bid from a Bidder that is a duly licensed Contractor in

good standing that has been prequalified and considered eligible by the Florida Department of Transportation (FDOT) under Section 337.14, F.S. and Chapter 14-2, Florida Administrative Code, to perform the work described in the Contract Documents. Contractors seeking consideration under this Paragraph shall submit along with the Bid Documents for review and consideration, current copy(ies) of their FDOT Certificate(s) of Qualification, Certification of Work Underway, and Status of Contract(s) On Hand. Acceptable FDOT prequalification(s) necessary to perform the Work specified in the Contract Documents include the Electrical Work Class.

3. Proof of such Certificate(s) must be submitted at the time of initial response and maintained current throughout the contract period. The County may request proof of continued certification at any time during the contract period. Failure to provide such proof within five (5) working days from notification by the County shall result in the removal from the contract and the rejection of any current or future RPQ bid submissions.

EXPERIENCE REQUIREMENT:

The Bidder must demonstrate that it has full-time personnel with the necessary experience performing similar Scope of Work, and to demonstrate at least five (5) years of experience in the Installation/Maintenance of 15 KV/480 VAC Unit Substations in a Transit environment, to include 15 KV cable installation, splicing, terminations, testing and commissioning for revenue service. Contractor shall provide work references for verification.

Demonstrate the experience requirement by:

Providing a detailed description of at least three (3) projects similar in detail to the Project's Scope of Work described in these Solicitation Documents and in which the Bidder's identified personnel is currently engaged or has completed within the past five years. List and describe the aforementioned projects and state whether the work was performed for the County, other government clients, or private entities. The description must identify for each project:

1) The identified personnel and their assigned role and responsibilities for the listed project

2) The client name and address including a contact person and phone number for reference

3) Description of work

4) Total dollar value of the contract

5) Contract duration

6) Statement or notation of whether Bidder's referenced personnel is/was employed by the prime contractor or subcontractor, and

7) For completed projects, provide letters of certification of final acceptance or similar project closure documentation issued by the client and available Contractor's performance evaluations.

The County reserves the right to request additional information and/or contact listed persons pertaining to bidder's experience.

BID DOCUMENTS:

Bidding documents may be purchased from the Miami-Dade County Department of Transportation and Public Works, Capital Improvements Section, 111 NW 1st Street, 14th Floor, Miami, Florida 33128 for a non-refundable fee of One hundred dollars (\$125.00) per each complete set of documents. Payment shall be in the form of a company check, cashier's check, or money order payable to "Miami-Dade County Department of Transportation and Public Works."

ADDENDUMS - RFI'S:

The Department of Transportation and Public Works has made changes with regard to how addendums and requests for information (RFI) will be sent to document holders. Be advised that all Addendums, RFI's, and the document holders list (bidder's list) are now available to view online at the following web address:

<https://www.miamidade.gov/apps/isd/StratProc/Home/CurrentSolicitations>

Therefore, during the advertisement period, the Department will not be sending these documents via certified mail. All document holders must provide a dedicated e-mail address. The Department will only be sending addendums and RFI's by e-mail and posting online at the aforementioned link. The bidders list will be updated every Friday during the advertisement phase of the contract. Please be aware that acknowledgment of receipt of all addendums and RFI's remain a requirement when submitting bids. All RFI requests should be e-mailed to katherine.fernandez@miamidade.gov while copying the Clerk of the Board

(clerkbcc@miamidade.gov).

VENDOR REGISTRATION:

Due to the new Vendor Registration procedures of the Internal Services Department, Procurement Management Division, updated definitions along with the "Affirmation of Vendor Affidavits" has been added to the Bid Submittal Package. The successful bidder must be registered under this new procedure prior to award.

PRE BID - SIT VISIT

Pre-Bid And Site Visit to be conducted at the same time and location: Wednesday, 10:00 A.M., May 24, 2023, 5949 Sunset Drive South, Miami, FL 33143. Meeting point will be at the South Miami Metro Rail Station.

BID SUBMITTAL DUE DATE:

Bid Due Date, Opening Time & Location:

Bid Submittal Time and Location: Wednesday, June 14, 2023, 2:00 P.M. at 111 NW 1 Street, 17th Floor, Clerk of the Board Office.

Bid Opening immediately after Bid Submittal in the 18 Floor.

DISCLOSURE:

- Contractor shall indemnify and hold harmless the County and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorneys' fees and costs of defense, which the County or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this Agreement by the Contractor or its employees, agents, servants, partners principals or subcontractors. Contractor shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the County, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. Contractor expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by the Contractor shall in no way limit the responsibility to indemnify, keep and save harmless and defend the County or its officers, employees, agents and instrumentalities as herein provided.

The Contractor shall furnish to **Department of Transportation and Public Works, Capital Improvements Division, 111 NW 1 Street, Suite 1410, Miami FL 33128**, Certificate(s) of Insurance which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

- A.** Worker's Compensation Insurance for all employees of the Contractor as required by Florida Statute 440.
 - a. If applicable should include coverage required under the U.S. Longshoremen and Harbor Workers' Act (USL&H) and/or Jones Act for any activities on or about navigable water.
- B.** Commercial General Liability in an amount not less than \$1,000,000 per occurrence, and \$2,000,000 in the aggregate. Miami-Dade County must be shown as an additional insured with respect to this coverage.
- C.** Automobile Liability Insurance covering all owned, non-owned and hired vehicles used in connection with the work, in an amount not less than \$1,000,000 combined single limit per occurrence for bodily injury and property damage.

*Under no circumstances are Contractors permitted on the Aviation Department, Aircraft Operating Airside (A.O.A) at Miami International Airport without increasing automobile coverage to \$5 million. Only vehicles owned or leased by a company will be authorized. \$1 million limit applies at all other airports.

- All 7040 RPQs are 100% Set-aside solicitations - solely for certified Small Business Enterprise-Construction (SBE-Con) firms registered in the MCC 7040 Plan. Registered SBE-Con firms are invited to bid based on the project's primary license requirement, estimated value and the contractors' certification participation level. The SBE-Con Participation Level will be stipulated on the RPQ and the Invitation to Bid or in the Project's Solicitation Documents. **All bidders prime and sub contractors must be SBE-Con certified.**
- All Prime Contractors submitting a bid for RPQ/Project with a Small Business Measures (s) MUST submit the Small Business Development "CERTIFICATE OF ASSURANCE" form properly completed, signed and notarized with their bid document at the time of Bid Submittal. FAILURE TO SUBMIT THE REQUIRED CERTIFICATE OF ASSURANCE FORM AT THE TIME OF BID SUBMISSION SHALL RENDER THE BID NON COMPLIANT TO THE CONTRACT REQUIREMENT AND SECTION 10.33.02 OF THE CODE OF MIAMI-DADE COUNTY.
- 7040 and 7360 RPQs with an estimated project value in excess of \$700,000.00 may be assigned a Small Business Enterprise Goods (SBE-G) or Small Business Services (SBE-S) program goal. The SBE-G or SBE-S goal if applicable will be stipulated on the RPQ and the Invitation to Bid or in the Project's Solicitation Documents.
- All RPQs with an estimated project value \$100,000 or above are subject to Responsible Wage Rates. The wage rate will be stipulated on the RPQ and the Invitation to Bid or in the Project's Solicitation Documents.
- All Projects, where price (Proposals/Bids) received are in excess of \$200,000 will require the submission of the Payment and Performance Bond as required by State of Florida Statute.

VERIFICATION OF EMPLOYMENT ELIGIBILITY (E-VERIFY):

By entering the Contract, the Awarded Bidder becomes obligated to comply with the provisions of Section 448.095, Florida Statute, titled "Verification of Employment Eligibility." This includes but is not limited to utilization of the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of all newly hired employees by the Awarded Bidder effective, January 1, 2021, and requiring all Subcontractors to provide an affidavit attesting that the Subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply may lead to termination of this Awarded Bidder, or if a Subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than twenty (20) calendar days after the date of termination. If this Contract is terminated for a violation of the statute by the Awarded Bidder, the Awarded Bidder may not be awarded a public contract for a period of one year after the date of termination, and the Awarded Bidder may be liable for any additional costs incurred by the County resulting from the termination of the Contract. Public and private employers must enroll in the E-Verify System (<http://www.uscis.gov/e-verify>) and retain the I-9 Forms for inspection.

SMALL BUSINESS ENTERPRISE-CONSTRUCTION PROGRAM REQUIREMENTS:

In accordance with Sections 2.25 and 2.33 (E) of CICC 7040-0/07 this Project is considered a single trade or primarily single trade project. Primary Trade related work shall not be subcontracted. If ancillary (trade) work is required to complete this Project you may contract with a subcontractor with approval from the contracting Department and the Internal Services Department, Small Business Development Division (SBD). All subcontractors must be certified SBE-CONS firms and approval given by SBD prior to any work beginning.

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

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1. The identified personnel and their assigned role and responsibilities for the listed project
2. The client name and address including a contact person and phone number for reference
3. Description of work
4. Total dollar value of the contract
5. Contract duration
6. Statement or notation of whether Bidder's referenced personnel is/was employed by the prime contractor or subcontractor, and
7. For completed projects, provide letters of certification of final acceptance or similar project closure documentation issued by the client and available Contractor's performance evaluations.

The County reserves the right to request additional information and/or contact listed persons pertaining to bidder's experience.

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FORMS FOR BIDDING

RPQ Bid Form - Attachment 5A

Bid Form

Surety Bid Bond

All Addendums (if applicable/Signed by Contractor)

Bid Submittal Check List Questionnaire Appendix "D"

Bidder's Statement of Qualifications and Business

References Scrutinized Company Affidavit

Non Collusion Affidavit

Firm's Responsibility Combined Affidavit

Responsible Contractor Affidavit (Form RTFE 1)

Contractor's Due Diligence Affidavit

Certificate of Assurance

All bids must be received by the due date and time. The County will not consider bids received after the due date and time.

Bids are to be submitted sealed with all necessary affidavits and supporting documentation attached. Bids are to be delivered to the Clerk of the Board at 111 NW 1st Street, 17th Floor, Miami, Florida, 33128. **All envelopes must be stamped at the reception desk with the date and time. Failure to submit with your bid the forms stipulated above may render the bid non-responsive.**

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

RPQ BID FORM - ATTACHMENT 5A

Department of
Transportation and Public
Works
Capital Improvements Division
111 NW 1 St Miami, FL 33128



MIAMI-DADE COUNTY, FLORIDA
REQUEST FOR PRICE QUOTATION (RPQ)
Contract No: MCC 7040 Plan - CICC 7040-0/07
RPQ No: TP-0000008861

RPQ BID FORM – ATTACHMENT 5A

RPQ Project Name: USS EQUIPMENT REPLACEMENT - PHASE 1

Price Proposal (Cost to Perform the work **must** be stated here. State 'No Bid' if not submitting a price proposal)

\$

Bidder's Company Name: _____

Company Address: _____

City: _____ **State:** _____ **Zip:** _____

Telephone No: _____ **Fax No:** _____ **E-Mail:** _____

THE EXECUTION OF THIS FORM CONSTITUTES THE UNEQUIVOCAL OFFER OF PROPOSER TO BE BOUND BY THE TERMS OF ITS PROPOSAL. FAILURE TO SIGN THIS SOLICITATION WHERE INDICATED BELOW BY AN AUTHORIZED REPRESENTATIVE SHALL RENDER THE PROPOSAL NON-RESPONSIVE. THE COUNTY MAY, HOWEVER, IN ITS SOLE DISCRETION, ACCEPT ANY PROPOSAL THAT INCLUDES AN EXECUTED DOCUMENT WHICH UNEQUIVOCALLY BINDS THE PROPOSER TO THE TERMS OF ITS OFFER.

Name of Person Submitting Quote (Print): _____

Number of Addendums received: _____ (if none' write "None")

Signature: _____ **Date:** _____

Note: Quotes must be submitted on this form. Quote envelope must state RPQ Number, date and time due and the Bidder's Name. Use of any other form for submission of the price quotation shall result in the rejection of the price quotation. Late bids will not be opened. *Low bidder will be notified, in the Recommendation of Award, of the requirements to submit current copies of insurance certificates in accordance with the Contract Documents. By signature, the CONTRACTOR agrees to be bound by the terms set forth in the MCC 7040 Plan.*

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

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BID FORM

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

To: Miami-Dade County
Board of County Commissioners
Miami, Florida

Bid Opening Date: _____

Bid Opening Time: _____

Local Time

Gentlemen:

We _____

Bidder's Name

have received, have examined and are familiar with the Contract Documents bearing the title **USS EQUIPMENT REPLACEMENT - PHASE 1 - RPQ NO. TP-0000008861**, the forms for the Submittal of Bids and have included the cost of their provisions, in our Bid. We have examined, are familiar with, and do accept the conditions of the Work site and other conditions affecting the Work.

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Failure to acknowledge receipt of all addenda may cause the bid to be considered not responsive to the invitation, which would require rejection of the bid.

PROJECT NAME: USS EQUIPMENT REPLACEMENT - PHASE 1

IF THIS PROPOSAL IS ACCEPTED, THE UNDERSIGNED BIDDER AGREES TO COMPLETE ALL WORK IN ACCORDANCE WITH THIS CONTRACT WITHIN THE CONTRACT DURATION SPECIFIED IN THE CONTRACT DOCUMENTS. **PRICING SHALL BE INCLUSIVE OF ALL REQUIREMENTS TO COMPLETE THE SCOPE OF WORK AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.**

Item No.	Division of Work:	Unit	Quantity	Unit Price	Total Price
1	Unit Substation Equipment Replacement (Dadeland South - Refer to Summary of Work and Technical Specifications)	L.S.	1	\$	\$
2	Unit Substation Equipment Replacement (Dadeland North - Refer to Summary of Work and Technical Specifications)	L.S.	1	\$	\$
3	Unit Substation Equipment Replacement (South Miami - Refer to Summary of Work and Technical Specifications)	L.S.	1	\$	\$
4	Unit Substation Equipment Replacement (University - Refer to Summary of Work and Technical Specifications)	L.S.	1	\$	\$
5	Unit Substation Equipment Replacement (Lehman Center USS1 (PYD) - Refer to Summary of Work and Technical Specifications)	L.S.	1	\$	\$
6	Unit Substation Equipment Replacement (Lehman Center USS2 (PYD) - Refer to Summary of Work and Technical Specifications)	L.S.	1	\$	\$

BASE BID TOTAL \$ _____

(Instructions: The spaces provided in the Total Price Column(s) for the Bid Line Item(s) must be filled in and no spaces left blank. The sum of the Bid Line Items must represent your Base Bid Total. Failure to submit a complete and accurate Bid Form may result in your bid found non-responsive.)

A TEN PERCENT (10%) CONTINGENCY ALLOWANCE AND OTHER DEDICATED ALLOWANCES AS REQUIRED WILL BE ADDED TO THE BASE BID TOTAL AS STIPULATED IN THE SPECIAL PROVISIONS.

“Pursuant to the general terms and conditions of the solicitation document, local preference is applicable to this solicitation. However, please be advised that the reciprocity agreement with Broward County expired September 30, 2017. Accordingly, local preference will only be afforded to a firm that meets the requirements for Miami-Dade County in any solicitation with a due date after September 30, 2017.”

LOCAL PREFERENCE CERTIFICATION: For the purpose of this certification, a “local business” is a business located within the limits of Miami-Dade County that conforms with the provisions of Section 3.0 of the Special Provisions of this solicitation and contributes to the economic development of the community in a verifiable and measurable way. This may include, but not be limited to, the retention and expansion of employment opportunities and the support and increase to the County’s tax base.

☐ Place a check mark here only if affirming bidder meets requirements for Local Preference. Failure to complete this certification at this time (by checking the box above) may render the vendor ineligible for Local Preference.

LOCALLY-HEADQUARTERED BUSINESS CERTIFICATION: For the purpose of this certification, a “locally-headquartered business” is a Local business whose “principal place of business” is in Miami-Dade County as defined in Section 3.0 of the Special Provisions of this solicitation.

☐ Place a check mark here only if affirming bidder meets requirements for the Locally-Headquartered Preference (LHP). Failure to complete this certification at this time (by checking the box above) may render the vendor ineligible for the LHP. The address of the locally-headquartered office is _____

LOCAL CERTIFIED WARTIME VETERAN BUSINESS ENTERPRISE CERTIFICATION: A Local Certified Service-Wartime Veteran Business Enterprise is a firm that is (a) a local business pursuant to Section 2-8.5 of the Code of Miami-Dade County and (b) prior to bid submission is certified by the State of Florida Department of Management Services as a service-wartime veteran business enterprise pursuant to Section 295.187 of the Florida Statutes.

☐ Place a check mark here only if affirming bidder is a Local Certified Service-Wartime Veteran Business Enterprise. A copy of the certification must be submitted with this proposal.

A. CONVICTION DISCLOSURE:

Pursuant to Section 2-8.6 of the Code of Miami-Dade County, any individual, corporation, partnership, joint venture or other legal entity having an officer, director, or executive who has been convicted of a felony during the past ten (10) years shall disclose this information at the time of bid submittal.

☐ Place a check mark here **only** if the Bidder has such conviction to disclose to comply with this requirement.

B. WAIVER OF CONFIDENTIALITY AND TRADE SECRET TREATMENT OF BID:

The Bidder acknowledges and agrees that the submittal of the Bid is governed by Florida’s Government in the Sunshine Laws and Public Records Laws, as set forth in Florida Statutes Section 286.011 and Florida Statutes Chapter 119. As such, all material submitted as part of, or in support of, the Bid will be available for public inspection after opening of bids and may be considered by the County in public.

By submitting a bid pursuant to this solicitation, Bidder agrees that all such materials may be considered to be public records. The Bidder shall not submit any information in response to this solicitation which the Bidder considers to be a trade secret, proprietary or confidential. In the event that the Bid contains a claim that all or a portion of the Bid submitted contains confidential, proprietary or trade secret information, the Bidder, **by signing below**, knowingly and expressly **waives** all claims made that the Bid, or any part thereof no matter how indicated, is confidential, proprietary or a trade secret and authorizes the County to release such information to the public for any reason.

LICENSE NO. _____ BIDDER'S NAME _____
BIDDER'S FEIN NUMBER _____ BIDDER'S SIGNATURE _____

THE BIDDER UNDERSTANDS AND AGREES THAT THE BASE BID TOTAL AND ALL APPLICABLE ALLOWANCES ARE INCLUSIVE OF ALL WORK NECESSARY TO COMPLETE THE SCOPE OF WORK AS DESCRIBED IN THE CONTRACT DOCUMENTS, AND IF THIS PROPOSAL IS ACCEPTED, THE BIDDER AGREES TO ENTER INTO AND EXECUTE THE CONTRACT WITH THE NECESSARY BOND AND ACCEPT THE ABOVE BASE BID, INCLUSIVE OF ALL ALLOWANCES, AS FULL COMPENSATION FOR THE WORK PERFORMED UNDER THIS CONTRACT.

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

BID BOND

BID BOND

STATE OF _____) ss.:

COUNTY OF _____)

KNOW ALL MEN BY THESE PRESENTS, that we, _____ as Principal, and _____ as Surety, are held and firmly bound unto Miami-Dade County in the penal sum of Dollars (\$ _____) lawful money of the United States, which sum represents five percent of the Base Bid Total, and for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the accompanying Bid, dated _____ 20____ for **RPQ NO. TP-0000008861** entitled, **USS EQUIPMENT REPLACEMENT - PHASE 1.**

NOW THEREFORE, if the Principal shall not withdraw said Bid within 180 days after the Bid opening date, shall submit complete information required, and shall within 10 days after the prescribed forms are presented to him for signature, enter into a written Contract with Miami-Dade County, in accordance with the Bid as accepted, and give a Surety Performance and Payment Bond with good and sufficient surety or sureties and provide the necessary Insurance Certificates, as may be required, for the faithful performance and proper fulfillment of such Contract and for the prompt payment of all persons furnishing labor or materials in connection therewith, or in the event of withdrawal of said Bid within the period specified, or in the event of the failure to enter into such Contract and give such Bond within the time specified, if the Principal shall pay Miami-Dade County the difference between the amounts specified in said Bid and the amount for which Miami-Dade County may procure the required work and supplies, provided the latter amount be in excess of the former, then the above obligations shall be void and of no effect; otherwise, to remain in full force and virtue.

IN WITNESS WHEREOF, the above bounden parties have caused this Bond to be executed by their appropriate officials as of the _____ day of _____, 20____.

(CORPORATE SEAL)

(printed name of corporation)

(printed state of incorporation)

By:_____
(signature of president or vice-president & capacity)

(printed name of president or vice- president & capacity)

By:_____
(signature of secretary or assistant secretary & capacity)

(printed name of secretary or assistant secretary & capacity)

(Business address of corporation)

ACKNOWLEDGEMENT:

STATE OF _____) ss.:

COUNTY OF _____)

Before me personally appeared _____, as President to me well known or has presented _____ as identification and

(Type of identification)

_____ as Secretary, to me well known, or has presented _____ as identification and known to me to be individuals described

(Type of identification)

in and who executed the foregoing instrument as _____ President and _____ Secretary of the above named _____ a Corporation, and severally acknowledged that they executed such instrument as such _____ President and _____

Secretary, respectively, of said corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that it was affixed to said instrument by due and regular corporate authority, and said instrument is the free act and deed of said corporation.

SUBSCRIBED AND SWORN TO (or affirmed) before me on _____
(Date)
by _____. He / She is personally known to me or has presented
(Affiant)
_____ as identification.
(Type of Identification)

(Signature of Notary) (Serial Number)

(Print or Stamp Name of Notary) (Expiration Date)

Notary Public _____
(State) Notary Seal:

=====

SURETY:

(CORPORATE SEAL)

(printed name of Surety)

(address of Surety)

By: _____
(Attorney-in-Fact)

By: _____
(resident Florida agent)

(printed name of Attorney-in-Fact)

(printed name of agent)

Note: Copy of Resident Agent's current license as issued by State of Florida Insurance Commissioner must be attached.

(Power of Attorney must be attached)

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

ADDENDUM ACKNOWLEDGEMENT FORM
(IF APPLICABLE/ SIGNED BY CONTRACTOR)

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS (DTPW)

PROJECT: USS EQUIPMENT REPLACEMENT - PHASE 1
PROJECT NO.: TP-0000008861

ACKNOWLEDGEMENT OF ADDENDA

(Must be completed and submitted with required solicitation documents)

Instructions: Complete Part I or Part II, as applicable.

PART I: Listed below are the dates of issue for each Addendum received in connection with this solicitation.

Addendum #1, Dated _____,	202__
Addendum #2, Dated _____,	202__
Addendum #3, Dated _____,	202__
Addendum #4, Dated _____,	202__
Addendum #5, Dated _____,	202__
Addendum #6, Dated _____,	202__
Addendum #7, Dated _____,	202__
Addendum #8, Dated _____,	202__
Addendum #9, Dated _____,	202__
Addendum #10, Dated _____,	202__

PART II:

____ No Addendum was received in connection with this solicitation.

Authorized Signature: _____ Date: _____

Print Name: _____ Title: _____

Firm Name: _____

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

BID SUBMITTAL CHECK LIST QUESTIONNAIRE

APPENDIX "D"

QUESTIONNAIRE

Appendix D



IN ORDER TO PROVIDE INFORMATION NECESSARY IN DETERMINING THE QUALIFICATIONS OF THE PROPOSER, PLEASE PROVIDE THE INFORMATION LISTED BELOW

#	QUESTION	ANSWER
1	Have you carefully read the Instruction To Prospective Contractors?	<input type="checkbox"/> YES <input type="checkbox"/> NO
2	Have you carefully reviewed the entire Contract Documents as identified within the Instruction To Prospective Contractors?	<input type="checkbox"/> YES <input type="checkbox"/> NO
3	If identified in the Contract Documents, have you carefully inspected the site of the work?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
4	Have you requested, in writing, of the contact person identified in the Advertisement, any clarifications necessary to submit a responsive proposal? Have you received a written response of clarification?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
5	Are you licensed and certified to perform the work for which you are submitting this proposal? License No.: Competency No.: FEIN No.: Qualifier's Name:	<input type="checkbox"/> YES <input type="checkbox"/> NO _____ _____ _____ _____
6	Are you registered with the Miami-Dade County Department of Procurement Management (DPM)?	<input type="checkbox"/> YES <input type="checkbox"/> NO
7	Have you made any changes or written any codicils to the Contract Proposal?	<input type="checkbox"/> YES <input type="checkbox"/> NO
8	How many previous Contracts with Miami-Dade County in the past five (5) years?	_____
9	Total dollar value of Contracts with Miami-Dade County in the past five (5) years?	_____
10	How many years has your Company been in business with the same Principals?	_____
11	Applicable Federal Requirement Certifications	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

BIDDER'S STATEMENT OF QUALIFICATIONS AND BUSINESS REFERENCES

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
TRANSIT ENGINEERING

BIDDER'S STATEMENT OF QUALIFICATIONS AND BUSINESS REFERENCES

This statement is an integral part of the Contractor's Bid, and must be completed as directed in the Instructions to Bidders. All references and information shall be current and traceable. If Bidder is a joint venture, a separate form must be prepared by each venturer (extra forms are available from the Engineer).

NAME OF BIDDER _____

PRINCIPAL OFFICE _____

(Street Address or P. O. Number)

(City)

(State)

(Zip Code)

(Area Code) (Telephone Number)

1. Are you registered to do business in Florida? _____ Registration No. _____ Classification _____
2. Do you hold a certificate of competency issued by Miami-Dade County, Florida? _____ Classification _____
3. Are you an individual _____, a partnership _____, a corporation _____ or a joint venture _____ (Check as applicable).

If a partnership, list names and addresses of partners; if a corporation, list names of officers and directors and State of incorporation; if a joint venture, list names and addresses of venturers and, if any venturer is a corporation, partnership or joint venture, list the same information for each such corporation, partnership and joint venturer.

4. How many years has your organization been in business as a contractor under your present business name? _____ years.

5. How many years of experience has your organization had in construction work similar to the work of this Contract?

(a) As a general contractor? _____

(b) As a subcontractor? _____

6. List all the projects which your organization has completed, which demonstrate qualifications to perform the work of this Contract. (For joint venture work show the sponsoring individual or company.)

YEAR	CONTRACT PRICE	KIND OF CONSTRUCTION	LOCATION OF WORK	NAME, ADDRESS, AND E-MAIL OF ENGINEER OR ARCHITECT

7. Have you or your organization, or any officer or partner thereof, failed to complete a Contract? _____

If so, give details _____

8. In what other lines of business are you financially interested?

9. Name the persons with whom you have been associated in business as partners or business associates during the last five years.

10. Give information about the construction experience of the principal individuals of your present organization.

11. List work, which you have currently underway.

Contract Price	Type of Construction	Location of Work	Percent Completed	Expected Completion Date	Name & Address of Engineer or Architect

12. List engineers, architects and owners, including public bodies, for whom you have done work:

NAME	ADDRESS	BUSINESS	TELEPHONE

13. Reference is hereby made to the following financial institutions as to the financial responsibility of the Bidder:

Name of Bank: _____

Street Address: _____

City and State: _____ Telephone: _____

Officer Familiar with Bidder's Account: _____

Name of Bank: _____

Street Address: _____

City and State: _____ Telephone: _____

Officer Familiar with Bidder's Account: _____

Name of Bank: _____

Street Address: _____

City and State: _____ Telephone: _____

Officer Familiar with Bidder's Account: _____

14. Reference is hereby made to the following surety company or companies as to the financial responsibility and general reliability of Bidder:

Name of Surety Company: _____

Name of Local Agent (if different): _____

Local Street Address: _____

City and State: _____ Telephone: _____

Person Familiar with Bidder's Account: _____

Name of Surety Company: _____

Name of Local Agent (if different): _____

Local Street Address: _____

City and State: _____ Telephone: _____

Person Familiar with Bidder's Account: _____

15. Is any litigation pending against your organization? _____

If so, give details _____

16. Is any litigation presently being prosecuted by your organization or on behalf of your organization? _____

If so, give details

The undersigned certifies that he is legally authorized by the Bidder to make the statements and representations contained in this document, and represents and warrants that the foregoing information is true and accurate to the best of his knowledge, and intends that the Miami-Dade County, DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS Agency, rely thereon in awarding the Contract.

BIDDER'S NAME: _____

DATE OF SIGNING: _____

SIGNATURE: _____ By: _____

TITLE: _____

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

AFFIDAVIT

SCRUTINIZED COMPANIES

By executing the Scrutinized Companies with Activities in Sudan or Iran Petroleum Energy Sector Lists Affidavit through a duly authorized representative, the bidder certifies that the bidder is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, as those terms are used and defined in sections 287.135 and 215.473 of the Florida Statutes. In the event that the bidder is unable to provide such certification, the bidder shall execute the Affidavit through a duly authorized representative. In such event, the bidder shall furnish together with its bid a duly executed written explanation of the facts supporting any exception to the requirement for certification that it claims under Section 287.135 of the Florida Statutes. The bidder agrees to cooperate fully with the County in any investigation undertaken by the County to determine whether the claimed exception would be applicable. The County shall have the right to terminate any Contract resulting from this solicitation for default if the bidder is found to have submitted a false certification or to have been, or is subsequently during the term of the Contract, placed on the Scrutinized Companies for Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

AFFIDAVIT
SCRUTINIZED COMPANIES WITH ACTIVITIES IN SUDAN
OR IRAN PETROLEUM ENERGY SECTOR LISTS
FLORIDA STATUTES 215.473

Pursuant to 287.135, F.S., the { _____ } (“Entity”) must disclose, if the Entity or any of its officers, directors, or executives are doing certain types of business in or with Sudan or Iran.

Indicate below if the above named Entity, as of the date of submission:

_____ has not engaged in commerce in any form in Sudan or Iran, including, but not limited to, acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, or any other apparatus of business or commerce.

_____ has engaged in commerce with Sudan or Iran, including, but not limited to, acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, or any other apparatus of business or commerce.

(CORPORATE SEAL)

CONTRACTOR

(Legal Name of Corporation)

ATTEST:

Secretary _____
(Signature and Seal)

By: _____
Contractor – Signature

(Type Name & Title)

Name: _____

(Type Name & Title)

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

NON COLLUSION AFFIDAVIT



NON-COLLUSION AFFIDAVIT

(In accordance with [Sections 2-8.1.1](#) and [10-33.02.1](#) of the Code of Miami-Dade County)

I, the undersigned, am over 18 years of age, have personal knowledge of the facts stated in the Non-Collusion Affidavit (*this Affidavit*) and I am an owner, officer, director, principal shareholder and/or otherwise authorized to bind the Bidder/Proposer of this solicitation.

- A. I have reviewed the list of respondents attached to this Affidavit. I state that the Bidder/Proposer of this competitive solicitation (check one):

☐ is **not related** to any of the other respondents submitting a Bid/Proposal in the competitive solicitation.

☐ is **related** to the following respondents who submitted a Bid/Proposal in the competitive solicitation, which are identified and listed below:

- B. I state that the Bidder/Proposer of this competitive solicitation:

1. has prepared this Bid/Proposal independently without consultation, communication, agreement or arrangement with any other Bidder/Proposer or competitor for the purpose of restricting competition;
2. has submitted the Bid/Proposal in its own behalf, and not in the interest or on behalf of any person not therein named;
3. has not, directly or indirectly, induced or solicited any other Bidder/Proposer to put in a sham proposal, or any other person, firm, or corporation to refrain from proposing;
4. has not in any manner sought by collusion to secure an advantage over any other Bidder/Proposer.

Note: Any person or entity that fails to submit this executed Affidavit shall be ineligible for contract award. In accordance with Section 2-8.1.1 of the Code of Miami-Dade County, where two or more related parties, as defined herein, each submit a Bid for any contract, such Bids shall be presumed to be collusive. The foregoing presumption may be rebutted by the presentation of evidence as to the extent of ownership, control and management of such related parties in preparation and submittal of such Bids. **Related parties** shall mean the Bidder/Proposer; the principals, corporate officers, and managers of a Bidder/Proposer; or the spouse, domestic partner, parents, stepparents, siblings, children or stepchildren of a Bidder/Proposer or the principals, corporate officers and managers thereof which have a direct or indirect ownership interest in another Bidder/Proposer for the same contract or in which a parent company or the principals thereof of one Bidder/Proposer have a direct or indirect ownership interest in another Bidder/Proposer for the same contract. Bid/Proposal found to be collusive shall be rejected. Bidder/Proposer who has been found to have engaged in collusion may be considered non-responsible, and may be suspended or debarred, and any contract resulting from collusive bidding may be terminated for default.

Written Declaration: Pursuant to §92.525, Florida Statutes, under penalties of perjury, I declare that I have read the foregoing Affidavit and that the facts stated in it are true, accurate, and complete.

Solicitation No.: _____ Solicitation Title: _____

By: _____
Signature of Affiant

Date: _____ 20 ____

Printed Name of Affiant and Title

____/____/____ - ____/____/____/____/____
Federal Employer Identification Number

Printed Name of Bidder/Proposer

Address of Bidder/Proposer

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

FIRM'S RESPONSIBILITY COMBINED AFFIDAVIT

STATE OF FLORIDA)
) SS:
COUNTY OF MIAMI-DADE)

GENERAL

- ## OWNERSHIP DISCLOSURE

- Combined Affidavit Initial

EMPLOYMENT DISCLOSURE

5. The following information and attachments are provided and are in compliance with all items in County Ordinance No. 90-133, amending Section 2.8-1; Subsection (d) (2):

- a. Does your firm have a collective bargaining agreement with its employees?
☐ Yes ☐ No
- b. Does your firm provide paid health care benefits for its employees?
☐ Yes ☐ No
- c. Provide a current breakdown (number of persons) of your firm's work force and ownership as to race, national origin and gender:

White:	_____	Males:	_____	Females:	_____
Asian:	_____	Males:	_____	Females:	_____
Black:	_____	Males:	_____	Females:	_____
American					
Indian:	_____	Males:	_____	Females:	_____
Hispanics:	_____	Males:	_____	Females:	_____
Aleut					
(Eskimo):	_____	Males:	_____	Females:	_____
_____:	_____	Males:	_____	Females:	_____

EMPLOYMENT DRUG FREE WORKPLACE

6. The Respondent provides a drug-free workplace in full compliance with Section 2-8.1.2 of the Code of Miami-Dade County.

EMPLOYMENT FAMILY LEAVE

7. That in compliance with Ordinance No. 91-142 of the Code of Miami-Dade County, Florida, the following information is provided and is in compliance with all items in the aforementioned Ordinance:

An employee who has worked for the above firm for at least one (1) year shall be entitled to ninety (90) days of family leave during any twenty-four (24) month period, for medical reasons, for the birth or adoption of a child, or for the care of a child, spouse or other close relative who has a serious health condition without risk of termination of employment or employer retaliation.

Combined Affidavit Initial

ARREARS WITH THE COUNTY

8. That in compliance with Ordinance No. 95-178 and Section 2-8.1(c) of the Code of Miami-Dade County, the Proposer has paid all delinquent and currently due fees or taxes, including but not limited to real estate and personal property taxes, registered in the name of Proposer and which are collected in the normal course by the Miami-Dade County Tax Collector, and that County issued parking tickets for vehicles registered in the name of the above proposer, and which are collected in the normal course by the Miami-Dade Clerk of the Circuit and County Courts, have been paid.

That in compliance with Ordinance No. 99-162 and Section 2-8.1 of the Code of Miami-Dade County, the Proposer is not in arrears in any payment under contract, promissory note or other loan document with Miami-Dade County, or any of its agencies or instrumentalities, including the Public Health Trust, either directly or indirectly through a firm, corporation, partnership or joint venture in which the individual or entity has a controlling financial interest as that term is defined in Section 2-11.1(b)(8) of the Code of Miami-Dade County.

CODE OF BUSINESS ETHICS

9. I, being duly sworn, hereby state and certify that this firm has adopted a Code of Business Ethics that is fully compliant with the requirements of Section 2-8.1(i) of the Code of Miami-Dade County as amended. I further acknowledge that failure to comply with the adopted Code of Business Ethics shall render any contract with Miami-Dade County voidable, and subject this firm to debarment from County work pursuant to Section 10-38 (h)(2) of the Code of Miami-Dade County as amended. I further acknowledge that failure to submit this affidavit shall render this firm ineligible for contract award.

NO CRIMINAL RECORD

10. The Respondent has not been convicted of a felony during the past ten (10) years, nor does it, as of the date of the bid or proposal submission, have an officer, director or executive who has been convicted of a felony during the past ten (10) years as defined in Section 2-8.6 of the Code of Miami-Dade County.

PUBLIC ENTITY CRIME

11. The respondent has not been convicted of a Public Entity crime as defined in Paragraph 287.133(1)(g) of the Florida Statutes. Violation of any State or Federal law with respect to the transaction of business with any public entity or with an agency or political subdivision of any State.

Combined Affidavit Initial

DEBARMENT AND SUSPENSION DISCLOSURE

- 12 . The Respondent, and its officers, principals, stockholders, subcontractors or its affiliates are not debarred or suspended from contracting with Miami-Dade County as regulated by Section 10-38 of the Miami Dade County Code.

NON -DISCRIMINATION BASED ON DISABILITY

- 13 . The Respondent is in compliance with and agrees to continue to comply with and assure any subcontractor, or third party contractor under this project complies with all applicable laws forbidding discrimination based on disability including, but not limited to those provisions pertaining to employment, provision of programs and services, transportation, communications. Access to facility, renovations and new construction as set forth in the Americans with Disabilities Act of 1990 (ADA), the Rehabilitation Act of 1973, the Federal Transit Act and the Fair Housing Act.

FAIR SUBCONTRACTING

- 14 . Consistent with Section 2-8.8 of the Code of Miami-Dade County, the Respondent has adopted subcontracting policies and procedures which (a) notifies the broadest number of local subcontractors of the opportunity to be awarded a subcontract; (b) invites local subcontractors to submit bids in a practical, expedient way; (c) provides local subcontractors access to information necessary to prepare and formulate a subcontracting bid; (d) allows local subcontractors to meet with appropriate personnel of the Respondent to discuss the Respondent's requirements; and (e) awards subcontracts based on full and complete consideration of all submitted proposals and in accordance with the Respondent's stated objectives.

RESPONSIBLE WAGE AND BENEFITS (IF APPLICABLE)

- 15 . If applicable, the Respondent is in full compliance with Section 2-11.16 of the Code of Miami-Dade County, and should he or she be awarded the contract, understands his or her obligation to pay the project minimum wage rates set forth in that Section and the labor provisions of the contract documents.

Combined Affidavit Initial

CLEARINGHOUSE AFFIDAVIT

16. That in compliance with Miami-Dade County Resolution Number R-1145-99, the Respondent agrees to comply with all requirements of the Clearinghouse Resolution and Job Request form for posting job opportunities. Making it a mandatory requirement for Respondents to post notice of job opportunities resulting from the construction of improvements on County property through the County's Clearinghouse process.

I STATE NOTHING FURTHER IN THIS AFFIDAVIT.

Signature: _____

Position/Title: _____

Name of Firm: _____

The foregoing was sworn and subscribed before me this _____ day of _____, _____ by _____, who is personally known to me or who has produced _____ as identification who being duly sworn, deposes and says that the above is true to the best of his knowledge, information and belief.

My Commission expires:

NOTARY PUBLIC
STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

RESPONSIBLE CONTRACTOR AFIDAVIT (FORM RTFE 1)

Residents First Training and Employment Program
Responsible Contractor/Subcontractor Affidavit Form (RFTE 1)
(Miami-Dade County Code Section 2-11.17)

In accordance with Section 2-11.17 of the Miami-Dade County Code, all contractors and subcontractors of any tier performing on a contract for (i) the construction, demolition, alteration and/or repair of public buildings or public works projects valued in excess of \$1,000,000 funded completely or partially by Miami-Dade County, or (ii) privately funded projects or leases valued in excess of \$1,000,000 for the construction, demolition, alteration or repair of buildings or improvements on County owned land, and which are subject to Section 2-11.16 of the Code of Miami-Dade County shall comply with the requirements of the Residents First Training and Employment Program.

If applicable, the undersigned ☐ Contractor / ☐ Subcontractor verifies that should they be awarded the contract, the undersigned understands their obligation to comply with the following:

- i. Prior to working on the project, all persons employed by the contractor / subcontractor to perform construction shall have completed, the OSHA 10 Hour Safety Training course established by the Occupational Safety & Health Administration of the United States Department of Labor. Such training does not need to be completed at the time of bidding but shall be completed prior to the date persons are employed on the project.
- ii. The contractor / subcontractor will make its best reasonable efforts to promote employment opportunities for local residents and seek to achieve a project goal of having fifty-one percent (51%) of all Construction Labor hours performed by Miami-Dade County residents. To verify workers' residency, firms shall require each worker to produce a valid driver's license or other form of government-issued identification.

Printed Name of Affiant Printed Title of Affiant Signature of Affiant

Name of Firm Date

Address of Firm State Zip Code

Notary Public Information

Notary Public – State of _____ County of _____

Subscribed and sworn to (or affirmed) before me this _____ day of, _____ 20____.

by _____ He or she is personally known to me ☐ or has produced identification ☐

Type of identification produced _____

Signature of Notary Public Serial Number

Print or Stamp of Notary Public Expiration Date Notary Public Seal

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

CONTRACTOR DUE DILIGENCE AFFIDAVIT

“The attention of the Contractor is hereby directed to the requirements of Resolution R-63-14 in that the award of this contract is conditioned on the Contractor providing the County, when required, with a “CONTRACTOR DUE DILIGENCE AFFIDAVIT”.

Miami-Dade County
Contractor Due Diligence Affidavit

Per Miami-Dade County Board of County Commissioners (Board) Resolution No. R-63-14, County Vendors and Contractors shall disclose the following as a condition of award for any contract that exceeds one million dollars (\$1,000,000) or that otherwise must be presented to the Board for approval:

- (1) Provide a list of all lawsuits in the five (5) years prior to bid or proposal submittal that have been filed against the firm, its directors, partners, principals and/or board members based on a breach of contract by the firm; include the case name, number and disposition;
- (2) Provide a list of any instances in the five (5) years prior to bid or proposal submittal where the firm has defaulted; include a brief description of the circumstances;
- (3) Provide a list of any instances in the five (5) years prior to bid or proposal submittal where the firm has been debarred or received a formal notice of non-compliance or non-performance, such as a notice to cure or a suspension from participating or bidding for contracts, whether related to Miami-Dade County or not.

All of the above information shall be attached to the executed affidavit and submitted to the Procurement Officer overseeing this solicitation/ contract/purchase order. The Vendor/Contractor attests to providing all of the above information, if applicable, to the County.

Written Declaration: Pursuant to Florida Statutes s. 92.525, under penalties of perjury, I declare that I have read the foregoing Contractor Due Diligence Affidavit and that the facts stated in it (attached to it) are true.

Contract No. : **Federal Employer Identification Number (FEIN):**

Contract Title:

<input type="text"/> Printed Name of Affiant	<input type="text"/> Printed Title of Affiant	<input type="text"/> Signature of Affiant
<input type="text"/> Name of Firm	<input type="text"/> Date	
<input type="text"/> Address of Firm	<input type="text"/> State	<input type="text"/> Zip Code

Notary Public Information

Notary Public – State of _____ County of _____

Subscribed and sworn to (or affirmed) before me this _____ day of _____ by _____
_____ He or she is personally known to me _____ or has produced identification

_____ Signature of Notary Public	_____ Serial Number	
_____ Print or Stamp of Notary Public	_____ Expiration Date	_____ Notary Public Seal

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

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CERTIFICATE OF ASSURANCE (COA)



**SMALL BUSINESS DEVELOPMENT
CERTIFICATE OF ASSURANCE(COA)
SMALL BUSINESS PARTICIPATION ON COUNTY PROJECTS**

This completed form must be submitted with bid documents by all bidders/proposers on a Miami-Dade County project with Small Business Enterprise ("SBE") program measure(s).

Project No.: TP-0000008861 Project Title: Unit Substation Equipment Replacement - Phase 1

Bidder/Proposer: _____ FEIN: _____

Address: _____ City _____ State _____ ZIP _____

Phone Number: _____ Email address: _____

The bidder/proposer is committed to meeting the established measure(s) assigned to this project: _____% SBE-A/E, 100.00% SBE-Cons, N Trade Set-aside SBE-Cons, _____% SBE-G, and/or _____% SBE-S.
(For Goals, write in the percentage. For Set-aside, put Y or N.)

Print Prime Bidder's Name & Title

Prime Bidder's Signature

Date

To satisfy the requirements for Step 1 - Bid Submittal and Compliance with Small Business Enterprise Program(s), the following are required:

1. Acknowledgement of the SBE-Architecture & Engineering, SBE-Construction, SBE-Good and/or SBE-Service (non-construction, architecture or engineering) measure(s) established for this project via this Certificate of Assurance.
2. Agree to engage in the solicitation of approved Miami-Dade County Small Business Enterprise firm(s) to achieve the established measure(s) as indicated in the Project Documents (specifications).
3. Agree to select and submit the names of the certified SBEs to satisfy the measures via Miami-Dade County's Business Management Workforce System ("BMWS") within the specified timeframe, upon email notification from the Small Business Development ("SBD") Division or BMWS.

To satisfy the requirements for Step 2 - Bid Evaluation and Recommendation for Award, please attest that:

I understand that my company will be deemed non-compliant and not eligible for award if I fail to (1) submit this form with my bid/proposal documents and/or (2) submit my company's Utilization Plan which shall list all certified Miami-Dade County Small Business Enterprise firms whom will be subcontracted with to satisfy the project's established SBE measure(s) via BMWS, within the specified timeframe, upon email notification from SBD or BMWS. Each SBE subcontractor, subconsultant, and/or sub-vendor will also be required to confirm its contractual relationship via BMWS, within the specified timeframe, for final approval by SBD.

STATE OF FLORIDA

COUNTY OF MIAMI-DADE

BEFORE ME, an officer duly authorized to administer oaths and take acknowledgement, personally appeared _____, who being first sworn deposes and affirms that the provided information statements are true and correct to the best of his/her knowledge information and belief.

Signature of Owner

SWORN TO and subscribed before me this day _____ of _____, 20 _____

Signature of Notary Public-State of Florida

My Commission Expires:

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

CONTRACT FORMS

Surety Performance and Payment Bond

Fair Wage Affidavit

Financial Documentation

DPM Requirement – Affirmation of Vendor Affidavits

Job Clearinghouse Form

Fair Subcontracting Practices

E-Verify Affidavit

Residents First Training and Employment Program/Community Workforce Program/Employ
Miami-Dade Program Construction Workforce Plan (Form RFTE 2)

OSHA Safety Training Affidavit (Form RFTE 3)

Residents First Training and Employment Program/Employ Miami-Dade Program
Workforce Performance Report (Form RFTE 4)

Certificate(s) of Insurance

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

SURETY PERFORMANCE AND PAYMENT BOND

SURETY PERFORMANCE AND PAYMENT BOND

By this Bond, we _____, as Principal, whose principal business address is _____, as Contractor under the contract dated _____, 20 __, between Principal and Miami-Dade County for the construction of **USS EQUIPMENT REPLACEMENT - PHASE 1**, RPQ/Project No. TP-0000008861 (herein after referred to as "Contract") the terms of which Contract are incorporated by reference in its entirety into this Bond and _____, a corporation, whose principal business address is _____ as Surety, are bound to Miami-Dade County (hereinafter referred to as "County") in the sum of _____ (U.S. dollars) \$_____, for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs all the work under the Contract, including but not limited to guarantees, warranties and the curing of latent defects, said Contract being made a part of this bond by reference, and in the times and in the manner prescribed in the Contract, including any and all damages for delay; and
2. Promptly makes payments to all claimants, as defined in Section [255.05\(1\)](#), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and
3. Pays County all losses, damages, including damages for delay, expenses, costs and attorney's fees, including appellate proceedings, that County sustains because of a default by Principal under the Contract, including but not limited to a failure to honor all guarantees and warranties or to cure latent defects in its work or materials within 5 years after completion of the work under the Contract; and
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the Contract, including all warranties and curing all latent defects within 5 years after completion of the work under the Contract;

then this bond is void; otherwise it remains in full force.

If no specific periods of warranty are stated in the Contract for any particular item or work, material or equipment, the warranty shall be deemed to be a period of one (1) year from the date of final acceptance by the County. This Bond does not limit the County's ability to pursue suits directly with the Principal seeking damages for latent defects in materials or workmanship, such actions being subject to the limitations found in Section 95.11(3)(c), Florida Statutes.

Any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect Surety's obligation under this Bond.

SURETY PERFORMANCE AND PAYMENT BOND (Cont'd)

IN WITNESS WHEREOF, the above bounden parties have caused this Bond to be executed by their appropriate officials as of the _____ day of _____ 20 ____.

CONTRACTOR

(Contractor Name)

BY:

(President) (Managing Partner or Joint Venture)

(SEAL)

COUNTERSIGNED BY RESIDENT
FLORIDA AGENT OF SURETY:

SURETY:

(Copy of Agent's current
Identification Card as issued by
State of Florida Insurance Commissioner must be attached) By: _____

Attorney-in-Fact

(CORPORATE SEAL)

(Power of Attorney must be attached)

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

FAIR WAGE AFFIDAVIT

FAIR WAGE AFFIDAVIT

Before me, the undersigned authority appeared _____ the
(PRINT NAME)

_____ of _____,
(PRINT TITLE) (PRINT NAME OF BIDDER OR PROPOSER)

who attests that _____ shall pay workers on
(PRINT NAME OF BIDDER OR PROPOSER)

the project minimum wage rates in accordance with Responsible Wages and Benefits, Section 2-11.16 of the Code of Miami-Dade County and the Labor Provisions of the contract documents.

State of FLORIDA

County of Miami-Dade

Sworn to (or affirmed) and subscribed before me this _____ day of _____, 202____.

_____ Personally, known or _____ produced identification.

(Signature of Notary Public - State of Florida)

(Print, Type, or Stamp Commissioned Name of Notary Public)

Type of identification produced: _____

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

FINANCIAL DOCUMENTATION

As a condition of award, the Contractor may be required to provide documentation that affirm its financial capacity to perform the work (i.e., Tax Returns, Financial Statements, Profit-and-Loss Statements, Cash Flow Statements, etc.).

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

DEPARTMENT OF PROCUREMENT MANAGEMENT (DPM)

AFFIRMATION OF VENDOR AFFIDAVITS

Bidders are required to affirm that all information submitted with the Vendor Registration Package is current, complete and accurate as a condition of award, by completing the provided Affirmation of Vendor Affidavit Form.



New Vendor Registration and Bid/Proposal Contract Language

1.1. DEFINITIONS FOR VENDOR REGISTRATION

Bid – shall refer to any offer(s) submitted in response to this solicitation.

Bidder – shall refer to anyone submitting a Bid in response to this solicitation.

Bid Solicitation – shall mean this solicitation documentation, including any and all addenda.

Bid Submittal Form – defines the requirement of items to be purchased, and must be completed and submitted with Bid. The Bidder should indicate its name in the appropriate space on each page.

County – shall refer to Miami-Dade County, Florida

DPM – shall refer to Miami-Dade County's Department of Procurement Management.

Enrolled Vendor – shall refer to a firm that has completed the necessary documentation in order to receive Bid notifications from the County.

Registered Vendor – shall refer to a firm that has completed the Miami-Dade County Business Entity Registration Application and has satisfied all requirements to enter into business agreements with the County.

The Vendor Registration Package – shall refer to the Business Entity Registration Application.

For additional information about on-line vendor enrollment or vendor registration contact the Vendor Assistance Unit at 111 N.W. 1st Street, 13th Floor, Miami, FL 33128, Phone 305-375-5773. Vendors can enroll online and obtain forms to register by visiting our web site at www.miamidade.gov/dpm

1.2. INSTRUCTIONS TO BIDDERS

A. Bidder Qualification

It is the policy of the County to encourage full and open competition among all available qualified vendors. All vendors regularly engaged in the type of work specified in the Bid Solicitation are encouraged to submit Bids. Vendors may enroll with the County to be included on a notification list for selected categories of goods and services. To be eligible for award of a contract (including small purchase orders), Bidders must become a Registered Vendor. Only Registered Vendors can be awarded County contracts. Vendors are required to register with the County by contacting the Vendor Assistance Unit. The County endeavors to obtain the participation of all qualified small business enterprises. For information and to apply for certification, contact the Department of Small Business Development at 111 N.W. 1st Street, 19th Floor, Miami, FL 33128-1900, or telephone at 305-375-3111. County employees and board members wishing to do business with the County are referred to Section 2-11.1 of the Miami-Dade County Code relating to Conflict of Interest and Code of Ethics.

B. Vendor Registration

To be recommended for award the County requires that vendors complete a Miami-Dade County Vendor Registration Package. Effective June 1, 2008, a new Vendor Registration Package, including a Uniform Affidavit Packet (Affidavit form), must be completed by vendors and returned to the Department of Procurement Management (DPM), Vendor Assistance Unit, within fourteen (14) days of notification of the intent to recommend for award. In the event the Vendor Registration Package is not properly completed and returned within the specified time, the County may in its sole discretion, award to the next lowest responsive, responsible Bidder. The Bidder is responsible for obtaining the Vendor Registration Package, including all affidavits by downloading from the DPM website at www.miamidade.gov or from the Vendor Assistance Unit at 111 N.W. 1st Street, 13th Floor, Miami, FL 33128.

Bidders are required to affirm that all information submitted with the Vendor Registration Package is current, complete and accurate, at the time they submit a response to a Bid Solicitation, by completing the provided Affirmation of Vendor Affidavit form.

In becoming a Registered Vendor with Miami-Dade County, the vendor confirms its knowledge of and commitment to comply with the following:

1. **Miami-Dade County Ownership Disclosure Affidavit**
(Sec. 2-8.1 of the County Code)
2. **Miami-Dade County Employment Disclosure Affidavit**
(County Ordinance No. 90-133, amending Section 2-8-1(d)(2) of the County Code)
3. **Miami-Dade County Employment Drug-free Workplace Certification**
(Section 2-8.1.2(b) of the County Code)
4. **Miami-Dade Disability and Nondiscrimination Affidavit**
(Article 1, Section 2-8.1.5 Resolution R182-00 Amending R-385-95)
5. **Miami-Dade County Debarment Disclosure Affidavit**
(Section 10.38 of the County Code)
6. **Miami-Dade County Vendor Obligation to County Affidavit**
(Section 2-8.1 of the County Code)
7. **Miami-Dade County Code of Business Ethics Affidavit**
(Article 1, Section 2-8.1(i) and 2-11(b)(1) of the County Code through (6) and (9) of the County Code and County Ordinance No 00-1 amending Section 2-11.1(c) of the County Code)
8. **Miami-Dade County Family Leave Affidavit**
(Article V of Chapter 11 of the County Code)

9. **Miami-Dade County Living Wage Affidavit**
(Section 2-8.9 of the County Code)

10. **Miami-Dade County Domestic Leave and Reporting Affidavit**
(Article 8, Section 11A-60 11A-67 of the County Code)

11. **Subcontracting Practices**
(Ordinance 97-35)

12. **Subcontractor/Supplier Listing**
(Ordinance 97-104)

13. **Environmentally Acceptable Packaging**
Resolution (R-738-92)

14. **W-9 and 8109 Forms**

The vendor must furnish these forms as required by the Internal Revenue Service.

15. **Social Security Number**

In order to establish a file for your firm, you must provide your firm's Federal Employer Identification Number (FEIN). If no FEIN exists, the Social Security Number of the owner or individual must be provided. This number becomes your "County Vendor Number". To comply with Section 119.071(5) of the Florida Statutes relating to the collection of an individual's Social Security Number, be aware that DPM requests the Social Security Number for the following purposes:

- Identification of individual account records
- To make payments to individual/vendor for goods and services provided to Miami-Dade County
- Tax reporting purposes
- To provide a unique identifier in the vendor database that may be used for searching and sorting departmental records

16. **Office of the Inspector General**
Pursuant to Section 2-1076 of the County Code.

17. **Small Business Enterprises**
The County endeavors to obtain the participation of all small business enterprises pursuant to Sections 2-8.2, 2-8.2.3 and 2-8.2.4 of the County Code and Title 49 of the Code of Federal Regulations.

18. **Antitrust Laws**

By acceptance of any contract, the vendor agrees to comply with all antitrust laws of the United States and the State of Florida.

C. PUBLIC ENTITY CRIMES

To be eligible for award of a contract, firms wishing to do business with the County must comply with the following:

Pursuant to Section 287.133(2)(a) of the Florida Statutes, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Bid on a contract to provide any goods or services to a public entity, may not submit a Bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit Bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 of the Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.



Miami-Dade County
Department of Procurement Management
Affirmation of Vendor Affidavits

In accordance with Ordinance 07-143 amending Section 2-8.1 of the Code of Miami-Dade County, effective June 1, 2008 (for goods and services) and July 1, 2008 (for design and construction), vendors are required to complete a new Vendor Registration Package, including a Uniform Affidavit Packet (Vendor Affidavits Form), before being awarded a new contract. The undersigned affirms that the Vendor Affidavits Form submitted with the Vendor Registration Package is current, complete and accurate for each affidavit listed below.

Contract No. : _____ **Federal Employer Identification Number (FEIN):** _____

Contract Title: _____

Affidavits and Legislation/ Governing Body

1. Miami-Dade County Ownership Disclosure Sec. 2-8.1 of the County Code	6. Miami-Dade County Vendor Obligation to County Section 2-8.1 of the County Code
2. Miami-Dade County Employment Disclosure County Ordinance No. 90-133, amending Section 2-8-1(d)(2) of the County Code	7. Miami-Dade County Code of Business Ethics Article 1, Section 2-8.1(i) and 2-11(b)(1) of the County Code through (6) and (9) of the County Code and County Ordinance No 00-1 amending Section 2-11.1(c) of the County Code
3. Miami-Dade County Employment Drug-free Workplace Certification Section 2-8.1.2(b) f the County Code	8. Miami-Dade County Family Leave Article V of Chapter 11, Resolution No. R-183-00 amending Resolution No. R – 1499-91 of the County Code
4. Miami-Dade County Disability Non-Discrimination Article 1, Section 2-8.1.5 Resolution R182-00 amending R-385-95	9. Miami-Dade County Living Wage Section 2-8.9 of the County Code
5. Miami-Dade County Debarment Disclosure Section 10.38 of the County Code	10. Miami-Dade County Domestic Leave and Reporting Article 8, Section 11A-60 11A-67 of the County Code

Printed Name of Affiant	Printed Title of Affiant	Signature of Affiant
Name of Firm		Date
Address of Firm	State	Zip Code

Notary Public Information

Notary Public – State of _____ County of _____

Subscribed and sworn to (or affirmed) before me this _____ day of, _____ 20 _____.

by _____ He or she is personally known to me ☐ or has produced identification ☐

Type of identification produced _____

Signature of Notary Public	Serial Number	
Print or Stamp of Notary Public	Expiration Date	Notary Public Seal

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

SBD JOB CLEARINGHOUSE AFFIDAVIT

“The attention of the Contractor is hereby directed to the requirements of Job Clearinghouse Code §2-1701 and Resolution No. R-1395-05.

COUNTY'S CLEARINGHOUSE: Pursuant to Miami-Dade County Resolution R-1145-99, Contractors involved in the construction of improvements on County property must post a notice of job opportunities with the Miami-Dade County Job Clearinghouse. For information regarding the Miami-Dade County's Clearinghouse program, please contact the County's Division of Small Business Development at (305) 375-3157.



Delivering Excellence Every Day

JOB CLEARINGHOUSE AFFIDAVIT
Notice of Construction Job Opportunities

Project / Contract Number: _____

Pursuant to Miami-Dade County Resolution No. R-1395-05, there are ____ open position(s) to submit to the Job Clearinghouse for this project at this time. All open positions will be submitted to South Florida Workforce at <https://iapps.careersourcesfl.com/jchcwp/>.

(Signature of Affiant)

(Date)

(Printed Name of Affiant, Title, and Firm Name)

(Witness)

Sworn to and subscribed before me this

_____ day of _____ 20 ____

By: _____

Signature of Notary Public



Personally Known



Produced ID

Type of ID produced _____

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

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FAIR SUBCONTRACTING PRACTICES

Consistent with Section 2-8.8 of the Code of Miami-Dade County, the Bidder has adopted subcontracting policies and procedures which (a) notifies the broadest number of local subcontractors of the opportunity to be awarded a subcontract; (b) invites local subcontractors to submit bids in a practical, expedient way; (c) provides local subcontractors access to information necessary to prepare and formulate a subcontracting bid; (d) allows local subcontractors to meet with appropriate personnel of the Respondent to discuss the Respondent's requirements; and (e) awards subcontracts based on full and complete consideration of all submitted proposals and in accordance with the Respondent's stated objectives.

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

E-VERIFY AFFIDAVIT

Miami-Dade County

E-Verify Affidavit

Executive Order 11-02 requires all Florida State agencies under the direction of the Governor to use E-Verify to confirm the employment eligibility of all current and prospective employees (including subcontractors) assigned to perform work pursuant to a state agency contract. Executive Order 11-116 clarifies that the requirement for state contractors to use E-Verify applies to "all contracts for the provision of goods and services to the state in excess of nominal value."

In accordance with the State requirement, Miami-Dade County requires all vendors doing business with the County who are awarded state-funded contracts to verify employee eligibility using the E-verify system. It is the responsibility of the awarded vendor to insure compliance with E-verify requirements at all times.

To enroll in E-Verify, employers should visit the E-Verify website (<http://www.uscis.gov/e-verify>) and follow the instructions. The employer must, as usual, retain the I-9 Forms for inspection.

By affixing your signature below you hereby affirm that you have complied with E-Verify requirements.

Federal Employer Identification Number (FEIN): _____

_____	_____	_____
Printed Name of Affiant	Printed Title of Affiant	Signature of Affiant
_____		_____
Name of Firm		Date
_____	_____	_____
Address of Firm	State	Zip Code

Notary Public Information

Notary Public -- State of _____ County of _____

Subscribed and sworn to (or affirmed) before me this _____ day of, _____ 20____

by _____ He or she is personally known to me ☐ or has produced Identification

Type of identification produced _____

Signature of Notary Public

Serial Number

Print or Stamp of Notary Public

Expiration Date

Notary Public Seal

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

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RESIDENTS FIRST TRAINING AND EMPLOYMENT PROGRAM/COMMUNITY
WORKFORCE PROGRAM/EMPLOY MIAMI-DADE PROGRAM CONSTRUCTION
WORKFORCE PLAN - FORM RFTE 2

**Residents First Training and Employment Program/Community Workforce Program/Employ Miami-Dade Program
Construction Workforce Plan (Miami-Dade County Code Sections 2-11.17, 2-1701 & A.O. 3-63) - Form RFTE 2**

Contract No. _____ Prime Contractor: _____

☐ §2-1701 Community Workforce Program ☐ §2-11.17 Resident First Training and Employment Program ☐ A.O. 3-63 Employ Miami-Dade Program

In accordance with Sections 2-11.17 & 2-1701 of the Miami Dade County-Code, this form must be submitted by the Prime Contractor within 15 business days of award notification and prior to issuance of a Notice to Proceed. The Prime Contractor should enter the word "NONE" where appropriate below and sign the form below. Please duplicate this form if additional space is needed.

- i. Specify the total number of persons that will be used by the Prime Contractor and all subcontractors to perform all of the construction trades and labor work of the contract, broken down by trade and labor category, minimum qualifications for each category, the number of persons to be utilized in each category, the number of positions to be hired by the contractor in each category which are not currently staffed, the number of positions to be filled from the Employ Miami-Dade Register and the number of employees which live within the project DTA. If the current workforce will not achieve the project goal of 51% construction labor hours performed by Miami-Dade County residents, include a Job Clearinghouse Affidavit or a statement on how Miami-Dade County residents will be recruited to fill the needed positions and meet the goal.

Contractor/Subcontractor Name	Trade/Category	Minimum Qualifications	# of Persons to be Utilized	# of Positions to be filled by Employ Miami Dade	# of Persons to be Hired	# of Persons who Reside in the DTA (if applicable)
Total:						

- ii. Identify by name, address and trade category of all persons proposed to perform work under the contract currently on the contractor's (or on any proposed subcontractor's) payroll who reside in Miami-Dade County only and marking the correct box for DTA residents. Two forms of identification must be provided for each DTA resident demonstrating one year of residency.

Employee Name	Address	Trade/Category Performing	DTA Resident (if applicable)

- iii. Attach a list of subcontractors that will be used on the project and executed Responsible Subcontractor Affidavits (Form RFTE 1) for each.
iv. Attach a list of all employees currently employed by the contractor and each subcontractor at the time of award that includes the last four digits of their social security.

I certify that the representations contained in this Construction Workforce Plan are to the best of my knowledge true and accurate.

Signature of Affiant

Print Name

Print Title

Date

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

OSHA SAFETY TRAINING AFFIDAVIT (FORM RFTE 3)

**Residents First Training and Employment Program
Occupational Safety & Health Administration (OSHA)
10 Hour Safety Training Affidavit - Form RFTE 3**

In accordance with Section 2-11.17 of the Miami-Dade County Code, all contractors and subcontractors of any tier performing on a County Construction Contract, shall satisfy the requirements of the Miami-Dade County Residents First Training and Employment Program which requires: for (i) all persons employed by the contractor to perform construction shall have completed the Occupational Safety & Health Administration (OSHA) 10 Hour safety training course established by the Occupational Safety & Health Administration of the United States Department of Labor

The undersigned verifies that every employee reported on the payroll has completed the OSHA 10 Hour or OSHA 30 Hour Safety Training Course prior to working on the project.

Project Number, Title

Printed Name of Affiant

Printed Title of Affiant

Signature of Affiant

Name of Firm

Date

Address of Firm

State

Zip Code

Notary Public Information

Notary Public – State of _____ County of _____

Subscribed and sworn to (or affirmed) before me this _____ day of, _____ 20____.

by _____ He or she is personally known to me ☐ or has produced identification ☐

Type of identification produced _____

Signature of Notary Public

Serial Number

Print or Stamp of Notary Public

Expiration Date

Notary Public Seal

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

RESIDENTS FIRST TRAINING AND EMPLOYMENT PROGRAM/EMPLOY MIAMI-
DADE PROGRAM WORKFORCE PERFORMANCE REPORT - FORM RFTE 4

**Residents First Training and Employment Program/Employ Miami-Dade Program
Workforce Performance Report - Form RFTE 4
(Miami-Dade County Code Section 2-11.17 & A.O. 3-63)**

Contract No. _____ Prime Contractor: _____

In accordance with Section 2-11.17 of the Miami-Dade County Code & A.O. 3-63, this report must be submitted by the Prime Contractor within thirty (30) days of completion of a County Capital Construction Contract to Small Business Development through the Contracting Officer. The Contracting Officer shall not authorize issuance of final payment for completion of a County Capital Construction Contract until the County receives a completed Workforce Performance Report.

Please provide the following information on the workforce employed in the execution of the contract:

_____ Total number of Construction Labor positions utilized on the project

_____ Total number of Construction Labor work hours performed on the project

_____ Total number Construction Labor work hours performed by Miami-Dade County residents

_____ Total number Construction Labor positions performed by Employ Miami-Dade participants

_____ Percentage of Construction Labor work hours performed by Miami-Dade County residents

Attach supporting documentation verifying construction labor work hours performed by Miami-Dade County residents & Employ Miami-Dade participants.

\$_____ Total amount of funds expended during the course of the project on other related skill and safety training programs

Were any positions on this project filled with new hires? _____ Yes _____ No

If you answered "yes" to the above question, please identify the new hires by name, address and trade category, and indicate whether they were Miami-Dade County residents or an Employ Miami-Dade participant. (Please attach additional sheets if necessary.)

Employee Name	Address	Trade/Category Performed	Miami-Dade County Resident (√)	Employ Miami-Dade County Participant (√)

Were all new hires Miami-Dade County residents? _____ No _____ Yes _____

Was the 20% labor workforce threshold met from the Employ Miami-Dade Register? _____ No _____ Yes

If you answered "no" to either of the above questions, please attach supporting documentation that verifies reasonable efforts to promote employment opportunities for local residents including participation in the Employ Miami-Dade Program, which shall include applicable advertisements in local newspapers, posting of job opportunities with CareerSource South Florida's Job Clearinghouse, referrals received from CareerSource South Florida, job applications received, candidates interviewed, and number of new hires.

I certify that the representations contained in this Construction Workforce Plan are to the best of my knowledge true and accurate.

Signature of Affiant

Print Name, Title

Date

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

CERTIFICATE(S) OF INSURANCE

(TO BE PROVIDED BY CONTRACTOR)

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

SPECIAL PROVISIONS

1.0 SCOPE OF WORK:

Refer to Section 01 11 00 – Summary of Work. The Contractor is responsible for verifying all quantities to perform this work. Refer to the contract documents.

2.0 COMMUNITY WORKFORCE PROGRAM:

A ten percent (10%) Community Workforce Program (CWP) goal has been established for this project. The Contractor is required to comply with the requirements of Miami-Dade County (MDC) Code 2-1701 as amended by Ordinance 13-66 (attached), and Implementing Order No. 3-37; **COMMUNITY WORKFORCE PROGRAM**. Additional information is available at the County's website at <http://www.miamidade.gov/business/contract-requirements.asp#0>.

Contractor must submit a Workforce Plan to the Miami-Dade County Regulatory and Economic Resources Department, Small Business Development Division (formerly Department of Small Business Development or SBD) through the Department within fifteen (15) days of notification of award of the contract. The County will not enter into the contract until it receives the Contractor's Workforce Plan and deems the Plan acceptable. The Workforce Plan forms may be obtained on the County's website at <http://www.miamidade.gov/business/contract-requirements.asp#0>.

3.0 LOCAL PREFERENCE:

The attention of the Contractor is hereby directed to the requirements of the Code of Miami-Dade County, Chapter 2, Article I, Section 2-8.5; **LOCAL PREFERENCE ORDINANCE**.

The award of this solicitation is subject to Section 2-8.5 of the County Code, which except where Federal or State law mandates to the contrary, allow preference to be given to a local business. For the purposes of the applicability of this Code section, "local business" means the bidder has a valid business tax receipt issued by Miami-Dade County at least one year prior to bid submission, and a physical business address located within the limits of Miami-Dade County from which the vendor operates or performs business. A Post Office Box cannot be used to establish a physical address.

"Pursuant to the general terms and conditions of the solicitation document, local preference is applicable to this solicitation. However, please be advised that the reciprocity agreement with Broward County expired September 30, 2017. Accordingly, local preference will only be afforded to a firm that meets the requirements for Miami-Dade County in any solicitation with a due date after September 30, 2017."

Additionally, a Locally-Headquartered Business shall mean a Local Business as defined above which has a "principal place of business" in Miami-Dade County. "Principal place of business" means *the nerve center or the center of overall direction, control, and coordination of activities of the bidder*. If the bidder has only one business location, such business location shall be its principal place of business.

- A. If the Low bidder is not a Local Business, then any and all responsive and responsible Local Businesses submitting a price within ten percent of the Low bid, the Low Bidder, and any and all responsive and responsible Locally-Headquartered Businesses submitting a price within fifteen percent of the Low Bid, shall have an opportunity to submit a best and final bid equal to or lower than the Low Bid.
- B. If the Low Bidder is a Local Business which is not a Locally-Headquartered Business, then any and all responsive and responsible Locally-Headquartered Businesses submitting a price within five percent of the Low Bid, and the Low Bidder shall have an opportunity to submit a best and final bid equal to or lower than the Low Bid.

Ties in best and final bid shall be resolved in the following order of priority: Locally-Headquartered Business, Local Business, other business.

4.0 WARTIME VETERAN’S BUSINESS PREFERENCE PROGRAM:

The attention of the Contractor is hereby directed to the requirements of the Wartime Veteran’s Business Preference Program: Per Section 2-8.5.1 of the Miami-Dade County Code, a Local Certified Wartime Veteran Business Enterprise that submits a bid for a contract shall receive a bid preference of five percent of the price bid. These preferences will only be used for evaluating and awarding the bids and shall not affect the contract price. However, if a Local Certified Service-Wartime Veteran Business Enterprise is the lowest bidder as a result of a Best and Final Bid (also known as a BAFO), then the price submitted as part of the Best and Final Bid shall be the contract price.

At the time of bid or proposal submission, the firm must affirm in writing its compliance with the certification requirements of Section 295.187 of the Florida Statutes and submit this affirmation and a copy of the actual certification along with the bid or proposal submission.

5.0 CERTIFICATE OF ASSURANCE (COA) AND UTILIZATION PLAN (UP):

For all projects with approved **SBE-CONS, SBE-A/E, SBE-G, and SBE-S “Set-Aside” or “Goal”** measures, all bidders are required to submit a Small Business Development (SBD) Certificate of Assurance (COA) at the time of bid submission. The COA must be completely filled out, signed, notarized, and submitted with each bid in order for the bidder to be deemed compliant by SBD. **Failure to submit the required COA at the time of bid submittal will result in the bidder being deemed non-compliant and not eligible for award of the contract.**

Successful first, second, and third ranked bidders will subsequently be notified to complete a Utilization Plan (UP), within a specified time frame, for SBD’s review and approval via Miami-Dade County’s online Business Management Workforce System (BMWS). The UP shall list all certified Miami-Dade County Small Business Enterprise (SBE) subcontractor(s), subconsultant(s), and/or sub-vendor(s) that will satisfy the project’s established SBE measure(s). Each SBE subcontractor, subconsultant, and/or sub-vendor will also be required to confirm its contractual relationship via BMWS, within the specified time frame, for final approval by SBD. The COA and UP requirements do not apply to “No Measure” open market projects; however, all prime and subcontractor(s), subconsultant(s), and/or sub-

vendor(s) will be required to report and confirm all payments made on Miami-Dade County projects.

6.0 ALLOWANCE ACCOUNTS:

- A. ***Contingency Allowance*** - A Contingency Allowance Account has been established for the exclusive use of the Department of Transportation and Public Works as a reserve account to cover unforeseeable and unavoidable costs associated with the Work. This Contingency Allowance account shall be calculated at ten percent (10%) of the base bid total for the Work. It is understood that any unspent portion of the contingency allowance account is to remain with the COUNTY.
- B. ***Dedicated Allowance*** - A Dedicated Allowance Account has been established for the exclusive use of the Department of Transportation and Public Works as a reserve account for the purpose of purchasing additional Spare Parts. It is understood that any unspent portion of the allowance account is to remain with the COUNTY.

7.0 INSURANCE REQUIREMENTS:

Contractor shall indemnify and hold harmless the County and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorneys' fees and costs of defense, which the County or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this Agreement by the Contractor or its employees, agents, servants, partners principals or subcontractors. Contractor shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the County, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. Contractor expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by Contractor shall in no way limit the responsibility to indemnify, keep and save harmless and defend the County or its officers, employees, agents and instrumentalities as herein provided.

Contractor shall furnish to Miami-Dade County, Risk Management Division 111 NW 1st Street Suite 2340 Miami FL 33128-1987, Certificate(s) of Insurance which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

- A. Worker's Compensation Insurance for all employees of the Contractor as required by Florida Statute 440.
- B. Commercial General Liability Insurance in an amount not less than \$1,000,000 per occurrence, and \$2,000,000 in the aggregate, not to exclude Products and Completed Operations. Miami-Dade County must be shown as an additional insured with respect to this coverage.

- C. Automobile Liability Insurance covering all owned, non-owned and hired vehicles, in an amount not less than \$1,000,000 combined single limit per occurrence for bodily injury and property damage.
- D. Umbrella Liability Insurance in an amount not less than \$3,000,000 per occurrence, and \$3,000,000 in the aggregate.
 - a) If Excess Liability is provided must be follow form of the General Liability coverage.
- E. Installation Floater on an "all risk" basis in an amount not less than one hundred percent (100%) of the replacement value of the equipment and materials. The policy shall list Miami Dade County as a Loss Payee A.T.I.M.A.

All insurance policies required above shall be issued by companies authorized to do business under the laws of the State of Florida, with the following qualifications:

The company must be rated no less than "A-" as to management, and no less than "**Class VII**" as to financial strength, by Best's Insurance Guide, published by A.M. Best Company, Oldwick, New Jersey, or its equivalent, subject to the approval of the County Risk Management Division.

or

The company must hold a valid Florida Certificate of Authority as shown in the latest "List of All Insurance Companies Authorized or Approved to Do Business in Florida" issued by the State of Florida Department of Financial Services.

**NOTE: CERTIFICATE HOLDER MUST READ: MIAMI-DADE COUNTY
111 NW 1st STREET
SUITE 2340
MIAMI, FL 33128**

Compliance with the foregoing requirements shall not relieve the vendor of his liability and obligation under this section or under any other section of the Contract.

Contractor's qualification for inclusion in the Contract is contingent upon the receipt of the insurance documents within fifteen (15) calendar days after notification. If the insurance certificate is received within the specified time frame but not in the manner prescribed in this solicitation, the Contractor shall be verbally notified of such deficiency and shall not be placed in an active status until such time as a corrected certificate is submitted to the County. Contractors who are not or do not remain in compliance will be listed as inactive and will not be remain inactive until all such defects are corrected. Any Contractor placed in an inactive status shall lose their current position in the established rotation and will be placed at the back of the current rotation upon correction of the deficiency and return to active status.

The CONTRACTOR shall be responsible for assuring that the insurance certificates required in conjunction with this Section remain in force for the duration of the contractual period including any and all option years that may be granted to the CONTRACTOR in accordance with Section 2.5 of the Special Conditions. If insurance certificates are scheduled to expire during the contractual period, the CONTRACTOR shall be responsible for submitting new or renewed

insurance certificates to the County at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates which cover the contractual period, the County shall place the contractor in an inactive status until such time as the new or renewed certificates are received by the County in the manner prescribed in the solicitation. Any Contractor placed in an inactive status shall lose their current position in the established rotation and will be placed at the back of the current rotation upon correction of the deficiency and return to active status. If the contractor has an open work order or project when the insurance expires, the contractor will be issued a stop work order and be required to correct the deficiency immediately. No additional time will be allowed as a result of the stop work order and liquidated damages will be assessed. If a Payment and Performance Bond is available on the work, the Bondholder will be notified and given the opportunity to complete the work assignment.

The County may, at its sole discretion require additional or supplemental insurance. Such requirements will be stated in any RPQ issued requiring insurance in addition to the requirements stated above.

8.0 PRE-BID MEETING:

A Pre-Bid Meeting will be held as indicated in the Invitation to Bid (ITB)/Request for Price Quotation (RPQ). Please refer to the ITB/RPQ for instructions and additional information.

9.0 CONTRACTOR USE OF PREMISES:

- 9.1 The Contractor's use of the premises is limited to the limits of construction. The Contractor will coordinate all work with the Project Manager and perform work in a manner which allows continuous use of adjoining facilities by DTPW. The Contractor shall maintain safe access to all project areas at all times.
- 9.2 The Contractor shall remain flexible with respect to his work schedule and if the Contractor is delayed due to the non-availability of the project site, his sole remedy for delay shall be limited to a contract time extension only, with no consideration for additional compensation for lost productivity. This remedy for delay (time extension only, no additional compensation) shall also apply to inclement weather conditions.
- 9.3 The Contractor and his subcontractors shall obtain all necessary Permits and provide copies to the Project Manager prior to commencement of work. At the completion of the project, the Contractor shall provide to the Project Manager as-built drawings, all equipment owner's manuals and related documentation provided by the Manufacturers and a copy of the permit(s) with all required inspections signed off.
- 9.4 The Contractor shall clean the area after each work day. In addition, the contractor shall clean the area, remove materials and equipment that would create a potential hazard to pedestrians and DTPW operations personnel.

10.0 EQUIPMENT:

The contractor will provide equipment of sufficient size and capacity to meet project needs.

11.0 INSPECTIONS/MATERIAL TESTING:

- A. **Inspections:** Daily inspections will be performed by the DTPW Representative. Inspections by the DTPW Representative shall not relieve the Contractor of his duties and obligations related to performance and/or quality of the Work.

The Contractor shall coordinate with the DTPW Representative the inspection of all pertinent work activities that may be deemed crucial to the completion of the Project. The pertinent work activities shall be defined by the DTPW Representative prior to installation. The Contractor will be responsible to schedule a meeting with the DTPW Representative to identify the pertinent work activities. Refer to technical specifications/notes provided in the project drawings. Installation Procedures recommended by manufacturer shall be submitted by the Contractor to the DTPW Representative. Contractor to comply with Technical Specifications/Notes provided on the Contract Drawings.

- B. **Materials:** As specified in the Scope of Work and Project Schedule of Values.

12.0 MEASUREMENT AND PAYMENT:

The Schedule of Values includes all costs required for the complete construction of the specified unit of work including cost of material, delivery; installation, testing, and labor including social security, insurance, and other required fringe benefits, workmen's compensation insurance, bond premiums, cost of the Inspector General random audits, rental of equipment and machinery, taxes, incidental expenses and supervision.

The Contractor shall be compensated based on percentage of work completed if a lump sum contract or by unit price quantities as agreed upon by the DTPW Representative. The Schedule of Values will be used for payment and negotiation of additions/deletions to scope. DTPW reserves the right to modify/adjust any of the unit item quantities at the same unit rate as specified on the Schedule of Values with no additional adjustment (compensation) for the reduction of work scope.

The Contractor shall comply with Resolution No. R-138-10, which mandates that SBE firms work be identified in the Schedule of Values, if applicable. In accordance with Resolution R-138-10, the Contractor is required as a condition subsequent to award and prior to the issuance of notice to proceed, that the scope of work to be performed by any SBE utilized to satisfy any SBE goal in the contract be separately identified in such schedule of values. Payment requisitions for the scope of work of such SBE shall be accomplished by statements of completion of the work of the SBE and shall be accompanied by appropriate documentation including invoicing and checks reflecting payment of the SBE for the previous construction draw.

13.0 TIME OF WORK:

Refer to Technical Specification Section 01 11 00 Summary of Work.

14.0 PRE-CONSTRUCTION MEETING:

A Pre-Construction Meeting will be scheduled prior to the NTP date. The DTPW Representative may require the Contractor to submit at the time of the Pre-Construction meeting a Project Schedule, Detailed Schedule of Values, Maintenance of Traffic (MOT) Plan, Shop Drawing Submittal Log, Emergency Contact List, and List of Subcontractors.

15.0 CONSTRUCTION COORDINATION MEETINGS:

The Contractor shall attend Construction Coordination meetings at the site, if required by the DTPW Representative. The DTPW Representative will advise the Contractor of the frequency of the meetings. The meetings shall be attended by the Contractors representative and the DTPW Representative at a time and location to be determined by the DTPW Representative.

16.0 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK:

TIME IS OF THE ESSENCE. The work to be performed under this Contract shall commence on the effective date of the Notice-to-Proceed and be completed and released to MDC upon completion of all punch list items within the time specified.

Completion of All Work: The Contractor shall complete all work included in the Contract Documents, including punch list, no later than **1,825** calendar days after NTP.

17.0 LIQUIDATED DAMAGES:

TIME IS OF THE ESSENCE and completing the work within the specified time is of the utmost importance to MDC. The following liquidated damages rate(s) have been determined based on the best information available at the time of bidding and represent a good faith effort by MDC to quantify the damages that MDC will incur if the contract duration is not achieved. Therefore, for failure to complete the work within the number of days stipulated in the Invitation to Bid, the Contractor and his/her sureties will be assessed Liquidated Damages as follows:

Final Completion

Liquidated Damages shall be assessed in the amount of **\$2,045.84**, per day for each day of delay, not as a penalty, but as Liquidated Damages for each day or fraction thereof of delay until the Final Completion Date is met, which will be paid to Miami-Dade County by the Contractor.

18.0 METHOD OF AWARD:

Award shall be made to the lowest responsive and responsible bidder. DTPW reserves the right to negotiate additional or deductive services related to this project with the low bidder. DTPW reserves the right to reject all bids if deemed in the best interest of Miami-Dade County.

19.0 PERFORMANCE & PAYMENT BOND:

The Contractor shall provide a Surety Performance and Payment Bond for 100% of the contract amount. NTP shall not be issued and no work shall commence until a fully executed performance bond and required insurance are submitted and approved by Miami-Dade County's Risk Management Division. Failure to provide a Performance & Payment Bond within the time required inclusive of any time extensions granted by DTPW may be considered withdrawal of the bid and forfeiture of the Bid Bond. The Contractor will be reimbursed for the direct (actual) Surety Performance and Payment costs upon presentation of an invoice and paid receipt/cancelled check.

20.0 COLLUSION AFFIDAVIT:

In accordance with Sections 2-8.1.1 and 10-33.1 of the Miami-Dade County Code as amended by Ordinance No. 08-113, bidders/proposers on County contracts are requested to submit the Collusion Affidavit within five (5) days from notification of intent to award.

Failure to provide a Collusion Affidavit within 5 business days after the recommendation to award has been filed with the Clerk of the Board shall be cause for the contractor to forfeit their bid/proposal bond.

NTP shall not be issued and no work shall commence until a fully executed Collusion Affidavit is submitted and approved by DTPW.

21.0 SCRUTINIZED COMPANIES:

By executing this proposal through a duly authorized representative, the bidder certifies that the bidder is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, as those terms are used and defined in sections 287.135 and 215.473 of the Florida Statutes. In the event that the bidder is unable to provide such certification but still seeks to be considered for award of this solicitation, the bidder shall execute the proposal through a duly authorized representative and shall also initial this space: _____. In such event, the bidder shall furnish together with its proposal a duly executed written explanation of the facts supporting any exception to the requirement for certification that it claims under Section 287.135 of the Florida Statutes. The bidder agrees to cooperate fully with the County in any investigation undertaken by the County to determine whether the claimed exception would be applicable. The County shall have the right to terminate any contract resulting from this solicitation for default if the bidder is found to

have submitted a false certification or to have been, or is subsequently during the term of the contract, placed on the Scrutinized Companies for Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

22.0 USER ACCESS PROGRAM:

Pursuant to Miami-Dade County Budget Ordinance No. 03-192, this Contract is subject to a user access fee under the County's User Access Program (UAP) in the amount of two percent (2%). All construction services provided under this contract are subject to the 2% UAP. This fee applies to all Contract usage whether by County Departments or by any other governmental, quasi-governmental or not-for-profit entity. From every payment made to the Contractor under this contract (including the payment of retainage), the County will deduct the two percent (2%) UAP fee provided in the ordinance and the Contractor will accept such reduced amount as full compensation for any and all deliverables under the contract. The County shall retain the 2% UAP for use by the County to help defray the cost of its procurement program. Contractor participation in this pay request reduction portion of the UAP is mandatory.

23.0 CONTRACTOR DUE DILIGENCE AFFIDAVIT:

The attention of the Contractor is hereby directed to the requirements of Resolution R63-14 in that the award of this contract is conditioned on the Contractor providing the County, when required, with a "CONTRACTOR DUE DILIGENCE AFFIDAVIT".

24.0 RESIDENTS FIRST TRAINING AND EMPLOYMENT PROGRAM:

In accordance with Section 2-11.17 of the Code of Miami-Dade County and Implementing Order No. 3-61 (copies attached or online at <http://www.miamidade.gov/smallbusiness/business-development-legislation.asp>), all contractors and subcontractors of any tier on (i) construction contracts valued in excess of \$1,000,000 for the construction, demolition, alteration and/or repair of public buildings or public works, or (ii) contracts or leases valued in excess of \$1,000,000 for privately funded construction, demolition, alteration or repair of buildings or improvements on County-owned land, shall comply with the following:

1. Bidders must:

- a. Submit a completed Responsible Contractor Affidavit (Form RTFE 1) along with the Bid Submittal Package. The Responsible Contractor Affidavit shall verify that (i) prior to working on the project, all persons employed by the contractor on the project to perform construction have completed the OSHA 10 hour safety training course, and (ii) the contractor will make its best reasonable efforts to have fifty-one percent (51%) of all construction labor hours performed by Miami-Dade County residents.
- b. The Contracting Officer shall provide to any contractor who fails to submit a Responsible Contractor Affidavit with its bid or proposal, a written notice that said contractor has forty-eight (48) hours from the time of notification to submit a

Responsible Contractor Affidavit or its bid or proposal will be deemed nonresponsive and disqualified.

2. Prior to the issuance of a Notice to Proceed, contractors must also submit: (i) a Construction Workforce Plan (Form RFTE 2) and supporting documentation; (ii) a list of all subcontractors to be used on the project; (iii) a Responsible Subcontractor Affidavit (Form RFTE 1) for each subcontractor; and (iv) a list of all employees currently employed by the contractor.

3. All certified payrolls submitted to the Contracting Officer shall include an OSHA Safety Training Affidavit (Form RFTE 3).

4. Within thirty (30) business days of completion of a project, the contractor must submit a Workforce Performance Report (Form RFTE 4).

5. Any lessee shall include requirements of Section 2-11.7 of the Code of Miami-Dade County and Implementing Order No. 3-61, including the right of the County to access the contractor's and subcontractors' records to verify compliance, in any contract, subcontract, or sublease. Lessee shall be responsible to the County for payment of compliance monitoring costs and any penalties found due.

25.0 EMPLOY MIAMI-DADE PROGRAM:

Except where state or federal laws or regulations mandate to the contrary, all contractors and subcontractors of any tier performing on a County Construction Contract shall satisfy the requirements of this Article.

In accordance with Section 5.02 of the Miami-Dade County Home Rule Amendment and Charter, Section 2-8.1 of the Code of Miami-Dade County, and Administrative Order No. 3-63, all contractors and subcontractors of any tier on (i) construction contracts valued in excess of one million dollars (\$1,000,000) for the construction, demolition, alteration and/or repair of public buildings, or public works; or (ii) contracts or leases valued in excess of one million dollars (\$1,000,000) for privately funded construction, demolition, alteration or repair of buildings, or improvements on County-owned land:

A. The awarded Contractor is hereby notified that the County will consider whether the Contractor made its best reasonable efforts to promote Employ Miami-Dade on this contract, as defined in A.O. 3-63, as part of the County's evaluation and responsibility review of the Contractor for new County contract awards.

1. Referral Procedures:

- I. Career Source South Florida shall compile and maintain the Employ Miami-Dade Register.
- II. The Contractor will notify Career Source South Florida of the vacancy by completing a Job Opening Form on the Employ Miami-Dade website <https://iapps.careersourcesfl.com/employmd/>. The job order must contain a detailed description of the job responsibilities and qualifications.

- III. Career Source South Florida will then provide a list of qualified candidates available to the Contractor with copy to the Compliance Officer.
- IV. Contractor will review the resumes and qualifications of the candidates, conduct interviews with those candidates who satisfy the minimum competency requirements, and make a good faith effort to fill at least 20% of the labor workforce required per Contractor's Construction Workforce Plan from the Employ Miami-Dade Register through Career Source South Florida.
- V. Positions filled from the Employ Miami-Dade Register must be full-time, for at least 120 days, in order to be considered towards attainment of the 20% labor workforce threshold herein.
- VI. If the 20% labor workforce per Contractor's Construction Workforce Plan from Employ Miami-Dade is not met on the contract, the Contractor must provide the Compliance Officer with a detailed explanation of its efforts.
- VII. Career Source South Florida may have funds to pay a portion of the salaries for Employ Miami-Dade participants. It shall be the responsibility of the Contractor to contact Career Source South Florida directly to determine eligibility for, and make arrangements as applicable with, Career Source South Florida to pay a portion of the salaries for a specified period and/or during on the job training for the Employ Miami-Dade participants employed on the contract.

26.0 SUBCONTRACTOR / SUPPLIER LISTING:

Pursuant to Section 2-8.1 and 10.34 of the Miami-Dade County Code, for contracts valued at \$100,000 or more when subcontractor(s) and/or supplier(s) are utilized, the Prime contractor/vendor/consultant shall report to Miami-Dade County the race, gender, and ethnic origin of all such first tier subcontractor(s) and supplier(s). The paper-based Subcontractor/Supplier Listing that was previously submitted at time of bid submission is no longer being used. The Prime contractor/vendor/consultant shall be required to identify its first tier subcontractor(s)/supplier(s) and provide demographic information for both their firm and each subcontractor/supplier on the contract as soon as reasonably available and in any event prior to final payment under the contract via Miami-Dade County's online Business Management Workforce System (BMWS).

27.0 MONTHLY UTILIZATION REPORTS:

Paper-based Monthly Utilization Reports (MURs) are no longer being accepted for construction, architecture, and engineering projects with measures. Also for architecture and engineering firms, pursuant to Implementing Order 3-39, primes and subconsultants are required to report payments monthly via Miami-Dade County's online Business Management Workforce System (BMWS). "Compliance Audits" will be created in Miami-Dade County's online Business Management Workforce System (BMWS) after

Miami-Dade County pays the Prime contractor/vendor/consultant (approximately one month after). Miami-Dade County Departments will check the compliance audit status for each payment application to ensure that no audits are open for more than two (2) months. For construction contracts without measures, which only require reporting of cumulative subcontractor payments, a “Compliance Audit” shall only be verified prior to the final payment.

28.0 PUBLIC RECORDS AND CONTRACTS FOR SERVICES PERFORMED ON BEHALF OF MIAMI-DADE COUNTY (HB 1309):

HB 1309 re: governmental accountability has been signed into law by the Governor and was effective July 1. It generally applies only to state agencies, but there is one provision of HB 1309 that also applies to counties. This provision requires public agency contracts for services performed on behalf of the public agency to contain contract provisions clarifying the public record responsibilities of the contractor.

The Contractor shall comply with the Public Records Laws of the State of Florida, including but not limited to, (1) keeping and maintaining all public records that ordinarily and necessarily would be required by Miami-Dade County (County) in order to perform the service; (2) providing the public with access to public records on the same terms and conditions that the County would provide the records and at a cost that does not exceed the cost provided in Chapter 119, F.S., or as otherwise provided by law; (3) ensuring that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (4) meeting all requirements for retaining public records and transferring, at no cost, to the County all public records in possession of the Contractor upon termination of the contract and destroying any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements upon such transfer. In addition, all records stored electronically must be provided to the County in a format that is compatible with the information technology systems of the County. Failure to meet any of these provisions or to comply with Florida’s Public Records Laws as applicable shall be a material breach of the agreement and shall be enforced in accordance with the terms of the agreement.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR’S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (305) 375-5773; ISD-VSS@MIAMIDADE.GOV; 111 NW 1 STREET, SUITE 1300, MIAMI, FLORIDA 33128.

29.0 CONE OF SILENCE

The attention of the Contractor is hereby directed to the requirements of Miami-Dade County Administrative Order No. 3-27 – Cone of Silence.

30.0 BID PROTEST

The attention of the Contractor is hereby directed to the requirements of Miami-Dade County Implementing Order No. 3-21 – Bid Protest and Resolution R-1080-19 which updated the Bid Protest filing fees for contracts set-aside for bidding solely by certified Small Business Enterprises, and other relevant sections.

31.0 PROMPT PAYMENT

The attention of the Contractor is hereby directed to the requirements of Miami-Dade County Administrative Order No. 3-19 – Prompt Payment.

32.0 ASSIGNABILITY/ASSIGNMENT

ASSIGNABILITY - Department of Transportation and Public Works (DTPW) may assign its rights and obligations under the Contract to any successor to the rights and functions of DTW or to any governmental agency to the extent required by applicable laws or governmental regulations or to the extent that DTPW deems necessary or advisable under the circumstances.

ASSIGNMENT - The Contractor shall not assign, transfer, or otherwise dispose of this Contract, including any rights, title or interest therein, or their power to execute such Contract to any person, company or corporation without the prior written consent to DTPW. DTPW's consent for any assignment will not be unreasonably withheld.

33.0 SECTION 20.055 (5)

The contractor/consultant/vendor agrees to comply with s.20.055 (5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with s.20.055 (5), Florida Statutes.

Section 20.055 (5):

(5) It is the duty of every state officer, employee, agency, special district, board, commission, contractor, and subcontractor to cooperate with the inspector general in any investigation, audit, inspection, review, or hearing pursuant to this section. Beginning July 1, 2015, each contract, bid, proposal, and application or solicitation for a contract shall contain a statement that the corporation, partnership, or person understands and will comply with this subsection.

34.0 ESTIMATED TIME CONTINGENCY

This Contract contains a Contingency Allowance time extension not to exceed ten percent (10%) of the original Contract Duration. Pursuant to a written request by the Contractor for a time extension, that affects the critical path schedule of the Contract or any previously approved changes; written documentation that supports the justification of a time extension, review and concurrence by the COUNTY A/E, a Contract Contingency

Allowance Expenditure Authorization will be created for execution by all parties. Once executed the time extension will adjust the scheduled completion date. The cumulative total of all Contingency Allowance time extensions shall not exceed ten percent (10 %) of the original Contract Duration rounded off to the next whole number.

35.0 LCP TRACKER

Refer to the memo dated April 25, 2019 from the Director of Small Business Development Division for Implementation of LCtracker.

36.0 RESOLUTION NO. 1181-18 / DIRECTIVE NO. 182536

The Contractor is directed to the attached report regarding consideration of Contractor Safety Information as a Part of the Contractor Responsibility Review for Contract Award – Directive No. 182536 and the requirements of Resolution No. 1181-18, applicable to this Project.

Bidders may request a copy of any ordinance, resolution and/or administrative order cited in this bid solicitation, by contacting the Clerk of the Board at 305.375.5126.

37.0 DISCLOSURE OF ALLEGED DISCRIMINATION LAWSUITS

In accord with Resolution No. R-828-19 , the County reserves the right to request from any Bidder the disclosure of any lawsuits which include allegations of discrimination in the last ten years prior to date of solicitation, the disposition of such lawsuits, or statement that there are NO such lawsuits.”

38.0 E-VERIFY

By entering the Contract, the Awarded Bidder becomes obligated to comply with the provisions of Section 448.095, Florida Statute, titled "Verification of Employment Eligibility." This includes but is not limited to utilization of the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of all newly hired employees by the Awarded Bidder effective, January 1, 2021, and requiring all Subcontractors to provide an affidavit attesting that the Subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply may lead to termination of this Awarded Bidder, or if a Subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than twenty (20) calendar days after the date of termination. If this Contract is terminated for a violation of the statute by the Awarded Bidder, the Awarded Bidder may not be awarded a public contract for a period of one year after the date of termination, and the Awarded Bidder may be liable for any additional costs incurred by the County resulting from the termination of the Contract. Public and private employers must enroll in the E-Verify System (<http://www.uscis.gov/e-verify>) and retain the I-9 Forms for inspection.

39.0 APPLICABLE LEGISLATION

The selected Contractor will be required to abide by all applicable federal, state and local laws and ordinances, as amended. the applicable local laws and ordinances include, but are not limited to:

Florida Statute(s)

- [Section 119.07-](#) Inspection and Copying of Records; Photographing Public Records; Fees; Exemptions.
- [Section 119.0701](#) - Contracts; Public Records
- [Section 287.133](#) - Public Entity Crimes
- [Section 287.135](#) - Prohibition against contracting with scrutinized companies
- [Section 295.187](#) - Florida Veteran Business Enterprise Opportunity Act
- [Section 448.095](#) – Employment Eligibility

Ordinance(s)

- 77-13 - Financial Disclosures Requirements
- 90-133 - Disclosure of Ownership, Collective Bargaining Agreement, and Employee Wages, Health Care Benefits, Race, National Origin and Gender
- [97-35](#) - Policy of Fair Subcontracting Practices
- [97-67](#) - Amending Chapter 11A Prohibiting Discrimination in Contracting, Procurement, Bonding and Financial Services
- [99-152](#) - False Claim Ordinance
- [03-107](#) - Ordinance Amending Section 2-11.1 (s) of the Conflict of Interest and Code of Ethics
- [07-65](#) - Sustainable Buildings Program (when applicable)
- [08-113](#) - Ordinance Amending Sections 2-8.1.1 and 10-33.1 of the Miami-Dade County Code relating to bids from related parties to include a prohibition on collusive bidding
- [11-90](#) - Ordinance Relating to the Collection of Data for a Disparity Study
- [14-79](#) - Sea-Level Rise Ordinance (when applicable)

Resolution(s)

- R-1049-93 - Affirmative Action Plan Furtherance and Compliance
- R-385-95 - Policy prohibiting contracts with firms violating the American with Disabilities Act (ADA) and other laws prohibiting discrimination on the basis of disability ADA requirements, are a condition of award, as amended by Resolution R-182-00
- [R-531-00](#) - Prohibition of contracting with individuals and entities while in arrears with the County
- [R-183-00](#) - Family Leave Requirements
- [R-185-00](#) - Domestic Violence Leave
- [R-273-05](#) - Public Involvement Planning
- [R-63-14](#) - Contractor Due Diligence

- [R-828-19](#) – Disclosure of Alleged Discrimination Lawsuits
- [R-1106-15](#) - Aspirational Policy of Miami-Dade County
- [R-1011-15](#): Requiring Vendors to Provide Addresses of Local Offices Administrative Order(s)

Administrative Order(s)

- [03-27](#) - Cone of Silence
- [3-53](#) – Miscellaneous Construction Contracts Program
- [10-10](#) - Duties and Responsibilities of County Departments for Compliance with the Americans with Disabilities Act (ADA) Implementing Order(s)
- [3-19](#) – Prompt Payment

Implementing Order(s)

- [3-21](#) - Bid Protest Procedure
- [3-24](#) – Responsible Wages and Benefits for County Construction Contracts
- [3-37](#) – Community Workforce Program
- [3-61](#) – Residents First Training and Employment Program
- [3-63](#) – Employ Miami-Dade Program
- [7-7](#) – Policies and Procedures Establishing a Public Service Honor Code for Elected and Appointed County Officials and County Employees

Miami-Dade County Code(s)

- [Section 2-8.1](#) - Contracts and Purchases
- [Section 2-8.1.5](#) – Nondiscrimination
- [Section 2-8.4](#) - Protest Procedures
- [Section 2-8.5](#) – Procedure to provide preference to local business in county contracts
- [Section 2-8.5.1](#) - Procedure to Provide Preference to Local Certified Veteran Business Enterprises in County Contracts
- [Section 2-8.8](#) - Fair Subcontracting Practices
- [Section 2.11.1](#) - Conflict of Interest and Code of Ethics
- [Section 10-34](#) - Listing of Subcontractors Required

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

LCP Tracker

Memorandum



Date: April 25, 2019

To: Department Directors

From: Gary T. Hartfield, Director
Small Business Development (SBD) Division

Subject: Implementation of LCPtracker

A handwritten signature in blue ink, appearing to be "G. Hartfield", written over a light blue grid background.

On April 10, 2018, the Board of County Commissioners adopted Ordinance No. 18-33, which amended several Miami-Dade County Code sections to mandate use of the County's web-based system, the Business Management Workforce System (BMWS), to comply with Small Business Enterprise (SBE), Wage, and Workforce program requirements. The implementation of BMWS will soon be complete with the "go live" of LCPtracker on May 1, 2019.

LCPtracker is a new web-based system for firms to submit certified payroll and workforce program documentation, replacing our current paper-based reporting requirements at no cost to the firms. As part of the implementation of LCPtracker, Small Business Development (SBD), a division of the Internal Services Department, reviewed all active Miami-Dade County contracts in BMWS subject to Responsible Wages and Benefits, Living Wages and federally-funded contracts at Miami Dade County International Airport with Davis Bacon Wages. Based on the contract status, over three hundred existing contracts have been selected to go into LCPtracker. Attached is the latest report listing the projects by department. In addition to these identified projects, all County contracts subject to the above-mentioned wage requirements and awarded on or after April 1, 2019 will be synced to LCPtracker for the electronic submission of certified payrolls and workforce documentation.

Beginning with the May 2019 reporting period, all prime contractors/vendors and their subcontractors at every tier level participating on a contract that was added to LCPtracker must submit certified payrolls via the system by the 10th day of the month for work performed in the previous month. Therefore, all certified payrolls for work performed in the month of May 2019 must be submitted electronically by **June 10, 2019**. At which point, the department should no longer collect or accept paper certified payrolls for these projects.

SBD will provide department staff with access to LCPtracker to view certified payrolls by project, firm, and reporting period. Prior to approving a firm's pay application/invoice, departments must log into LCPtracker to verify certified payrolls have been submitted for all firms on the project, regardless of tier, for the period of the pay application.

Attached are the steps to generate the LCPtracker report titled "Certified Payroll Report (CPR) Status Report" for a project and period of a pay application/invoice under review. This report will list all received, rejected, pending and delinquent certified payrolls for a project for the period requested. For any delinquent certified payrolls listed on the report, the departments should:

- 1) Provide written notice to the prime contractor/vendor (and SBD, if the prime contractor/vendor is a certified SBE or any of the subcontractors are certified) that the review and approval of its pay application/invoice is on hold until all firms that worked during the period of the pay application/invoice have submitted their certified payrolls via LCPtracker.

- 2) Provide the prime contractor/vendor with a copy of the CPR Status Report, or provide the report to the firm(s) listed under the delinquent section of the report, the week ending date for the missing payroll(s), and a deadline to submit the missing certified payroll(s) via LCPtracker.

LCPtracker user accounts for department staff on existing applicable contracts will be automatically created. For any additional staff requiring access, the department's SBD Liaison should provide their name and email address to Alecia Anderson, SBD Section Manager, at Alecia.Anderson@miamidade.gov or Shawn Gannon, Special Projects Administrator, at Shawn.Gannon@miamidade.gov.

As always, SBD will continue to work closely with departments to ensure compliance with the legislated changes and offer monthly hands-on training opportunities for department staff and firms. Should you have any questions, please do not hesitate to contact Alice Hidalgo-Gato, SBD Section Chief, at (305) 375-3153.

Attachments

- c. Office of the Mayor Senior Staff
Tara C. Smith, ISD Director
SBD Liaisons
Procurement Liaisons

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

SAFETY DIRECTIVE 182536 / RESOLUTION No. 1181-18

Memorandum



Date: February 26, 2019

Agenda Item No. 2(B)2
March 19, 2019

To: Honorable Chairwoman Audrey M. Edmonson
and Members, Board of County Commissioners

From: Carlos A. Gimenez
Mayor

A handwritten signature in blue ink, which appears to be "Carlos A. Gimenez", written over a horizontal line.

Subject: Report Regarding Consideration of Contractor Safety Information as a Part of the
Contractor Responsibility Review for Contract Award – Directive No. 182536

This report is in response to Resolution No. R-1181-18, approved at the November 8, 2018 meeting of the Board of County Commissioners (Board), directing the County Mayor or the County Mayor's designee to provide a status report describing the processes, procedures and actions taken to consider safety records of prospective contractors and first-tier subcontractors for public construction projects.

The County reviews contractor responsibility prior to award for all construction contracts. Pursuant to Resolution No. R-187-12, and in accordance with procurement guidelines, staff currently performs due diligence reviews as a part of the process to determine a contractor's responsibility. This review includes checking the contractor's corporate status, lists for convicted, debarred and suspended vendors, excluded parties, and internal County reports for small business compliance, evaluations and delinquent contractors.

County staff will require contractors and proposed first-tier subcontractors to submit the following items for the previous three years from the United States Department of Labor Occupational and Safety Health Administration (OSHA):

1. The OSHA Form 300 containing a list of the company's work-related injury and illness data; and
2. OSHA inspection data.

A copy of this memorandum and Resolution No. R-1181-18 will be forwarded to each of the department directors who manage capital programs across the County. Confirmation that safety due diligence was performed and any instance when a safety record affects the contractor responsibility will be included in any memorandum to the Board recommending an award or ratification of award of a construction project.

Pursuant to Ordinance No. 14-65, this memorandum will be placed on the next available Board Meeting agenda. Should you require additional information, please contact Tara C. Smith, Director, Internal Services Department, at 305-375-1135.

- c: Abigail Price-Williams, County Attorney
Geri Bonzon-Keenan, First Assistant County Attorney
Office of the Mayor Senior Staff
Tara C. Smith, Director, Internal Services Department
Department Directors
Linda L. Cave, Acting Director, Clerk of the Board
Eugene Love, Agenda Coordinator
Yinka Majekodunmi, Commission Auditor

MEMORANDUM

Agenda Item No. 11(A)(1)

TO: Honorable Chairman Esteban L. Bovo, Jr.
and Members, Board of County Commissioners

DATE: November 8, 2018

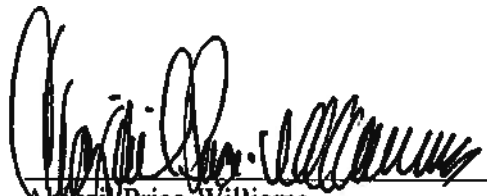
FROM: Abigail Price-Williams
County Attorney

SUBJECT: Resolution directing the County Mayor to: (1) consider safety records of prospective contractors and first-tier subcontractors for public construction projects; (2) confirm the safety records of recommended contractors and first-tier subcontractors were considered and report any instance where the safety record may adversely affect a finding of contractor responsibility in award memorandum to the Board; and (3) provide a report to the Board within 60 days

Resolution No. R-1181-18

This item was amended at the 10-17-18 Government Operations Committee to add language in Section 1 specifying that the OSHA related safety information required to be considered in the resolution shall be initially provided by the prospective contractors and first-tier subcontractors bidding on County construction projects.

The accompanying resolution was prepared and placed on the agenda at the request of Prime Sponsor Commissioner Daniella Levine Cava.


Abigail Price-Williams
County Attorney

APW/lmp



MEMORANDUM

(Revised)

TO: Honorable Chairman Esteban L. Bovo, Jr.
and Members, Board of County Commissioners

DATE: November 8, 2018

FROM: 
Abigail Price-Williams
County Attorney

SUBJECT: Agenda Item No. 11(A)(1)

Please note any items checked.

- ☐ **"3-Day Rule" for committees applicable if raised**
- ☐ **6 weeks required between first reading and public hearing**
- ☐ **4 weeks notification to municipal officials required prior to public hearing**
- ☐ **Decreases revenues or increases expenditures without balancing budget**
- ☐ **Budget required**
- ☐ **Statement of fiscal impact required**
- ☐ **Statement of social equity required**
- ☐ **Ordinance creating a new board requires detailed County Mayor's report for public hearing**
- ☐ **No committee review**
- ☐ **Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous ____) to approve**
- ☐ **Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 11(A)(1)
11-8-18

RESOLUTION NO. R-1181-18

RESOLUTION DIRECTING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO: (1) CONSIDER SAFETY RECORDS OF PROSPECTIVE CONTRACTORS AND FIRST-TIER SUBCONTRACTORS FOR PUBLIC CONSTRUCTION PROJECTS; (2) CONFIRM THE SAFETY RECORDS OF RECOMMENDED CONTRACTORS AND FIRST-TIER SUBCONTRACTORS WERE CONSIDERED AND REPORT ANY INSTANCE WHERE THE SAFETY RECORD MAY ADVERSELY AFFECT A FINDING OF CONTRACTOR RESPONSIBILITY IN AWARD MEMORANDUM TO THE BOARD; AND (3) PROVIDE A REPORT TO THE BOARD WITHIN 60 DAYS

WHEREAS, we live in a large, heavily-populated and diverse metropolitan area with constantly expanding public infrastructure needs and demands; and

WHEREAS, Miami-Dade County's infrastructure, including its public buildings, roads and bridges, mass transit facilities, airports and seaport, fuel supply facilities, medical and nursing care facilities, recreational facilities, sporting facilities and water and wastewater facilities, constantly require significant new construction and on-going improvements and upgrades; and

WHEREAS, consequently, to meet these infrastructure demands, Miami-Dade County (the "County") enters into significant construction contracts for public buildings, structures and other public works; and

WHEREAS, a substantial number of the County's public construction projects are large complex projects requiring a large of number of workers to complete the project; and

WHEREAS, many of these County projects occur in densely populated areas where members of the public may be directly exposed to the dangers of a construction site; and

WHEREAS, the tragic loss of life caused by the collapse of the Florida International University pedestrian bridge reminds this community that the safety of members of the public and workers relating to public construction projects is of paramount importance; and

WHEREAS, this Board wants to ensure that a contractor's safety record be fully considered in the selection and contracting of construction companies for public infrastructure projects,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board:

Section 1. Directs the County Mayor or County Mayor's designee to consider the safety records of prospective contractors and their first-tier subcontractors as part of the due diligence investigation performed to determine contractor responsibility for the construction or improvement of a public building, structure or other public construction project that will be presented to this Board for contract award or ratification of an award. Such investigation shall include reviewing available relevant information from the United States Department of Labor Occupational Safety and Health Administration (OSHA) such as OSHA logs of work-related injuries and illnesses (Form 300) and OSHA inspection data >>which shall be initially provided by the prospective contractors and first-tier subcontractors<<¹. The OSHA information shall be reviewed for at least the previous three (3) years to the extent that such information is available for that period. In addition, County staff may use other sources to investigate the safety records

¹ Committee amendments are indicated as follows: Words stricken through and/or [[double bracketed]] are deleted, words underscored and/or >>double arrowed<< are added.

of prospective contractors and their first-tier subcontractors for public construction projects in determining contractor responsibility.

Section 2. Directs the County Mayor or County Mayor's designee to include in his or her memorandum to this Board recommending an award or ratification of an award of a County public construction project confirmation that the safety record was considered by the County as part of the due diligence required pursuant to Resolution R-187-12, including reporting to this Board any instance where the safety record may adversely affect a finding of contractor responsibility.

Section 3. Directs the County Mayor or County Mayor's designee to submit a report to this Board within 60 days of the effective date of this resolution describing the processes, procedures and actions taken to comply with Sections 1 and 2 of this resolution and place the completed report on an agenda of the Board pursuant to Ordinance No. 14-65.

The Prime Sponsor of the foregoing resolution is Commissioner Daniella Levine Cava. It was offered by Commissioner **Dennis C. Moss**, who moved its adoption. The motion was seconded by Commissioner **Sally A. Heyman** and upon being put to a vote, the vote was as follows:

Esteban L. Bovo, Jr., Chairman	aye
Audrey M. Edmonson, Vice Chairwoman	aye
Daniella Levine Cava	aye
Sally A. Heyman	aye
Barbara J. Jordan	aye
Jean Monestime	aye
Rebeca Sosa	aye
Xavier L. Suarez	aye
Jose "Pepe" Diaz	aye
Eileen Higgins	aye
Joe A. Martinez	aye
Dennis C. Moss	aye
Sen. Javier D. Souto	aye

The Chairperson thereupon declared this resolution duly passed and adopted this 8th day of November, 2018. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this resolution and the filing of this approval with the Clerk of the Board.



MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

Linda L. Cave

By: _____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

A handwritten signature in black ink, appearing to read "E. Gonzalez", is written over a horizontal line.

Eduardo W. Gonzalez

A handwritten mark, possibly a stylized "4" or a signature, is located at the bottom center of the page.

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

RESPONSIBLE WAGES & BENEFITS
(Ordinance No. 90-143, as amended)

BUILDING

The following Minimum Wage Rates and Responsible Wages and Benefits are those established for the listed trades working at the Work site by the U. S. Secretary of Labor and/or by the Board of County Commissioners under Ordinance No. 90-143, as amended. The rates have been established in accordance with the stipulations contained in the Davis-Bacon Act and/or by Miami-Dade County Ordinance No. 90-143, as amended, and have been established as being the rates for the corresponding classes of workers employed for projects of a similar character in the locality where the Work is to be performed. The Contractor shall pay wages and fringe benefits at rates not less than the higher of the Minimum Wage Rates (Davis-Bacon Act) or Responsible Wages and Benefits (Ordinance No. 90-143, as amended) as stipulated for each listed trade. A mistake in the indicated wages and fringe benefits will not entitle the Contractor to cancel the Contract, to increase the Contract price or to recover additional payment.

The Contractor is ultimately responsible for the verification and use of the latest wages publication.

MIAMI-DADE COUNTY, FLORIDA

RESPONSIBLE WAGES AND BENEFITS SECTION 2-11.16 OF THE CODE OF MIAMI-DADE COUNTY

SUPPLEMENTAL GENERAL CONDITIONS

WAGES AND BENEFITS SCHEDULE

Construction Type: **BUILDING**

Building Construction generally is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade.

Note: Where multiple construction is "incidental" in function, the construction is considered a part of the building project for wage determination purposes.

NOTICE TO EMPLOYEES

FAIR WAGE AFFIDAVIT

LCPTRACKER – CONTRACTOR QUICK START GUIDE

2023

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- D. FAIR WAGE AFFIDAVIT**
- E. LCPTRACKER - CONTRACTOR QUICK START GUIDE**

SUPPLEMENTAL GENERAL CONDITIONS TO BIDDERS

Bidders are advised that the provisions of § 2-11.16 *et seq.*, Code of Miami-Dade County (the "Code"), pertaining to Responsible Wages on County Construction Contracts, will apply to any contract awarded pursuant to this bid. By submitting a bid under these provisions, a bidder agrees to comply with these provisions of the Code and to acknowledge awareness of the penalties for non-compliance. A copy of the Code may be obtained from the department issuing the specifications for this bid or online at <http://www.municode.com/resources/gateway.asp?pid=10620&sid=9>.

This Supplemental General Conditions is organized with the following sections:

1. Minimum Wages and Posting of Information
2. Liability for Unpaid Wages, Liquidated Damages and Withholding
3. Payrolls Records, Reporting and Inspection of Records
4. Subcontracts
5. Complaints, Hearings and Contracts Termination and Debarment
6. Apprentices and Trainees
7. Other State and Federal Wage Laws

1. MINIMUM WAGES AND POSTING OF INFORMATION

A. Minimum Wages

All employees working on the project must be paid the combined dollar value (hourly rate and benefits) listed in the Wages and Benefits Schedule for work being performed. Payment to workers shall be made in the form of check, money order or direct deposit. Cash payments are not allowed. The rates paid shall be no less than those contained in the Wages and Benefits Schedule regardless of any contractual relationship that may exist between the contractor and the workers hired to perform under the contract. For any classification of workers, the hourly rate paid must equal the sum of the base rate and the fringe benefit rates listed for that classification in the Wages and Benefits Schedule. Paying below the base rate is not acceptable, even if the value of the fringe benefits exceeds the value of the required contribution. Paying the base wage rate or above and making payments to legitimate fringe benefits providers on behalf of workers is acceptable.

Wages and benefits listed in the Wages and Benefits Schedule will be reviewed and increased, if appropriate, once a year, on January 1st. The rates for wages and benefits to be paid for work performed under this contract and during each subsequent calendar year will be the rate in effect on January 1st of the year in which the work is performed.

B. Fringe Benefits

The contractor, or any subcontractor under the contractor, may pay the base rate to the employee plus pay contributions to employee benefit plans; or, pay the base rate plus the benefit rate in the Wages and Benefits Schedule in the form of check, money order or direct deposit, but not cash. If the value of the fringe benefits is less than the hourly amount required in the wage schedule the difference must be paid to the employee as an increase to their base pay.

Payments made to health insurance companies for hospitalization and medical costs, to dental insurance companies for dental costs, retirement plans, and life insurance companies for life insurance are fringe benefits.

Payments made irrevocably to a trustee or third party pursuant to a bona fide fringe benefit fund, plan or program for health, life, death, and dismemberment, dental, vision insurance and retirement/pension can be credited towards meeting the required wages. These payments must be made not less often than quarterly. Annual payments to a fringe benefit fund, plan or program will not be accepted.

C. More than One Classification

Workers must be paid the appropriate base rate and fringe benefits on the Wages and Benefits Schedule for the classification of work actually being performed without regard to skill. Workers performing work in more than one classification may be paid at the rate listed for each classification for the time they worked; however, the employer's payrolls must accurately show the time spent in each classification in which work is performed. This does not apply to workers performing tasks that are incidental to the trade they are working in, such as handling materials they will be installing or cleaning up the worksite after they complete their work.

D. Classification Not Listed in the Wage Schedule

If you do not find a wage classification in the Wages and Benefits Schedule that describes the work actually being done, you must contact Small Business Development. Questions concerning the comparability of worker classifications or the applicability of Davis Bacon classifications will be determined by the County.

E. Complaints by Workers

Any complaints of underpayment by the workers should be filed with:

**Internal Services Department
Small Business Development Division
111 NW 1ST Street, 19TH Floor Miami, FL 33128
Telephone: (305) 375-3111 FAX: (305) 375-3160
Email: SBDMAIL@MIAMIDADE.GOV**

Neither the contractor nor any subcontractor on the project may terminate an employee

performing work on the contract because of such employee's filing a complaint regarding underpayment of required wage rates.

F. Posting of Wages

The contractor and all subcontractors must permanently post the Wages and Benefits Schedule, together with a notice of the fines that may be assessed to the contractor or subcontractor, for failure to pay the required wage rates, at the site where the contract work is being performed in a prominent and accessible place where it can be easily seen by the workers. Failure to post the Wages and Benefits Schedule is a violation.

2. LIABILITY FOR UNPAID WAGES; PENALTIES; WITHHOLDING

A. Compliance by Bidders

In the event of underpayment of the required wage rates, the contractor shall be liable to the underpaid employee for such underpayment. In addition, the contractor shall pay a penalty in accordance with the requirements of the Code and section 2B below. Contractors must pay all back wages and penalties on previous contracts before being awarded or participating on a new contract.

B. Penalties

In addition to any under payment due to employees, contractors may be fined a penalty in an amount equal to twenty percent (20%) of the first underpayment; forty percent (40%) of the amount of the second underpayment; for the third and successive underpayments, a penalty in an amount equal to sixty percent (60%) of the underpayment. A fourth underpayment violation within a three (3) year period shall subject the contractor to debarment to be initiated by SBD in accordance with the debarment procedures of the County. A fourth underpayment violation shall also constitute a default of the subject contract and shall be cause for suspension or termination. If the required payments are not made within the specified period of time, the non-complying contractor and principal owners thereof shall be prohibited from bidding on or otherwise participating in County contracts for a period not to exceed three (3) years.

C. Withholding Contractor Payments

The County may stop payment of monies to the contractor necessary to pay any wages that are required, and any penalties owed by the contractor or subcontractor. The withheld monies shall be given to the employee in accordance with the provisions of Section 5, "Complaints and Hearings; Contract Termination and Debarment".

3. PAYROLL; BASIC RECORDS; REPORTING

A. Payroll Records

The contractor and all subcontractors must keep accurate written records, signed under oath as true and correct, showing payment of the required wages. These records must include the name, social security number of each worker, his or her address, correct classification, per hour rates of wages paid (including rates of contributions or costs anticipated for legitimate fringe benefits), and daily and weekly number of hours worked on this project. Contractors employing apprentices or trainees under approved programs shall keep records of the registration or apprenticeship programs, the certification of trainee programs, the registration of the apprentices and trainees, and wage rates as required by the applicable programs, in accordance with the provisions of Section 6 "Apprentices and Trainees".

B. LCPtracker

Each contractor and every low-tier subcontractor is required to submit all certified payrolls and labor compliance documentation electronically by the 10th of every month for the previous month using LCPtracker, a web-based Certified Payroll Management System (www.lcptracker.net). The system is managed by Small Business Development ("SBD"), a division of the Internal Services Department. The use of the system is **mandatory**, pursuant to Miami-Dade County Ordinance No. 18-33.

Each contractor and subcontractor on applicable contracts will be provided a username and password to access LCPtracker system. Use of the system will involve data entry of weekly payroll information including: employee name, social security number, trade classification, total hours and fractions of hours for every type of trade classification work performed on the project, and wage and benefits paid. LCPtracker's software can also interface with most payroll and accounting software programs that are capable of generating a CSV (comma delimited file). If your program does not have this capability, LCPtracker may be able to build an interface to communicate with your accounting software.

Hands-on training sessions for the LCPtracker system is available. To RSVP, please visit <https://mdcsbd.gob2g.com/events.asp> and select the training session you would like to attend.

If you are not able to attend a training class in person, there are other free training options available for contractors:

Option 1: Web-Based Training Sessions. Online and live training sessions facilitated by members of LCPtracker's Customer Support Team are offered several times per month. All you need to participate is a computer with internet access, an email address, and access to a phone.

- Go to the LCPtracker Website: www.lcptracker.net
- Enter your username/password
- Select "Watch Now" on the Projects tab and register for the Online training sessions

Option 2: Computer-Based Training Courses. Pre-recorded videos can be viewed at any time by logging into the LCPtracker website (www.lcptracker.net) and following these simple steps:

- Enter your username/password
- Select the “Training Materials” link located at the top of the page
- Select Contractor Training Videos

C. Inspection of Records

The contractor or subcontractor must make these records available for inspection and copying by an authorized representative of the County and shall allow such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the reports or make the records on which they are based available, the County may, after written notice to the contractor, cause the stoppage of payments. Also, failure to submit the reports upon request or make the records available may be reason for debarment. The prime contractor is responsible for the submission of the information required and for the maintenance of records and provisions of access to same by all subcontractors.

4. SUBCONTRACTS

The contractor must insert into any subcontracts the clauses set forth in paragraphs 1 through 6 of this Supplemental General Conditions and a clause reminding their subcontractors to include these paragraphs in any lower tier subcontract. The prime contractor will be responsible for compliance by all subcontractors and their lower tier subcontractors with the clauses set forth in paragraphs 1 through 6 of this Supplemental General Conditions. In the event of non-payment or underpayment of the required wages, the prime contractor shall be liable to the underpaid employees of the subcontractor for each underpayment.

5. COMPLAINTS AND HEARINGS; CONTRACT TERMINATION AND DEBARMENT

A. Complaints

Upon receipt of a written complaint or identification of a violation pertaining to an employee wage underpayment of the required overall hourly rates, the County will investigate the complaint and notify the contractor or subcontractor employing said workers of the complaint/violation. The notice shall include a brief description of the said complaint/violation, the dollar amount that the contractor or subcontractor is liable for in back wages and fines, the required corrective action(s) to be taken and the due date for payment of back wages and fines or to request a compliance meeting. Failure to comply or request a compliance meeting within the due date specified shall constitute a waiver of the contractor's or subcontractor's right to a compliance meeting, and that such waiver shall constitute an admission of the complaint/violation. The County may withhold from the contractor so much accrued payments as may be considered necessary by the Contracting Officer to pay employees of the contractor or subcontractor under

them for the performance of the contract work, the difference between the combined overall hourly wage rate and benefits required to be paid by the contractor/subcontractor to the employee on the work and the amounts received by such employee where violations have been found.

Any employee of a contractor or subcontractor who performed work on a contract subject to this section, may instead of adhering to the County administrative procedure, but not in addition to such procedure, bring an action by filing suit against the contractor or subcontractor in any court of competent jurisdiction to enforce these provisions and may be awarded back pay, benefits, attorney's fees, costs. The applicable statute of limitations of such a claim will be two (2) years as provided in Section 95.11(4)(c), Florida Statutes, in an action for payment of wages. The court may also impose sanctions on the employer, including those persons or entities aiding or abetting the employer, to include wage restitution to the affected employee and damages payable to the covered employee in the sum of up to five hundred dollars (\$500.00) for each week each employer is found to have violated these provisions.

B. Hearings

A contractor or subcontractor has the right to an administrative hearing to appeal a determination of non-compliance within (30) days of the notice. To request a hearing the contractor or subcontractor must file a written request along with a \$250.00 non-refundable filing fee with the County Mayor or his or her designee. Upon timely receipt of a request for an administrative hearing request, the County Mayor shall appoint a hearing officer and fix a time for an administrative hearing thereon. A notice of hearing (together with a copy of SBD's determination of non-compliance) shall be served upon the contractor (or subcontractor). Upon completion of the hearing, the hearing officer shall submit proposed written findings and recommendations to the County Mayor within a reasonable time. The County Mayor or designee will review the findings and recommendations of the Hearing Officer and decide to accept or reject the recommendations of the Administrative Hearing Officer either with or without modifications.

C. Penalties

If the County Mayor or designee determines that the contractor or subcontractor substantially or repeatedly failed to comply, the non-complying contractor or subcontractor and the principal owners thereof shall be prohibited from bidding or otherwise participating in County contracts for the construction, alteration and/or repair, including painting or decorating, of public buildings or public works for a period of three years. The County Mayor or designee may order the withheld amount equal to any underpayment remitted to the employee. In addition, the County Mayor or designee may order payment of a penalty to the County. If the required payment is not made

within a reasonable period, the County Mayor or designee may order debarment as described above.

A breach of the clauses contained in this Supplemental General Conditions shall be deemed a breach of this contract and may be grounds for termination of the contract, and for debarment.

6. APPRENTICES AND TRAINEES

A. Apprentices

Apprentices will be permitted to work at less than the rate listed in the Wages and Benefits Schedule for the work they perform when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau, or if a person is employed in his or her first 90 days probationary employment who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a state apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice. All apprentices participating on a project must approved in LCPtracker by SBD. LCPtracker will not allow a contractor to enter an apprentice on its certified payrolls until SBD has received and approved the Apprenticeship Certification, which is only valid for 90 days after issuance. To obtain SBD's approval, the Program Sponsor must submit the Apprenticeship Certification to:

**Internal Services Department
Small Business Development Division
111 NW 1ST Street, 19TH Floor Miami, FL 33128
Telephone: (305) 375-3111 FAX: (305) 375-3160
Email: SBDMAIL@MIAMIDADE.GOV**

Any worker listed as an apprentice on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, must be paid not less than the wage on the Wages and Benefits Schedule for the classification of work actually performed.

B. Apprentice Ratio

The number of apprentices shall not be greater than the ratio listed in the Wages and Benefits Schedule. If the number of apprentices working on the project, is greater than the ratio permitted, the apprentices must be paid the wage rate on the Wages and Benefits Schedule for the work performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in the percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be

observed. Every apprentice must be paid at least the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable schedule.

C. Apprentice Fringe Benefits

Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable apprentice classification; fringe benefits shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a state apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is provided.

D. Trainees

The rules for trainees are similar to those of apprentices. Except as provided in 29 C.F.R. § 5.16, trainees cannot work for less than the predetermined rate listed in the Wages and Benefits Schedule unless they are registered in a program certified by the U. S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site must not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Trainees must be paid fringe benefits in accordance with the Trainee Program. If the Trainee Program does not specify fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the administrator of the wage and hour division determines that the rate is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination, which provides for less than the full fringe benefits for apprentices.

E. Summary of Apprentices and Trainees

Any worker who is not registered in a training plan approved by the Employment and Training Administration must be paid not less than the wage rate on the Wages and Benefits Schedule for the work actually performed without regard to skill. In addition, if the number of apprentices and trainees are in excess of the ratio permitted under the registered program, then the wages that must be paid are those listed on the Wages and Benefits Schedule for the work actually performed by the apprentices or trainees. If the Employment and Training Administration cancels approval of an apprenticeship or training program, the contractor will no longer be permitted to pay the trainee or apprenticeship rate.

7. OTHER STATE AND FEDERAL WAGE LAWS

All Miami-Dade County contracts require contractors to comply with all applicable state and federal wage laws including payment of overtime. To obtain information regarding these laws, please visit the U.S. Department of Labor Wage and Hours Division at www.dol.gov/whd.

MIAMI-DADE COUNTY
§2-11.16 CODE OF MIAMI-DADE COUNTY
RESPONSIBLE WAGES AND BENEFITS SCHEDULE
2023

"BUILDING CONSTRUCTION"

TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
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BRICKLAYERS

Bricklayer	\$ 26.30	\$ 5.40	\$ 3.15	\$ 34.85
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(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see page 6 of the Supplemental General Conditions for more information.

Apprentices:

1st 6 month period	\$ 17.10	\$ 5.40	\$ 3.15	\$ 25.65
2nd 6 month period	\$ 18.41	\$ 5.40	\$ 3.15	\$ 26.96
3rd 6 month period	\$ 19.73	\$ 5.40	\$ 3.15	\$ 28.28
4th 6 month period	\$ 21.04	\$ 5.40	\$ 3.15	\$ 29.59
5th 6 month period	\$ 22.36	\$ 5.40	\$ 3.15	\$ 30.91
6th 6 month period	\$ 23.67	\$ 5.40	\$ 3.15	\$ 32.22

Apprentice Ratio: There shall be one (1) apprentice for every three (3) journeymen.

Scope of work under this trade includes but is not limited to: all forms of masonry construction, including all brick, stone, concrete block, marble, cement, plaster, mosaic, tile, terrazzo, terra cotta, glass block, refractory materials, and pointing-cleaning-caulking. The complete installation of all forms of masonry panels including the on-site fabrication, all integral elements of masonry construction and all forms of substitute masonry materials or building systems thereto utilized.

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CARPENTERS

Carpenter	\$ 25.65	\$ 5.50	\$ 6.65	\$ 37.80
Foreman (5 or more workers one must be a Foreman)	\$ 27.78	\$ 5.50	\$ 6.65	\$ 39.93
Foreman (12 or more workers)	\$ 31.54	\$ 5.50	\$ 6.65	\$ 43.69
General Foreman (2 or more foremen)	\$ 33.84	\$ 5.50	\$ 6.65	\$ 45.99

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see page 6 of the Supplemental General Conditions for more information.

1st 6 month period	\$ 15.90	\$ 5.50	\$ 6.65	\$ 28.05
2nd 6 month period	\$ 17.19	\$ 5.50	\$ 6.65	\$ 29.34
3rd 6 month period	\$ 18.47	\$ 5.50	\$ 6.65	\$ 30.62
4th 6 month period	\$ 19.75	\$ 5.50	\$ 6.65	\$ 31.90
5th 6 month period	\$ 21.03	\$ 5.50	\$ 6.65	\$ 33.18
6th 6 month period	\$ 22.32	\$ 5.50	\$ 6.65	\$ 34.47
7th 6 month period	\$ 23.60	\$ 5.50	\$ 6.65	\$ 35.75
8th 6 month period	\$ 24.88	\$ 5.50	\$ 6.65	\$ 37.03

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Acoustic Ceilings

The unloading, distribution and installation of all materials and component parts of all types of acoustic ceilings and plenums, regardless of their material composition or method of manner of their installation, attachment or connection, including, but not limited to the following items: all hangers, carrying channels, cross furring, stiffeners, braces, all bars regardless of materials or methods of attachment, all integrated gypsum wall board ceiling heat panels, fill, all main tees, cross tees, splines, splays, wall and ceiling angles or moldings, all backing board and all finish ceiling materials regardless of method of installation excepting acoustic plaster.

Doors

The unloading, distribution and installation of all prefinished wooden doors, hollow metal doors, overhead or mechanical doors, whether steel, aluminum or plastic and all supporting systems. Install all hollow metal jambs and hardware on doors whether they be interior or exterior.

Floor Covering

Carpeting including all measuring, lay-outs, remaking, cutting, fitting, sewing, binding, sizing, laying, stretching, repairing and installation, either by hand or power machine. The installation of resilient flooring to include the laying of all cork, linoleum, asphalt, mastic, plastic, rubber tile, whether nailed or laid in with Lino paste, glue, mastic or substitute materials. All wood flooring, whether nailed or laid in mastic. All necessary preparatory work including the scraping, filling of holes, nailing, lay of paper or other underlayments. The sanding or refinishing of all wood floors either by hand or power machine.

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TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
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CARPENTERS, Continued

Forms

The fabrication and re-fabrication of all forms and dismantling of forms when they are to be reused. This includes removable corrugated metal forming systems and all other patented forming systems. When power rigging is used in the setting or dismantling of forms, and the necessary false work, all handling, rigging and signaling. The setting, leveling and aligning of all templates for anchor bolts for structural members, machinery, and the placing, leveling, bracing, burning and welding for all bolts. The installation of embedded materials where attached to forms and/or embedded materials for machinery. Framing in connection with the setting of bulkhead; fabrication of screeds and stakes for floors and form for articles. The handling of lumber, fabricated forms and form hardware installed by carpenters. The building and moving of all scaffolding for runways and staging. The cutting or framing of openings for piles, conduit, ducts, when they pass through floors, partitions or forms. All rigging, setting, aligning and hand signaling when setting up pre-cast units.

Furniture

The loading, unloading, handling, dismantling, distribution, erection, stockpiling, refurbishing, and installation of all modular and systems office furniture and all components parts, new and refurbished.

Lathing

The prefabricating, erecting, construction, furring, making and erecting of brackets, clips and hangers, wood, wire and metal lath to which plaster-type materials are applied; corner beads, arches erected for the purpose of holding plaster or cement.

The rigging, erecting, staying and fastening in any manner of all pre-cast aggregate panels of all types. All carrying bars, purlins and furring, regardless of size; light iron and metal furring of all descriptions for the receipt of metal lath, rock lath and all light iron when studs are to receive metal lath or rock lath for the application of plaster; and all other light iron furring erected to receive lath and plaster. The nailing, typing and fastening of all wire and metallic lath such as wire cloth, wire mesh, expanded metal lath, hy rib and flat expanded metal lath and wire of all descriptions as well as the placing of all hangers to support suspended ceilings or any of the above types of light iron and metal furring which receive lath and plaster; the placing of all types of floor lath, such as hyrib lath, paperback steeltex floor lath, Penn metal rib, etc. The tying, nailing, clipping or fastening, mechanical or otherwise, of all types of lath regardless of size, such as wood lath, plasterboard, button board, flaxilinum board, bishopric, celetex, gypsum lath, foam and Styrofoam, rock lath or any and all other types of material erected to receive or hold plaster. The erection of all metal plastering accessories such as metal corner beads and other plastering accessories which are covered and/or serve as a ground of screed for plaster.

Material Procedures

The unloading, handling and erection and power rigging in connection with laminated wood arches, trusses and decks. All power rigging and signaling of Carpenters' materials. The operation and maintenance of small air compressors generators, electric or gasoline power motors for the operation of woodworking machinery. The unloading, handling and distribution of materials erected and installed. by carpenters. All prefabricated, manufactured and finished materials regardless of packing, shall be unloaded distributed and installed by the Carpenters. This shall include, but not be limited to all forms, templates, bolt, cabinets and all materials normally installed by Carpenters. Underpinning, lagging, bracing, propping and shoring, raising and moving of all building structures of parts thereof by the use of jack, power rigging or other methods shall be the work. This includes the unloading and setting of modular units and all work related thereto. The assembly and erection of pole and pre-engineered buildings.

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CARPENTERS, Continued

Railing

The installation of all construction of temporary guardrails, barricades and /or safety devices. The unloading, handling, distribution, installation and backing necessary for all aluminum, vinyl, plastic or wood handrails and guardrails.

Scaffolding

The installation of all construction of temporary guardrails, barricades and /or safety devices. The unloading, handling, distribution, installation and backing necessary for all aluminum, vinyl, plastic or wood handrails and guardrails.

Sink Tops and Cabinets

The unloading, distribution and installation of all sink tops, cabinets, hoods base and wall units.

Weather and Spray Protection

The fabrication, erection and removal of frames, enclosures of buildings or scaffoldings, the draping of tarps, visqueen or similar coverings when secured by wire, nailing, bolting or clamps. The handling and setting up of all temporary enclosures.

Windows, Walls and Partitions

The installation, erection and/or application of all material component parts of wall and partitions regardless of all materials composition or method or manner of their installation, attachment of connection, including but not limited to the following items: All floor and ceiling runners, studs, stiffeners, cross bracings, Te-Blocking, resilient channels, furring channels, doors and windows including frames, casing, molding, base, accessory trim items, gypsum drywall materials, the making and installing of all backing for fixtures and welding of studs or other fasteners to receive materials being applied; laminated gypsum systems backing board, finish board, fireproofing of beams and columns, fireproofing of chase, sound and thermal installation materials, fixture attachments including all layout work, preparation of all openings for lighting, air vents or other purposes, all toilet partitions and insulated translucent wall and ceiling systems, and all other necessary or related work.

The erection of exterior metal studs and the installation windows metal or wood and those attached to metal studs.

The installation of rockwool, cork, fiberglass, tectum, Styrofoam and other insulation material used form sound of weatherproofing, the renewal for caulking and replacing of staff bead, brick mould and all Oakum, caulking, substitutes and all other caulking in connection there with, and the installation of chalkboards, cork and tack boards.

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DRYWALL FINISHERS

Drywall Finisher - Hand Tools	\$ 21.54	\$ 6.72	\$ 5.83	\$ 34.09
Drywall Finisher - Bazooka Box	\$ 22.54	\$ 6.72	\$ 5.83	\$ 35.09

\$1.00 Charge person working up to 5 employees

\$1.50 Charge person working 6 or more employees

\$1.00 General Foreman above highest paid Charge person

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st 6 months	\$ 14.00	\$ 6.72	\$ 1.67	\$ 22.39
2nd 6 months	\$ 15.08	\$ 6.72	\$ 1.67	\$ 23.47
3rd 6 months	\$ 16.16	\$ 6.72	\$ 1.67	\$ 24.55
4th 6 months	\$ 17.23	\$ 6.72	\$ 1.67	\$ 25.62
5th 6 months	\$ 18.31	\$ 6.72	\$ 1.67	\$ 26.70
6th 6 months	\$ 19.39	\$ 6.72	\$ 1.67	\$ 27.78
7th and 8th 6 months	\$ 20.46	\$ 6.72	\$ 1.67	\$ 28.85

APPRENTICE RATIO: One (1) Apprentice to every one (1) Drywall Finisher

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

MIAMI-DADE COUNTY
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ELECTRICAL WORKERS

Electrician - Wiremen	\$ 38.71	\$ 6.00	\$ 5.81	\$ 50.52
Electrician - Cable Splicer	\$ 39.21	\$ 6.00	\$ 5.88	\$ 51.09
Welder	\$ 39.21	\$ 6.00	\$ 5.88	\$ 51.09
Foremen - Required on any job where 3-9 electricians are employed, one shall be designated foreman. One (1) additional electrician shall be designated foreman if there are 10-14 electricians, and one (1) additional for 15-21 electricians	\$ 42.58	\$ 6.00	\$ 6.39	\$ 54.97
General Foremen (22 or more Electricians)	\$ 46.45	\$ 6.00	\$ 6.97	\$ 59.42

Per Hour Premiums:

\$1.00 per hour to the per hour wage rate for electricians working in hazardous locations, above or below ground in high places such as silos, hangers, beacon lights, or other similar structures where a free fall of 30 feet or more is possible.

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st Year	\$ 19.26	\$ 4.57	\$ 0.58	\$ 24.41
2nd Year	\$ 20.36	\$ 4.57	\$ 3.05	\$ 27.98
3rd Year	\$ 22.54	\$ 4.57	\$ 3.38	\$ 30.49
4th Year	\$ 24.72	\$ 4.57	\$ 3.71	\$ 33.00
5th Year	\$ 29.03	\$ 4.57	\$ 4.35	\$ 37.95

APPRENTICE RATIO: Two (2) Apprentices to (1-3) Wiremen, four (4) Apprentices to (4 to 6) Wiremen, six (6) Apprentices to (7 to 9) Wiremen

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not be limited to: installation, inspection, operation, maintenance, service, repair, testing or retrofit of all energized and de-energized electrical power and communications conductors, electrical materials, electrical devices and electrical power distribution equipment, or a part of there which generates, transmits, transforms or utilize electrical energy in any form AC or DC voltages for heat, light or power used in the construction, alteration, temporary power, maintenance, service and repair of public and private premises including building, floating buildings, structures, bridges, street, highway and tunnel work including all signaling, shafts, dams or levees, river and harbor work, airports, mobile homes, recreational vehicles, yards, lots, parking lots, carnivals, tradeshow, events and industrial substations, The installations of electrical conductors and electrical distribution equipment that connect to the supply of electricity, installations used by an electric utility that are not an integral part of a generating plant, substation or control center and all electrical raceways of whatever form for electrical and communications conductors and fiber optics.

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ELECTRICAL WORKERS, Continued

As related to an electrical system in its entirety, the chasing, channeling, opening and closing of places above and below ground, placement, installation or temporary installation, erection, inspection, operation, welding, maintenance, service, repair, testing or connection of any electrical conductors, electrical lighting fixtures, appliances, instrumentation apparatus, raceway systems, conduit systems , pipe systems, underground systems, cable tray systems, grounding, bonding systems, lightening protection systems, power-generating green technology systems or other systems of renewable energy including but not limited to photovoltaic, solar, wind turbine, hydro-generation, geothermal or tidal systems, electric vehicle technology, electrical power conductors and communications conductors for energy management systems, electrical power conductors and communications conductors for building automation systems, railroad, signalman, maintainer and railroad communication, nuclear, or the erection, alteration, repair, modification, splicing, termination of electric transmission lines on private property, structured cabling systems for transmission of voice, data, video, notification, warning systems, smoke and fire alarm systems, other life safe safety and security systems and appurtenances.

The installation of electrical lighting, heating and power equipment, fiber optics, and the installation and connecting of all electronic equipment, including computing machines and devices, monitoring of radiation hazards where such monitoring work is not preempted or performed by an electrical utility, the installation of all temporary power and light wiring, high-voltage cable splicing and terminations, breaker testing and the commission and decommission of electrical control systems. Clean, service, repair, replace, operate and adjust high and low voltage switchgear; transformers, conductors, connectors, breakers, fuses and buses. Operations, maintenance and repair of high voltage electrical power connections, circuit protection devices and associated switchgear. Pre-fabricated parts and materials shall be unloaded, distributed and installed by employees covered under this trade and working for the electrical contractor. There are no restrictions on an employers utilization of pre-fabricated or pre-assembled parts, fixtures or other materials when obtained from a third party supplier, except as set forth above.

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ELECTRICAL WORKERS (ELECTRIC SIGN)

Electrician - Wireman	\$ 38.71	\$ 6.00	\$ 5.81	\$ 50.52
Foreman - Required on any job where ten (10) Electricians are employed, one shall be designated foreman.	\$ 42.58	\$ 6.00	\$ 6.39	\$ 54.97

Per Hour Premiums:

\$2.00 per hour to the per hour wage rate for Electrician working in high places, seventy-five feet (75') above the ground floor except safety-guarded swing stage, walkways, or 2 man remote baskets.

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st year	\$ 19.26	\$ 4.57	\$ 0.58	\$ 24.41
2nd year	\$ 20.36	\$ 4.57	\$ 3.05	\$ 27.98
3rd year	\$ 22.54	\$ 4.57	\$ 3.38	\$ 30.49
4th year	\$ 24.72	\$ 4.57	\$ 3.71	\$ 33.00
5th year	\$ 29.03	\$ 4.57	\$ 4.35	\$ 37.95

APPRENTICE RATIO: Two (2) Apprentices to (1-3) Wiremen, four (4) Apprentices to (4 to 6) Wiremen, six (6) Apprentices to (7 to 9) Wiremen

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not be limited to: the installation, alteration, dismantling or removing of all illuminated signs, non illuminated signs or displays, whether luminous tube, light emitting diodes, receptacle, plastic, reflector type, plaques and panels. The installation of all interior neo tubing and light emitting diodes for lighting or decorating all secondary conduit work, flashers, timers or other auxiliary equipment, also the steel structures for the support of signs or displays. In the event of billboards or displays not served from an existing building or group of buildings and which in itself is an individual entity, having its own service and meter, all such service conduit meter and secondary conduit. Also covered is the service, maintenance and patrolling of all electrical equipment on signs, displays, and tube lighting after they have been erected and in operation.

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ELEVATOR CONSTRUCTORS

Mechanics	\$ 51.26	\$ 16.08	\$ 20.56	\$ 87.90
Mechanic In Charge	\$ 57.67	\$ 16.08	\$ 20.56	\$ 94.31

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see page 6 of the Supplemental General Conditions for more information.

Probationary Apprentice/Helper (0 - 6 mo.)	\$ 25.63	\$ -	\$ -	\$ 25.63
Probationary Apprentice/Helper (7 mo. - 1 yr.)	\$ 28.19	\$ 16.08	\$ 20.56	\$ 64.83
1st year	\$ 28.19	\$ 16.08	\$ 20.56	\$ 64.83
2nd year	\$ 33.32	\$ 16.08	\$ 20.56	\$ 69.96
3rd year & Helpers	\$ 35.88	\$ 16.08	\$ 20.56	\$ 72.52
4th year & Asst. Mechanics	\$ 41.01	\$ 16.08	\$ 20.56	\$ 77.65

APPRENTICE RATIO: One (1) Apprentice to one (1) Mechanic

- (1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.
- (2) Probationary Apprentice/Helper receive health and pension after 1st 6 months.

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INSULATORS & ASBESTOS WORKERS

Insulators & Asbestos Workers	\$ 35.03	\$ 15.62	\$ -	\$ 50.65
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(1) Per hour health benefit includes hospitalization, medical and life insurance.

Scope of work under this trade includes but is not be limited to: the preparation, fabrication, application, alteration, erection, assembling molding, spraying, pouring, mixing, hanging, adjusting, repairing, dismantling, reconditioning, maintenance, finishing and/or weatherproofing of cold or hot thermal, insulation with such materials as may be specified when these materials are to be installed for thermal, fireproofing and acoustical purposes in voids, or to create voids, or on either piping, fittings, valves, boilers, ducts, flues, tanks, vats equipment, or on any cold or hot surfaces for the purpose of thermal control. Exclude is the manufacture or pipe covering and/or fittings in one piece halves or the facing of flexible blanket duct insulation.

Preparation and application of all exterior material, excluding factory applied for the purpose of weatherproofing or protection, etc. This is also to include all labor connected with the handling and distribution of thermal insulation materials on the job premises and all other such work for the purpose of thermal control. All exterior material, excluding factory applied for the purpose of weatherproofing or protection, etc., shall be prepared and applied by the Asbestos Workers. This is also to include all labor connected with the handling and distribution of thermal insulation materials on the job premises.

It shall also includes firestopping or fireproofing technicians, & apprentices engaged in the manufacture, fabrication, assembling, molding, handling, erection, spraying, pouring, mixing, hanging, preparation, application, adjusting, alteration, repairing, dismantling, reconditioning, testing, and maintenance of the following, when applied by machine or other application methods of all firestopping materials including, but not limited to: intumescent firestop sealant, intumescent firestop blocks, elastomeric firestop sealant, self-leveling firestop sealant, trowel able firestop compound, firestop collars, composite sheets, putty pads, fire containment pillows, wrap strips, putty sticks, firestop mortar, firestop mastic, refractory ceramic fiber blanket for kitchen exhaust and fire rated duct systems, or other materials used in connection with labor, and to include other fire protection materials such as boots and cable coatings which are connected with the handling or distribution of the above insulating materials, or the repair and maintenance of all equipment, on job premises.

The types of work shall include but not be limited to: top of wall, curtain wall, fire rated wall penetrations, grease ducts, stairwell pressurization systems, beam, column, and deck fireproofing, application of materials or devices within or around penetrations and openings in all rated wall or floor assemblies in order to prevent the passage of fire, smoke, or other gases. The application include all components involved in creating the rated barrier at perimeter slab edges and cavities, the head of gypsum board or concrete walls, joints between rated wall or floor components, and sealing of penetrating items and blank openings.

The unloading and distribution on the job site of all insulation material and related material and equipment, the assembling, dismantling of scaffolding and clean up when necessary.

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IRONWORKERS

Ironworkers	\$ 27.00	\$ 6.00	\$ 6.07	\$ 39.07
Foreman *	\$ 29.70	\$ 6.00	\$ 6.07	\$ 41.77
General Foreman *	\$ 32.40	\$ 6.00	\$ 6.07	\$ 44.47

* A foreman is required when two (2) or more Ironworkers are employed by one employer, one shall be a foreman. When the crew exceeds 12 or more, another foreman is required. A general foreman is required if three (3) or more Ironworker Foremen are employed on a job.

Per Hour Premiums:

Diving Pay add \$40.00 rental plus \$5.00 to the Ironworker's wage rate.

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st 6 months - 800 Hours	\$ 16.20	\$ 6.00	\$ -	\$ 22.20
2nd 6 months - 800 Hours	\$ 17.55	\$ 6.00	\$ -	\$ 23.55
3rd 6 months - 800 Hours	\$ 18.90	\$ 6.00	\$ -	\$ 24.90
4th 6 months - 800 Hours	\$ 20.25	\$ 6.00	\$ -	\$ 26.25
5th 6 months - 800 Hours	\$ 21.60	\$ 6.00	\$ -	\$ 27.60
6th 6 months - 800 Hours	\$ 22.95	\$ 6.00	\$ -	\$ 28.95
7th 6 months - 800 Hours	\$ 24.30	\$ 6.00	\$ -	\$ 30.30

APPRENTICE RATIO: One (1) Apprentice to four (4) Ironworkers. Ornamental work one (1) Apprentice to two (2)

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not be limited to: erection and installation of all bridges, structural, ornamental, reinforcing, and reinforcing ironwork; which includes but is not limited to the following: reinforcing steel (rebar), post tensioning (cables), structural steel and iron, miscellaneous steel and iron, stairs – joist – decking, curtains and window walls, storefronts – windows, metal doors (manual and electric), glass doors (manual and electric), glass slider doors, screens – fences, tilt walls – precast – stone, space frames – skylights, pre-engineered metal buildings, cladding covers (all types), column covers (all types), towers – cranes – hoists, standing seam metal roofs, handrails – rails (all types), rigging – welding, conveyors – erectors and maintenance, glazing – caulking – sealants and louvers -fixed.

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This classification cannot be used for unskilled employees performing work in other trades OR for employees in other trades that handle their own materials and/or must clean up after their work is performed. Employees must be paid in accordance with the type of work being performed without regard to skill.

LABORERS

Laborer	\$ 19.00	\$ 4.25	\$ 3.41	\$ 26.66
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Per Hour Premiums:

Laborer Foreman (For every 4 laborers) - **\$2.00** per hour on top of the highest paid laborers

General Foreman (16 or more laborers) - **\$3.00** per hour on top of the highest paid laborers

\$2.00 - Mason and Plaster Tenders, Concrete Placement Patch Men, and Finisher Tenders, Scaffold Builders, Strippers and Wreckers (Demolition), Electric and Air-Hammers, Concrete Grinders, Saws, Coring Machines, Nozzle and Hopper & Mixers, Cutting Torch, Hydro-Blasting (Pressure Washing), Chain Saw.

\$3.50 - Sidewalks and Curb and Gutter Form Builders and Setters, Plaster and Concrete Finish and Repair, Loader, Lulls, Forklifts, Bobcats, Water Sewer and Storm Drain Pipe Layers, Asbestos Removal, Hazardous Waste, and Lead Removal, Remediation and Handling.

Contracts for the inspection of sewer lines for leakage and damage through the use of Closed Circuit T.V. inspections and the simultaneous sealing of leaks or other damage in the lines as the machine inspects the sewer line is covered under the Responsible Wages and Benefits. Contracts for inspection only are not covered. Workers performing on a Closed Circuit T.V. crew should be classified and paid as laborer. The CCTV Operator should receive the \$3.00 per hour supplement for Water Sewer & Storm Drain Pipe layers. The rate for the Vector Trucks Operator is listed under the Operating Engineers

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st 6 month period	\$ 15.20	\$ 4.25	\$ 3.41	\$ 22.86
2nd 6 month period	\$ 16.15	\$ 4.25	\$ 3.41	\$ 23.81
3rd 6 month period	\$ 17.10	\$ 4.25	\$ 3.41	\$ 24.76
4th 6 month period	\$ 18.05	\$ 4.25	\$ 3.41	\$ 25.71

APPRENTICE RATIO: After employing one (1) Laborer, the next laborer employed may be an apprentice, after employing four (4) Laborers, an apprentice shall be employed as the next laborer employed. After the first apprentice is employed, the ratio of Apprentices to Laborers shall not exceed one (1) Apprentice for three (3) Laborers

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes tending masons, plasterers, carpenters and other building and construction crafts. Tending shall consist of preparation of materials and the handling and conveying of materials. Unloading, handling and distributing of all materials, fixtures, furnishings and appliances from point of delivery to point of installation. Cleaning and clearing of all debris. Ageing and curing of concrete, mortar and other materials.

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LABORERS, Continued

Scaffolds: The erection, planking and removal of all scaffolds for lathers, plasterers, bricklayers and other construction trades. Building planking or installation and removal of all staging, swing and hanging scaffolds, including maintenance thereof up to a height of three (3) bucks.

Excavations and Foundations, Site Preparation and Clearance, Transportation and Transmissions Lines:

Excavation for building and all other construction, digging of trenches, piers, foundations and holes, digging, lagging, sheeting, cribbing, bracing and propping of foundations, holes, caissons, cofferdams, dams, dikes, and irrigation trenches, canals and all handling filling and placing of sand bags connected therewith. All drilling, blasting and scaling on the site or along the right of way, as well as all access roads, reservoirs, including areas adjacent or pertinent to the construction site, installation of temporary lines. Preparation and compacting of roadbeds for highway construction and the preparation of trenches, footings, etc. for cross country transmission or underground lines or cables. On site preparation and right-of-way clearance, for construction of any structures or the installation of traffic and transportation facilities such as highways, pipelines, electrical transmission lines, dam sites and reservoir areas, access roads, etc. Erection, dismantling and/pre-installation of all fences.

Concrete, Bituminous Concrete and Aggregates: Mixing, handling, conveying, pouring, vibrating, gunniting and otherwise placing concrete or aggregates, whether done by hand or other process. Wrecking, stripping, dismantling and handling concrete forms and falsework. Placing of concrete or aggregates whether poured, pumped, gunnited, or placed by any other process. All vibrating, grinding, spreading, flowing, puddling, leveling and strike off of concrete aggregates by floating rodding or screeding, by hand or mechanical means prior to finishing. The filling and patching of voids, crevices etc. to correct defects in concrete.

Underpinning, Lagging, Bracing, Propping and Shoring; Drilling and Blasting; Signal Men; General Excavation and Grading and Landscaping of all sites for all purposes; and Wrecking.

Construction Cleaners, Janitors, Fire Watchers, Hole Watchers, Material Handlers, Escorts and Equipment Monitors, Decontamination Workers, Flaggers and Landscapers, Mowers, Guardrail and Fencer Erectors, Rod Carriers, and Pressure Washing

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MILLWRIGHTS, MACHINERY ERECTORS & DIVERS

Millwrights, Machinery Erectors	\$ 32.75	\$ 5.50	\$ 12.58	\$ 50.83
Foreman - (2 to 10 Millwrights)	\$ 35.04	\$ 5.50	\$ 12.58	\$ 53.12
General Foreman - (2 or more Foremen and can serve as a Crew Foreman)	\$ 36.03	\$ 5.50	\$ 12.58	\$ 54.11
Diver - wet dry days (2)	\$ 38.79	\$ 5.50	\$ 12.58	\$ 56.87

Per Hour Premiums:

On wet days, a Diver shall be paid the Diver rate and penetration pay of **\$2.00** per foot per day in excess of twenty (20) feet after entering an enclosed structure that has no direct path to the surface.

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st Year	\$ 21.29	\$ 5.50	\$ 12.58	\$ 39.37
2nd Year	\$ 24.56	\$ 5.50	\$ 12.58	\$ 42.64
3rd Year	\$ 27.84	\$ 5.50	\$ 12.58	\$ 45.92
4th Year	\$ 31.11	\$ 5.50	\$ 12.58	\$ 49.19

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

(2) Diver classification applies to any Millwright that performs work beneath the water surface.

Scope of work under this trade includes but is not be limited to: installation, assembly, and, when necessary, dismantling machinery in factories, power plants, and construction sites.

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<u>OPERATING ENGINEERS</u>				
A-Frame Truck	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Air Compressor	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Compressor, Above 250 CFM	\$ 26.29	\$ 7.05	\$ 4.50	\$ 37.84
Backhoe-Loader Combination	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Batching Plant	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Bobcat/Skid Steer	\$ 22.50	\$ 4.25	\$ 3.41	\$ 30.16
Boom Hauling Truck	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Boom Truck	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Boring Machine	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Bulldozer	\$ 28.75	\$ 7.55	\$ 5.00	\$ 41.30
Concrete Mixer	\$ 30.47	\$ 7.55	\$ 5.00	\$ 43.02
Concrete Placing Booms	\$ 30.33	\$ 7.05	\$ 4.50	\$ 41.88
Concrete Pump, Trailer Mounted	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Concrete Pump, Truck Mounted	\$ 30.33	\$ 7.05	\$ 4.50	\$ 41.88
Crane 100 Ton - 199, Medium Top Drive				
Drill Rig. All Friction Cranes performing duty cycle work (clam shelling pile driving, drag line work.	\$ 36.50	\$ 7.55	\$ 5.00	\$ 49.05
Crane 200 Ton+, Large Top Drive Drill Rigs	\$ 37.50	\$ 7.55	\$ 5.00	\$ 50.05
Crane 99 Ton and Below	\$ 28.75	\$ 7.55	\$ 5.00	\$ 41.30
Drill Rig	\$ 28.75	\$ 7.55	\$ 5.00	\$ 41.30
Directional Boring and Drilling Machine	\$ 30.47	\$ 7.55	\$ 5.00	\$ 43.02
Distributor	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Dozer	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Drill Rig, Truck Mounted, Large	\$ 32.34	\$ 7.05	\$ 4.50	\$ 43.89
Drill Rig, Truck Mounted, Small	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Driver, Miscellaneous Trucks	\$ 26.29	\$ 7.05	\$ 4.50	\$ 37.84
Excavator	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Finish Machine - Paving	\$ 25.00	\$ 7.55	\$ 4.50	\$ 37.05
Forklift/Lull	\$ 22.50	\$ 4.25	\$ 3.41	\$ 30.16
Front-End Loader	\$ 22.50	\$ 4.25	\$ 3.41	\$ 30.16
Fuel Truck	\$ 25.00	\$ 7.55	\$ 4.50	\$ 37.05
Gradall	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Grader	\$ 30.33	\$ 7.05	\$ 4.50	\$ 41.88
Grader, Finisher	\$ 32.34	\$ 7.05	\$ 4.50	\$ 43.89
Grease Truck	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Hoist (Electric, Hydraulic, Air) Personnel,				
Material, Tugger	\$ 27.35	\$ 7.05	\$ 4.50	\$ 38.90
Hoists, 2 & 3 Drum Only	\$ 34.29	\$ 7.05	\$ 4.50	\$ 45.84
Hydraulic Backhoe	\$ 28.75	\$ 7.55	\$ 5.00	\$ 41.30
Inside Elevators, Temporary Only	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Locomotive Operator	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Lowboy Truck	\$ 25.00	\$ 7.55	\$ 4.50	\$ 37.05

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<u>OPERATING ENGINEERS, Continued</u>				
Mechanic I	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Mechanic II	\$ 28.75	\$ 7.55	\$ 5.00	\$ 41.30
Mechanic's Helper	\$ 24.06	\$ 7.05	\$ 4.50	\$ 35.61
Milling Machine	\$ 15.00	\$ -	\$ -	\$ 15.00
Motor Grader	\$ 30.47	\$ 7.55	\$ 5.00	\$ 43.02
Motor Mixing Pump (All types)	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Off-Road Trucks	\$ 26.29	\$ 7.05	\$ 4.50	\$ 37.84
Oiler, Driver Oiler, Crawler Crane	\$ 24.06	\$ 7.05	\$ 4.50	\$ 35.61
Oiler/Driver/Flagman	\$ 25.76	\$ 7.05	\$ 4.50	\$ 37.31
Pan	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Pavement Breaker	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Pumps/ Dewatering Systems 4 in. and over	\$ 26.29	\$ 7.05	\$ 4.50	\$ 37.84
Roller	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Scraper	\$ 26.29	\$ 7.05	\$ 4.50	\$ 37.84
Spreading/Finishing Machine	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Straddle Buggy/Travel Lift	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Tack Truck	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Trackhoe	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Tractors	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Trenching and Ditching Machine	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Utility Operator, Less than 6 Pieces of				
Miscellaneous Equipment	\$ 26.29	\$ 7.05	\$ 4.50	\$ 37.84
Vactor Truck	\$ 23.87	\$ -	\$ -	\$ 23.87
Vacuum Pump	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Water Truck Driver	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Welder	\$ 28.93	\$ 7.05	\$ 4.50	\$ 40.48
Welding Machines, three (3) or more	\$ 26.29	\$ 7.05	\$ 4.50	\$ 37.84
Winch Truck	\$ 25.00	\$ 7.55	\$ 5.00	\$ 37.55
Yard Crane	\$ 28.75	\$ 7.55	\$ 5.00	\$ 41.30

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st 6 months	\$ 20.51	\$ 7.55	\$ 5.00	\$ 33.06
2nd 6 months	\$ 21.06	\$ 7.55	\$ 5.00	\$ 33.61
3rd 6 months	\$ 21.61	\$ 7.55	\$ 5.00	\$ 34.16
4th 6 months	\$ 22.15	\$ 7.55	\$ 5.00	\$ 34.70
5th 6 months	\$ 22.70	\$ 7.55	\$ 5.00	\$ 35.25
6th 6 months	\$ 23.25	\$ 7.55	\$ 5.00	\$ 35.80
7th 6 months	\$ 23.79	\$ 7.55	\$ 5.00	\$ 36.34
8th 6 months	\$ 24.34	\$ 7.55	\$ 5.00	\$ 36.89

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

APPRENTICE RATIO: Three (3) Apprentices to one (1) Operator. Apprentices must be under the supervision of an Operator

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PAINTERS/WALL COVERING INSTALLATIONS

Painter - Commercial	\$ 17.53	\$ 6.72	\$ 5.83	\$ 30.08
Painter - Industrial	\$ 21.76	\$ 6.72	\$ 5.83	\$ 34.31
Painter (Highway/Parking Lot Striper)	\$ 15.00	\$ -	\$ -	\$ 15.00
Operator (Spray Nozzleman)	\$ 15.00	\$ -	\$ -	\$ 15.00
Operator (Striping Machine)	\$ 15.07	\$ -	\$ -	\$ 15.07

Per Hour Premiums:

\$1.00 Charge person working up to 5 employees

\$1.50 Charge person working 6 or more employees

\$1.00 General Foreman above highest paid charge person

\$1.00 Swing-Stage

\$2.00 Thermal-Spay/Metalizing

\$.50 Apprentices - steel, swing/stage, tanks, lead/asbestos abatement, power facilities, catalyzed epoxies, urethanes, HIPAC coatings

Industrial Rates are used on Water Treatment Plants, Pump Stations, Elevated / Ground Storage Tanks and Communication Towers.

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st 6 months	\$ 11.39	\$ 6.72	\$ 1.67	\$ 19.78
2nd 6 months	\$ 12.27	\$ 6.72	\$ 1.67	\$ 20.66
3rd 6 months	\$ 13.15	\$ 6.72	\$ 1.67	\$ 21.54
4th 6 months	\$ 14.02	\$ 6.72	\$ 1.67	\$ 22.41
5th 6 months	\$ 14.90	\$ 6.72	\$ 1.67	\$ 23.29
6th 6 months	\$ 15.78	\$ 6.72	\$ 1.67	\$ 24.17
7th and 8th 6 months	\$ 16.65	\$ 6.72	\$ 1.67	\$ 25.04

APPRENTICE RATIO: One (1) Apprentice to every one (1) Painter/Wall Covering Installer

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not limited to: preparation, application and removal of all types of coatings and coating systems in relation to all painting, decorating, protective coatings, coating and staining of concrete floors and toppings, waterproofing, masonry restoration, fireproofing, fire retarding, metal polishing, refinishing, sealing, lining, fiber glassing, E-Glass fiberglass, carbon fiber, encapsulating, insulating, metalizing, flame spray, the application of Exterior Insulating Finishing Systems;

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PAINTERS/WALL COVERING INSTALLATIONS, Continued

Each and all such applications, and similar or substitute applications, on all surfaces, interior and exterior, to include, but not to be limited to: residences; buildings; structures; industrial, power, chemical and manufacturing plants; bridges; tanks; vats; pipes; stacks; light and high tension poles; parking, traffic and air strip lines; trucks; automobile and railroad cars; ships; aircraft; and all machinery and equipment;

Any and all material used in preparation, application or removal of any paint, coatings or applications, including, but not limited to: the handling and use of thinners, dryers, sealers, binders, pigments, primers, extenders, air and vapor barriers, emulsions, waxes, stains, mastics, plastics, enamels, acrylics, epoxies, epoxy injection and T-Lock welding, alkalis, sheet rubber, foams, seamless and tile-like coatings, etc.;

All preparation for and removal of any and all materials for finishes, such as deep cleaning, patching, all levels of finishing, taping/finishing skim coating, pointing, caulking, high pressure water, chemical and abrasive blasting, environmental blasting, wet/dry vacuum work, chemical stripping, scraping, air tooling, bleaching, steam cleaning, asbestos and lead abatement/removal; mold remediation and vapor barrier systems;

The inspection of all coatings and/or coating systems during their applications.

WALL COVERING INSTALLATIONS

All material applied to walls or ceilings with adhesive, staples, tacks, by stretching or adhered by any other method, including all papers, vinyl, flexible woods, fabrics, borders, metals upholstered wall systems, the fabric covered panels made of plastic/wood or pre-finished products of micro fiberglass, etc., acrovin and various plastic wall coverings such as wainscot, caps, corner moldings and accessories;

Any and all preparation of walls and ceilings such as scraping or any methodology for removal of existing materials, including patching, leveling, skim coating and priming.

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PILEDRIVERS, BRIDGE CARPENTERS & DIVERS

Piledrivers and Bridge Carpenters	\$ 25.45	\$ 4.60	\$ 7.05	\$ 37.10
Foreman	\$ 28.95	\$ 4.60	\$ 7.05	\$ 40.60
(All piledriving crews shall consist of at least one paid foreman)				
Divers (Wet days up to 59' or Dry days)	\$ 29.90	\$ 4.60	\$ 7.05	\$ 41.55
Diver Tenders	\$ 29.90	\$ 4.60	\$ 7.05	\$ 41.55
Diver Foreman	\$ 33.40	\$ 4.60	\$ 7.05	\$ 45.05

Diver Wet Days - The diver and tender must receive the diver rate with a premium pay of \$1.00 per hour/ per foot per day for (60'-100'). Over 100' will be negotiated between the diver and the employer.

Foreman Wet Days - The foreman must receive the foremen rate with a premium pay of \$2.00 per hour/ per foot per day for (50'-100'). Over 100' will be negotiated between the diver and the employer.

For Effluent Diving (working in hazardous waters such as waste water treatment plant/tanks, sewer pipes or storm water out fall pipes) the diver and tender must receive 1.5 times the diver and tender base rate and on wet days the diver and tender must also receive a premium pay of \$1.00 per foot per day for (60' - 100') and over 100' will be negotiated between the diver and the employer.

Penetration: \$1.00 per foot per day in excess of 20' after entering an enclosed structure that has no direct path to the surface.

Per Hour Premiums:

\$0.50 Certified Welders

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see page 6 of the Supplemental General Conditions for more information.

1st year	\$ 17.05	\$ 4.60	\$ 7.05	\$ 28.70
2nd year	\$ 19.09	\$ 4.60	\$ 7.05	\$ 30.74
3rd year	\$ 20.87	\$ 4.60	\$ 7.05	\$ 32.52
4th year	\$ 22.91	\$ 4.60	\$ 7.05	\$ 34.56

APPRENTICE RATIO: Two (2) Apprentices to three (3) Piledrivers/Bridge Carpenter

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not be limited to: all work historically related to piledrivers, welders, drillers, burners, riggers, divers, bridge, deck and wharf builders, signaling, and highway construction. Such work includes, but is not limited to, the following kinds, classes, or descriptions of work: fabricating, erecting, dismantling, loading, unloading, moving, spotting, and handling of all piledriving equipment on the jobsite;

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PILEDRIVERS, BRIDGE CARPENTERS & DIVERS, Continued

Jobsite moving and spotting of barges used in connection with piledriving work; anchoring, bolting, boom-tending, bracing, building, burning, capping, caulking, cutting, chipping of all types of piles, dismantling, drilling, erecting, fabricating, fitting, handling, lagging, loading, moving, plumbing, rafting, securing, signaling, spotting, welding, wrapping, and tying back, unloading and removing, all materials of any kind, make, shape or composition, whether prestressed or post stressed concrete, pipe, corrugated shell where power rigging is used, sand piles, sheet piles, auger cast type piling, wood, plastic, fiberglass, steel or any metal or synthetic which is used or installed in, or for, the building, construction, alteration, maintenance, or repair of wharfs, bridges, docks, piers, bulkheads, trestles, offshore drilling platforms of oil, gas, or any other purpose, coal docks, cofferdams, tunnels, seawalls, seawall caps, boardwalks, deck, and temporary flotation devices;

Pilings used in retaining walls, reservoirs, ditches, canals, spillways, cuts, or in any place where retaining walls are used, made of any kind of material, whether temporary or permanent; weights for piers, caissons, and test piles; Test piles and other test materials, including the securing of such materials except for independent testing equipment done by an independent testing laboratory;

Foundation work, including all piling, whether cast-in-place, poured-in-place, driven, jetted, augured, pre-augured or placed, and all caisson, drilled shaft and vibro-flotation foundations;

The splicing, heading, placing of stringers for frame work, fabrication and placing of wailing, spring and fender lines of any material described above;

The driving, vibrating, jetting, sinking, or screwing of all materials described above, whether by steam, pneumatic, hydraulic, electric, diesel, gravity, or vibratory hammer power; All other work in connection with drilling of any holes, shafts or caissons, for foundation work, spotting, aligning, monitoring, plumbing, and leveling of all drilling equipment whether the drilling is vertical, diagonal, on land or water, and is performed by equipment mounted on trucks, cranes, platforms or barges, or any other kind of mounted or self-contained water or land unit; and the handling, loading, unloading, changing, setting up, repairing, welding, or maintenance of the drilling equipment on the job site.

The fabrication and placing of all decking and guards on all docks, wharfs, and piers on the jobsite. All labor (except the work of the Operating Engineers and Oilers) employed in the actual operation of Piledriving equipment used from whatever purpose, including the operation of deck winches. The operation of vibratory hammer controls, hammer throttle valves and panels not permanently fixed to a crane within reach of the Operator work.

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PILEDRIVERS, BRIDGE CARPENTERS & DIVERS, Continued

Diving: shall be defined as any work performed beneath the water surface, which require individual external life support systems for safe and efficient performance. All underwater construction and reconstruction and the salvage of, and removing of, underwater structures; underwater inspection and repair of hulls, docks, bridges and dams, underwater pipelines, sewages and water systems, underwater suction and discharge lines such as those used at chemical plants, pull mills, and desalinization plants; inspecting, surveying , removing, rescuing, and recovering of all objects below water surfaces; all underwater work necessary on offshore oil platforms permanent or temporary, including all offshore floating drill rights and offshore jack up platforms; all underwater work on pipelines and hookups including oil, gas, water sewage systems; the laying of under water power and telephone cables; offshore marine mining and dredging operations using divers in any phase of tier work; all petroleum, fisheries, oceanographic, research and experimental work, nuclear reactors where the use of divers is necessary; all underwater demolition and blasting work requiring divers.

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PIPEFITTERS, AIR CONDITIONING & REFRIGERATION

R-1 ALL PIPING NOT FOR AIR CONDITIONING WORK; AND, COMMERCIAL UNLIMITED, ALL PIPING SYSTEMS OVER 100

Pipefitter, Air Conditioning & Refrigeration	\$ 40.78	\$ 7.85	\$ 6.30	\$ 54.93
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R-2 COMMERCIAL LIMITED, PIPING LIMITED, ALL AC SYSTEMS REFRIGERATION, PIPING UP TO 100 TONS

Pipefitter, Air Conditioning & Refrigeration	\$ 32.62	\$ 7.85	\$ 5.95	\$ 46.42
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R-3 COMMERCIAL AC, REFRIGERATION, ICE MACHINES, SELF CONTAINED AND SPLIT SYSTEMS UP TO 50 TONS

Pipefitter, Air Conditioning & Refrigeration	\$ 26.51	\$ 7.60	\$ 5.35	\$ 39.46
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R-4 UNLIMITED RESIDENTIAL AND LIGHT COMMERCIAL UP TO 10 TONS

Pipefitter, Air Conditioning & Refrigeration	\$ 22.43	\$ 7.60	\$ 1.00	\$ 31.03
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Foreman - Required for four (4) or more workers; also required on all jobs 150 tons or over. A foreman may supervise up to nine (9) Pipefitter, Air Conditioning & Refrigeration Workers.

\$ 46.90	\$ 7.85	\$ 6.30	\$ 61.05
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General Foreman - Required when three (3) foremen are required. A general foreman may supervise up to five (5) foreman.

\$ 50.98	\$ 7.85	\$ 6.30	\$ 65.13
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Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st year	\$ 18.35	\$ -	\$ 0.35	\$ 18.70
2nd year	\$ 20.39	\$ 6.15	\$ 0.35	\$ 26.89
3rd year	\$ 24.47	\$ 6.15	\$ 0.35	\$ 30.97
4th year	\$ 26.51	\$ 6.15	\$ 3.74	\$ 36.40
5th year	\$ 28.55	\$ 6.15	\$ 3.90	\$ 38.60

APPRENTICE RATIO: One (1) Apprentice to one (1) Pipefitter, Air Conditioning & Refrigeration Worker

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

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PIPEFITTERS, AIR CONDITIONING & REFRIGERATION, Continued

Scope of work under this trade includes but is not be limited to: All piping, setting and hanging of all units and fixtures for air conditioning, cooling, heating, roof cooling, refrigeration, ice making, humidifying, dehumidifying, dehydrating, by any method, and the charging and testing, servicing of all work after completion.

The installation and service of all circulating water lines when used for the distribution of heat and heat transfer equipment on ornamental pools, commercial and residential pools and spas, display fountains and aquariums.

All piping, handling and setting of equipment in connection with central distributing filtration treatment stations, boosting stations, water treatment, waste and sewage disposal plants, central chlorination and chemical treatment work and all underground supply lines to cooling wells, suction basins, filter basins, settling tanks, aeration basins or tanks and lift stations. (This applies to public work when installed or serviced and would apply to private work after its completion and or under pubic operation.)

The handling, assembling and erecting of all economizers, super heaters, regardless of mode or method of making joints, hangers and erection of same, when used in connection with the pipefitting industry.

All internal and external piping on boilers, heaters, tanks and evaporators, water legs, water backs and water grates, boiler compound equipment, etc., when in connection with the pipefitting industry.

The setting and erecting of all boiler feeders, water heaters, filters, water softeners, purifiers, condensate equipment, pumps, condensers, coolers and all piping for same when used in connection with the pipefitting industry.

The setting and erecting of all underfeed stokers, fuel burners and piping, including gas, oil, power fuel, hot and cold air piping and all accessories and parts of burners and stokers, etc., when used in connection with the pipefitting industry.

Make-up water supply from main to equipment installed by Pipefitters.

All meters for measuring a volume of any substance, when used in connection with the pipefitting industry.

The setting and hanging of all units or fixtures for ice making when unit must be assembled before operation. (Shipping bolts, grids and other parts are to be removed or put in place.)

All solar systems, piping and collectors of every description when used in connection with the pipefitting industry.

The installation and service of hydraulic or pneumatic door openers when in connection with industrial, manufacturing and commercial applications. Airports included.

All gas piping from the main to the meter. All distribution lines.

The assembling, erecting, handling and setting of tanks used in connection with the pipefitting industry.

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PIPEFITTERS, AIR CONDITIONING & REFRIGERATION, Continued

The setting, erecting and piping for all smoke consuming and smoke washing and regulating devices, when used in connection with the pipefitting industry.

The setting, erecting and piping of instruments, measuring devices, thermostatic controls, gauge boards and other controls used in connection with power, heating, refrigeration, air conditioning, manufacturing, mining and industrial work.

The setting and erection of all oil heaters, oil coolers, storage and distribution tanks, transfer pumps and mixing devices and piping thereto, when used in connection with the pipefitting industry.

Installations of drain lines from equipment installed by pipefitters where drain lines drop to a safe waste, floor drain, roof, or any open fixture and where drain lines are not directly connected to a sanitary system.

Recovery condensate systems in their entirety.

The setting, erecting and piping of all cooling units, pumps, reclaiming systems and appurtenances in connection with transformer and piping to switches of every description.

The installation and service of vacuum cleaning equipment and piping when used in connection with manufacturing plants, maintenance facilities, airport terminals, post offices, etc.

The installation and service of vacuum systems when used in connection with manufacturing plants, maintenance facilities, airport terminals, post offices, etc.

The installation and service of oxygen systems when used in connection with manufacturing, commercial & industrial application.

All sheet lead lining for tanks or vats for all purpose, when in the category of industrial work.

All piping for railing work and racks of every description, whether screwed or welded when assigned by the Contractor.

All power plant piping of every description, as it applies to the pipefitting industry.

The unloading, handling and setting of all sterilizers, laundry and cleaning equipment will be done by composite crew. Steam and oil lines will be done by this trade classification.

Laying out, cutting, bending and fabricating of all pipe work of every description by whatever mode or method, when used in connection with the pipefitting industry.

All acetylene and arc welding, brazing, lead burning, soldered and wiped joints, caulked joints, expanded joints, rolled joints or any other mode or method of making joints used in connection with the pipefitting industry including pipe fusing.

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PIPEFITTERS, AIR CONDITIONING & REFRIGERATION, Continued

The laying out and cutting of all holes, chases and channels, the setting and erection of bolts, inserts, stands, brackets, supports, sleeves, thimbles, hangers, conduit and boxes, used in connection with the pipefitting industry. Hangers, supports, brackets requiring off site fabrication may be purchased from miscellaneous metal or structural steel fabricators.

The handling and using of all tools and equipment that may be necessary for the erection and installation of all work and materials used in connection with the pipefitting industry.

The operation, maintenance, repairing, servicing, test and balance, and dismantling of all work installed by this trade classification.

All soot blowers and soot collecting piping systems, when used in, connection with the pipefitting industry.

All piping for artificial gases, natural gases, holders and equipment for same, chemicals, minerals and by products and refining of same, when used in connection with the pipefitting industry.

All ash collecting and conveyor piping systems, including all air washing and dust collecting piping and equipment, accessories and appurtenances and regulating devices, etc., when used in connection with the pipefitting industry.

All pneumatic transit tube work and all piping for carrying systems by vacuum.

All process piping and equipment for refining, manufacturing, and industrial purposes.

The installation and service of all piping systems and equipment with grease pressure lubricating and hydraulic lifts in connection with industrial manufacturing, commercial and maintenance facilities applications (excluding schools). Service station installations optional pertaining to grease pressure and hydraulic lift installations until assigned.

The installation of all related piping, fuel storage tanks and exhaust piping for emergency generators, manufacturing plants, airports, post offices and industrial applications.

The installation and service of all air piping and related equipment in connection with manufacturing plants, industrial, airports, post offices, etc.

The installation and service of all fuel oil, gasoline and cleaning solvent piping and related equipment in connection with manufacturing plants, industrial, airports, post offices. Maintenance facilities and service stations optional until assigned.

The installation and service of all oxygen and acetylene piping systems and related equipment in connection with manufacturing plants or remote distribution systems and industrial applications. Maintenance facilities and service stations optional until assigned.

The setting, erecting and piping of all cooling towers and evaporative condensers.

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PIPEFITTERS, AIR CONDITIONING & REFRIGERATION, Continued

All work related to the removal and replacement of CFC Refrigerants as mandated by the federal, state and local laws.

All work done in the pipefitter industry to comply with any environmental rules or regulations as set forth by federal, state, or local governments.

Equipment used on building and construction work in conjunction with the work of the trade, as a time and labor saving device, shall be operated by qualified Employees under this trade classification.

The operation of pumps, air compressors and welding machines when used in conjunction with work covered by the pipefitters, shall be done by this trade classification.

The testing and balancing of all piping systems or component parts thereof and solar systems, shall be done by this trade classification.

Temporary mechanical equipment and air conditioning systems shall be installed and serviced by this trade classification.

The unloading and handling from curbstone delivery, all equipment (including cooling towers) materials, the erection, installation of all tubing and piping, the setting and hanging of all units and fixtures which are included and necessary to make and complete an air conditioning, refrigeration, heating, piping installation, and solar installation, including the charging, testing, air and water balancing, servicing and maintenance of same and warranty of same.

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PLUMBERS

Plumbers	\$ 30.78	\$ 6.90	\$ 5.34	\$ 43.02
Foremen (10 or more employees)	\$ 35.42	\$ 6.90	\$ 5.34	\$ 47.66
General Foremen (16 or more employees)	\$ 40.05	\$ 6.90	\$ 5.34	\$ 52.29

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st year	\$ 16.62	\$ 3.44	\$ 0.40	\$ 20.46
2nd year	\$ 17.54	\$ 4.99	\$ 1.85	\$ 24.38
3rd year	\$ 18.78	\$ 5.09	\$ 2.03	\$ 25.90
4th year	\$ 20.01	\$ 5.15	\$ 2.03	\$ 27.19
5th year	\$ 23.09	\$ 5.06	\$ 2.03	\$ 30.18

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not be limited to: the installation of appliances, piping and plumbing fixtures to be done by plumber and plumbers apprentices. All job site unloading from tailgate and after, all of the handling and rigging of materials, fixtures, appliances having waste, water or gas connections, tools and equipment, for use in the work covered shall be done by plumbers and plumber apprentices. Also included, where required, cement under tubs and all cementing of pipe supports and columns for piping systems. All filling and testing fixtures and pipes as required, including the layout and hook-up of water hoses for tests. Additionally where required: covering of fixtures for protection, grouting of all fixtures and cementing of all plumbing pipe chases and sleeves.

Plumber shall mean any person employed by a firm or corporation lawfully licensed to contract for and install work covered by the Plumbing Code of Miami-Dade County. The scope of work shall be, but not limited to as follows: All piping, setting and hanging of all units and fixtures for plumbing systems, water, waste, floor drains, drain gates, supply, leader, soil pipe, grease traps, sewage and vent lines. All cold, hot and circulating water lines, piping for house pumps, cellar drains, ejectors, house tanks, pressure tanks, swimming pools, ornamental pools, display fountains, drinking fountains, aquariums, plumbing fixtures and appliances, and the handling and setting of the above mentioned equipment. All piping in connection with central distributing filtration treatment stations, boosting stations, water and sewage disposal plants, central chlorination and chemical treatment work, and all underground supply lines to cooling wells, suction basin, filter basins, settling basins, and aeration basins or tanks and lift stations on private property.

MIAMI-DADE COUNTY
§2-11.16 CODE OF MIAMI-DADE COUNTY
RESPONSIBLE WAGES AND BENEFITS SCHEDULE
2023

"BUILDING CONSTRUCTION"

TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
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PLUMBERS, Continued

All potable water mains for whatever source, including branches and fire hydrants, etc. All potable water services from mains to buildings, including water meters and water meter foundations. All piping for potable water filters, water softeners, water meters and the setting of the same. All meters for measuring a volume of any substance, when used in connection with the plumbing industry. The laying out and cutting of holes, chases and channels, the setting and erection of bolts, inserts, stands, brackets, supports and boxes used in connection with the plumbing industry. The handling and using of all tools and equipment that may be necessary for the erection and installation of all work and material used in connection with plumbing. Laying out, cutting, bending and fabricating of all pipe work of every description, by whatever mode or method, when used in connection with the plumbing industry.

Prepare and grade trenches either manually or with machines in connection with the plumbing. The setting and hanging of all units or fixtures for ice making when units are complete and ready for operation. All Solar systems, piping and collectors of every description when used. All gas piping on the building side of meter, all piping of air systems including the assembling, erecting, handling and setting of all equipment used in the systems. The assembling, erecting, handling and setting of tanks, piping of instruments, measuring devices, thermostatic controls, gauges boards and other controls, oil heaters, oil coolers, storage and distribution tanks, transfer pumps and mixing devices and piping thereto. Installation of drain lines from equipment installed by pipefitters where directly connected to a sanitary system and condensate drain as part of system.

Down spouts and drainage area soil pipes, catch basins, manholes, drains, gravel basins, storm water sewers, septic tanks, cesspools, water storage tanks, air conditioning and heating drain directly connected to storm drains and condensation systems. The installation and service of vacuum cleaning equipment and piping, vacuum systems and the installation and service of oxygen systems. All acetylene and arc welding, brazing, lead burning, soldering and wiped joints, caulked, expanded and rolled joints, or any other mode or method of making joints in connection with the plumbing industry.

Inspections of sewer lines for leak and damages through the use of video camera inspections and the repairing of any leaks or replacing pipes.

Smoke testing on sanitary piping systems and the repairing of damaged pipes; domestic water piping, reclaim water and irrigation water distribution; water pipe locating and leak detection and repairs of all water services, water distribution, irrigation and reclaim water piping.

All reclaim water systems and water harvesting systems installed and maintained by the plumbers including underground tank, above ground tanks, pumps and filters and filtering systems.

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TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
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ROOFERS

Roofers	\$ 25.59	\$ 6.47	\$ 2.50	\$ 34.56
Foreman	\$ 27.59	\$ 6.47	\$ 2.50	\$ 36.56
Helper 1st year	\$ 12.80	\$ 6.47	\$ 2.50	\$ 21.77
Helper 2nd year	\$ 15.35	\$ 6.47	\$ 2.50	\$ 24.32
Helper 3rd year	\$ 17.91	\$ 6.47	\$ 2.50	\$ 26.88

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

The application and installation of the following types of work: All forms of elastomeric, elasto-plastic and thermo-plastic roofing systems, both sheet and liquid applied, whether single-ply or multi-ply. These shall include but not be limited to Polyvinyl chloride systems (PVC), Butyl Rubber, ethylene propylene diene monomer (EDPM), Polyisobutylene (PIB), Chlorinated polyethylene (CPE), Chlorosulfonated polyethylene (CSPE), Neoprene, Nitrile Alloy (NBP), Ethylene Interpolymers (EIP), Thermoplastic Polyolefins (TPO), Ethylene Tetra Fluoro Ethylene (ETFE).

All base flashings, curb flashings and counter flashings of elastomeric, elasto-plastic or thermos-plastic composition as outlined in (1) used to roof or waterproof intersections of horizontal surfaces.

All components of elastomeric, elasto-plastic and thermos-plastic roofing systems used to seal the roof, including but not limited to nailers, blocking, ballast of all types of walkways, reinforcements, preformed panels, protection boards, plaza pavers, expansion joints, pitch pans, scupper flashing, drain flashings, compression seal, termination bars, caulking, and sealants.

All insulations applied with the above systems, whether laid dry, mechanically fastened or attached with adhesives.

All forms of composite insulations having nailable surfaces or any other means of attachments (e.g. plywood, pressboard, chipboard, drywall, or other laminates) bonded to the insulation wherever such composite insulations are used as an integral thermal insulating component of the roofing system.

All types of aggregates, blocks, bricks, stones, pavers, soils, overburdens, vegetation or units of photovoltaic cell construction used to ballast or protect these elastomeric, elasto-plastic and thermo-plastic systems.

All solar or photovoltaic cell-type integrated roof membranes used to transform solar energy to electrical energy.

All types of aggregates, blocks, bricks, stones, pavers, soils, overburdens, vegetation or units of photovoltaic cell construction used to ballast or protect inverted roof membrane assembly (IRMA) roofs or roofs of similar construction where the insulation is laid over the roof membrane.

All sealing and caulking of seams and joints on these elastomeric, elasto-plastic and thermos-plastic systems to ensure that these systems are watertight.

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ROOFERS, Continued

All cleaning, preparing, priming and sealing of surfaces to be roofed, whether done by roller, mop, swab three-knot brush, squeegees, spray systems or any other means of application.

All handling, hoisting, lifting and storing of all roofing materials.

All tear off and/or removal of any type of roofing including ballast and all overburdens, all spading, sweeping, vacuuming and/or cleanup of any and all areas of any type where an elastomeric, elasto-plastic or thermos-plastic or similar product as listed above to be re-laid or any cleanup of any materials on any construction site and operation of equipment that are used these roofing systems under the roofing trade.

All components of water recapturing systems that is an integral part of these types of roofing systems that protect against water and moisture mitigation or intrusion.

All components of rooftop and sub-surface water recapture or rainwater harvest systems that are an integral part of these type roof systems where the primary purpose is to control and manage water run-off.

All water and flood testing of all roofing systems.

All substitutions, improvements, changes, modifications and/or alternatives to roofer jurisdiction or materials listed above.

All other materials, equipment and/or applications necessary or appropriate to complete, perform or apply the processes and/or materials under this trade.

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"BUILDING CONSTRUCTION"

TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
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SHEET METAL WORKERS

Commercial

Sheet Metal Workers	\$ 27.90	\$ 8.11	\$ 5.77	\$ 41.78
Foreman (4 - 10 workers)	\$ 30.69	\$ 8.11	\$ 5.77	\$ 44.57
General Foreman (2 or more Foreman)	\$ 32.09	\$ 8.11	\$ 5.77	\$ 45.97

Industrial

Sheet Metal Workers	\$ 37.09	\$ 8.11	\$ 6.06	\$ 51.26
Foremen (4 -10 workers)	\$ 42.65	\$ 8.11	\$ 6.06	\$ 56.82
General Foremen (2 or more Foremen)	\$ 44.51	\$ 8.11	\$ 6.06	\$ 58.68

Industrial Rate are used for Garbage Disposal Plants and Water & Sewer Treatment Plants.

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

Commercial Apprentice

1st 6 months	\$ 15.35	\$ 8.11	\$ 3.18	\$ 26.64
2nd 6 months	\$ 15.35	\$ 8.11	\$ 3.18	\$ 26.64
3rd 6 months	\$ 16.74	\$ 8.11	\$ 3.46	\$ 28.31
4th 6 months	\$ 18.14	\$ 8.11	\$ 3.76	\$ 30.01
5th 6 months	\$ 19.53	\$ 8.11	\$ 4.04	\$ 31.68
6th 6 months	\$ 20.93	\$ 8.11	\$ 4.33	\$ 33.37
7th 6 months	\$ 22.32	\$ 8.11	\$ 4.62	\$ 35.05
8th 6 months	\$ 23.72	\$ 8.11	\$ 4.91	\$ 36.74

Industrial Apprentice

1st 6 months	\$ 20.40	\$ 8.11	\$ 3.34	\$ 31.85
2nd 6 months	\$ 20.40	\$ 8.11	\$ 3.34	\$ 31.85
3rd 6 months	\$ 22.25	\$ 8.11	\$ 3.64	\$ 34.00
4th 6 months	\$ 24.11	\$ 8.11	\$ 3.94	\$ 36.16
5th 6 months	\$ 25.96	\$ 8.11	\$ 4.24	\$ 38.31
6th 6 months	\$ 27.82	\$ 8.11	\$ 4.55	\$ 40.48
7th 6 months	\$ 29.67	\$ 8.11	\$ 4.85	\$ 42.63
8th 6 months	\$ 31.53	\$ 8.11	\$ 5.16	\$ 44.80

APPRENTICE RATIO: Three (3) Apprentices to three (3) Sheet metal Workers

(1) Per hour health benefit includes hospitalization, medical, life vision and dental insurance.

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"BUILDING CONSTRUCTION"

TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
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SHEET METAL WORKERS, continued

Scope of work under this trade includes but is not be limited to: (a) manufacture, fabrication, assembling, handling, erection, installations, dismantling, conditioning, adjustment, alteration, repairing and serving of all ferrous or nonferrous metal work and all other materials used in lieu thereof and of all HVAC systems, air veyor systems, exhaust systems and air-handling systems regardless of materials used including the setting of all equipment and all reinforcements in connection therewith; (b) all lagging over insulation and all duct lining; (c) testing and balancing of all air-handling equipment and duct work; (d) the preparation of all shop and field sketches whether manually drawn or computer assisted used in fabrication and erection, including those taken from original architectural and engineering drawings or sketches; and, (e) installation of proprietary and non proprietary metal roofing.

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SPRINKLER FITTERS

Low Commercial: Construction up to 12 stories and all warehouses up to 800,000 square feet.

Sprinkler Fitters	\$ 30.03	\$ 11.10	\$ 10.20	\$ 51.33
Foreman (4 or less workers)	\$ 31.78	\$ 11.10	\$ 10.20	\$ 53.08
Foreman (5 or more workers)	\$ 32.28	\$ 11.10	\$ 10.20	\$ 53.58
General Foreman (15 or more workers)	\$ 34.28	\$ 11.10	\$ 10.20	\$ 55.58

Commercial: Construction 13 stories or more.

Sprinkler Fitters	\$ 31.28	\$ 11.10	\$ 10.20	\$ 52.58
Foreman (4 or less workers)	\$ 33.03	\$ 11.10	\$ 10.20	\$ 54.33
Foreman (5 or more workers)	\$ 33.53	\$ 11.10	\$ 10.20	\$ 54.83
General Foreman (15 or more workers)	\$ 35.53	\$ 11.10	\$ 10.20	\$ 56.83

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - <http://www.fldoe.org/workforce/apprenticeship>. Please see pages 7-8 of the Supplemental General Conditions for more information.

For Apprentices indentured after June 30, 2011 but prior to July 1, 2017

1st year	\$ 15.64	\$ 10.20	\$ 1.50	\$ 27.34
2nd year	\$ 16.85	\$ 10.20	\$ 1.65	\$ 28.70
3rd year	\$ 18.77	\$ 10.20	\$ 1.95	\$ 30.92
4th year	\$ 22.52	\$ 10.20	\$ 9.45	\$ 42.17
5th year	\$ 25.53	\$ 10.20	\$ 9.75	\$ 45.48

For Apprentices indentured after June 30, 2017

1st year	\$ 15.64	\$ 10.20	\$ 1.50	\$ 27.34
2nd year	\$ 17.20	\$ 10.20	\$ 1.50	\$ 28.90
3rd year	\$ 18.77	\$ 10.20	\$ 1.50	\$ 30.47
4th year	\$ 22.52	\$ 10.20	\$ 8.70	\$ 41.42
5th year	\$ 25.53	\$ 10.20	\$ 8.70	\$ 44.43

APPRENTICE RATIO: One (1) Apprentice for every two (2) Sprinkler Fitters

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not be limited to: the installation of all fire protection and fire control systems including the unloading, handling by hand, power equipment and installation of all piping and tubing appurtenances and equipment pertaining thereto, including both overhead and underground water mains, fire hydrants and hydrant mains, hose and hose connections with sprinkler and alarm systems, also all tanks and pumps connected thereto, but excluding steam fire protection systems. Also, included shall be detection systems, mulsifyre, fog and fog foam, also dry chemical systems.

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TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

For any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract, please contact Small Business Development for a wage determination.

Questions concerning the comparability of worker classifications or the applicability of Davis-Bacon classification shall be determined by the County.

Please Contact:

**Internal Services Department
Small Business Development Division
The Stephen P. Clark Center
111 N.W. 1st Street - 19th Floor
Miami, Florida 33128-1906
Phone Number: (305) 375-3111
Fax Number: (305) 375-3160**

NOTICE

County Code §2-11.16



NOTICE TO ALL EMPLOYEES WORKING ON COUNTY CONSTRUCTION PROJECTS

RESPONSIBLE WAGES AND BENEFITS

MINIMUM WAGE

You must be paid not less than the required base hourly rate and benefits listed in the Wages and Benefits Schedule for every hour worked. You may not be paid below the base rate even if the value of the fringe benefits provided to you exceeds the value of the health and pension required in the schedule. Additionally, you must be paid not less than the combined dollar value (Base Rate + Health + Pension Benefit) listed in the wage and benefits schedule posted with this notice for the type of work you are performing if benefits are not provided.

OVERTIME

You must be paid time and one-half of your rate of pay for all hours worked in excess of 40 hours in a week.

APPRENTICES & TRAINEES

Apprentices/trainees rates apply only to apprentices and trainees properly registered under an approved Federal or State apprenticeship or training program.

SANCTIONS

Sanctions for a first-time offender are 20% of the amount of underpayment payable to the County. The sanctions increase to 40% for the second underpayment and 60% for the third underpayment. Contractors found to have underpaid a fourth time may be subject to suspension or termination in accordance with the contract terms and debarment in accordance with the debarment procedures of the County.

COMPLAINTS Written complaints of underpayment should be filed with:

Internal Services Department
Small Business Development Division
111 NW 1ST Street, 19TH Floor Miami, FL 33128
Telephone: (305) 375-3111 FAX: (305) 375-3160
Email: SBDMAIL@MIAMIDADE.GOV

FAIR WAGE AFFIDAVIT

Before me, the undersigned authority appeared _____ the
(PRINT NAME)

_____ of _____,
(PRINT TITLE) (PRINT NAME OF BIDDER OR PROPOSER)

who attests that _____ shall pay workers on
(PRINT NAME OF BIDDER OR PROPOSER)

the project minimum wage rates in accordance with Responsible Wages and Benefits, Section 2-11.16 of the Code of Miami-Dade County and the Labor Provisions of the contract documents.

**State of FLORIDA
County of Miami-Dade**

Sworn to (or affirmed) and subscribed before me this _____ day of _____, 20_____.

_____ Personally, known or _____ produced identification.

(Signature of Notary Public - State of Florida)

(Print, Type, or Stamp Commissioned Name of Notary Public)

Type of identification produced: _____

Contractor Quick Start Guide

Version: 2

Date: 8/3/2022

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Contractor Quick Start Guide

At LCPtracker (Labor Compliance Program Tracker), we are aware that using a Prevailing Wage Software may be a new undertaking for many Contractors. We have designed this guide to explain what LCPtracker is used for and how to start using the software.

The LCPtracker service is a paperless, online system of entering Certified Payroll Reports (CPRs). Payroll data may be entered directly into the system or uploaded from major construction accounting systems or payroll programs. This service eliminates the need for Contractors to submit paper documents and forms while providing an online database that stores all CPRs.

All contract-specific wage rates, fringe rates and worker crafts/classifications are online within the system, and Contractors may then select craft/classifications from a drop-down menu. Potential errors in wage rates or work classification entries can be flagged to Contractors preemptively, allowing them to submit data with corrections implemented. (This is contingent on how the Administrator set up their Project validations). Once you have submitted your CPR, an electronic version will be available, and you will have access to all Contractor reports within LCPtracker.

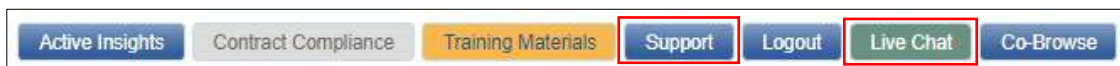
It is important to understand that the LCPtracker validation rules operate to assist you in your compliance process only insofar as the correct classifications are chosen by the user, and the correct data is entered by the user.

Contacting LCPtracker Support

There is no cost to Contractors for this service or for online training. We have a dedicated Support staff available Monday through Friday from 5:00am until 5:30pm PST.

Contractors may access the various options for training after receiving a User ID and password, which will be sent by a “no reply” email address from LCPtracker (i.e., NOREPLY@LCPtracker.com). This email, with login instructions, will be sent to Contractors once they’re assigned to an account in LCPtracker by your Agency or Prime Contractor. Every Contractor account is created by the Agency or their Prime Contractor. Complete and full support is offered directly to Contractors by LCPtracker for any technical questions on the use of the software.

Contact LCPtracker Support:



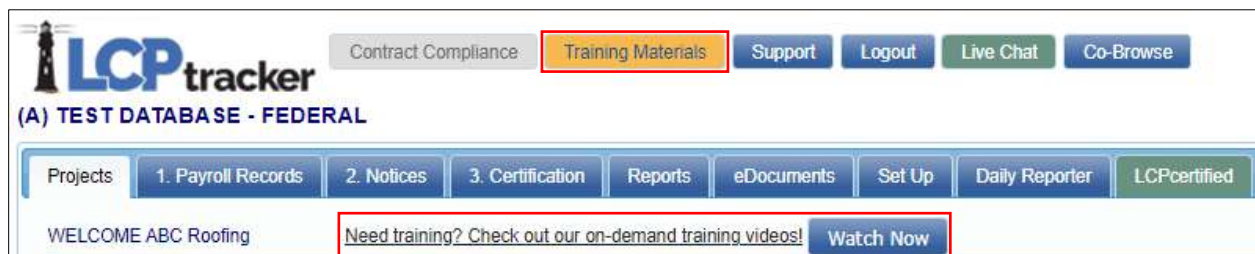
- 714-669-0052 option 4; or
- Support@LCPtracker.com; or
- Live Chat

If you send the Support Team an email or prefer to leave a voice message, LCPtracker asks that you include the information listed below (because of the high number of users stored within LCPtracker, we cannot look up your account with only your company name or project you are working on).

- Your Company Name
- Your User ID
- Your Name and Phone Number
- What the Issue is – please be as specific as possible so we can re-create the issue

LCPtracker Training Options

Contractors can access the various options for training after receiving a User ID and password. An email with login instructions will be sent to Contractors once they are assigned to an account in LCPtracker. Every Contractor account is created by the Agency or their Prime Contractor.



Add/Edit Employee

This section is used to enter Contractor employee's personal information.

To add an employee into system or edit someone already in system, click 'Set Up' and then 'Add/Edit Employee'.



Add/Edit Employee Information

Enter the appropriate employee information in the data fields. Tab key or mouse click to move between fields. Any **RED** asterisk field(*) is required by the Agency, and the system will not save unless the information is entered in the required fields.

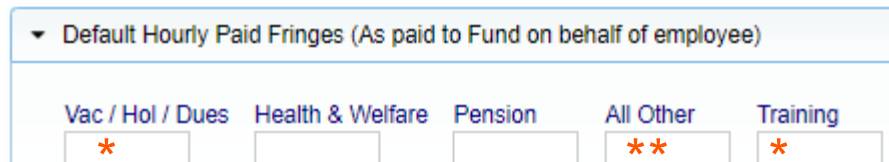
Default Hourly Paid Fringes (As paid to Fund on behalf of employee)

This section is known as a 'time saver'. It is optional to fill in the hourly fringe rates in this section. This will allow for ease of use when entering payroll records manually, as you will be able to click the 'Calculate Fringes' button on the Payroll Entry screen, and the system will perform the mathematical calculation of the hourly fringes multiplied by the hours worked.

*If there are any predetermined increases, or your Union updates once a year, you will need to come back to this section and update your fringes accordingly.

**If you have multiple projects with different fringe rates, built in increases, or everyone has the same fringes and you only want to enter those dollar values once, skip this section and use the 'Fringe Benefit Maintenance' table to enter your hourly fringe rates into system.

Note: Any fringe amount entered in this section will supersede the fringe amount entered in that time saver section of the employee setup.



The screenshot shows a form titled "Default Hourly Paid Fringes (As paid to Fund on behalf of employee)". It contains five input fields with the following labels: "Vac / Hol / Dues", "Health & Welfare", "Pension", "All Other", and "Training". The "Vac / Hol / Dues" field contains an asterisk (*), the "All Other" field contains two asterisks (**), and the "Training" field contains one asterisk (*). The other two fields are empty.

*** DO NOT USE - Not allowed by Responsible Wages & Benefits** **** Use to enter vision, dental, life, and Accidental Death & Dismemberment insurance Only**

Default Other Deductions Notes

Any deduction that is permissible according to the USDOL or your Agency (such as IRS garnishments, child support, a company loan, etc.) would fall under the 'other' deduction section. Any amount listed in 'other' will then dictate that 'other deduction notes' are required.

1. Payroll Records Tab

There are five methods of payroll entry available to all Contractors:

1. Copy Payroll feature in LCPtracker
2. Upload from a payroll system export file
3. Upload from the Excel spreadsheet
4. Direct Payroll Subscription / Interface (DPI)
5. Manual entry

1. Copy Payroll

This option is only available if a week of payroll has been previously completed. In the Payroll Records tab, click the 'Copy Previous Payroll' button, select the project, then select the CPR to be copied.

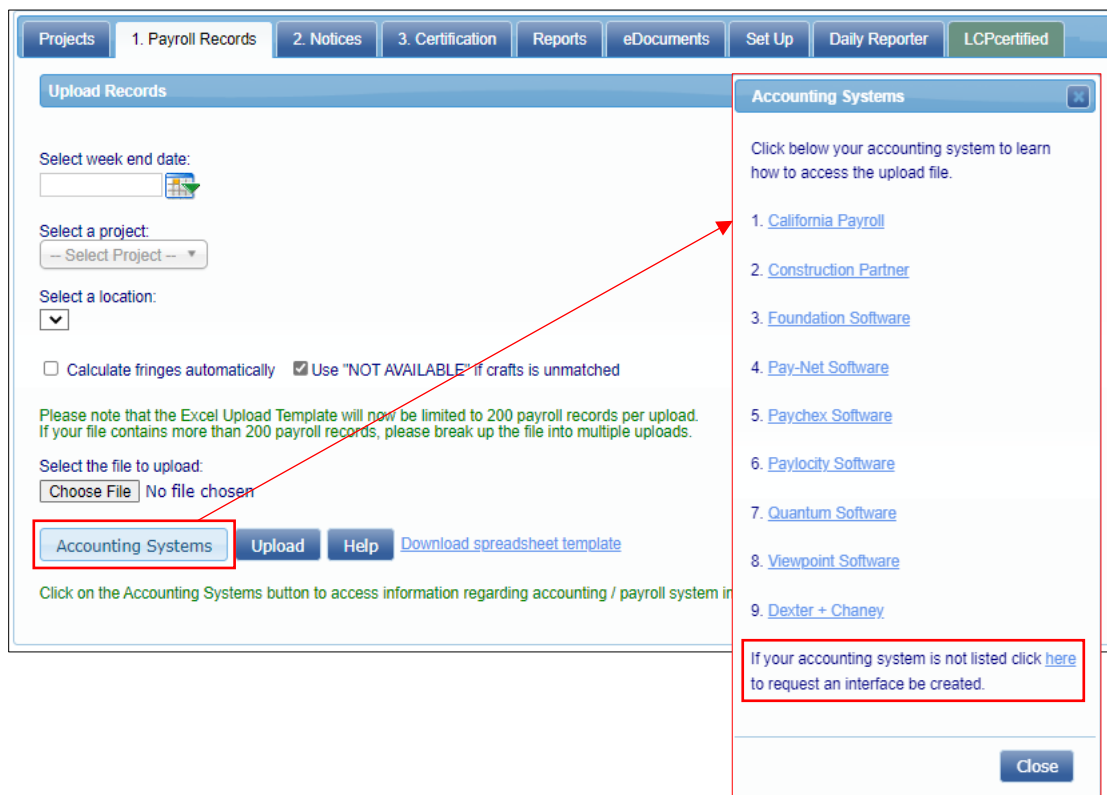


The screenshot shows the 'Payroll Records' tab in the LCPtracker application. The 'Copy Previous Payroll' button is highlighted with a red rectangle. Other buttons visible include 'Enter Records', 'Direct Payroll Subscription', 'Edit Certified Payroll Records', 'Recovery Act Additional Data Entry', 'Edit Uncertified Payroll Records', 'FHWA 1391 Additional Data Entry', 'Upload Records', and 'HUD Additional Data Entry'.

2. Upload from a Payroll System Export File

In the Payroll Records tab, click the 'Upload Records' button, then click the 'Accounting Systems' button, you will see a partial list of the payroll companies that we have partnered with to create a payroll interface, or export file.

To see a complete list of payroll interfaces available, please visit www.lcptracker.com, and click the 'Resources' tab, then select 'Partners'. If you do not find your payroll company and would like to see if there is an opportunity to partner, please fill out the informational form listed under the "Upload Records" section and someone from LCPtracker will contact you.



The screenshot shows the 'Upload Records' tab in the LCPtracker application. The 'Accounting Systems' button is highlighted with a red rectangle. A red arrow points from this button to the 'Accounting Systems' modal window. The modal lists various payroll companies and includes a 'Close' button. The modal text reads: 'Click below your accounting system to learn how to access the upload file.' followed by a list of companies: 1. California Payroll, 2. Construction Partner, 3. Foundation Software, 4. Pay-Net Software, 5. Paychex Software, 6. Paylocity Software, 7. Quantum Software, 8. Viewpoint Software, 9. Dexter + Chaney. At the bottom, it says: 'If your accounting system is not listed click [here](#) to request an interface be created.'

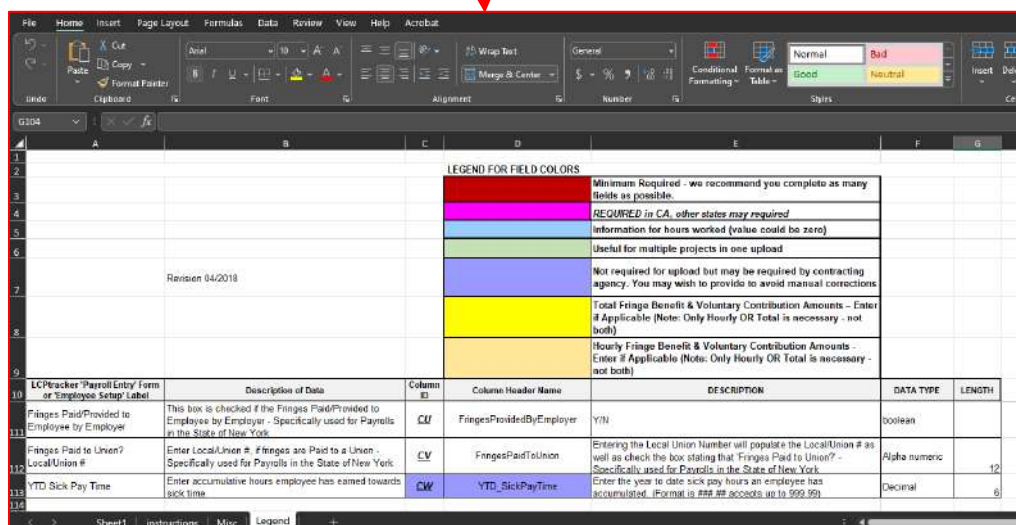
Click on the name of your payroll company, and a list of directions on how to obtain your export file will be available, or you will see a request that you contact your payroll company directly for instructions on how to obtain that export file.

Once you have the export file, you can use it to upload your CPR using the “Upload Records” button.

3. Upload from the Excel Spreadsheet

There is an Excel spreadsheet template available for you to download in the same ‘Upload Records’ section mentioned above. There is a legend as well as instructions available on the Excel template.

Information can be manually entered into this Excel spreadsheet, or you can confer with your IT department to see if they can utilize this spreadsheet to create a report out of your existing payroll system.

LCPTracker Payroll Entry Form or Employee Setup Label	Description of Data	Column ID	Column Header Name	DESCRIPTION	DATA TYPE	LENGTH
Fringes Paid/Provided to Employee by Employer	This box is checked if the Fringes Paid/Provided to Employee by Employer - Specifically used for Payrolls in the State of New York	CV	FringesProvidedByEmployer	Y/N	boolean	
Fringes Paid to Union? Local/Union #	Enter Local/Union # - Fringes are Paid to a Union - Specifically used for Payrolls in the State of New York	CV	FringesPaidToUnion	Entering the Local Union Number will populate the LocalUnion # as well as check the box stating that Fringes Paid to Union? - Specifically used for Payrolls in the State of New York	Alpha numeric	12
YTD Sick Pay Time	Enter accumulative hours employee has earned towards sick time	DW	YTD_SickPayTime	Enter the year to date sick pay hours an employee has accumulated. If format is ###.## seconds up to 999.99	Decimal	6

Entering Fringe Benefits on LCPTracker

Wages Paid in Lieu of Fringes (Total cash fringes) = hourly rate of fringe x hours worked on county job

Projects | 1. Payroll Records | 2. Notices | 3. Certification | Reports | eDocuments | Set Up | Daily Reporter | LCPcertified

Notices

Week End Date: 6/21/2019 Contractor: CMC PRIME CONTRACTOR
 Project: CMC RWB TEST CONTRACT-HIGHWAY Sub To:
 Employee: ANDERSON, ALECIA Contract ID: test

☐ Is Foreman ☐ Is Owner/Operator

Gross Employee Pay This Project (Usually No Fringes) 1600.000
 Wages Paid in Lieu of Fringes (Total Cash Fringes) 0.000

These fields are Hourly rate fields (Usually No Fringes)

Base Hourly	Overtime Hourly	Doubletime Hourly
40.000	0.000	0.000

Rate in Lieu of Fringes (Cash Fringes) 0.000

▼ Classifications

Jurisdiction	Location	Craft	Classification	Construction Type	
Miami-Dade County Responsible Wages	Miami-Dade County	ELECTRICAL WORKER	Electrician - Wireman	Building	Edit

▼ Hours Worked Each Day for This Project Only

	Saturday 6/15/2019	Sunday 6/16/2019	Monday 6/17/2019	Tuesday 6/18/2019	Wednesday 6/19/2019	Thursday 6/20/2019	Friday 6/21/2019	Total Hours
Regular Time	0.00	0.00	8.00	8.00	8.00	8.00	8.00	40.00
Overtime at 1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Double-Time	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	8.00	8.00	8.00	8.00	8.00	40.00
Total Hours All Projects Worked	40.00							

▼ Fringes / Contributions paid to others (not employee) for This Project Only (Rate Times the # of Hours Worked)

Vac / Hol / Dues	Health & Welf.	Pension	All Other	Training
0.000	0.000	0.000	0.000	0.000

More... More... More... More...

Voluntary Contributions for all Projects

Pension	Medical
0.000	0.000

☐ Vac/Hol/Dues Included in Gross Emp. Pay/Base Hourly Rate
☐ Some or All Fringes Paid to Employee
☐ Voluntary Contributions Included in Gross Emp. Pay
 Calculate Fringes

This is an hourly rate of funds paid instead of Fringes Benefits. Funds paid directly to the employee and not paid into an approved plan.

Paid into approved Plan.

- Health Insurance
- Dental Insurance
- Vision Insurance
- Life Insurance
- Accident Death & Dismemberment

Paid into approved Plan

- Pension Plan
- 401K

Payroll record entry form (2 of 2)

Week End Date: 6/3/2018 Contractor: Darren's Demo
 Project: M59 Realignment Sub To:
 Employee: DUCK, DONALD Contract ID: 5

☐ Is Foreman ☐ Is Owner/Operator

Gross Employee Pay This Project
(Usually No Fringes)

0.000

Wages Paid in Lieu of Fringes (Total Cash Fringes)

0.000

These fields are Hourly rate fields (Usually No Fringes)

Base Hourly

50.000

Overtime Hourly

0.000

Doubletime Hourly

0.000

Rate in Lieu of Fringes (Cash Fringes)

0.000

Gross Employee Pay This Project – The amount of basic wages paid for this project only. This is typically the hourly rate of pay multiplied by the hours worked (it could be more complex with overtime figured in).

Wages Paid-in-Lieu of Fringes – The amount paid to the employee instead of fringe benefits paid to a plan, fund or program. This amount is sometimes included in the Gross Employee Pay this Project depending on the accounting system and the agency reporting requirements. (Whether you are a Union Shop or Open Shop typically determines whether you pay these required fringes to an approved plan, fund or program, or pay them directly to the employee in cash.) This amount would be the rate-in-lieu of Fringes multiplied by the number of hours worked.

Rate-in-lieu of fringes – The hourly rate paid-in-lieu of fringes. If you pay your employees directly for the required fringe benefit instead of paying into an approved plan, fund or program, please list the hourly rate paid here.

Base Hourly – The hourly rate of pay not including fringes. Some accounting systems include taxable fringes and fringes paid-in-lieu in this amount, do not include those in this field.

Overtime Hourly – The hourly rate of pay multiplied by a factor of 1.5. Do not include fringe benefits in this equation, unless specifically called for by your Awarding Body.

Doubletime Hourly – The hourly rate of pay multiplied by a factor of 2. Do not include fringe benefits in this equation, unless specifically called for by your Awarding Body.

Lump Sum Payments

Rates

4. Direct Payroll Subscription/Interface (DPI)

This option allows you to choose to have LCPtracker map your existing payroll so that you may use it (as a PDF or .CSV file) as an upload file. Once you have it, you can use it to upload your CPR from that 'Upload Records' button.



The screenshot shows the 'Payroll Records' section of the LCPtracker interface. It features a navigation bar with tabs: Projects, 1. Payroll Records, 2. Notices, 3. Certification, Reports, eDocuments, Set Up, Daily Reporter, and LCPcertified. Below the navigation bar, there is a section titled 'Payroll Records' containing several buttons: Enter Records, Direct Payroll Subscription, Edit Certified Payroll Records, Copy Previous Payroll, Recovery Act Additional Data Entry, Edit Uncertified Payroll Records, FHWA 1391 Additional Data Entry, Upload Records (highlighted with a red rectangle), and HUD Additional Data Entry.

5. Manual Entry

For Manual Entry, in the 'Enter Records' tab, you will enter a record each week for every employee that performs work covered by prevailing wages on their project.



The screenshot shows the 'Payroll Records' section of the LCPtracker interface. It features a navigation bar with tabs: Projects, 1. Payroll Records, 2. Notices, 3. Certification, Reports, eDocuments, Set Up, Daily Reporter, and LCPcertified. Below the navigation bar, there is a section titled 'Payroll Records' containing several buttons: Enter Records (highlighted with a red rectangle), Direct Payroll Subscription, Edit Certified Payroll Records, Copy Previous Payroll, Recovery Act Additional Data Entry, Edit Uncertified Payroll Records, FHWA 1391 Additional Data Entry, Upload Records, and HUD Additional Data Entry.

If your employee works in more than one classification (i.e., they've worked 20 hours as a Carpenter and 20 hours as a Power Equipment Operator) enter two separate pay records to show that they are being paid according to the work performed.

Amounts Paid (top section of the Payroll Record Entry Form)

Enter the appropriate amounts in the appropriate sections. Keep in mind this is just a transfer of historical data from your already existing payroll records.

1. Gross Employee Pay This Project – The amount of basic wages paid for this project only. This is typically the hourly rate of pay multiplied by the hours worked (it could be more complex with overtime figured in).
2. Wages Paid-in-Lieu of Fringes – The amount paid to the employee instead of fringe benefits paid to a plan, fund or program. This amount is sometimes included in the Gross Employee Pay this Project depending on the accounting system and the agency reporting requirements. (Whether you are a Union Shop or Open Shop typically

determines whether you pay these required fringes to an approved plan, fund or program, or pay them directly to the employee in cash.) This amount would be the rate-in-lieu of Fringes multiplied by the number of hours worked.

3. Rate-in-lieu of fringes – The hourly rate paid-in-lieu of fringes. If you pay your employees directly for the required fringe benefit instead of paying into an approved plan, fund, or program, please list the hourly rate paid here.
4. Base Hourly – The hourly rate of pay not including fringes. Some accounting systems include taxable fringes and fringes paid-in-lieu in this amount, do not include those in this field.
5. Overtime Hourly – The hourly rate of pay multiplied by a factor of 1.5. Do not include fringe benefits in this equation, unless specifically called for by your Agency.
6. Doubletime Hourly – The hourly rate of pay multiplied by a factor of 2. Do not include fringe benefits in this equation, unless specifically called for by your Agency.

Payroll record entry form (2 of 2)

Week End Date: 6/3/2018

Project: M59 Realignment

Employee: DUCK, DONALD

Contractor: Darren's Demo

Sub To:

Contract ID: 5

☐ Is Foreman
 ☐ Is Owner/Operator

1

Gross Employee Pay This Project
(Usually No Fringes)

0.000

2

Wages Paid in Lieu of Fringes (Total Cash Fringes)

0.000

These fields are Hourly rate fields (Usually No Fringes)

4

Base Hourly

50.000

5

Overtime Hourly

0.000

6

Doubletime Hourly

0.000

3

Rate in Lieu of Fringes (Cash Fringes)

0.000

Classifications

This section lists the craft and classification that your employee worked on your project and will be paid for. If you mistakenly choose the wrong classification on the original entry page, you may change it here by clicking on the Edit button. (Remember that if your employee worked in more than one classification within this work week, you would need to enter a separate payroll record for that classification).

▼ Classifications						
Jurisdiction	Location	Craft	Classification	Construction Type		
Federal Wages	Huron County, MI	Carpenter	Carpenter - Pending USDOL 02/01/2017	Highway	Edit	

Hours Worked Each Day for This Project Only

Enter the hours worked each day.



The first row is for regular time worked(1), the second row is for overtime worked(2) and the third row for is for double time worked(3).

ONLY enter hours worked on this prevailing wage job for this week. The system will total each type of hours worked, the days worked and the week under the totals hours column(4).

▼ Hours Worked Each Day for This Project Only								
	Monday 5/28/2018	Tuesday 5/29/2018	Wednesday 5/30/2018	Thursday 5/31/2018	Friday 6/1/2018	Saturday 6/2/2018	Sunday 6/3/2018	4 Total Hours
1 Regular Time	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 Overtime at 1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 Double-Time	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: If turned on by the Administrator, you may see an additional field 'Total Hours All Projects Worked' listed in the hours section. If so, this field will require a manual entry for your employee's full hours worked that week.

▼ Hours Worked Each Day for This Project Only								
	Monday 4/8/2019	Tuesday 4/9/2019	Wednesday 4/10/2019	Thursday 4/11/2019	Friday 4/12/2019	Saturday 4/13/2019	Sunday 4/14/2019	Total Hours
Regular Time	2.00	2.00	2.00	2.00	2.00	0.00	0.00	10.00
Overtime at 1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Double-Time	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.00	2.00	2.00	2.00	2.00	0.00	0.00	10.00
Total Hours All Projects Worked	40.00							

Fringes/Contributions Paid to Other (Not Employee) for This Project Only

You may utilize this section in two different ways:

1. Auto calculate
2. Manual entry

▼ Fringes / Contributions paid to others (not employee) for This Project Only (Rate Times the # of Hours Worked)					
* Vac / Hol / Dues 0.000 More...	Health & Welf. 0.000	2 Pension 0.000 More...	** All Other 0.000	* Training 0.000	Voluntary Contributions for all Projects Pension 0 Medical 0 <input type="checkbox"/> Vac/Hol/Dues Included in Gross Emp. Pay <input type="checkbox"/> Some or All Fringes Paid to Employee <input type="checkbox"/> Voluntary Contributions Included in Gross Emp. Pay <input type="button" value="Calculate Fringes"/>

* DO NOT USE - Not allowed by Responsible Wages & Benefits

** Use to enter vision, dental, life, and Accidental Death & Dismemberment insurance Only

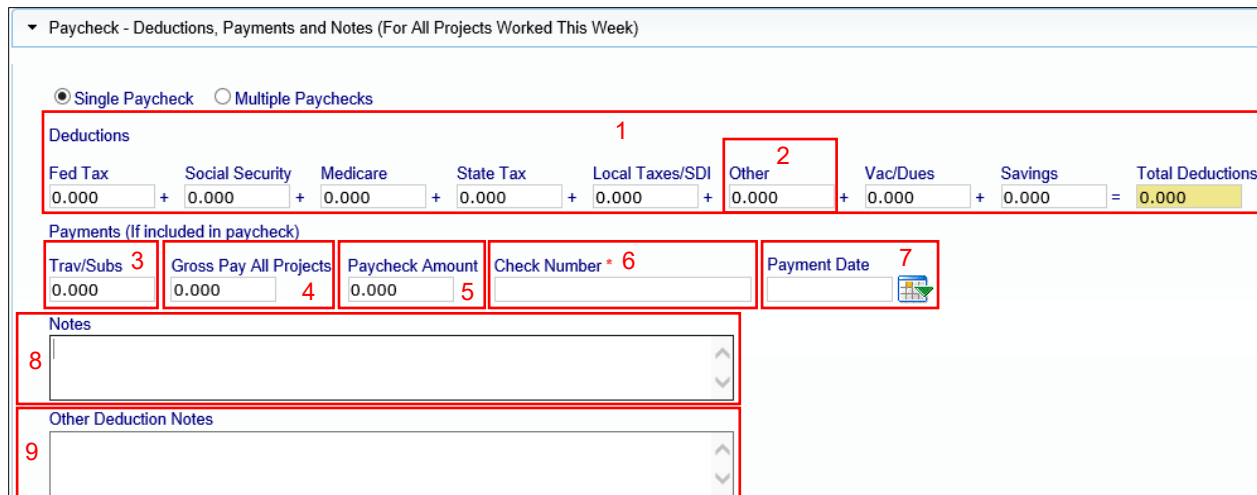
Auto Calculate: The first is by simply clicking the 'Calculate Fringes' button so that the system automatically calculates the fringe benefit rates paid.

Manual Entry: This only works if you filled out the hourly fringe benefit rates in the Add/Edit Employee screen (or the Fringe Benefit Maintenance section, also available in the Set Up tab). This function multiplies the hours worked times the fringe benefit rate to get the values.

The second way is to manually enter the total amounts paid per section (Vac/Hol/Dues, Health & Welfare, Pension, etc.) from your payroll register or paystubs. Mark the appropriate check boxes as required. If they are checked in the Add/Edit Employee setup, then that value carries over.

Paycheck – Deductions, Payments, and Notes

Values entered in this section apply to all hours worked on all projects during the week.



1. Deductions - the 'Total Deductions' box will add as you enter values in the taxes, other deductions, Vac/Dues and Savings fields.
2. Other Deduction - this field is for permissible deductions that do not fall into the other available fields. If you put an amount in the 'Other' deductions field, an 'Other Deduction Note' will become required.
3. Trav/Subs - this field is for travel or subsistence paid to your employee. This amount does figure into the mathematical calculation that the system to ensure that Gross and Net pays are correct.
4. Gross Pay All Projects – the gross amount on the paycheck for the week including all projects worked.
5. Paycheck Amount – this is also referred to as Net pay. This is the actual amount of pay the employee received.
6. Check Number – you have the option of putting different information in this field. If you hand out actual checks to your employees, please enter the check number in this field. If

you utilize direct deposit and no check numbers exists, enter 'DD'.

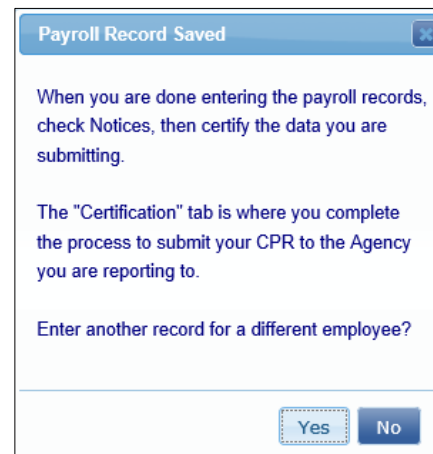
7. Payment Date – this is the actual date of the paycheck. Not all Agencies require this field.
8. Notes – this is a section that allows you to communicate anything out of the ordinary that you would like your Agency to know.
9. Other Deduction Notes – if you entered a permissible deduction in the above-mentioned field, then you will be required to leave a note describing that deduction. Please remember to be transparent in your notes entered. We recommend that you list what the actual deduction is, and not write "other deduction" or "N/A".

Saving the Payroll Record

When you have completed all the above-mentioned fields, Click Save.

SAVE WITH NO NOTICES

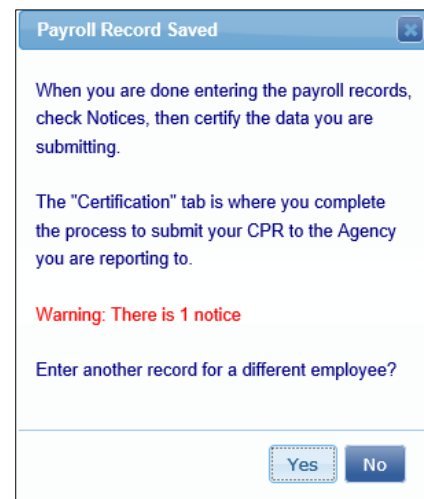
With a successful save you will get this message:



A screenshot of a web browser dialog box titled "Payroll Record Saved". The dialog box has a blue header bar with a close button (X) in the top right corner. The main content area is white and contains the following text: "When you are done entering the payroll records, check Notices, then certify the data you are submitting." followed by "The 'Certification' tab is where you complete the process to submit your CPR to the Agency you are reporting to." Below this is a question: "Enter another record for a different employee?". At the bottom right, there are two buttons: "Yes" (outlined) and "No" (solid blue).

SAVE WITH NOTICES

If you do not get this message, look for the **RED** message on the screen. You may have to scroll through the payroll record to see what you have missed that may be a required field.



A screenshot of a web browser dialog box titled "Payroll Record Saved". The dialog box has a blue header bar with a close button (X) in the top right corner. The main content area is white and contains the following text: "When you are done entering the payroll records, check Notices, then certify the data you are submitting." followed by "The 'Certification' tab is where you complete the process to submit your CPR to the Agency you are reporting to." Below this is a warning message in red text: "Warning: There is 1 notice". Below the warning is a question: "Enter another record for a different employee?". At the bottom right, there are two buttons: "Yes" (outlined) and "No" (solid blue).

2. Notices Tab

Once you have entered all payroll records for the week, go to the '2. Notices' tab to check and see if you have any payroll Notices.

After your records have been saved: there could be issues ranging from forgetting to add an employee ID or phone number to forgetting to enter the Gross Employee Pay This Project field at the top of the Payroll Record Entry screen, this will display in the Notices tab.

If an employee is displayed on the notices screen (see below), the notice will need to be cleared.



The screenshot shows the 'Contractor Notices' interface. At the top, there's a 'Project' dropdown menu set to 'All Projects'. Below it are 'From Date' and 'To Date' fields with calendar icons, and a checkbox for 'Include Closed Admin Notices'. There are 'Load Data' and 'Help' buttons. Below these are two tabs: 'Payroll Notices (7)' and 'Administrator Notices (20)'. The 'Payroll Notices' tab is active, showing a table with the following data:

Employee	Project	Sub ID	Contract ID	Week End Date	Jurisdiction	Craft	Classification	
CHARNTEL ALEXANDER	Herbert Hoover Dam			6/3/2018	Florida	Laborer	Laborer: Pipelayer	Edit

To clear the notice, click on the Edit button to the right of the employee's name. This will take you back into the Payroll Record Entry screen. Scroll down the bottom and you will see detailed notes on exactly what your notice is.

If you do not understand the notice, there are options on how to get help. You can click on the Video Assistance 'Play Now' button and you will see a video that explains what the notice is and how to address it, or you can contact our [Support](#) department and they will assist you.

All Notices must be cleared to certify the payroll.

3. Certification Tab

It's time to certify your payroll! You will do this for each week beginning when you first start work on your project until the last week on the project.

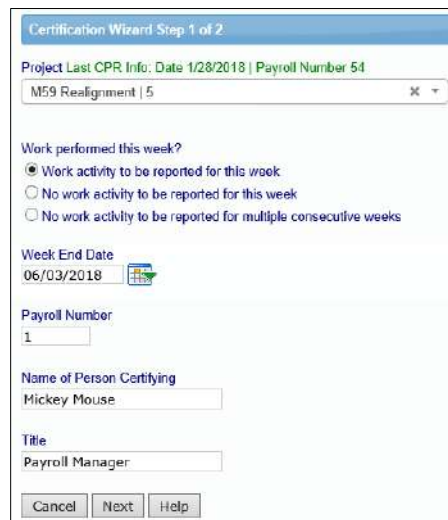
There are three options available to you when you certify your payroll:

1. Certify a payroll for a week during which work was performed
2. Certify a payroll for a week during which no work was performed (non-work week payroll)
3. Certify a payroll for multiple consecutive weeks during which no work was performed

Certification Wizard - Step 1 of 2

To certify your payroll:

- Choose your project
- Choose the type of payroll you are certifying
- Choose your week ending date (if you choose multiple consecutive weeks, you will enter the start date and the last date)
- Enter your name as the person certifying your payroll
- Enter your title
- Click next



The screenshot shows the 'Certification Wizard Step 1 of 2' form. It includes a header with 'Project Last CPR Info: Date 1/28/2018 | Payroll Number 54'. Below this is a dropdown menu for 'M59 Realignment | 5'. The form asks 'Work performed this week?' with three radio button options: 'Work activity to be reported for this week' (selected), 'No work activity to be reported for this week', and 'No work activity to be reported for multiple consecutive weeks'. It also has a 'Week End Date' field with '06/03/2018' and a calendar icon. Below that are fields for 'Payroll Number' (1), 'Name of Person Certifying' (Mickey Mouse), and 'Title' (Payroll Manager). At the bottom are 'Cancel', 'Next', and 'Help' buttons.

Certification Wizard - Step 2 of 2

The Statement of Compliance (SOC) portion of your certified payroll report will display.

You now need to denote how you pay your fringe benefits (if you do both, you may choose both):

- 4a – paid into an approved plan, fund, or program
- 4b – paid in cash to the employee
- 4c – section to note any exceptions you might have, per craft/classification.

If you have any final remarks that you'd like to leave for your Agency, there is a section available to you to do so. Note: this field is mandatory if you are *recertifying* a CPR.

You may also click on a checkbox to note if your CPR is a final.

Enter your eSignature and click Save. This completes your CPR, and it will pop up in another window so long as you have your pop-up blocker turned off. (If you forget your e- Signature, go back to the Set Up tab, edit your eSignature, and then go back to the Certification Tab and follow the above procedures again.)

eSignature Password:

You have now completed certifying your payroll.

Your CPRs are electronically sent to your Administrator, and unless otherwise specified, there is no need to send or print out a hardcopy unless you would like to do so for your own records.

Remember that your CPR's will always be stored in your account to access at any time, so you may decide not to print out hardcopies.

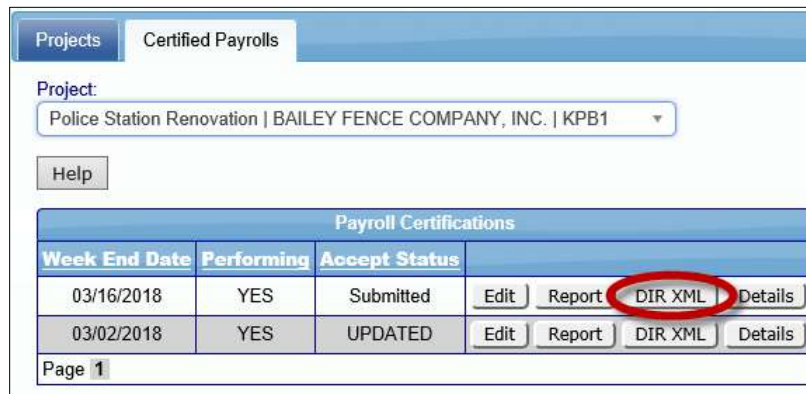
State Specific Uploads

California DIR XML Upload

If you perform work on a California Public Works project, you also need to upload your payroll to the Department of Industrial Relations (DIR) eCPR system. Once you've certified your payroll, you can download the DIR XML file to upload.

Instructions to find and upload this file:

- Click on the Projects tab
- Click on the Certified Payrolls tab
- Locate the week ending payroll file you need
- Click on the DIR XML button (make sure your pop-up blockers are off)
- Save this file to your desktop
- Upload into the DIR eCPR system



Payroll Certifications						
Week End Date	Performing	Accept Status				
03/16/2018	YES	Submitted	Edit	Report	DIR XML	Details
03/02/2018	YES	UPDATED	Edit	Report	DIR XML	Details

Page 1

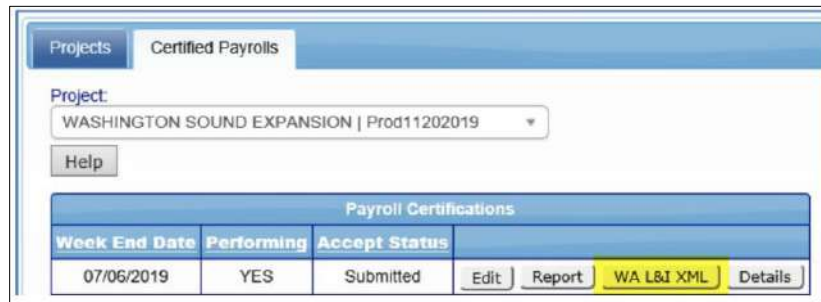
Washington L&I XML Upload

Beginning in January 2020, weekly certified payroll reports are required to be filed online with Washington State Department of Labor and Industries, or WA L&I, at least once a month for all public works projects. Once you've certified your payroll, you can download the WA L&I XML file to upload.

Instructions to find and upload this file:

- Click on the Projects tab
- Click on the Certified Payrolls tab
- Locate the week ending payroll file you need
- Click on the WA L&I XML button (make sure your pop-up blockers are off)
- Save this file to your desktop

- Upload into the WA State PWIA portal



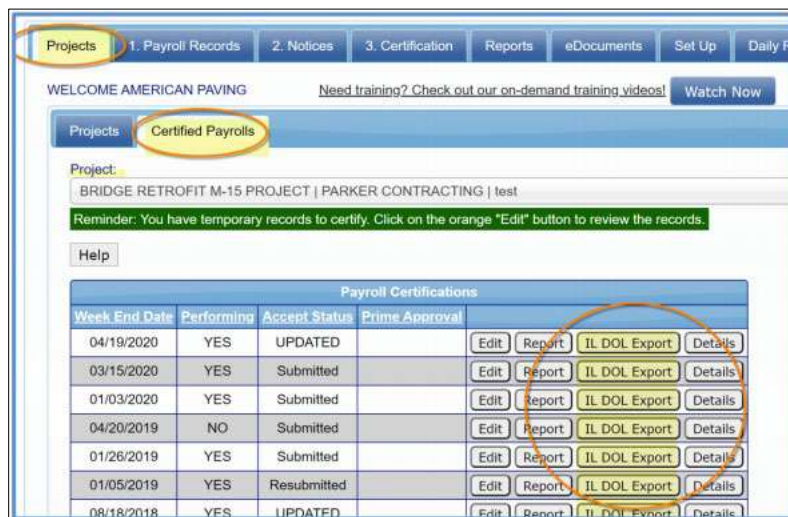
Payroll Certifications			
Week End Date	Performing	Accept Status	
07/06/2019	YES	Submitted	Edit Report WA L&J XML Details

Illinois DOL Export Upload

Beginning in September 2020, weekly certified payroll reports are required to be filed online with the Illinois Department of Labor, or IDOL, by the 15th of each month for all state-funded public works projects. Once you've certified your payroll, you can download the IL DOL XML file to upload.

Instructions to find and upload this file:

- Click on the Projects tab
- Click on the Certified Payrolls tab
- Locate the week ending payroll file you need
- Click on the IL DOL Export button (make sure your pop-up blockers are off)
- Save this file to your desktop
- Make any manual additions/adjustments to the CSV file
- Upload into the IDOL portal



Payroll Certifications			
Week End Date	Performing	Accept Status	Prime Approval
04/19/2020	YES	UPDATED	Edit Report IL DOL Export Details
03/15/2020	YES	Submitted	Edit Report IL DOL Export Details
01/03/2020	YES	Submitted	Edit Report IL DOL Export Details
04/20/2019	NO	Submitted	Edit Report IL DOL Export Details
01/26/2019	YES	Submitted	Edit Report IL DOL Export Details
01/05/2019	YES	Resubmitted	Edit Report IL DOL Export Details
08/18/2018	YES	UPDATED	Edit Report IL DOL Export Details

Should you find that you have any further questions, please consult either the Contractor User Manual or call our [Support](#) department.

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

STANDARD CONSTRUCTION
GENERAL CONTRACT CONDITIONS

STANDARD CONSTRUCTION
GENERAL CONTRACT CONDITIONS
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- C. Disputes
- D. Termination

12. MISCELLANEOUS PROVISIONS

- A. No Third Party Beneficiary
- B. Venue
- C. Governing Laws
- D. Successors and Assigns
- E. Written Notice
- F. Indemnification
- G. Audit Rights
- H. Severability
- I. Payment and Performance Bonds
- J. Insurance
- K. Conflict of Interest
- L. Rights in Shop Drawings
- M. Patent and Copyright
- N. Historical, Scientific and Archaeological Discoveries
- O. Use of Owner's Name in Contractor Advertising or Public Relations

13. ATTACHMENTS

1. DEFINITIONS

(June 12, 2012)

Addendum/Addenda: A modification or clarification of the Contract Documents distributed to prospective Bidders prior to the opening of Bids.

Advertisement for Bids: The public notice inviting the submission of Bids for the Work.

Allowance Account (General): Account in which a stated maximum dollar amount is included in the Contract for the purpose of funding, at the sole discretion of the Owner, unforeseen and/or changed conditions or extra work arising during the prosecution of the Work or any other changes issued by the Owner. The scope and limitations regarding use of the Allowance Account are contained in the Contract Documents. Performance of work, if any, under this Allowance Account shall be authorized by written Work Order issued by the Owner.

Allowance Account(s) (Dedicated): Account(s) in which stated maximum dollar amount(s) are included in the Contract for the purpose of funding specific items of work at the sole discretion of the Owner. The scope and limitations regarding use of the Dedicated Allowance Account(s) are contained in the Contract Documents.

Architect/Engineer: Owner or its authorized representatives identified in the Notice-to-Proceed letter, including but not limited to the Resident Architect/Engineer, the Construction Manager, the Owner's representatives and the Architect/Engineer of Record. In the event an Architect/Engineer is not employed on the project, the term "Owner" may be substituted for Architect/Engineer.

Art in Public Places: Miami-Dade County program established through Ordinance #94-12 and codified in Miami-Dade County Code Section 2-11.15 providing 1.5% of each County project's capital cost to fund a public art component within the Project. Coordination and installation of the Artist's work is included as part of the scope of the Contractor's services to the extent that it is defined in the Bid Documents.

Artist: Person(s) chosen through the Art in Public Places program to design and fabricate or specify an integrated work of art for the Project. The term Artist as may be referred to in the Contract Documents means the Artist and/or their authorized representative.

As-Built Documents: Documents signed and sealed by an appropriately licensed professional and submitted by the Contractor during and/or upon completion of the Contract reflecting actual installed/built conditions and all changes made in the Contract Documents during the construction process and showing the exact dimensions, geometry, location, identification and such other information as required by the Contract Documents and/or Architect/Engineer for all elements of the work completed under the contract. (Also referred to as As-Built Drawings or As-Built Documents).

BCC: Board of County Commissioners, the governing board of Miami-Dade County.

Beneficial Occupancy: The point at which the Owner or Architect/Engineer determines that the Work or any portion thereof can be occupied from a regulatory and work function

standpoint prior to Substantial Completion of the Work. Beneficial Occupancy will not relieve the Contractor of any of its obligations relative to Substantial Completion or of its responsibility to fully complete the Work in accordance with the Contract Documents.

Bid: The written offer of a Bidder to perform the Work.

Bid Documents: The Advertisement for Bids, Instructions to Bidders, Bid Form, Bid Security, Construction Contract, all contractual forms, General Conditions, Special Provisions, Technical Specifications and Contract Drawings, together with all Addenda and any other applicable standards, regulations, laws and permits as described within these other documents which may be incorporated by reference.

Bid Item: A specific item of work represented by a line item in the Bid Form.

Bid Form: The form on which Bids are submitted.

Bid Security: The cashier's check, certified check or bid bond, accompanying the Bid and submitted by the prospective bidder, as a guarantee that the prospective bidder will enter into a contract with the Owner for the performance of the Work and furnish acceptable bonds and insurance if the Contract is awarded to him.

Bidder: An individual, firm, partnership, corporation or combination thereof, submitting a Bid for the Work.

Certificate of Substantial Completion: Certificate issued to the Contractor by the Owner certifying that Substantial Completion has been achieved.

Certificate of Completion: Certificate issued by the local building official providing proof that a structure or system is complete and, for certain types of permits, is released for use and may be connected to a utility system. This certificate does not grant authority to occupy a building, such as a shell building, prior to the issuance of a Certificate of Occupancy by the local building official.

Certificate of Final Acceptance: Certificate issued to the Contractor by the Owner certifying that Final Acceptance has been achieved in accordance with the definition reflected herein (see Final Acceptance definition).

Certificate of Occupancy: Certificate issued by the local building official after the building official inspects the building or structure and finds no violations of the provisions of applicable codes or other laws that are enforced by the local building department.

Change Notice: A document issued by the Architect/Engineer or Owner to the Contractor specifying a proposed change to the Contract Documents and requesting a price proposal from the Contractor, if applicable, within a specified time period.

Change Order: A written agreement executed by the Owner, the Contractor and the Contractor's Surety, covering modifications to the Contract Documents.

Construction Staging Area: Property which may be available for use by the Contractor during the construction period for the purpose of storing products and construction equipment and for the purpose of staging the Work. The construction staging area(s), if applicable, are defined in the Contract Documents.

Construction Contract: The agreement executed by the Contractor and the Owner covering the performance of the Work including the furnishing of labor, superintendence, materials, tools and equipment as indicated in the Contract Documents. The term "Contract" shall have the same meaning.

Consultant: See Architect/Engineer.

Contract Documents: Bid Documents, Change Orders, Payment and Performance Bonds, Work Orders, Approved Schedules, all Contractual Forms, Approved Shop Drawings and Approved Working Drawings.

Contract Drawings: The plans, profiles, cross-sections, elevations, schedules, and details which show locations, character, dimensions and details of the Work. Contract Drawings are confidential under the Florida Public Records Act and the Contractor is responsible for maintaining confidentiality during and after the progress of the Work.

Contractor: The individual, firm, partnership, or corporation, or combination thereof, private, municipal, or public, including joint ventures, duly licensed under Florida Statutes, which, as an independent Contractor, has entered into a Contract with Miami-Dade County, who is referred to throughout the Contract Documents by singular in number and masculine in gender.

Contract Time: The number of days allowed for completion of the Work commencing with the effective date of Notice to Proceed. The Contract Time will be stipulated in the Contract Documents unless extended by a Change Order or by a Work Order.

County: See Owner.

County Manager: The County Manager of Miami-Dade County, Florida.

County Mayor: The Mayor of Miami-Dade County, Florida.

Critical Path: Longest sequence of activities in a project's schedule which defines the project completion date and which must be completed on time in order for the project to be completed on schedule.

Days: Unless otherwise designated, days mean calendar days.

Department Director: The Director of the Miami-Dade County Department implementing the work.

Department Director's Representative: The person or persons designated by the Department Director to act on his behalf in the administration of the contract within the limits of their respective authorization.

Direct Costs: Direct Costs recoverable by the Contractor as a result of changes in the Work shall be limited to the actual additional costs of labor and materials installed as part of the Work and for the reasonable additional cost of rental of any Special Equipment or Machinery. Labor shall be limited to site labor costs, including Employer's Payroll Burden. Specifically excluded from labor are the costs of general foremen and site office personnel. Materials are limited to permanent materials required by the Contract Documents and materials approved by the Architect/Engineer as necessary to install the permanent materials in an efficient and workmanlike manner. For special equipment or machinery not listed in said document, the Contractor shall be paid a rental rate corresponding to the average

prevailing rental rate for such equipment or machinery in Miami-Dade County, Florida, subject to approval by the Architect/Engineer. No additional payment shall be made to the Contractor for fuel, lubricants, fair wear and tear, transportation, insurance or depreciation. Any equipment or machinery not designated by the Architect/Engineer as special equipment and machinery shall be considered Overhead.

Extra Work: Work not provided for in the Contract Documents as awarded or as previously modified by Change Order or Work Order but found to be essential to the satisfactory completion of the Contract within its intended scope.

Field Representative/Construction Manager: An authorized representative of the Owner that may provide administrative and construction inspection services during the pre-construction, construction, and closeout phases of the Contract and through which the orders of the Owner shall be given. The Field Representative has no authority to modify or waive any provision of the Contract Documents.

Final Acceptance: The formal written acceptance by the Owner of the completed work.

Final Completion: Point in time when the Owner determines that all Work has been completed in accordance with the Contract Documents and all deficiencies listed within the Certificate of Substantial Completion and Punch List have been corrected to the satisfaction of the Owner or Architect/Engineer including but not limited to all required final inspections, close-out documents, delivery of all spares and extra materials and activation of warranties as required. A Certificate of Final Acceptance shall be issued to the Contractor by the Owner upon Final Completion.

Force Account: A method of payment measured by actual cost of the labor, materials and equipment plus a mark-up for Indirect Costs, as distinct from other payment methods such as lump sum or unit price, for Extra Work ordered by Change Order and/or Work Order.

Fragment: A fragment or selected portion of the Schedule network and/or network of proposed changed work activities.

Furnishing: Manufacturing, fabricating and delivering to the site of the Work materials, plant, power, tools, patterns, supplies, appliances, vehicles and conveyances necessary or required for the completion of Work.

General Conditions: This section of the Contract Documents which specifies, in general, the contractual conditions.

Green Building Practices: Environmentally- and socially-conscious practices that emphasize processes and methods of design and construction that reduce exposure to noxious materials, conserve non-renewable energy and scarce materials, minimize life-cycle ecological impact of energy and materials, employ renewable energy or materials that are sustainably harvested, protect and restore local air, water, soils, flora and fauna, and support pedestrians, bicycles, mass transit and other alternatives to fossil-fueled vehicles.

Indirect Costs: Overhead.

Installation, Install or Installing: Completely assembling, erecting and connecting material, parts, components, supplies and related equipment specified or required for the completion of the Work including the successful passing of all tests so that they are fully functional.

LEED (Leadership in Energy and Environmental Design): An ecology-oriented building certification program run under the auspices of the U.S. Green Building Council (USGBC) which concentrates its efforts on improving performance across five key areas of environmental and human health: energy efficiency, indoor environmental quality, materials selection, sustainable site development, and water savings.

Limit of Work: Boundary within which the Work is to be performed.

Liquidated Damages: The amount that the Contractor accepts, as stipulated in the Contract Documents, that will be deducted from the Contract Sum for each Day of delay due to a Non-excusable Delay.

Liquidated Indirect Costs Rate: The amount, stipulated in the Contract Documents, that will be added to the Contract Sum for each Day of delay due to a Compensable Delay. The Contractor accepts this sum as full compensation for the Contractor's and all its Subcontractors' Indirect Costs, for each Day of Compensable Delays. This amount is agreed to include any costs other than Direct Costs incurred by the Contractor and all its Subcontractors of any tier in the performance of this Contract.

Lump Sum Bid Item: A bid item in which quantity is not separately measured for payment in units but rather is based on the amount bid by the Contractor as indicated in the Bid Form and made a part of the Contract. Partial payments of Lump Sum Bid Items will be conditionally made, based upon an approved schedule of values, and will be subject to reconciliation in the event that the work of a Lump Sum Bid Item is not fully completed in accordance with the requirements of the Contract Documents.

Miami-Dade County (MDC): A political subdivision of the State of Florida, the Owner.

Milestone: A completion date as defined in the Contract Documents.

Notice to Proceed: Written notice from the Owner to the Contractor specifying the date on which the Contractor is to proceed with the Work and on which the Contract Time commences to run.

Notice of Termination: Written notice from the Architect/Engineer or the Owner to the Contractor to permanently stop work under the Contract on the date and to the extent specified in the notice. The Notice of Termination includes Notices of Termination for Convenience, Default and National Emergencies as set forth in the Contract Documents. Upon receipt of such notice, the Contractor shall comply with the termination provisions of this Contract.

Overhead (Indirect Costs): Overhead, also defined as "Indirect Costs", includes any and all costs other than Direct Costs. The term "Overhead" as indicated in this definition shall apply to both Contractors and Subcontractors of any tier. Overhead includes, but is not limited to, all profit and costs associated with: Project bond premiums, Project insurance premiums, costs of supervision, coordination, superintendents, general foremen, consultants, schedulers, cost controllers, accountants, office administrative personnel, time keepers, clerks, secretaries, watch persons, small tools, equipment or machinery, utilities, rent, telephones, facsimile machines, computers, word processors, printers, plotters, computer software, all expendable items, job site and general office expenses, extended jobsite general conditions, interest on monies retained by the Owner, escalated costs of materials and labor, impact cost on unchanged work, inefficiency, decreased productivity, home office expenses or any cost

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incurred that may be allocated from the headquarters of the Contractor or any of its Subcontractors, loss of any anticipated profits, loss of bonding capacity or capability losses, loss of business opportunities, loss of productivity on this or any other Project, loss of interest income on funds not paid, costs to prepare a bid, cost to prepare a quote for a Change in the Work, costs to prepare, negotiate or prosecute claims, costs of legal and accounting work, costs spent to achieve compliance with applicable laws and ordinances, loss of Projects not bid upon, loss of productivity or inefficiencies in the Work from any cause.

Owner: Miami-Dade County, whose governing body is the BCC acting in its proprietary capacity. Where applicable, the Owner acts through its Architect/Engineer or Field Representative. When these Contract Documents require the action of individual persons, the documents contain specific references to these persons. In particular, the documents shall refer to the BCC when approval of the BCC is specifically required and to the Architect/Engineer when the Architect/Engineer's approval is specifically required.

Payment and Performance Bonds: Bonds executed by the Contractor and its Surety assuring that the Contractor will, in good faith, perform and guarantee the work in full conformity with the terms of the Contract Documents and will promptly pay all persons supplying the Contractor with labor, materials, or supplies, used directly or indirectly by the Contractor in the prosecution of the Work. These bonds shall be two separate bonds, one bonding payment and one bonding performance. Each bond shall be for no less than 100% of the total maximum contract amount.

Project: See definition for Work.

Punch List: A list issued by the Owner to the Contractor of work elements requiring remedial action or completion by the Contractor before Final Completion is issued to the Contractor.

Right-of-Way: A term denoting land and property, and interests therein, owned or acquired by the Owner.

Schedules: All schedules delivered under the Contract including time schedules and schedule of values.

Schedule of Values: A detailed cost breakdown of each lump sum bid item in the bid form, submitted by the Contractor at the beginning of the Work and to be used as a basis to determine monthly progress payments and quantity adjustments within the constraints specified in the Contract Documents.

Shop Drawings: Documents furnished by the Contractor for approval by the Architect/Engineer to illustrate specific portions of the Work. Shop Drawings include drawings, diagrams, illustrations, calculations, schedules, tables, charts, brochures and other data describing design, fabrication and installation of specific portions of the Work.

Site, Project Site, Work Site, Construction Site, Job Site: The location(s) at which the work under this Contract is to be accomplished, as shown in the Contract Documents.

Special Provisions: Section of the Contract which includes specific contractual requirements not covered in the General Conditions that are specific to the Project.

Subcontractor: Any person or entity, other than the employees of the Contractor, supplying the Contractor with labor, materials, supplies and/or equipment used directly or indirectly by the Contractor in the prosecution of the Work.

Substantial Completion: Substantial Completion of a Project is the date on which the Owner certifies that the construction is sufficiently completed, in accordance with the Contract Documents, as modified by any Change Orders, so that the Owner can occupy the Project for the use for which it was intended. A certificate shall be issued to the Contractor by the Owner upon achievement of Substantial Completion.

Surety: The bonding company or companies furnishing the bonds required of a Bidder and of the Contractor.

Technical Specifications: The general term comprising all the written directions, provisions and requirements contained herein, entitled "Technical Specifications," those portions of standard specifications to which reference is specifically made in the Technical Specifications, and any Addenda, Work Orders and Change Orders that may be issued for the Contract, all describing the work required to be performed, including detailed technical requirements as to labor, materials, supplies and equipment and standards to which such work is to be performed as well as any reports specifically issued with the Bid Documents and specifically identified in the Instructions to Bidders which may include geotechnical or other technical reports.

Temporary Construction Easement Line: A boundary which describes additional areas which may be made temporarily available for construction operations.

Time Contingency: The maximum time specifically identified in the Contract Documents by which the Owner may extend the contract time to accomplish the work without a change order. Limitations on the use of the time contingency are set forth in the Contract Documents.

Unit Prices: Unit prices shall include all labor, materials, tools, and equipment; all other direct and indirect costs necessary to complete the item of Work and to coordinate the unit price Work with adjacent work; and shall include all overhead and profit. Contractor shall accept compensation computed in accordance with the unit prices as full compensation for furnishing such Work.

Work: The construction and services required by the Contract Documents, which includes all labor, materials, equipment, and services to be provided by the Contractor to fulfill the Contractor's duties and obligations imposed by the Contract Documents or, if not specifically imposed by the Contract Documents, which can be reasonably assumed as necessary to fulfill the intent of the Contract Documents to provide a complete, fully functional and satisfactory project.

Work Order: A written order, authorized by the Architect/Engineer or Owner, directing the Contractor to perform work under a specific Allowance Account or directing the Contractor to perform a change in the Work that does not have a monetary impact, including but not limited to, extending the Contract Time or subject to the payment of Liquidated Indirect Costs if entitlement is established as required by these Contract Documents. No Work Order may increase the Contract Sum.

END OF ARTICLE

2. INTERPRETATION

(June 12, 2012)

- A. The intent of the Contract is to include all necessary items for the proper completion of the Work by the Contractor so the Owner may have a fully functioning facility and fully receive the benefits intended under the Contract. The Contractor shall perform, without additional compensation, such incidental work as necessary to complete the Work and fulfill the design intent, in accordance with the requirements set forth in the Contract Documents, so that it will meet the requirements for which the Project was intended, in a satisfactory and workmanlike manner.
- B. The Contract Documents and all referenced standards cited are essential parts of the Contract requirements. A requirement occurring in one is as binding as though occurring in all. The documents comprising the Contract Documents are complementary and indicate the construction and completion of the Work. Anything mentioned in the Contract Documents and not shown on the Contract Drawings or shown on the Contract Drawings and not mentioned in the Contract Documents, shall be of like effect as if shown or mentioned in both. The more stringent shall apply in the case of a conflict.
- C. Site Inspections and Verification of Governing Dimensions: In executing the contract, the Contractor represents that he has, prior to bid, visited the site, become familiar with the conditions under which the work is to be performed and correlated his personal observations with the requirements of the Contract Documents or that he has chosen not to do so, in the event that a mandatory site visit is not specified in the Contract Documents. The Contractor accepts the responsibility for all errors in construction which could have been avoided by such examination and the opportunity to seek timely clarifications during the bidding process. The Contractor, before commencing work, shall verify all governing dimensions at the site, and shall examine all adjoining work on which his work is in any way dependent for its conformance with the intent of the Contract Documents and no disclaimer of responsibility for defective or non-conforming adjoining work will be considered unless notice of same has been filed by the Contractor, and agreed to in writing by the Owner through the Architect/Engineer before the Contractor begins any part of the Work. No disclaimer for defective or non-conforming adjoining work that was clearly foreseeable to the Contractor during a site visit (mandatory or non-mandatory) will be considered by the Owner.
- D. Errors, Inconsistencies and Omissions: The Contractor shall carefully study and compare all drawings, Contract Documents and other instructions; shall verify all figures on the Contract Drawings before laying out the Work; shall notify the Owner or Architect/Engineer of all errors, inconsistencies, or omissions which he may discover; and obtain specific instructions in writing during the bidding process and prior to submitting his Bid. The Contractor shall not take advantage of any apparent error or omission which may be found in the Contract Drawings or Contract Documents, and the Architect/Engineer shall be entitled to make such corrections

therein and interpretations thereof as he may deem necessary for the fulfillment of their intent. The Contractor shall be responsible for all errors in construction which could have been avoided by such examination and notification, and shall correct, at his own expense, all work improperly priced, scheduled or constructed through failure to notify the Owner or Architect/Engineer and to request specific instructions.

- E. Where "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the Contract Documents unless stated otherwise.
- F. References to Articles or Sections include sub-articles or subsections under the Article referenced.
- G. Referenced Standards: Material and workmanship specified by the number, symbol, or title of a referenced standard shall comply with the latest edition or revision thereof and amendments and supplements thereto in effect on the date of the Invitation to Bid except where otherwise expressly indicated. In case of a conflict between the Contract Documents and the referenced standard, the Contract Documents shall govern.
- H. Order of Precedence of Contract Documents: Unless otherwise provided for in the Special Provisions or required by law, the order of precedence of the Contract Documents will be as follows:
 - 1) Change Orders to the Contract
 - 2) Notice to Proceed
 - 3) Construction Contract
 - 4) Addenda
 - 5) Special Provisions
 - 6) General Conditions
 - 7) Technical Specifications
 - 8) Contract Drawings
 - 9) Referenced Codes and Standards
 - 10)Guarantees
 - 11)Instructions to Bidders
 - 12)Invitation to Bid
 - 13)Other documents
- I. In case of differences between small and large scale drawings, the drawings showing greater detail shall govern. Schedules on drawings shall take precedence over conflicting notations on drawings. In the event of discrepancy between any scaled dimensions on drawings and the figures written thereon, the figures shall govern over the scaled dimensions unless otherwise indicated.
- J. Explanations: Should it appear that the Work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents, the Contractor shall apply to the Owner or Architect/Engineer in a timely manner to allow sufficient time for such further written explanations as may be necessary and shall

conform to the explanation provided as part of the Contract. The Owner or Architect/Engineer's decision shall be final.

- K. Effect of Headings: The headings and titles to provisions in the Contract Documents are descriptive only and shall be deemed not to modify or affect the rights and duties of parties to this Contract.
- L. No acceptance, order, measurement, payment, or certificate of or by the Architect/Engineer and/or the Owner or its employees or agents shall either estop the Owner from asserting any rights or operate as a waiver of any provision hereof or of any power or right herein reserved to the Owner or of any rights to damages herein provided.
- M. Wherever the terms, "as directed", "ordered", "permitted", "designated", "as approved", "approved equal", "or equal", "acceptable" and other words of similar meaning which authorize an exercise of judgment are used in the Contract Documents, such judgment shall be vested only in the Architect/Engineer and/or the Owner and shall be final.
- N. The Contractor shall make available at the job site one copy of each referenced standard and/or Contract Documents for the Contractor's and the Field Representative's use during the time that work covered by the standards and/or Contract Documents is underway.
- O. The Contract Documents provide for a complete work and may have been prepared in divisions of various crafts, trades and other categories of work. The Contractor is responsible for the performance of all work under the Contract regardless of any such divisions and shall ensure that all of the work is performed and completed. The organization of the Contract Documents into divisions, sections and articles and the arrangement of the drawings do not restrict or limit the Contractor into dividing the Work among subcontractors or in establishing the extent of the Work to be performed by any trade.
- P. No deviation from the approved Contract Documents shall be permitted without the prior written approval of the Owner, which approved deviation shall be documented either by Change order or Work Order.
- Q. All Requests for Information by the Contractor per this section shall be in accordance with the Contract Documents.

END OF ARTICLE

3. ARCHITECT/ENGINEER/FIELD REPRESENTATIVE

(June 12, 2012)

- A. The Architect/Engineer shall respond to questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work in accordance with the time frames prescribed in the Contract Documents. The Architect/Engineer shall decide all questions which may arise as to the interpretation of the Contract Documents relating to the Work, and the fulfillment of the Contract on the part of the Contractor, and those decisions shall be binding on the Contractor
- B. The Architect/Engineer is not authorized to revoke, alter, or waive any requirement of the Contract.
- C. The Architect/Engineer, Owner or Field Representative shall have free access to the Work and materials at all times to facilitate the performance of his duties.
- D. Subject to concurrence by the Owner, the Architect/Engineer shall have the right to observe and reject any material or work performed which does not meet the requirements of the Contract Documents. When the Architect/Engineer discovers any work in progress or completed that does not meet the requirements of the Contract Documents, the Architect/Engineer shall reject that portion of the Work affected and shall confirm such rejection in writing, as soon as practical, detailing the reasons for the rejection. Work rejected by the Architect/Engineer will not be paid for. Any such observation and/or rejection shall not be construed as undertaking supervisory control of the Work or of means and methods employed by the Contractor or his Subcontractors and shall not relieve the Contractor of any of his responsibilities or obligations under the Contract. The Contractor shall not request or attempt to require the Architect/Engineer to undertake such supervisory control or to administer, supervise, inspect, assist, or act in any manner so as to relieve the Contractor from such responsibilities or obligations.
- E. The fact that the Architect/Engineer has not made early discovery of materials furnished or work performed which does not meet the requirements of the Contract Documents, shall not bar the Architect/Engineer from subsequently rejecting said materials or work.
- F. If either the Architect/Engineer or the Field Representative requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the Contract Documents. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as Extra Work. Should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at no additional cost to the Owner.

- G. Any work done or materials used which are not in compliance with the Contract Documents may be ordered removed and replaced at the Contractor's expense.
- H. The Owner and other agencies having jurisdiction over the work hereunder shall be afforded free access to the site to perform such inspections and tests as may be required to determine conformance of the Work with the Contract Documents.
- I. Neither the Architect/Engineer nor the Field Representative shall be responsible for any safety obligations imposed on the Contractor by applicable industry standards, licensing requirements, laws or regulatory requirements.

END OF ARTICLE

4. OWNER

(June 12, 2012)

- A. Unless otherwise specified or excluded elsewhere in the Contract Documents, the records of borings, test excavations and other subsurface investigations, if any, are offered as information only and solely for the convenience of the Contractor. The Owner does not warrant or guarantee either that said records are complete or that the said records will disclose the actual subsurface conditions. The interpretation of the records and the conclusions drawn therefrom as to the actual existing subsurface conditions are the sole responsibility of the Contractor.
- B. Any estimates of quantities of work or materials, based on said borings, test excavations and other subsurface investigations are not warranted by the Owner to indicate the true quantities or distribution of quantities unless the Contractor is expressly directed to rely on such information to prepare and submit his Bid.
- C. If the Contractor is notified by the Owner to correct defective or nonconforming work, and the Contractor fails to promptly proceed with corrective action in a reasonable time, the Owner may, upon written notice, accomplish the redesign, repair, rework or replacement of nonconforming work by the most expeditious means available and backcharge the Contractor for the cost incurred. The cost of backcharge work shall include all reasonable costs associated with the corrective action.
- D. The Owner shall separately invoice or deduct from payments, otherwise due to the Contractor, the costs as provided herein. The Owner's right to backcharge is in addition to any or all other rights and remedies provided in this Contract, or by law. The performance of backcharge work, on behalf of the Owner, shall not relieve the Contractor of any of its responsibilities under this Contract including but not limited to express or implied warranties, specified standards for quality, contractual liabilities and indemnifications, and the Contract Time.
- E. The Field Representative and/or Architect/Engineer will administer the Contract and the orders of the Owner are to be given through the Field Representative and/or Architect/Engineer. The Field Representative and/or Architect/Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for under the Contract.
- F. The Field Representative will observe the Contractor's work for compliance with the Contract Documents. Such observation shall extend to all or any part of the work done and to the preparation, fabrication, or manufacture of the material to be used.
- G. Upon discovery, the Field Representative shall call the Contractor's attention to faulty workmanship or defective materials and shall reject work and materials not conforming to the requirements of the Contract Documents.
- H. When any work in progress or completed does not meet the requirements of the Contract Documents, the Field Representative shall have the authority to order the Contractor to shut down that portion of the work affected until the affected work is corrected to the satisfaction of the Field Representative. The Field Representative shall confirm this order in writing as soon as practicable, detailing the reasons for the

shutdown. Work performed in violation of the Field Representative's order to shutdown will not be accepted or paid for.

- I. The Field Representative is not authorized to revoke, alter, or waive any requirements of the Contract. The Field Representative will negotiate and act on behalf of the Owner to the authorized limits of his authority as specified in the Contract Documents.
- J. Whenever the Contractor intends to build, assemble or perform any portions of the Work away from the site, the Contractor shall promptly notify the Field Representative of such intentions, including where and when such work is to be performed, before such work starts. The Contractor shall also make arrangements for access thereto by the Field Representative and/or the Architect/Engineer so that the aforementioned portions of the Work may be inspected as needed.
- K. The fact that the Field Representative has not made early discovery of materials furnished or work performed which does not meet the requirements of the Contract Documents, shall not bar the Field Representative from subsequently rejecting said materials or work and does not relieve the Contractor of his responsibility to meet the requirements of the Contract Documents.
- L. The Field Representative shall not act as a foreman or perform other duties for the Contractor, nor interfere with the management of the work by the Contractor.
- M. The administration, observation of the work, and actions by the Field Representative, as herein provided, shall not be construed as undertaking supervisory control of the construction work or of means and methods employed by the Contractor or his Subcontractors and shall not relieve the Contractor from any of his responsibilities or obligations under the Contract; the Contractor shall not request or attempt to require the Field Representative to undertake such supervisory control or to administer, to supervise, to inspect, to assist, or to act in any manner so as to relieve the Contractor from such responsibilities or obligations.
- N. The Field Representative shall decide all questions relating to the rights of different prime Contractors on the Project or site.
- O. All materials and each part or detail of the work shall be subject to observation by the Field Representative and/or the Architect/Engineer. The Architect/Engineer and the Field Representative shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required.
- P. Miami-Dade County enters into this Contract solely in its proprietary capacity. Nothing in this Contract is intended to bind or otherwise restrict the discretion of Miami-Dade County acting in its regulatory capacity, including but not limited to the regulatory acts of the Departments of Regulatory and Economic Resources (RER), Transportation and Public Works (DTPW), Fire-Rescue (MDFRD) and Water & Sewer (WASD) or their successors.

END OF ARTICLE

5. CONTRACTOR

(June 12, 2012)

- A. If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.
- B. The Contractor shall hold valid current certificate(s) of competency for the type of work to be performed, in accordance with the qualifications requirements as set forth in Chapter 489 of the Florida Statutes and Chapter 10 of the Code of Miami- Dade County.
- C. The Contractor shall maintain within Miami-Dade County, Florida, a duly authorized agent to accept service of legal process on its behalf, and shall keep the Owner advised of such agent's name and address, during the duration of the Contract, and for three years after final payment or as long as Contractor has warranty obligations under these Contract Documents, whichever period terminates later. The Contractor shall complete the form titled "Contractor Agent to Accept Service" included in the Contract Documents and submit it to the Architect/Engineer prior to NTP.
- D. The Contractor shall be responsible for the complete performance for all of the work under the Contract, and for the methods, means, and equipment used in performing the Contract and for all materials, tools, apparatus and property of every description used in connection therewith.
- E. Upon approval of the Contractor's schedule by the Owner, the Contractor will submit written confirmation from all his Subcontractors agreeing to work within the timeframes specified in the Contractor's approved schedule.
- F. Contractor's Superintendent: The Contractor shall provide a superintendent at the site at all times who is competent in the type of work being performed to act as the Contractor's agent, and shall give that superintendent the full authority to receive instruction from the Field Representative or Architect/Engineer and to execute the order or directions of the Field Representative or Architect/Engineer, including the prompt supply of all materials, tools, equipment, labor, and incidentals that may be required. The Contractor shall furnish such superintendence regardless of the amount of work that is subcontracted, and the superintendent shall read, speak, write and understand English. The Contractor shall also maintain at least one other employee on the work site during Project working hours who speaks and understands English. This superintendent shall be responsible for keeping written daily logs of the work on the project.
- G. The competency of the superintendent shall be demonstrated through licensure or certification in contracting, engineering, trade or experience as applicable to the work being performed. Proof of licensure, certification or qualification of the superintendent must be provided to the Owner at the pre-construction conference and is subject to the approval of the Architect/Engineer or Field Representative after Contractor receipt of said requirements.

- H. In the event that the Field Representative or Architect/Engineer determines, through the course of the actual work progress, that the superintendent lacks the knowledge or expertise necessary to execute the work in an efficient and competent manner, in keeping with all current codes and best practices, the Field Representative or Architect/Engineer shall notify the Contractor in writing and the superintendent shall be replaced by the Contractor with a person acceptable to the Field Representative or Architect/Engineer within five (5) working days.
- I. The Contractor's failure to replace the superintendent in the time allotted shall be cause for the Owner to suspend work with such delays chargeable to the Contractor as Liquidated Damages as specified elsewhere in this contract.
- J. The Contractor shall maintain a daily accounting of his daily manpower, by trade and position, and provide this information to the Field Representative on a weekly basis.

END OF ARTICLE

6. SUBCONTRACTORS

(June 12, 2012)

- A. The Contractor will be permitted to subcontract portions of the Work to competent Subcontractors. Such Subcontractors shall hold valid current certificate(s) of competency for the type of work to be performed, in accordance with the qualifications requirements as set forth in the Florida Statutes and the Code of Miami- Dade County.
- B. Nothing contained herein shall create any contractual relationship between the Owner and any level of Subcontractor, materialman or supplier.
- C. All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor which shall contain provisions that:
 - 1) Preserve and protect the rights of the Owner and any of its authorized representatives under the Contract, including but not limited to, the Architect/Engineer and Field Representative, with respect to the Work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;
 - 2) Require that such Work be performed in accordance with the requirements of the Contract Documents including the Contractor's approved schedule;
 - 3) Require submission to the Contractor of applications for payment under each subcontract to which the Contractor is a part, in reasonable time to enable the Contractor to apply for payment in accordance with any and all payment provisions of the Contract Documents;
 - 4) Require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the Work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor or Supplier where appropriate) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the Contractor upon the Owner;
 - 5) Require specific consent to all relevant provisions of the Contract Documents; and
 - 6) Incorporate all flow-down clauses specifically called for in the Contract, as directed.
- D. Contractor Participation: The Contractor shall perform not less than 25 percent of the Work, not inclusive of materials purchased, with his own organization. If the Contractor is a joint venture, the requirement shall be satisfied by any one, or a combination of any of the joint venture partners. Where a percentage of a Bid Item is subcontracted, the dollar value of that percentage subcontracted will be based on the estimated cost of such Bid Item, determined from information submitted by the Contractor, subject to approval by the Owner. The materials produced by other than the Contractor's forces shall be considered as being subcontracted. If, during the

progress of the Work, the Contractor requests a reduction in such participation percentage, and the Owner determines that, due to the special nature of the conditions of the Work at the time, it would be to the Owner's advantage, the percentage of the Work required to be performed by the Contractor may be reduced, provided written approval of such reduction is obtained by the Contractor from the Owner. The Contractor shall not proceed with any such reductions until his request is approved in writing by the Owner or his authorized designee. Under no circumstances shall less than ten percent (10%) of the Work be performed with the Contractor's own forces.

E. Work Performed by Equipment-Rental Agreement:

- 1) The amount of work performed under equipment rental agreements shall not be considered Subcontractor work. However, for work to be performed by equipment-rental agreement, the Contractor shall notify the Architect/Engineer in writing of such intention before using the rented equipment, and shall indicate whether the equipment is being rented on an operated or non-operated basis. The Contractor's written notice shall contain a listing and description of the equipment and a description of the particular work to be performed with such equipment. As an exception to the above requirements for a written notice to the Architect/Engineer, such notice will not be required for equipment to be rented (without operators) from an equipment dealer or from a firm whose principal business is the renting or leasing of equipment.
- 2) The operators of rented equipment, whether rented on an operated or a non-operated basis, will be subject to wage rate requirements applicable to the Project. If equipment is being rented without operators, the Contractor shall be required to carry the operators on his own payroll. When equipment is rented on an operated basis, the Contractor, when required by the Contract or requested by the Architect/Engineer, shall submit payrolls from the lessor with the names of the operators shown thereon.

F. No work is to be performed at the Work site until the Contractor is in compliance with the Insurance Specifications, has furnished satisfactory evidence of required insurance to the Owner and obtained all required permits.

G. Approval of Subcontractor:

- 1) Prior to entering into any subcontract for Work to be performed on the Project, the Contractor shall secure the approval of the Owner regarding the prospective subcontractor's qualifications, employment data and compliance with CSBE program requirements. The forms used to provide the required information shall be the same as those included in the Forms for Bidding. The Owner will review the submittal from each Subcontractor, and will furnish written notification to the Contractor concerning approval of the award of the subcontract. If the Owner objects to the proposed award or fails to respond to the Contractor within five (5) business days of the complete submittal of the required information, the Contractor may furnish written notice of another subcontractor for consideration. The Owner may, at its discretion, waive or reduce subcontractor information submittal requirements as it deems appropriate.

- 2) In accordance with Ordinance 97-104, codified in Miami-Dade County Code Sections 2-8.1 and 10-33.01, the Contractor shall not, without written consent of the Owner, either replace any subcontractor or permit any such subcontract to be assigned or transferred, or allow that portion of the Work to be performed by anyone other than the approved subcontractor, except he may perform the work himself with qualified personnel upon written notice to the Owner in accordance with applicable law.

END OF ARTICLE

7. PROSECUTION OF THE WORK

(June 12, 2012)

A. Workmanship and Unauthorized Work

- 1) Work under this Contract shall be performed in a skillful and workmanlike manner. Unless otherwise indicated in the Contract Documents, the Contractor shall be solely responsible for means and methods and for the coordination of all trades through completion of the Work and without damage to the existing or newly installed components and surfaces. The Architect/Engineer or Field Representative may, in writing, require the Contractor to remove from the work any employee the Architect/Engineer or Field Representative determines incompetent, careless or otherwise objectionable. Such request shall be at no cost to the Owner.
- 2) Unauthorized Work: Work performed beyond the lines and grades shown on the Contract Drawings and approved Shop Drawings or established by the Owner, and Extra Work done without a Work Order or Change Order, will be unauthorized work and the Contractor will receive no compensation therefor. If required by the Owner, unauthorized work shall be remedied, removed or replaced by the Contractor at the Contractor's expense. Upon failure of the Contractor to remedy, remove or replace unauthorized work, the Owner may at its discretion, remedy, remove or replace the unauthorized work and the Contractor shall bear the responsibility for any and all costs and for delays resulting from such work.
- 3) The entire work and each part thereof, unless otherwise specified in the Contract Documents, shall be placed at the location, elevation, grade and gradient specified, and in proper alignment and adjustment. The Contractor shall provide all frames, forms, falsework, shoring, guides, anchors and temporary structures required to ensure these results.
- 4) No deviation from the approved Contract Documents shall be permitted without the prior written approval of the Architect/Engineer and/or Owner, by Work Order or Change Order, which approved deviation(s) shall be documented to the extent required by the Contract Documents.
- 5) The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the Contract Documents. All workers shall have sufficient skill and experience to properly perform the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.
- 6) All proposed equipment shall be of sufficient size and in such mechanical condition as to meet requirements of the work, producing a satisfactory quality of work. Equipment used on any portion of the work shall be such that no damage to previously completed work, adjacent property, or existing facilities will result from its use.

- 7) When the Contract Documents specify the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized in writing by the Architect/Engineer by Work Order or Change Order. If the Contractor desires to use a method or type of equipment other than specified in the Contract, he may request permission from the Architect/Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with Contract requirements. If, after trial use of the substituted methods or equipment, the Architect/Engineer determines that the work produced does not meet Contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Architect/Engineer may direct, at no additional cost to the Owner. No change will be made to the Contract price or the Contract Time as a result of authorizing a change in methods or equipment under this article.
- 8) The Contractor shall give constant attention to the work to facilitate the progress thereof, and he shall cooperate with the Architect/Engineer and its Field Representatives and with other Contractors in every way possible.
- 9) The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that the work will be of good quality, free from faults and defects in materials and workmanship for a period of one year from the date of Substantial Completion, unless otherwise required under this Contract. Work not conforming to these standards may be considered defective. If required by the Architect/Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

B. Material

- 1) Unless otherwise indicated in the Contract Documents, equipment, material and products incorporated in the Work covered by this Contract shall be new and of the grade specified for the purpose intended. Unless otherwise specifically indicated, reference to equipment, material, product, or patented process by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at his option and, subject to the approval of the Architect/Engineer, use any equipment, material, article, or process which is equivalent to that named, subject to the requirements of these Contract Documents or propose a substitute equipment, material, article or process as indicated below. The Contractor shall at all times comply with established Green Building or LEED standards, if applicable, and as established in the Contract Documents. Proposed alternative equipment, material, products, or patented processes shall be considered equivalent if the Architect/Engineer

determines that the proposed alternative is functionally equal to and/or sufficiently similar to that specified in the Contract Documents.

- 2) The Architect/Engineer shall be the sole judge of the quality, suitability and cost of the proposed alternative equipment, material, article or process. A proposed alternative shall be considered equivalent and/or functionally equal to that specified in the Contract Documents if, in the exercise of reasonable judgment, the Architect/Engineer determines that the proposed alternative is at least equal in materials of construction, quality, durability, appearance, strength and design characteristics, will reliably perform at least equally well the function and achieve the results imposed by the design concept and has a proven record of performance and availability.
- 3) If the Architect/Engineer determines that a proposed alternative does not qualify as equivalent or functionally equal, the alternative may be proposed for consideration as a substitute subject to the Contractor submitting sufficient information as provided below to allow the Architect/Engineer to determine that the proposed alternative is essentially equivalent to or better than the specified item and is an acceptable substitute for that said specified item.
- 4) The burden of proving the quality, suitability and cost of an alternative shall be borne by the Contractor. All information required by the Architect/Engineer in judging an alternative shall be supplied by the Contractor at the Contractor's expense. The Architect/Engineer's costs in evaluating a proposed alternative, irrespective of its acceptance, will be reimbursed by the Contractor to the Owner. In the case of approved alternatives, the Contractor shall also reimburse the Owner for the Architect/Engineer's costs to revise the Contract Documents.
- 5) The Contractor certifies that, if approved and incorporated into the Work, there will be no increase in cost to the Owner or in Contract Time and the proposed alternative shall conform substantially to the detailed requirements of the item specified in the Contract Documents.
 - a. Where use of an alternative material involves redesign of or changes to other parts of the Work, the cost and the time required to affect such redesign or change will be considered in evaluating the suitability of the alternative material. All costs pertaining to redesign and changes in other parts of the Work, including remedial work to completed work, shall be at the Contractor's expense.
 - b. No action relating to the approval of alternative materials will be taken until the request for approval of the alternative materials is made in writing by the Contractor accompanied by complete data as to the quality, suitability and cost of the materials proposed. Such request shall be made at least 60 days before the early start date of the activity. Any delays in receiving approval shall be the responsibility of the Contractor.
 - c. The Architect/Engineer will examine and review the proposed alternative with the Owner and return it, within twenty-one (21) calendar days from the date of its receipt at the Architect/Engineer's

office, to the Contractor noted with the final decision. If the final decision approves either an equal or a substitution, the approval must also contain the Owner's written approval. When requested by the Architect/Engineer, the Contractor shall resubmit such Shop Drawings, descriptive data and samples as may be required.

- d. Where classification, rating, or other certification by a body such as, but not limited to, Underwriters' Laboratories Inc. (UL), National Electrical Manufacturer's Association (NEMA), or American Railway Engineering Association (AREA) is a part of the specification for any material, proposals for use of alternative materials shall be accompanied by reports from the listed body, or equivalent independent testing laboratory, indicating compliance with Contract Documents requirements. Testing required proving equality of the material proposed shall be at the Contractors expense.
 - e. Approval of an alternative material will be only for the characteristics and use named in such approval, and shall not change or modify any Contract requirement, or establish approval for the material to be used on any other Project for the Owner.
- 6) Source of Supply and Quality of Materials: The Contractor shall furnish all materials and products required to complete the Work except those designated to be furnished by the Owner.
- a. Notwithstanding prior inspection and approval by the Architect/Engineer, only materials conforming to the requirements of the Contract Documents shall be incorporated in the Work.
 - b. The materials shall be manufactured, handled and incorporated so as to ensure completed work in accordance with the Contract Documents.
- 7) Defective Materials: Contractor-furnished materials not conforming to the requirements of the Contract Documents will be rejected, whether in place or not. Rejected material shall be removed immediately from the Work site. No rejected material, the defects of which have been subsequently corrected, shall be used in the Work. The Owner may cause the removal and replacement of rejected material and the cost thereof will be deducted from any monies due or to become due to the Contractor.
- 8) Handling of Materials: Materials shall be transported, handled and stored by the Contractor in a manner which will ensure the preservation of their quality, appearance and fitness for the Work. Materials shall be stored in a manner to facilitate inspection.
- 9) The Owner will have no responsibility to the Contractor concerning local material sources.
- a. The Contractor shall make all necessary arrangements with the owners of material sources. The Contractor shall pay all costs in connection with making such arrangements, exploring, developing

and using material sources, whether or not indicated, except such costs as the Owner expressly agrees in writing to assume.

10) Disposal of Material Outside the Work Site: Unless otherwise specified in the Contract Documents, the Contractor shall make his own arrangements for properly disposing of waste and excess materials outside the Work Site and he shall pay all costs therefore. Contractor shall comply with all local, state and federal requirements when disposing of waste and excess materials.

a. Prior to disposing of material outside the Work Site, the Contractor shall obtain written permission from the owner on whose property the disposal is to be made. The Contractor shall file with the Architect/Engineer said permit, or a certified copy thereof, together with a written release from the property owner absolving the Owner from any and all responsibility in connection with the disposal of material on said property.

11) Property Rights in Materials: The Contractor shall have no property right in materials after they have been attached or affixed to the Work or the soil, or after payment has been made by the Owner to the Contractor for materials delivered to the site of the Work, or stored subject to or under the control of the Owner, as provided in these Contract Documents. However, the Contractor shall be responsible for the security of the material on-site until Final Acceptance by the Owner.

C. Methods of Sampling and Testing

1) Sampling and testing of all materials shall be as set forth in the Contract Documents. Except for quality control testing and any other testing that may be the direct responsibility of the Contractor as set forth in the Contract Documents, the testing of samples and materials will be made at the expense of the Owner by the project testing laboratory. The Contractor shall furnish the required samples without charge. Any and all fees for non-conforming materials or work shall be solely borne by the Contractor. The Contractor shall give sufficient notification to the Field Representative of the placing of orders for or receipt of materials to permit testing.

2) The Field Representative may inspect, at its source, any specified material or assembly to be used in the Work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the Work and to obtain samples required for its acceptance of the material or assembly

Should the Field Representative conduct plant inspections, the following shall exist:

a. The Field Representative shall have the cooperation and assistance of the Contractor and the producer with whom he has contracted for materials.

- b. The Field Representative shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of materials being furnished.
 - c. If required by the Field Representative, 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.
- 3) It is understood and agreed that the Owner shall have the right to retest any material which has been tested and approved at the source of supply after it has been delivered to the site. The Field Representative shall have the right to reject only material which, when retested, does not meet the requirements of the Contract Documents. In such an event, the cost of re-testing shall be borne by the Contractor if it results in a rejected material.
- 4) All inspections and testing of materials, assemblies and equipment will be performed in Miami-Dade County. If the Contractor's material or manufacturing sources are such that inspections or tests cannot be made in Miami-Dade County, all traveling and lodging expenses in connections with such inspections and testing shall be borne by the Contractor.

D. Meetings

- 1) A pre-construction conference will be held prior to the issuance of the Notice to Proceed to discuss the work to be performed under this contract. The Contractor and its major Subcontractors shall be required to attend this meeting. The Contractor will be advised of the time, date and location of the meeting.
- 2) The Contractor shall attend weekly construction coordination meetings at a time and place to be designated by the Architect/Engineer. These meetings are intended to determine job progress, identify job problems, assist in solving and preventing job problems, and promote coordination with all entities involved in the Contract and with other Owner Contractors. The Contractor shall cause Subcontractors and suppliers to attend as he deems advisable, or as requested by the Architect/Engineer. Unless otherwise provided for in these Contract Documents, the Contractor shall be responsible for generating and distributing meeting minutes for all such meetings.

E. Permits and Compliance with Laws

- 1) Unless otherwise provided for in these Contract Documents, the Contractor shall be responsible for obtaining necessary licenses and permits and for complying with applicable Federal, State, County and Municipal laws and latest codes and regulations in connection with the prosecution of the Work. (For payment of permit(s), see Special Provisions). No time extensions will be allowed for delays in obtaining the required permits unless revisions directly caused by the Owner or its agents are required to the Contract Drawings due to changes in codes, regulations and applicable contract standards during the contract term. See Special Provisions for additional permit requirements.

- 2) The Owner will not pay or reimburse the Contractor for any penalties relating to his permits or fees as a result of the Contractor's failure to timely obtain all his permits, inspections, approvals, etc.
- 3) The Contractor shall observe and comply with all applicable Federal, State, County and other laws, codes, ordinances, rules and regulations of the Federal, State and County governments, all authorities having jurisdiction, and any and all programs developed in compliance therewith, in any manner affecting the conduct of the Work.
- 4) Dewatering of excavations shall be performed in accordance with the applicable provisions of the Department of Environmental Resources Management (DERM), Florida Department of Environmental Protection (DEP), U.S. Environmental Protection Agency (USEPA) and the South Florida Water Management District (SFWMD) Dewatering Permits and/or any and all authorities having jurisdiction and any other requirements specified in the Contract Documents. The means and methods of dewatering shall be determined by the Contractor who shall bear the full cost of same as part of the contract price.
- 5) All construction activities shall be subject to the pollution prevention requirements established under the National Pollutant Discharge Elimination System (NPDES) program under the Clean Water Act regulating storm water discharge from construction sites.
- 6) Upon completion of all of the work contemplated under the Contract Documents, the Contractor shall obtain and deliver to the Field Representative such Certificate(s) of Occupancy or Certificate(s) of Completion as required by the Florida Building Code and/or authority having jurisdiction.
- 7) The Contractor shall be subject to and comply with all the provisions of Miami-Dade County Code Section 2-8.4.1, which provides that, whenever any individual or corporation or other entity attempts to meet its contractual obligations with the County through fraud, misrepresentation or material misstatement, the County shall, whenever practicable, terminate the Contract. The Contractor is further directed to Section 10-38 of the Miami-Dade County Code which provides for the debarment of County contractors.

F. Coordination and Access

- 1) Other Contracts: The Owner may undertake or award other contracts for additional work, and the Contractor shall fully cooperate and coordinate with other Contractors and the Owner and carefully fit his own work to such additional work. The Contractor shall not perform any act which will interfere with the performance of work by any other contractor or by the Owner. The Contractor shall be responsible for obtaining all necessary scheduling details from other Contractors and these requests must be provided, in writing, to the Owner. The Architect/Engineer shall have the authority to resolve conflicts related to coordination between Contractors.
- 2) In the event of interference between the work of the Contractor and other contractors working concurrently at the Site, the Field Representative will

instruct the Contractor as to which work has priority in performance and such instructions shall be binding upon the Contractor.

- 3) Utility companies, railroads, and municipal agencies having facilities within the limits of the Work shall have access to their facilities at all times for inspection and repair.

G. Rights in Land and Improvements

The Contractor shall make no arrangements with any person to permit occupancy or use of any land, structure or building within the Work Site for any purpose whatsoever, either with or without compensation, in conflict with any agreement between the Owner and any property owner, former property owner or tenant of such land, structure or building. The Contractor shall not occupy Owner-owned property outside the Work Site without obtaining prior written approval from the Owner.

H. Interference With Existing Utilities

- 1) Attention of the Contractor is specifically directed to the need for careful control of all aspects of his work to prevent damage to cables, ducts, water mains, sewers, fire mains, telephone cables, fuel lines, radar cables, and any other existing overhead or underground utilities and structures.
- 2) Before commencing work in any given area, the Contractor shall contact utility companies to identify any potential conflicts. Further, the Contractor shall also carefully review the Plans, survey and search the site for utility locations, and determine possible utility conflicts. All known above and underground utilities, including, but not limited to, electrical, telephone, communications, lighting cables, fuel lines, sewer, drainage and water pipes, and other existing structures are shown on the Plans for reference purposes only, but no guarantee is expressed or implied that the information is accurate. It shall be the sole responsibility of the Contractor to ascertain and/or verify the location of any and all such utilities or structures using magnetic and electronic detectors and by hand excavation or other appropriate measures before performing any work that could result in damage to such existing utilities or structures. The Contractor shall make a thorough search of the particular location for underground utilities or structures whether or not shown on the drawings, before excavation work is commenced in any particular location. To this end the Contractor shall provide and maintain throughout the term of the Contract, electronic and magnetic detecting devices capable of locating underground utilities or structures. The Contractor shall, after locating primary and critical existing utilities, mark their location with indelible material or other means satisfactory to the Field Representative and maintain above ground physical identification during the work.
- 3) In the event of damage to, or accidental disruption of utilities or other facilities as a result of the Contractor's operations, the Contractor shall take immediate steps to repair or replace all damage and to restore all services. Further, the Contractor shall engage any additional outside services which may be necessary to prosecute repairs on a continuous "around the clock" basis until

services are restored. The Contractor shall also provide and operate any supplemental temporary services to maintain uninterrupted use of the facilities. All costs involved in making repairs and restoring disrupted service resulting from the Contractor's work shall be borne by the Contractor and the Contractor shall be fully responsible for any and all claims resulting from the damage.

I. Protection of Existing Facilities, Vegetation, Structures, Utilities and Improvements

- 1) The Contractor shall preserve and protect existing vegetation such as trees, shrubs, and grass on or adjacent to the work site which are not indicated to be removed and which do not unreasonably interfere with the construction Work and he shall replace in kind the vegetation, shrubs and grass damaged by him at his own expense.
- 2) The Contractor shall protect from damage all utilities, foundations, walls or other parts of adjacent, abutting or overhead buildings, railroads, bridges, structures, surface and subsurface structures at or near the site of the Work and shall repair or restore any damage to such facilities, except utilities, resulting from failure to comply with the requirements of this Contract or the failure to exercise reasonable care in the performance of the Work. If, after receipt of notification from the Architect/Engineer, the Contractor fails to or refuses to repair any such damage promptly, the Owner may have the necessary Work performed and charge the cost thereof to the Contractor.
- 3) At points where the Contractor's operations are adjacent to utility facilities, damage to which might result in expense, loss, disruption of service or other undue inconvenience to the public or to the owners, Work shall not be commenced until all arrangements necessary for the protection thereof have been made by the Contractor. The Contractor shall be solely and directly responsible to the owners and operators of such utilities for any damage, injury, expense, loss, inconvenience, or delay, caused by the Contractor's operations.
 - a. Where public utilities or their appurtenances interfere with permanent construction, unless otherwise specified, work involved in permanently relocating or otherwise altering such public utilities and their appurtenances will not be a part of this Contract but will be done by utility owners at no cost to the Contractor. If the Contractor wishes to have utilities temporarily relocated, he shall make necessary arrangements with utility owners and reimburse them at his own expense for cost of the Work. The Contractor shall keep the Architect/Engineer advised of temporary relocation arrangements.
 - b. The Contractor shall not repair or attempt to repair utility damage but shall immediately contact the utility owner. The Contractor shall obtain the name, address and telephone number of each utility company that the work will affect and the person in such utility company to contact. He shall submit to the Architect/Engineer said names, addresses and telephone numbers.

- 4) The Contractor shall comply with the latest version of the Florida Building Code or the Code under which the Contract Documents were approved, whichever is applicable at the time the Work is performed.
- 5) In order to safeguard the owners and tenants of abutting property and at the same time prevent unjust or fraudulent claims against the Contractor the Government, State, the Owner and the Architect/Engineer in respect thereto, the Contractor shall cause a detailed examination of abutting property to be made before construction is begun. The owner or tenant of each parcel or structure or his or their duly authorized representative will be invited to be present during the examination by a notice in writing delivered by the Contractor to a person in charge of the premises or structure, or by the mailing of the notice to the owner at the premises. The Architect/Engineer will attend while the Contractor makes the detailed examination. A complete record including photographs of the existing conditions of each parcel or structure shall be made in triplicate, signed by the Contractor, Owner and the Architect/Engineer and one copy will be delivered to the Owner, one to the Architect/Engineer and one will be retained by the Contractor. At such time as the Architect/Engineer may direct, or upon the filing of the verified statement by the owner, tenant, lessee, operator or occupant of the building structure, and in any event, upon the completion of any work that in the opinion on the Architect/Engineer might affect the abutting property, the Contractor will make another detailed examination of such abutting property. A complete record of the then existing conditions of said property will be made in triplicate, signed by the Contractor and one copy will be delivered to the Owner, one to the Architect/Engineer and one will be retained by the Contractor. In any action, which may be brought by any owner, tenant, lessee, operator or occupant of abutting property to recover under the provisions of this article or any paragraph hereof, the record of the existing conditions of each parcel will be prima facie evidence of the conditions thereof at the time of the making of the examination.
- 6) The Contractor shall maintain access to fire hydrants and fire alarm boxes throughout the prosecution of the Work. Hydrants, alarm boxes and standpipe connections shall be kept clear and visible at all times unless approved otherwise. If visibility cannot be maintained, the Contractor shall provide clearly visible signs showing the location of the fire hydrant, fire alarm box or standpipe connection. The Contractor shall promptly notify the authority having jurisdiction of any impairment to any fire systems.

J. Damage to the Work and Responsibility for Materials

- 1) The Contractor shall be responsible for materials delivered and work performed until completion and Final Acceptance of the entire construction thereof, except those materials and work which may have been accepted under the applicable sections of this article and shall take all necessary steps to protect the Work, from all causes, at his expense.
- 2) The Contractor shall bear the risk of injury, loss or damage to any and all parts of the Work for whatever cause, whether arising from the execution or from the

non-execution of the Work, except as provided for in this article. The Contractor shall rebuild, repair or restore work and materials which have been damaged or destroyed from any cause before Completion and Acceptance of the Work and shall bear the expense thereof. The Contractor shall provide security including, but not limited to, security guards, temporary drainage systems and erection of temporary structures and temporary fencing as necessary to protect the Work and materials from damage.

- 3) The Contractor shall be responsible for materials not delivered to the site for which any progress payment has been made to the same extent as if the materials were so delivered.
- 4) The Contractor's responsibility for material shall be the same for Owner-furnished material, upon receipt of said material from the Owner, under this Contract as for Contractor-furnished material.
- 5) Relief from Maintenance and Responsibility: The Contractor may request, in writing, from the Owner, that the Owner relieve the Contractor of the duty of maintaining and protecting certain portions of the Work, as described in this paragraph, which have been completed in all respects in accordance with the requirements of the Contract. Such action by the Owner will relieve the Contractor of responsibility for injury or damage to said completed portions of the Work resulting from use by the Owner or the public for any cause, but not from injury or damage resulting from the Contractor's own operations or negligence. Portions of the Work for which the Contractor may be relieved of the duty of maintenance and protection, as provided in this paragraph, include the following:
 - a. Early possession by the Owner of any portion of the Work, in accordance with the Contract Documents.
 - b. This Paragraph 5 does not relieve the Contractor of responsibility for repairing or replacing defective work or materials in accordance with the Contract requirements.

K. Emergencies

- 1) In an emergency affecting the safety of life, the Work, or adjacent property, the Contractor shall notify the Field Representative and the Architect/Engineer as early as possible that an emergency exists. In the meantime, without special instruction from the Architect/Engineer as to the manner of dealing with the emergency, the Contractor shall act at his own discretion to prevent such threatened loss or injury. As emergency work proceeds, the Field Representative and the Architect/Engineer may issue instructions, which the Contractor shall follow. The compensation to which the Contractor is entitled on account of emergency work, if any, shall be limited to emergencies not caused by actions or inactions of the Contractor determined in accordance with the Contract Documents, where applicable.
- 2) For purposes of this article, an emergency is defined as an act or event that has already occurred, not caused by actions or inactions of the Contractor, which, if no immediate action is taken may affect the safety of life, the work, or adjacent property. This article does not apply to steps taken by the Contractor to protect

the Work, adjacent structures, utilities, existing vegetation, etc. under other sections of the Contract Documents. Furthermore, this article does not apply to preparations the Contractor may make prior to storms or hurricanes or other acts of God.

L. Accident Prevention

- 1) Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - a. All persons on the Site or who may be affected by the Work;
 - b. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and other property at the Site or adjacent thereto, including trees, shrubs lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction.
- 2) Contractor shall comply with all applicable laws and regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection.
- 3) Upon notification from the Owner or its representative(s), the Contractor shall promptly correct any deficiencies affecting the safety and well being of the construction workers and the public that have been identified by the notice.
- 4) Should a situation of imminent danger be identified, work in the affected area must be suspended immediately until the condition has been corrected. Imminent danger is defined as the exposure or vulnerability to harm or risk that is impending or about to occur as defined by the Field Representative or the Architect/Engineer. The Contractor will not be entitled to future claims alleging impacts caused by the Owner stoppage of the Work due to safety reasons.

M. Warranty of Work

- 1) Except where longer periods of warranty are indicated for certain items, the Contractor warrants the Work under the Contract to be free from faulty materials and workmanship for a period of not less than one (1) year from the date of Substantial Completion. This one-year period shall be covered by the Surety Performance Bond as specified in this Contract, except that in the case of defects or failure in a part of the work which the Owner takes possession of prior to Substantial Completion, such a period shall commence on the date the Owner takes possession. Upon receiving notification from the Owner or any public body, to whom the ownership of the Work has been transferred or who has agreed to maintain the Work, the Contractor shall immediately remedy, repair, or replace, without cost to the Owner or other notifying party and to the entire satisfaction of the notifying party, defects, damages, or imperfections

due to faulty materials or workmanship appearing in said Work within said period of not less than one year. Remedial work shall carry the same warranty as the original work starting with the date of acceptance of the replacement or repair. Payment to the Contractor will not relieve him of any obligation under the Contract.

- 2) The Contractor, at no additional expense to the Owner, shall also remedy damage to equipment, the site, or the buildings or the contents thereof, which is the result of any failure or defect in the Work, and restore any Work damaged in fulfilling the requirements of the Contract. Should the Contractor fail to remedy any such failure or defect within ten (10) days after receipt of notice thereof, the Owner will have the right to replace, repair, or otherwise remedy such failure or defect and deduct all costs from the Contractor's pay request or Performance Bond if final payment has been made.
- 3) The Contractor will correct all latent defects discovered within ten (10) years after Substantial Completion provided that the Owner shall notify the Contractor of each latent defect within the time specified by law. The Contractor, without prejudice to the terms of the Contract, shall be liable to the Owner for all damages sustained by the Owner resulting from latent defects, fraud, or such gross mistakes as may amount to fraud, discovered after the stated guarantee and warranty periods have expired. If the Contractor fails to act within ten (10) days, the Owner reserves the right to have the work performed by others at the expense of the Contractor, and the Contractor agrees to pay the Owner the reasonable cost associated with procurement, implementation and management thereof upon demand. The Owner shall also be entitled to reasonable attorney's fees, necessarily incurred upon the Contractor's refusal to pay the above costs.
- 4) Subcontractors', manufacturers' and suppliers' warranties and guaranties, expressed or implied, with respect to any part of the Work and any material used therein shall be deemed obtained and shall be enforced by the Contractor for the benefit of the Owner provided that, if directed by the Owner, the Contractor requires such subcontractors, manufacturers and suppliers to execute such warranties and guaranties, in writing, directly to the Owner.
- 5) The rights and remedies of the Owner provided in this article are in addition to and do not limit any rights and remedies afforded by the Contract or by law.
- 6) Nothing in the above intends or implies that this warranty shall apply to work that has been abused or neglected by the Owner, its agents or other public body, utility or railroad to which ownership has been transferred.

END OF ARTICLE

8. CONTRACT TIME

(June 12, 2012)

A. Notice to Proceed

- 1) The Owner may issue authorization to obtain permits to the Contractor after the Contractor has executed the Contract and has delivered the specified bonds and certificates of insurance in forms acceptable to the Owner, for the limited purpose of obtaining all necessary permits to complete the work. If the Contractor is unable to obtain all necessary permits within 30 days, through no fault of the Contractor, the Owner has the option, but not the obligation, to terminate the Contract, without fault to the Contractor or the Owner, effective immediately upon written notice by the Owner or give the Contractor additional time to obtain the permits. Upon the Contractor providing satisfactory evidence of obtaining the permits, the Owner will issue Notice to Proceed. Except as specifically authorized in writing by the Owner, the Contractor is not authorized to perform work (other than obtaining permits) under the Contract until the effective date of the Notice to Proceed, upon which the Contractor shall commence work and shall diligently prosecute the Work to completion within the time limits specified. The Contract time commences on the date shown on the Notice to Proceed.
- 2) Any Work Performed by the Contractor (other than obtaining permits) prior to Notice-To-Proceed shall be at the Contractor's own risk and shall not be considered as the basis for any claim.

B. Schedules

- 1) The Contractor shall provide, maintain, and periodically update schedules in strict accordance with the Contract Documents. The Special Provisions shall contain specific requirements for the form, content and date of submission of the baseline schedule and all schedule updates.
- 2) The Contractor shall prosecute the Work in accordance with the approved baseline Schedule or most recently approved revision to the baseline schedule. In the event that progress along the critical path is delayed, the Contractor shall revise his planning to include additional forces, equipment, shifts or hours as necessary to meet the time or times of completion specified in this Contract at no additional cost to the Owner. In addition, the Contractor shall revise his schedule to reflect these recovery actions and submit it to the Owner for review and approval it being understood that such approval will be as to the format and composition of the schedule and not the Contractor's means and methods. Additional costs resulting therefrom will be borne by the Contractor. Delayed progress is defined as:
 - a. A delay in the start or finish of any activity on the critical path (critical path is defined as the path with the least amount of float) of the approved baseline schedule or most recently approved revision to the baseline; or

- b. A delay in the start or finish of any non-critical activity which consumes more than the available float shown on the approved baseline schedule or most recently approved revision to the baseline, thereby making the activity critical and late; or
 - c. A projected completion date shown on a schedule update which is later than the contractual completion date; or
 - d. Any combination of the above.
- 3) Failure of the Contractor to comply with the requirements under this provision will be grounds for determination that the Contractor is not prosecuting the Work with such diligence as will ensure completion within the Contract Time. Upon such determination, the Owner may terminate the Contractor's right to proceed with the Work, or any separate part thereof, in accordance with the Contract Documents. If in the Contractor's estimation, the cause(s) of delay are beyond the Contractor's control, the Contractor shall adhere to the sections of the Contract Documents related to extensions of time, claims and others as appropriate.
- 4) The Contractor shall be responsible for scheduling and coordinating the work of all crafts and trades, subcontractors and suppliers, required to perform the Work and to complete the Work within the prescribed time. Any inefficiency or loss of productivity in the labor, materials, or special equipment of the Contractor or its subcontractors of any tier, from any cause, shall be the responsibility of the Contractor. No reimbursement of these or any other costs can be requested by or granted to the Contractor or any of its subcontractors of any tier for inefficiency or loss of productivity in labor, materials, or special equipment, except as specified in the paragraph in this article dealing with Liquidated Indirect Costs, for delays in the performance and completion of the Work directly caused by the Owner or its authorized representatives. Other than the exception described above, additional costs may only be paid to the Contractor as a result of additional Work added to the Contract scope of work.

C. Extensions of Time and Classification of Types of Delays

- 1) Once a delay has been identified and it has been established through a scheduling analysis that a delay affects the Project's end date or contractually mandated milestone date, the delay must be classified to determine responsibility and to compute damages, if any. Before the Contractor can submit a request for time extension, claim or any request for additional compensation involving or related to time, the Contractor must classify the delay(s) in accordance with the following classifications. These delay classifications shall be used by the Owner and the Contractor in resolving any time-related disputes. Delays fall into three basic categories: non-excusable, excusable, and compensable.
 - a. Non-excusable delays are those delays to the critical path which were foreseeable at the time of contract award or delays caused by the Contractor due to the Contractor's fault or negligence or his/her own

inefficiencies or problems, due to his/her inability to coordinate subcontractors and/or other flaws in his/her planning. In these types of delays the Contractor is not entitled to extra time or compensation and the Owner may be allowed to assess Liquidated Damages or actual damages, depending on the contract provisions.

- b. Excusable delays are those delays to the critical path beyond the Contractor's control and without the active interference of the Owner, such as extreme weather (force majeure), strikes and delays caused by third parties (i.e. not the Contractor or the Owner). Contractors are granted a time extension but no additional compensation for the extended time of performance for excusable delays.
- c. Compensable delays are delays to the critical path caused by active interference or participation of the Owner or Owner's consultant. Examples of compensable delays are failure of the Owner to provide right-of-way, introducing late design changes, late review of shop drawings by the Owner or his Architect/Engineer and failure of the Owner to coordinate the work of various prime Contractors. In the case of a compensable delay, the compensation for the extended period of performance may cover, in addition to the direct cost due as a result of the changes, Liquidated Indirect Costs as specified in the Contract Documents.
- d. Concurrent delays involve two or more delays to the critical path occurring at the same time, either of which, had it occurred alone, would have affected the end date of the Project. In that event, the Contractor's sole remedy is a time extension and relief of Liquidated Damages with no compensation for extended cost for the concurrency delay period.
- e. The compensability of concurrent delays depends on the types of delays involved. The following shall determine the effects of concurrent delays on time extensions and compensable costs:
 - i. EXCUSABLE DELAY CONCURRENT WITH A NON-EXCUSABLE DELAY. For excusable delays concurrent with non-excusable delays, the Contractor is entitled to a time extension only. For example, it rains the day footings are to be excavated (excusable delay) but the excavation equipment was down for repairs (non-excusable delays).
 - ii. NON-EXCUSABLE DELAY CONCURRENT WITH A COMPENSABLE DELAY. For non-excusable delays concurrent with compensable delays, the Contractor is entitled to a time extension only. For example, if the Owner introduces a design change for a beam but the Contractor has failed to submit the shop drawings for said beam in a timely manner. This would be an example of a non-excusable delay (late shop drawings) concurrent with a compensable delay (Owner introducing design change).

iii. EXCUSABLE DELAY CONCURRENT WITH A COMPENSABLE DELAY. For excusable delays concurrent with compensable delays, the Contractor is entitled to a time extension only. For example, the Owner does not provide the necessary right-of-way to begin construction (compensable delay) but the Contractor's forces are on strike (excusable delay).

2) Time Extensions: The Contractor may be granted an extension of time and will not be assessed Liquidated Damages for any portion of the delay in completion of the Work, arising from acts of God, acts of the public enemy, fires, floods, epidemics, quarantine restrictions, freight embargoes, strikes, labor disputes, or weather more severe than the norm, provided that the aforesaid causes were not foreseeable and did not result from the fault or negligence of the Contractor, and provided further that the Contractor has taken reasonable precautions to prevent further delays owing to such causes, and has given to the Architect/Engineer immediate verbal notification, with written confirmation within 48 hours, of the cause or causes of delay. Within thirty (30) days after the end of the delay, the Contractor shall furnish the Architect/Engineer with detailed information concerning the circumstances of the delay, the number of days actually delayed, the appropriate Contract Document references, and the measures taken to prevent or minimize the delay. All requests for extension of time shall be submitted in accordance with the Contract Documents. Failure to submit such information will be sufficient cause for denying the delay claims. The Owner will ascertain the facts and the extent of the delay and its findings thereon will be final and conclusive subject to the dispute provisions in the Contract Documents. The extensions of time granted for these reasons shall be considered excusable and shall not be the basis for any additional compensation.

- a. Weather more severe than the norm shall apply only as it affects particular portions of the Work and operations of the Contractor, as determined by the Architect/Engineer. Weather more severe than the norm is defined as any situation exceeding the mean data as recorded by The National Climatic Data Center, Asheville, North Carolina and published by the National Oceanic and Atmospheric Administration (This data is taken from the table of normals, means, and extremes in the latest version of the "Local Climatological Data, Annual Summary with Comparative Data, Miami, Florida"). For the calculation of delays due to rain, precipitation of 0.01 inches or more a day shall be considered to be a rain day if the rain actually prevented the Contractor from performing work. The effects of weather less severe than the norm may be taken into account in granting time extensions at the Owner's sole discretion.
- b. An extension of time will not be granted for a delay to the critical path caused by a shortage of materials, except Owner-furnished materials, unless the Contractor furnishes to the Architect/Engineer documentary proof that he has diligently made every effort to obtain

such materials from every known source within reasonable reach of the Work. The Contractor shall also submit proof, in the form of a CPM network analysis data, that the inability to obtain such materials when originally planned, did in fact cause a delay in final completion of the Work which could not be compensated for by revising the sequence of his operations. Only the physical shortage of material will be considered under these provisions as a cause for extension of time. No consideration will be given to any claim that material could not be obtained at a reasonable, practical, or economical cost, unless it is shown to the satisfaction of the Architect/Engineer that such material could have been obtained only at exorbitant prices, entirely inconsistent with current rates taking into account the quantities involved and the usual practices in obtaining such quantities.

- 3) Delays Caused by Consultant and/or the Owner: If the Contractor's performance of the Work along the critical path is delayed by any condition or action directly caused by the Owner, and which was not foreseeable by the Contractor at the time the Contract was entered into, the Contractor shall, provide notification in accordance with the Contract Documents, of any such delay and of the anticipated results thereof. The Contractor shall cooperate with the Owner and use its best efforts to minimize the impact on the schedule of any such delay. In instances where a Contract change extends the Contract beyond the completion date, the Contractor may claim Liquidated Indirect Costs as specified in the paragraph in this article dealing with Liquidated Indirect Costs. These delays shall be considered compensable, except for the period in which these delays may be concurrent with Contractor-caused delays. If a delay on the part of the Owner is concurrent, that is, if it occurs at the same time as a Contractor-caused delay, the Owner-caused delay shall be considered an excusable delay for the portion of the Owner-caused delay which is concurrent with the Contractor-caused delay.
- 4) Delays Beyond Contractor's Control Not Caused by Consultant and/ or the Owner: If Contractor's performance of the Work along the critical path is delayed by any conditions beyond the control and without the fault or negligence of Contractor and not caused by the Owner, and which was not foreseeable by Contractor at the time this Contract was entered into, Contractor shall, provide immediate verbal notification with written notification in accordance with the Contract Documents, of any such delay and of the anticipated results thereof. Within two (2) calendars days of the termination of any such delay, Contractor shall file a written notice with the Architect/Engineer specifying the actual duration of the delay. If the Owner determines that the delay was beyond the control and without the fault or negligence of the Contractor and not foreseeable by the Contractor at the time this Contract was entered into, the Owner will determine the duration of the delay and may extend the time of performance of this Contract provided, however, that Contractor shall cooperate with the Owner and use its best efforts to minimize the impact on the schedule of any such delay. These delays shall

be considered excusable and the Contractor shall not be entitled to, and hereby expressly waives recovery of, any damages suffered by reason of the delays contemplated by this paragraph and extension of time shall constitute Contractor's sole remedy for such delays.

- 5) In addition to the delays in the Work specified in this section, delays in the Work directly caused by an act or omission by an owner of an adjoining property will not be considered an Owner-controlled delay. An owner of an adjoining property is a person, firm, corporation, partnership, or other organization who either owns or occupies, or both, structures or parcels or both, immediately adjacent to the Work Site. Extension of time for those delays will be considered excusable and shall be treated as specified in this article, provided that:
 - a. The Contractor has, in accordance with this article, given to the Architect/Engineer immediate verbal justification, with written confirmation within forty-eight (48) hours of the delay; and
 - b. The Contractor establishes, to the satisfaction of the Architect/Engineer, that:
 - i. The delay was caused directly by an act or omission by the owner of the adjoining property; and
 - ii. The Contractor has taken reasonable precautions and has made substantial effort to minimize the delay.
- 6) A Change Order will be furnished to the Contractor within a reasonable period of time, after approval by the BCC, of a request for extension of time, specifying the number of days allowed, if any, and the new dates for completion of the Work or specified portions of the Work. All requests for time extension shall be in accordance with the Contract Documents. With the exception of time extensions covered under the time contingency allowance in the contract, only the BCC shall grant final written approval of all Change Orders, including additional money or extensions of time. All change orders shall be in full accord with the Contract Documents.
- 7) For the proper format to be used in submitting requests or claims for time extensions, refer to applicable sections of the Contract Documents.
- 8) Extensions of time shall be in accordance with Section 9-3 of the Code of Miami-Dade County, as applicable.

D. Substantial Completion and Final Acceptance

- 1) The following items must be satisfied before Substantial Completion, as defined in the Contract Documents, will be approved:
 - a. All Work must be completed to the satisfaction of the appropriate permitting agencies having jurisdiction over the Work. The Contractor must furnish the Owner with a "Certificate of Occupancy" or a "Certificate of Completion", as applicable, from the permitting agency unless circumstances arise outside the contract scope that

prohibits such certificates from being issued (i.e. utility connections).

- b. All operational systems which may include but not be limited to: electrical systems, security systems, irrigation systems and fire systems, must be completed in accordance with the Contract Documents, tested and approved.
 - c. All plumbing, heating, ventilation, and air conditioning systems must be completed, tested and approved. Whenever the scope of work includes a facility or building, an HVAC test and balance report must be submitted and approved as a condition precedent to Substantial Completion.
 - d. The punch list may not be so extensive or of a nature that the Contractor's completion will significantly interfere with the Owner's beneficial use of the facility.
- 2) When the Contractor believes that all the Work or designated portion thereof required by the contract is substantially completed, the Contractor shall submit to the Field Representative and the Architect/Engineer a request for Substantial Completion inspection. The Contractor, the Field Representative, the Architect/Engineer, sub-consultants, and the Owner shall meet at the Project site for the purpose of making a combined inspection of the Work. During this inspection, any item of work remaining to be done or Work to be corrected shall be noted on a Punch List. If the Field Representative and/or the Architect/Engineer and the Owner indicate on this inspection report that the Work is substantially complete, a Certificate of Substantial Completion will be issued to the Contractor. The Certificate of Substantial Completion shall establish the date of Substantial Completion and shall have attached the Punch List reflecting any items to be completed or corrected, but which do not prevent beneficial use and occupancy, and shall state the date by which the Punch List is to be completed. The completion time for the Punch List shall not be greater than sixty (60) days from the date of issuance of the Certificate of Substantial Completion.
- 3) If any of the conditions listed in this article are not met and the Work has not been completed, or the Contractor determines that the final Punch List cannot be completed within sixty (60) days, a Certificate of Substantial Completion shall not be issued. The Contractor shall continue work, reducing the number of items on the Punch List that were not met. Additional inspections shall be scheduled as necessary until Substantial Completion is declared. However, costs incurred by the Owner for any inspections beyond a second inspection will be charged back to the Contractor.
- 4) In the event the Contractor fails to achieve Substantial Completion within the period specified in the Contract for completion, the Contractor shall be liable for Liquidated Damages and the Owner has, as its option, the right to, after ten (10) calendar days notice to the Contractor, have the work performed by others and backcharge the Contractor for all Direct and Indirect Costs related to performing this work. In the event that the Owner chooses to have the work

completed by others, there shall not be any further non-excusable delays charged to the Contractor beyond the ten (10) days following notice to the Contractor. However, the Contractor shall not be relieved of any non-excusable delays incurred through the date of termination. The Punch List and the Contract shall remain open until all the Work is complete and accepted. The current retainage will be used to offset any Liquidated Damages and any backcharges, after which, any surplus retainage will be released to the Contractor. If the retainage is insufficient to cover the Liquidated Damages and any backcharge, the Owner will bill the Contractor for the balance and the Contractor shall promptly remit to the Owner an amount equal to the billing.

- 5) Final Completion: When the Owner or Architect/Engineer considers all Work indicated on the Punch List to be complete, the Contractor shall submit written certification that:
 - a. Work has been inspected for the compliance with the Contract Documents.
 - b. Work has been completed in accordance with the Contract Documents, and that deficiencies listed within the Certificate of Substantial Completion and its attachments have been corrected.
 - c. Work is completed and ready for final inspection.
- 6) Should the Owner and/or Architect/Engineer inspection find that Work is incomplete, he will promptly notify the Contractor in writing listing all observed deficiencies. The Contractor shall be responsible for all Direct and Indirect Costs to the County resulting from the Contractor's failure to complete the Punch List items within the time allowed for completion.
- 7) The Contractor shall remedy deficiencies and send a second certification. Another inspection will be made that shall constitute the final inspection. Provided that work has been satisfactorily completed, the Architect/Engineer will notify the Contractor in writing of Final Acceptance as of the date of this final inspection.
- 8) Prior to Final Acceptance, the Contractor shall deliver to the Field Representative complete As-Builts, all approved Shop Drawings, maintenance manuals, pamphlets, charts, parts lists and specified spare parts, operating instructions and other necessary documents required for all installed materials, equipment, or machinery, all applicable warranties and guarantees, and the appropriate Certificate of Occupancy.
- 9) Upon notification of Final Acceptance to the Contractor, the Architect/Engineer will request and consider closeout submittals from the Contractor including but not limited to the final Contractor's Affidavit and Release of All Claims.
- 10) The Contractor, without prejudice to the terms of the Contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.
- 11) Re-Inspection Fees: Should the status of completion of the Work require re-inspection of the Work by the Owner and the Architect/Engineer due to failure

of the Work to comply with the Contractor's representations regarding the completion of the Work, the Owner will deduct from the final payment to the Contractor, fees and costs associated with re-inspection services in addition to scheduled Liquidated Damages.

E. Use and Possession

The Owner shall have the right to beneficially occupy, take possession of or use any completed or partially completed portions of the Work. Such possession or use will not be deemed an acceptance of work not completed in accordance with the Contract. While the Owner is in such possession, the Contractor, notwithstanding the provisions of the Contract Documents, will be relieved of the responsibility for loss or damage to the Work other than that resulting from the Contractor's fault or negligence or breach of warranty. If such prior possession or use by the Owner delays the progress of the Work or causes additional expense to the Contractor, a Contract change in the Contract price or the time of completion will be made and the Contract will be modified in writing accordingly.

F. Liquidated Damages and Liquidated Indirect Costs

- 1) The parties to the Contract agree that time, in the completion of the Work, is of the essence. The Owner and the Contractor recognize and agree that the precise amount of actual damages for delay in the performance and completion of the Work is impossible to determine as of the date of execution of the Contract and that proof of the precise amount will be difficult. Therefore, the Contractor shall be assessed Liquidated Damages on a daily basis for each Day that individual milestones, both interim and cumulative as specified in the Contract Documents, are not timely achieved or that Contract Time is exceeded due to a non-excusable delay. These Liquidated Damages shall be assessed, not as a penalty, but as compensation to the Owner for expenses which are difficult to quantify with any certainty and which were incurred by the Owner due to the delay. The amount of Liquidated Damages assessed shall be an amount, as stipulated in the Contract Documents, per day for each calendar day that individual milestones as specified in the Contract are not timely achieved or that the Project is delayed due to a non-excusable delay.
- 2) The Owner and the Contractor recognize and agree that the precise amount of the Contractor's Indirect Costs for delay in the performance and completion of the Work is impossible to determine as of the date of execution of the Contract, and that proof of the precise amount will be difficult. Therefore, Liquidated Indirect Costs recoverable by the Contractor shall be assessed on a daily basis for each Day the Contract Time is delayed due to compensable delay. These Liquidated Indirect Costs shall be paid to the Contractor in full satisfaction of all costs and damages caused by compensable excusable delays, except for Direct Costs. There shall be no Liquidated Indirect Costs payable for time directly related to Extra Work for which a Change Order has been issued.
- 3) The amount of Liquidated Indirect Costs recoverable shall be an amount, as stipulated in the Contract Documents per day for each day the Contract is delayed due to compensable excusable delay. For lump sum contracts, the daily amount of Liquidated Indirect Costs will be calculated by dividing the total

amount in the Contractor's approved Schedule of Values for General Requirements by the Contract duration (in days) after deducting any general conditions costs directly paid by the Owner during the execution of the Project. The amount of the Liquidated Indirect Costs calculated in accordance with this formula shall be stated in the Notice-to-Proceed. For unit price contracts, the daily amount of Liquidated Indirect Costs will be calculated as defined in the formula below:

- 4) In the event the Contractor fails to perform any other covenant or condition (other than time-related) of this Contract relating to the Work, the Contractor shall become liable to the Owner for any actual damages which the Owner may sustain as a result of such failure on the part of the Contractor. The Owner reserves the right to retain these amounts from monies due the Contractor.
- 5) Nothing in this article shall be construed as limiting the right of the Owner to terminate the Contract and/or to require the Surety to complete said Project and/or to claim damages for the failure of the Contractor to abide by each and every one of the terms of this Contract as set forth and provided for in the Contract Documents.

END OF ARTICLE

9. PROGRESS PAYMENTS

(June 12, 2012)

A. Payments

- 1) The Contractor shall receive and accept compensation provided for in the Contract as full payment for furnishing all materials, for performing all work under the Contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof.
- 2) The Owner will make progress payments monthly as the work proceeds. Unless the Special Provisions provide for the payment to be determined by using a cost-loaded CPM, the Contractor shall, within 15 days after Notice-to-Proceed, furnish a Schedule of Values for review and approval by the Owner consisting of a detailed cost breakdown of each lump sum bid item in the bid form in such detail as the Architect/Engineer shall request, showing the amount included therein for each principal category of the work, to provide the basis for determining the amount of progress payments. Unit price bid items shall be paid for in accordance with the Bid Form. The Schedule of Values shall clearly indicate the amount to be paid by the Contractor to each individual Subcontractor.
 - a. The unit prices shall be in proper balance and shall be subject to approval by the Owner. In the preparation of estimates, the Owner, at its sole discretion, may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the Work Site may also be taken into consideration under this article when the Contractor furnishes satisfactory evidence that it will be utilized on the work covered by this Contract.
- 3) In making such progress payments, a maximum of ten-percent (10%) or a minimum of five-percent (5%), as may be amended in the Contract Documents, of the estimated amount shall be retained from each progress payment made to the Contractor until Fifty-Percent (50%) Completion of the work has been established. Fifty-Percent (50%) completion is defined as the point in time when at least 50% of the Work under contract has been physically and satisfactorily completed in accordance with the intent of the Contract Documents as determined by the Architect/Engineer. At this point, the retainage amount withheld from each subsequent progress payment shall be reduced by 50% or not to exceed five-percent (5%) and the accumulated excess amount of retainage will be released to the Contractor, unless such amount is the subject of a good faith dispute, the subject of a claim brought pursuant to Florida Statute 255.05, or otherwise the subject of a claim or demand by the Owner or Contractor. If, at the discretion of the Owner, any time after Fifty-Percent (50%) Completion of the work has been established, the Owner finds

that satisfactory progress is being made, it may authorize any of the remaining progress payments to be made in full. Also, whenever the Work is Substantially Complete, the Owner, if it considers the amount retained to be in excess of the amount adequate for its protection, may release to the Contractor all or a portion of such excess amount.

- 4) Material and work covered by progress payments shall become the sole property of the Owner. This provision shall not be construed as relieving the Contractor from the sole responsibility for material and work upon which payments have been made, the restoration of damaged work or as waiving the right of the Owner to require the fulfillment of the terms of the Contract.
- 5) Progress payments will be made in accordance with the Miami-Dade County Code, Florida Statute, s. 218.70 Florida Prompt Payment Act, and Florida Statute, s. 218.735.
 - a. The Contractor's attention is directed to Florida Statute, s. 218.735, revising provisions regarding timely payment, revising deadlines for the payment of contractors, subcontractors, sub-subcontractors, material-men and suppliers. The contractor shall remit payment due to subcontractors within ten (10) days after the contractors' receipt of payment. The subcontractor shall remit payment due to sub-subcontractors and suppliers within seven (7) days after the subcontractors' receipt of payment. Dispute resolution is provided within the Statute.
- 6) No progress payments will knowingly be made for work not in accordance with this Contract.
- 7) Applications for progress payments shall be in the format as prescribed by the Owner. These applications shall be supported by evidence, which is required by this article. Each application for payment shall clearly indicate the amount to be paid to the Contractor as well as the amount to be paid to each of the Contractor's Subcontractors and suppliers. The Contractor shall certify that the work for which payment is requested has been done and that the materials listed are stored where indicated. Those items on the progress payment application that, in accordance with the applicable sections of the Contract Documents, compensate for Force Account Work, for materials not yet incorporated in the work, or for work under change orders negotiated on a cost-reimbursable basis will, under procedures of the Owner, be subject to the Owner's audit review of the Contractor's records supporting the payment application. Audits will be performed so as not to interfere with timely processing of applications for payment. If audit indicates the Contractor has been overpaid under a previous payment application, that overpayment will be credited against current progress payment applications. For a period of five years from Final Acceptance of the Contract, the Contractor shall maintain and make available for audit inspection and copying by the Owner, State and the Government and their authorized representatives, all records subject to audit review.

8) The Owner, at its discretion, may authorize payment for materials not yet incorporated into the Work, whether or not delivered to the Work Site. The value of materials on hand but not incorporated into the Work will be determined by the Field Representative, based on actual invoice costs to the Contractor, and such value will be included in a monthly application for payment only if the materials have been properly stored on the Site, provided that such materials meet the requirements of the Contract Documents, and are delivered to acceptable locations on Site or in bonded warehouses that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next application for payment after the following conditions are met:

- a. The material has been stored and stockpiled in a manner acceptable to the Field Representative at or on the Work site or in a secure storage facility within Miami-Dade County or other location as approved by the Architect/Engineer. If such materials are stored outside Miami-Dade County, the Contractor shall accept responsibility for and pay all personal and property taxes that may be levied against the Owner by any state or subdivision thereof on account of such storage of such material. The Owner will permit the Contractor, at his own expense, to contest the validity of any such tax levied against the Owner and in the event of any judgment or decree of a court against the Owner, the Contractor agrees to pay same.
- b. The Contractor has furnished the Field Representative with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the Field Representative with satisfactory evidence that the materials and transportation costs have been paid including but not limited to certified bills of sale for such materials and insurance certificates or other instruments, in writing, and in a form as required by the Owner. The Architect/Engineer may allow only such portion of the amount represented by these bills as, in his opinion, is consistent with the reasonable cost of such materials.
- d. The Contractor has furnished the Owner legal title (free of debts, claims, liens, mortgages, taxes or encumbrances of any kind) to the material so stored and stockpiled and subject only to the Owner's payment for the materials as reflected in the application for payment. All such materials so accepted shall become the property of the Owner. The Contractor at his own expense shall mark such material as the property of the Owner and shall take such other steps, if any, the Owner may require or regard as necessary to vest title in the Owner to such material.
- e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or

disappearance of such materials at any time prior to use in the work. The cost of the material included in an application for payment which may subsequently become lost, damaged or unsatisfactory shall be deducted from succeeding applications for payment irrespective of the cause and whether or not due to the negligence, carelessness or fault of the Owner.

- f. It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of its responsibility for furnishing and placing such materials in accordance with the requirements of the Contract Documents and does not waive Owner's right to reject defective material when it is delivered to the Site until such material is delivered to the Site and satisfactorily incorporated into the work.
 - g. In no case will the amount in an application for payment for material on hand exceed the Contract price for such material, the Contract price for the Contract item in which the material is intended to be used or the value for such material established in the approved Schedule of Values. Payment for material furnished and delivered as indicated above will be based on 100 percent of the cost to the Contractor and retention will be withheld as specified in the Contract Documents. In any event, partial payments for materials on hand will not exceed seventy percent (70%) of the item's Bid Price, including taxes and shipping, or the agreed amount within the Schedule of Values.
 - h. No partial payment will be made for stored or stockpiled living or perishable plant materials.
 - i. The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this Article.
 - j. Materials may be subject to being purchased by the Owner directly under the County's "Direct Material Purchase Program" and installed by the Contractor, as applicable, in accordance with the Special Provisions.
- 9) Payment of the Contract lump sum price for General Requirements, if applicable, will be made in the following manner:
- a. The General Requirements Lump Sum amount, including cost for bonds and insurance, shall be paid in proportion to the total percent of completion. The Owner will consider requests for payment for bonds and insurance under the General Requirements after receipt of certified invoices from the Contractor showing that the Contractor has paid them.

- b. The Owner reserves its right to withhold payment for General Requirements, in whole or in part, at the Owner's sole discretion, in accordance with Paragraph 11 below.
- 10) If any claim is filed against the project for labor, materials, supplies or equipment which the Owner has determined to have been incorporated on the site and the Contractor has not paid for, the Owner will have the right to retain from payments otherwise due the Contractor, in addition to other amounts properly withheld under this article or under other provisions of the Contract, an amount equal to such amounts claimed.
- 11) In addition to the provisions of this article and other relevant sections of the Contract Documents, payment may also be withheld proportionately for the following reasons:
- a. Reasonable doubt that the Work can be completed for the unpaid balance of the Contract Sum,
 - b. Reasonable indication that the Work will not be completed within the Contract Time,
 - c. Damage to another Contractor,
 - d. Unsatisfactory prosecution of the Work by the Contractor,
 - e. Failure of the Contractor, or his Subcontractors, to pay wage rates, when applicable as required by the Contract.
 - f. In the event the Surety on the Performance and Payment Bond provided by the Contractor becomes insolvent, or is placed in the hands of a receiver, or has its right to do business in the State of Florida suspended or revoked as provided by law. In this case, payment will continue when the Contractor provides a good and sufficient Bond(s) as required by the Contract Documents, in lieu of the Bond(s) so executed by such Surety.
 - g. If any work or material is discovered which, in the opinion of either the Architect/Engineer or the Field Representative, is defective, or should a reasonable doubt arise on the part of the either the Architect/Engineer or the Field Representative as to the integrity of any part of the work completed previous to the final acceptance and payment. In this case, there will be deducted from the first application for payment subsequent to the discovery of such work, an amount equal in value to the defective or questioned work, and this work will not be included in any subsequent applications for payment until the defects have been remedied or the causes for doubt removed.
- 12) The Contractor shall submit with each monthly invoice the certified payroll forms for all employees on the job in accordance with applicable Responsible Wages and Benefits (Ordinance No. 90-143 and codified in Miami-Dade County Code Section 2-11.16). Failure to provide this information will cause

the Field Representative and/or Architect/Engineer to return the invoice to the Contractor until such time as the Contractor properly submits the information.

- 13) Failure to comply with the insurance requirements listed in the Contract Documents may result in the Owner's withholding or delaying payment to the Contractor.

B. Taxes

- 1) Except as may be otherwise provided for in the Contract Documents, the price or prices bid for the Work shall include full compensation for all federal, state, local and foreign taxes, fees and duties that the Contractor is or may be required to pay and the Contractor shall be responsible for the payment thereof during the prosecution of the work.
- 2) The Contractor's attention is directed to the fact that materials and supplies necessary for the completion of this Contract are subject to the Florida Sales and Use Tax, in accordance with Section 212.08, Florida Statutes, as amended. The Contractor shall not collect taxes upon making delivery to the Owner.
- 3) The Owner, at its sole discretion, upon request of the Contractor and where appropriate, may furnish to the Contractor appropriate evidence to establish exemption from any taxes, fees or duties which may be applicable to the agreement and from which the Owner is exempt.

C. Payments to Subcontractors and Suppliers

- 1) The Contractor shall pay all Subcontractors for and on account of work performed by such Subcontractors in accordance with the terms of their respective subcontracts and in accordance with Ordinance Nos. 94-40, and 02-29, Miami-Dade County Code Section 10-33.02 and Florida Statute s. 218.735.
- 2) Before the Contractor can receive any payment, except the first payment, for monies due him as a result of a percentage of the work completed, he must provide the Architect/Engineer with duly executed release of claim from all subcontractors and suppliers who have performed any work or supplied any material on the project as of the date, stating that said subcontractors or suppliers have been paid their proportionate share of all previous payments. In the event such affidavits cannot be furnished, the Contractor may, at the Owner's sole discretion after the Contractor demonstrates justifiable reasons, submit an executed Consent of Surety to Requisition using the form provided in the Contract Documents identifying the subcontractors and the amounts for which the Statement of Satisfaction cannot be furnished.
- 3) The Contractor's failure to provide a Consent of Surety to Requisition Payment will result in the amount in dispute being withheld until (1) the Statement of Satisfaction is furnished, or (2) Consent of Surety to Requisition Payment is furnished. The Subcontractor(s) shall submit with each monthly invoice the Certified Payroll forms for all employees on the job in accordance with applicable Provisions. Failure to provide this information will cause the Architect/Engineer to return the invoice to the Contractor until such time as the Contractor properly submits the information.

D. Contract Prices – Bid Form

- 1) Payment for the various Bid Items listed in the Bid Form shall constitute full compensation for furnishing plant, labor, equipment, appliances and materials and for performing operations required to complete the Work in conformity with the Contract Documents. All costs for work shown or indicated by the Contract Documents, although not specifically provided for by a Bid Item in the Bid Form, shall be included in the most appropriate Bid Item price for the items listed. Except for the relief provided by the applicable section of the Contract Documents governing Differing Site Conditions, the Contractor will not be entitled to additional compensation for providing an activity or material necessary for the completion of the Work in accordance with the Contract even though the activity or material is not included in a specific Bid Item or indicated in the Contract Documents.

E. Final Payment

- 1) After the Work has been accepted by the Owner, subject to the provisions of the Contract Documents, a final payment will be made as follows:
 - a. Prior to Final Acceptance of the Work, the Contractor shall prepare and submit a proposed final application for payment to the Architect/Engineer showing the proposed total amount due the Contractor, segregated as to Bid Item quantities, force account work, and other bases for payments; deductions made or to be made for prior payment; amounts to be retained; any claims the Contractor intends to file at that time or a statement that no claims will be filed; and any unsettled claims, stating amounts. Prior applications and payments shall be subject to correction in the proposed final application for payment. Claims filed with the final application for payment must be otherwise timely under these General Conditions.
 - b. The Owner will review the Contractor's proposed final application for payment and necessary changes or corrections will be forwarded to the Contractor. Within 10 days thereafter, the Contractor shall submit a final application for payment incorporating changes or corrections made by the Architect/Engineer together with additional claims resulting therefrom. Upon approval by the Owner, the corrected proposed final application for payment will become the approved final application for payment.
 - c. If the Contractor files no claims with the final application for payment and no claims remain unsettled within 30 days after final inspection of the Work by the Architect/Engineer and the Owner, and agreements are reached on all questions regarding the final application for payment, the Owner, in exchange for an executed release of all claims and properly executed close-out documents specified in Paragraph 3 below, will pay the entire sum found due on the approved final application for payment.
 - d. Upon final determination of any and all claims, the Owner, in exchange for properly executed close-out documents specified in

Paragraph 3 below, will pay the entire sum found due on the approved final application for payment, including the amount, if any, allowed on claims.

- e. The release from the Contractor will be from any claims arising from the Work under the Contract. If the Contractor's claim to amounts payable under the Contract has been authorized by the Owner for assignment pursuant to the relevant sections of the Contract Documents, a release may be required from the assignee.
 - f. Final payment will be made within 30 days after approval of the final notice and resolution of Contractor's claims, or 30 days after Final Acceptance of the Work by the Owner, whichever is later. If a final application for payment has not been approved within 30 days after final inspection of the Work, the Owner shall make payment of sums not in dispute without prejudice to the rights of either the Owner or the Contractor in connection with any disputed items.
 - g. Prior to payment of a claim settlement, the claim may be audited by the Owner and may be subject to approval by the funding agencies.
 - h. Final payment made in accordance with this article will be conclusive and binding against both parties to the Contract on all questions relating to the amount of work done and the compensation paid therefore.
- 2) With the final application for payment, the Contractor shall return and submit final releases of claim from himself, from each Subcontractor of record and from other Subcontractors or material suppliers who may have notified the Owner that they were furnishing labor or materials for this project. These releases from Subcontractors and suppliers shall be final, originals, notarized and executed on the form provided by the Owner and included in the Contract Documents, all in accordance with all applicable Florida Statutes. In addition, the Contractor shall execute and return to the Owner all the enclosed close-out documents. In the event that all of the above releases cannot be furnished, the Contractor may, at the Owner's sole discretion after the Contractor demonstrates justifiable reasons, submit a Consent of Surety to Final Payment in a form acceptable to the Owner, recognizing lack of such releases of claim. Furthermore, the Contractor and the Surety shall agree in writing, in a form acceptable to the Owner, to indemnify, defend and hold harmless the Owner from any claims of Subcontractors and suppliers who refuse to execute final releases.
- 3) The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:
- a. Faulty or defective Work appearing after Final Completion;
 - b. Failure of the Work to comply with the requirements of the Contract Documents, discovered after Final Completion;

- c. The performance of audits to seek reimbursement of any overpayments discovered as a result of an audit as provided in the Contract Documents;
 - d. The enforcement of those provisions of the Contract Documents which specifically provide that they survive the completion of the Work;
 - e. The enforcement of the terms of the Payment and Performance Bonds against the Surety;
 - f. Terms of all warranties/guarantees required by the Contract Documents.
- 4) The acceptance of final payment shall constitute a waiver of all claims by the Contractor.

END OF ARTICLE

10. CHANGES

(June 12, 2012)

A. Changes

- 1) The Owner reserves the right to, at any time, without notice to the sureties and without invalidating the Contract, by written notice or order designated as a Change Notice or Change Order, make any change in the Work within the general scope of the Contract including but not limited to changes:
 - a. In the Contract Documents;
 - b. In the method or manner of performance of the Work;
 - c. In Owner-furnished facilities, equipment, materials, services, or site or;
 - d. Directing acceleration in performance of the Work.
- 2) In the event the Owner exercises its right to change, delete or add work under the Contract, such work will be ordered and paid for as provided for in the Contract Documents.
- 3) Changes in the work may be initiated by the issuance of a Change Notice by the Architect/Engineer. The Contractor shall submit a proposal to the Architect/Engineer and the Owner for their review, in accordance with the Contract Documents, within a reasonable time after receipt of a Change Notice. The Contractor shall maintain this proposal, for acceptance by the Owner, for a minimum of 90 calendar days after submittal. The cost or credit to the Owner for any change in the work shall be determined in accordance with the provisions of the Contract Documents. The Contractor shall not be compensated for effort expended in preparing and submitting price quotes.
- 4) In the event the Contractor fails to provide the full cost and time estimate for the change work or refuses to execute a full accord Change Order, the Owner will, at its sole discretion, (1) determine the total cost and time impacts of the change and compensate the Contractor and/or extend the Contract Time, if applicable, through a unilateral Change Order signed only by the Owner; or (2) direct the Contractor to proceed with the Work under the Force Account provisions of this article. Failure of the Contractor to submit his total and final estimated cost and time impact within the time period specified on the Change Notice form shall constitute a waiver by the Contractor to claim additional costs or time beyond that which has been determined by the Owner. Any disputes arising out of an Owner determination shall be resolved in accordance with the disputes provisions in the Contract Documents. Pending the Owner's final decision, the Contractor shall proceed diligently with the performance of the Work under the Contract.
- 5) Changes in the work covered by Unit Prices, as stated in the Contract Documents shall be all inclusive. These prices will include all Direct and Indirect Costs and means and methods of execution. To be compensable, units

must be measured daily by the Contractor and approved in writing by the Owner or his authorized representative.

- 6) The following mark-ups on Extra Work shall apply to all changes in the Work performed under this article:
 - a. For Extra Work performed by the Contractor's own forces, the Contractor agrees that his proposed cost to perform said Extra Work will in no event include a rate for overhead in excess of fifteen percent (15%).
 - b. For Extra Work performed by a Subcontractor's forces, the Contractor agrees that his proposed cost to perform said Extra Work will in no event include Overhead in excess of fifteen percent (15%). The Contractor may then add five percent (5%) times the Subcontractor's or sub-tier Subcontractor's actual Direct Cost as direct compensation for the Contractor's Overhead and all other costs associated with the Subcontractors Work at all tiers.
- 7) Increases to the Contract Amount shall be authorized by a Change Order executed by the Contractor, the Contractor's Surety and the Owner and approved by the BCC. Decreases to the Contract amount shall be by Change Order or Work Order as determined by the Owner and shall also be subject to BCC approval when the decrease results from a reduction in the scope of the work.
- 8) A cost of bonds for Change Orders that impact the Contract price shall be established by the Contractor's actual reimbursement costs, as approved by the Owner, based on the original Contract Amount and the original amount reimbursed to the Contractor for bonds at the commencement of the Work. This cost of bonds shall be added to all credit amounts allowed by the Owner. For Change Orders paid under the Allowance Account, no additional bond cost will be allowed unless the Allowance Account is not included in the original Contract Amount. In this case, additional bond costs for these Change Orders will be considered.
- 9) Any claim for payment of Extra Work that is not covered by a Change Order or Work Order will be rejected by the Owner.

B. Allowance Accounts

- 1) Certain portions of work which may be required to be performed by the Contractor under this Contract are either unforeseeable or have not yet been designed, and the value of such work, if any, is included in the Contract as a specific line item(s) entitled "Allowance Account(s)".
 - a. The Allowance Account (General) can be used to reimburse the Contractor for (1) furnishing all labor, materials, equipment and services necessary for modifications or Extra Work required to complete the Project because of unforeseeable conditions and; (2) for performing construction changes required to resolve: oversight in design, Owner oversight, unforeseen conditions, revised regulations, technological and product development, operational changes,

schedule requirements, program interface, emergencies and delays; and for making final adjustment to estimated quantities shown on the Schedule of Values or amounts bid in the Bid Form to conform to actual quantities installed.

- b. Other Allowance Account(s) (Dedicated) may be used as specified in the Contract Documents to fund specific items of work at the sole discretion of the Owner. These dedicated allowance accounts shall be used only for the purposes approved pursuant to a written Work Order issued by the Owner or his authorized representative.
- 2) At such time as work is to be performed under the Allowance Account(s), if any, the work shall be incorporated into the Schedule and the Schedule of Values, and shall in all respects be integrated into the construction as a part of the Contract as awarded.
- 3) The Work Order for the required work will be issued by the Owner or Architect/Engineer upon receipt from the Contractor of a satisfactory proposal for performance of the work, and the acceptance thereof by the Architect/-Engineer and the Owner. If the Contractor and the Owner are unable to agree upon an amount of compensation or; if the nature of the work is such that a Unit Price or Lump Sum price is not economically practical or if the change work is deemed essential to the Project and actual conditions require work to be swiftly conducted to avoid or minimize delays, the Work Order may be issued to perform the work on a Force Account basis. In the event that an equitable adjustment for the said change work cannot be arrived at, either by mutual agreement or under the dispute provisions of the Contract Documents, the compensation hereunder will be the total compensation for this work.
- 4) No Work Orders shall be issued against an Allowance Account if such Work Orders in the aggregate exceed the authorized amount of that Allowance Account, provided however that such excess may be authorized by appropriate Change Order.
- 5) The unexpended amounts under the allowance accounts shall remain with the Owner and the Contractor shall have no claim to the same.

C. Deletion or Addition of Work

- 1) In the event the Owner exercises its right to delete any portion(s) of the work contemplated herein, such deletion will be ordered and the Contract Total Amount and Time may be adjusted as provided for in these Contract Documents by Change Order or by Work Order, as appropriate. The Contractor shall be reimbursed for any actual reasonable expenses incurred prior to the notice of deletion of work as a result of preparing to perform the work deleted. In the event of a dispute between Owner and Contractor as to the adjustment to the amount of time, the dispute shall be handled in accordance with these General Conditions.
- 2) Deleted Work - Lump Sum Bid Item(s): The Contractor shall credit the Owner for the reasonable value of the deleted work determined from the approved Schedule of Values, subject to approval by the Architect/Engineer. If the reasonable value of the deleted work cannot be readily ascertained from the

Schedule of Values submitted in accordance with these General Conditions, or if requested by the Architect/Engineer, the Contractor shall supply all data required by the Architect/Engineer, including the actual agreements executed by the Contractor with the Subcontractors and suppliers affected by the deleted work, to substantiate the amount of the credit to be given the Owner. The Contractor shall also submit for the Owner's approval a revised schedule of values reflecting the work remaining under the Contract following the deletion.

- 3) No payment(s) shall be made to the Contractor by the Owner for loss of anticipated profit(s) from any deleted work.
- 4) In the event the Owner exercises its right to add to any portion of the work contemplated herein, such addition will be ordered and the Contract Total Amount and Contract Time will be adjusted as provided for in these Contract Documents, by Change Order or by Work Order as appropriate. In the event of a dispute between Owner and Contractor as to the adjustment to the Amount or the Time, the dispute shall be handled in accordance with the Contract Documents.

D. Increased or Decreased Quantities (Unit Prices)

- 1) This section applies to Owner-initiated additions or deletions from the Work and to the unit prices contained within this contract and controls payments or credits for variations between estimated and actual quantities required to complete the Work, even though the additions or deletions may be distinct or separate structures or activities and regardless of the fact that the addition or deletion is a result of field adjustments, site conditions, a design change or any other cause. Increases or decreases will be determined by comparing the actual quantity required to the Architect/Engineer's estimated quantity in the Bid Form.
- 2) If the actual quantity of Bid Item varies from the Architect/Engineer's quantity estimate by 25% or less, payment for the Bid Item will be made at the Contract unit price. If the actual quantity varies from the Bid quantity by more than 25%, the compensation payable to the Contractor will be the subject of review by the Contractor and the Architect/Engineer and a Contract adjustment will be made by means of a Change Order in accordance with the Contract Documents to credit the Owner with any reduction in unit prices or to compensate the Contractor for any increase in unit price resulting from variations between estimated and actual quantities. The unit price to be re-negotiated shall be only for that quantity above 125% or below 75% of the original bid quantities.
- 3) The Contractor shall submit to the Architect/Engineer all data required to substantiate the amount of compensation requested therefore. In no event shall the Contractor be entitled to compensation greater than the aggregate amount of all the Unit Prices times the original bid quantities of Work reflected in the Bid Form.
- 4) No compensation will be made in any case for loss of anticipatory profits, loss of bonding capacity or consequential damages.

E. Extra Work

- 1) Except as otherwise expressly provided above, all additional work ordered, work changed or work deleted shall be authorized by Work Order(s) or Change Order(s). All changed or added work so authorized shall be performed by the Contractor at the time and in the manner specified.

The Change Order shall include, as a minimum:

- a. Scope of work to be added, deleted or modified;
- b. Cost of work to be added, deleted or modified;
- c. The Contract time extension or reduction in contract time in the case of deleted work required to perform the work to be added, deleted or modified;
- d. Full release of claims associated with the Contract through the date of the change order, or a reservation of claims identified as to each claim reserved, the scope of the work, the maximum cost of the work, and the maximum number of days of Contract time requested, shall be specified.

The Work Order shall include, at a minimum:

- a. Scope of work to be added, deleted or modified;
- b. Cost of work to be added, deleted or modified;
- c. The Contract time extension required to perform the work to be added, deleted or modified;
- d. Full release of claims associated with the work order work, or a reservation of claims identified as to each claim reserved, the scope of the work, the maximum cost of the work, and the maximum number of days of Contract time requested, shall be specified.

- 2) If Work is ordered, changed, or deleted which is not covered by Unit Prices, then, the Owner and the Contractor shall negotiate an equitable adjustment to the Contract Price for the Direct Costs for the performance of such work in accordance with this article. Indirect Costs for Work ordered, changed or deleted may be reimbursed for Excusable and Compensable Delay as defined in these Contract Documents.

- a. In order to reimburse the Contractor for additional Direct Costs, either by Work Order, Change Order or any other means, the Contractor must have additional work added to the Contract Scope of Work. The additional cost of idle or inefficient labor, from any cause, or the additional cost of labor made idle or inefficient from any cause will not be considered a reimbursable additional Direct Cost. Special equipment or machinery, which is made idle or inefficient by the Work ordered, changed or deleted, may be reimbursable if approved by the Architect/Engineer as an unavoidable cost to the Contractor, caused by the Owner.

- b. Costs of special equipment or machinery, not already mobilized on the site, approved by the Architect/Engineer, shall be calculated using the current issue of the Associated Equipment Distributors (AED) Manual plus any required mobilization. The selection of which of the AED rates (daily, weekly, monthly) to be used to calculate these costs shall be as follows:
 - i. Between one (1) day and seven (7) days, use the daily rate.
 - ii. Between seven (7) days and thirty (30) days, use the weekly rate.
 - iii. Greater than thirty (30) days, use the monthly rate.
- c. For less than one (1) day hourly rates, use the daily rate divided by eight (8).
- d. For overtime hourly rates use the daily rate divided by eight (8), the weekly rate divided by forty (40), or the monthly rate divided by one hundred and seventy-six (176) as appropriate.
- e. Costs for Special Equipment and Machinery already mobilized on the site, shall not exceed the monthly rate stated in the AED Manual, divided by one hundred and seventy-six (176), per hour that the Special Equipment and Machinery is in use on the work plus any required re-mobilization.
- f. The cost calculation shall not combine rates within the range of a time extension. It shall use decimals of the time extension rate that the extension falls under. For example, the cost calculation for a piece of Special Equipment with an approved delay of forty five (45) days shall be one and one-half (1.5) months times the monthly rate, not one (1) month at the monthly rate, plus two (2) weeks at the weekly rate, plus one (1) day at the daily rate.
- g. Rental for special equipment and machinery, not already mobilized to the site, shall be an amount equal to the appropriate daily, weekly, or monthly rental rate for such equipment, in accordance with the current issue of Associated Equipment Distributors' (AED) "Compilation of Nationally Averaged Rental Rates and Model Specifications for Construction Equipment" (notwithstanding the caveats contained therein that such rental rates are not for use by government agencies) for each and every rental period (in weeks, days, or months as applicable) that the special equipment or machinery is in use on the work plus any required mobilization. Payment for special equipment and machinery already mobilized to the site shall not exceed the monthly rate stated in the AED standards divided by one hundred and seventy six (176) to establish a per hour rate that the special equipment and machinery is in use on the Work, plus any required re-mobilization.
- h. For indirect costs, the Contractor shall be allowed a percentage mark-up as set forth in Paragraph G. 2 below.

F. Differing Site Conditions

- 1) The Contractor shall immediately, and before such conditions are disturbed, notify the Architect/Engineer in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.
- 2) The Architect/Engineer will promptly investigate the conditions, and if such conditions materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under the Contract, a Contract change may be made and the Contract modified in writing in accordance with the Contract Documents.
- 3) No claim of the Contractor under this article will be allowed unless the Contractor has given the notice required in the Contract Documents.
- 4) No claim by the Contractor for a Contract change hereunder will be allowed if asserted after final payment under this Contract.
- 5) If the Owner is not given written notice prior to the conditions being disturbed, the Contractor will be deemed to have waived his right to assert a claim for additional time and compensation arising out of such changed conditions.

G. Force Account

- 1) If the Owner and the Contractor cannot reach agreement on an equitable adjustment to the Contract Price for any work as prescribed above, then the Extra Work will be performed on a Force Account basis as directed by the Architect/Engineer and paid for as specified below.
- 2) The following percentages will be allowed as mark-ups over Direct Costs for all negotiated adjustments to the Contract Amount or for work performed on either a negotiated lump sum basis or a Force Account basis:
 - a. Extra Work Performed directly by Contractor's Own Forces: The Contractor may add up to a maximum fifteen percent (15%) mark-up on the actual Direct Cost of the Extra Work, subject to review and approval by the Architect/Engineer, as direct compensation for Overhead. A 10% mark-up will be added to all negotiated credit amounts for deleted work not performed to cover Overhead.
 - b. Extra Work Performed by a Subcontractor or any Sub-tier Subcontractor: The Subcontractor may add up to a maximum fifteen percent (15%) mark-up on the actual Direct Cost of the Extra Work as direct compensation for Overhead. The Contractor may add a five percent (5%) mark-up on the Subcontractor's actual Direct Cost as Contractor's Overhead. A 10% additional credit will be added to all Subcontractor negotiated credit amounts for deleted work not performed to cover quality control, supervision, coordination, overhead, small tools and incidentals.

3) In the event Extra Work is performed on a Force Account basis, then the Contractor and the Subcontractor(s), as appropriate, shall maintain itemized daily records of costs, quantities, labor and the use of authorized Special Equipment or Machinery. Copies of such records, maintained as follows, shall be furnished to the Architect/Engineer daily for approval, subject to audit.

- a. Comparison of Record: The Contractor, including its Subcontractor(s) of any tier performing the work, and the Architect/Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor, the Subcontractor performing the work, and the Architect/Engineer or their duly authorized representatives.
- b. Statement: No payment will be made for work performed on a force account basis until the Contractor has furnished the Architect/Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:
 - i. Name, classification, date, daily hours, total hours, rate and extension for each laborer, tradesman, and foreman.
 - ii. Designation, dates, daily hours, total hours, rental rate, and extension of each unit of special machinery and equipment.
 - iii. Quantities of materials, prices, and extensions.
 - iv. Transportation of materials.

The statements shall be accompanied and supported by a receipted invoice of all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from its stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

- c. Authorization of Special Equipment and Machinery: No compensation for special equipment or machinery shall be made without written authorization from the Architect/Engineer. The Architect/Engineer shall review and evaluate any special equipment or machinery proposed by the Contractor for use on a force account basis. As part of its evaluation, the Architect/Engineer shall determine whether any of the special equipment or machinery being proposed by the Contractor will be concurrently used on the Project, including approved changes, or on other force account work on the Project. If the Architect/Engineer determines that such a concurrent use of special equipment or machinery is being proposed by the Contractor, prior to the authorization of such special equipment or machinery, the Architect/Engineer and thereto Contractor shall establish a straight-line prorated billing mechanism based on the

actual percentage of time that the equipment or machinery is required to be used on the force account work(s).

Special equipment or machinery which is approved for use by the Architect/Engineer shall be reviewed and accounted for on a daily basis as provided in the Comparison of Record and Statement paragraphs of this section of the Contract.

- d. Inefficiency in the Prosecution of the Work: If in the Owner's or Architect/Engineer's opinion, the Contractor or any of its Subcontractors, in performing Force Account Work, is not making efficient use of labor, materials or equipment or is proceeding in a manner which makes Force Account Work unnecessarily more expensive to the Owner, the Owner or Architect/Engineer may, in whole or part, direct the Contractor in the deployment of labor, material and equipment. By way of illustration, inefficiency may arise in the following ways, including but not limited to: (1) the timing of the Work, (2) the use of unnecessary labor or equipment, (3) the use of a higher percentage of journeymen than in non-force account Work, (4) the failure to procure materials at lowest price, or (5) using materials of quality higher than necessary.

H. Contractor Proposals - General

- 1) The Contractor may at any time submit to the Architect/Engineer for his review proposed modifications to the Contract Documents, including but not limited to, changes in the Contract Time and/or Contract Amount, supported by a cost/price proposal. Upon acceptance of the proposed modifications by the Owner, a Work Order or Change Order will be issued. Denial of a proposed modification will neither provide the Contractor with any basis for claim for damages nor release the Contractor from contractual responsibilities. A Contract change in the form of a Contract price reduction will be made if the change results in a reduction of the cost of performance and the Contractor will not be entitled to share in said savings unless the proposal is made in accordance with Paragraph I of this article. Except as provided in Paragraph I below, the Contractor will not be compensated for any direct, incidental or collateral benefits or savings the Owner receives as a result of the proposal.

I. Value Engineering Change Proposals: The Contractor may submit to the Architect/Engineer one or more cost reduction proposals for changing the Contract requirements. The proposals shall be based upon a sound study made by the Contractor indicating that the proposal:

- a. Will result in a net reduction in the total Contract amount;
- b. Will not impair any essential function or characteristic of the Work such as safety, service life, reliability, economy of operation, ease of maintenance and necessary standardized features;
- c. Will not require an unacceptable extension of the Contract completion time; and

- d. Will require a change in the Contract Documents and such change is not already under consideration by the Owner.
 - i. The Owner may accept in whole or in part any proposal submitted pursuant to the previous paragraph on Value Engineering Change Proposals by issuing a Change Order which will identify the proposal on which it is based. The Change Order will provide for a Contract change in the Contract price and will revise any other affected provisions of the Contract Documents. The equitable adjustment in the Contract price will be established by determining the net savings resulting from the accepted change. The net savings resulting from the change will be shared between the Contractor and the Owner on the basis of 50 percent for the Contractor and 50 percent for the Owner and will be limited to one Value Engineering Change Proposal per Change Order. Net savings will be determined by deducting from the proposal's estimated gross savings (1) the Contractor's costs of developing and implementing the proposal (including any amount attributable to a subcontractor) and (2) the estimated amount of increased costs to the Owner resulting from the change, such as evaluation, implementation, inspection, related items, and Owner -furnished material. Estimated gross savings will include Contractor's labor, material, equipment, overhead, profit and bond. The Contract price will be reduced by the sum of the Owner's costs and share of the net savings. For the purposes of this article, the applicable provisions of the Contract Documents shall be used to determine the equitable adjustment to the Contract price.
 - ii. The Owner will not be liable for delay in acting upon, or for failure to act upon, any proposal submitted pursuant to of this article. The decision of the Owner as to the acceptance or rejection of any such proposal under the Contract will be final. The submission of a proposal by the Contractor will not in itself affect the rights or obligations of either party under the Contract.
 - iii. The Contractor shall have the right to withdraw part or all of any proposal he may make under Paragraph 2 of this article at any time prior to acceptance by the Owner. Such withdrawal shall be made in writing to the Architect/Engineer. Each such proposal shall remain valid for a period of 60 days from the date submitted. If the Contractor wishes to withdraw the proposal prior to the expiration of the 60 day period he will be liable for the cost incurred by the Owner in reviewing the proposal.

- iv. The Contractor shall specifically identify any proposals under Paragraph 2 of this article with the heading "Value Engineering Change Proposal", or the proposal will be considered as made under Paragraph 1 of this article.
- 2) The Contractor, in connection with each proposal for a Contract Change Notice under this article, shall furnish the following information:
 - a. A description of the difference between the existing Contract requirement and the proposed change, and the comparative advantages and disadvantages of each, justification when a function or characteristic of an item is being altered, and the effect of the change on the performance of the end item;
 - b. An analysis and itemization of the requirements of the Contract which must be changed if the Value Engineering Change Proposal is accepted and a recommendation as to how to make each such change (e.g., a suggested specification revision);
 - c. A separate detailed cost estimate for both the existing Contract requirement and the proposed change to provide an estimate of the reduction in costs, if any, that will result from acceptance of the Value Engineering Change Proposal taking into account the costs of development and implementation by the Contractor;
 - d. A prediction of any effects the proposed change would have on collateral costs to the Owner such as government-furnished property costs, costs of related items, and costs of maintenance and operation;
 - e. A statement of the time by which a Contract modification accepting the Value Engineering Change Proposal must be issued so as to obtain the maximum cost reduction, noting any effect on the Contract completion time or delivery schedule; and
 - f. Identification of any previous submission of the Value Engineering Change Proposal to the Owner, including the dates submitted, the numbers of the contracts involved, and the previous actions by the Owner.
- 3) The Contractor waives any and all claims relating to any delay that may arise out of a Value Engineering Change Proposal.

END OF ARTICLE

11. CLAIMS AND DISPUTES

(June 12, 2012)

A. Notice of Claims

- 1) The Contractor will not be entitled to additional time or compensation otherwise payable for any act or failure to act by the Owner, the happening of any event or occurrence, or any other cause, unless he shall have given the Architect/Engineer a written notice of claim therefore as specified in this article.
- 2) The Contractor shall provide immediate verbal notification with written confirmation within forty-eight (48) hours of any potential claims and of the anticipated time and/or cost impacts resulting thereof. The written notice of claim shall set forth the reasons for which the Contractor believes additional compensation and/or time will or may be due, the nature of the costs involved and the approximate amount of the potential claim.
- 3) It is the intention of this article, that differences between the parties arising under and by virtue of the Contract shall be brought to the attention of the Architect/Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken.
- 4) The notice requirements of this article are in addition to those required in other articles of these Contract Documents.
- 5) The Contractor shall segregate all costs associated with each individual claim including but not limited to labor, equipment, material, subcontractor and supplier costs, and all other costs related to the claim. In the event that the Contractor has multiple claims, the Contractor will segregate each claim individually including the respective costs associated with each claim. Failure to segregate claims and their respective costs will be grounds for the Owner's rejection of the claim. No "total cost claims" shall be allowed under this Contract.
- 6) The Contractor must maintain a cost accounting system as a condition for making a claim against the Owner. The cost accounting system must segregate the costs of the work under the Contract (non-claims-related) from claims-related and other Contractor costs through the use of a job cost ledger and be otherwise in compliance with general accounting principles.
- 7) If the Owner decides to pay all or part of a claim for which notice was not timely made, the Owner does not waive the right to enforce the notice requirements in connection with any other claim.
- 8) Inasmuch as the notice of claim requirements of this article are intended to enable the Architect/Engineer to investigate while facts are fresh and to take action to minimize or avoid a claim which might be filed thereafter, the Contractor's failure to make the required notice on time is likely to disadvantage the Owner. Therefore, a claim that does not comply with the

notice requirements above shall not be considered unless the Contractor submits with his claim proof showing that the Owner has not been prejudiced by the Contractor's failure to so comply and, in the event the Owner has been prejudiced by the Contractor's failure to submit a timely notice of claim, the Owner will reduce any equitable adjustment claimed by the Contractor to reflect the damage.

B. Claim Submittals

- 1) Claims or requests for equitable adjustments filed by the Contractor shall be filed in full accordance with this article no later than 30 calendar days after the act giving rise to the claim and in sufficient detail to enable the Owner to ascertain the basis and amount of said claims. In the case of continuing or on-going claim events, the Contractor shall be allowed to periodically amend his claim to more accurately reflect the impact of said claim, until the end of the claim event. No claims for additional compensation, time extension or for any other relief under the Contract shall be recognized, processed, or treated in any manner unless the same is presented in accordance with this Article. Failure to present and process any claim in accordance with this Article shall be conclusively deemed a waiver, abandonment or relinquishment of any such claim, it being expressly understood and agreed that the timely presentation of claims, in sufficient detail to allow proper investigation and prompt resolution thereof, is essential to the administration of this Contract.
- 2) The Owner will review and evaluate the Contractor's claims. It will be the responsibility of the Contractor to furnish, when requested by the Architect/Engineer, such further information and details as may be required to determine the facts or contentions involved in his claims. The cost of claims preparation or Change Order negotiations shall not be reimbursable under this Contract.
- 3) Any work performed by the Contractor prior to Notice-to-Proceed (NTP) shall not be the basis for a claim from the Contractor of any kind.
- 4) Each claim must be certified by the Contractor as required by the Miami-Dade Code, False Claims Act (see Code Section 21-255, et seq.), and accompanied by all materials required by Miami-Dade County Code Section 21-257. A "certified claim" shall be made under oath by a person duly authorized by the claimant, and shall contain a statement that:
 - a. The claim is made in good faith;
 - b. The claim's supporting data is accurate and complete to the best of the person's knowledge and belief;
 - c. The amount of the claim accurately reflects the amount that the claimant believes is due from the Owner; and
 - d. The certifying person is duly authorized by the claimant to certify the claim.

- 5) In order to substantiate time-related claims (delays, disruptions, impacts, etc.), the Contractor shall, if applicable and as determined by the Owner, submit, in triplicate, the following information:
- a. Copy of Contractor's notice of claim in accordance with this article. Failure to submit the notice is sufficient grounds to deny the claim.
 - b. The approved, as-planned Schedule in accordance with the applicable section of the Contract Documents and computer storage media, if applicable.
 - c. The as-built Schedule reflecting changes to the approved schedule up to the time of the impact in question and computer storage media if applicable.
 - d. The basis for the duration of the start and finish dates of each impact activity and the reason for choosing the successor and predecessor events affected in the schedule shall be explained. Also, the basis for the duration of any lead/lags inserted into the schedule and the duration in related activity duration shall be explained.
 - e. A marked-up as-built Schedule indicating the causes responsible for changes between the as-planned and as-built schedule and establishing the required cause and effect relationships.
 - f. After indicating specific time related changes on the as-built schedule, the documentation must be segregated into separate packages with each package documenting a specific duration change identified previously. This documentation package shall include Change Orders, Change Notices, Work Orders, written directions, meeting minutes, etc., related to the change in duration.
 - g. Any loss of efficiency, acceleration, disruption and loss of productivity claims shall be compensated as part of the Liquidated Indirect Costs paid for compensable, excusable delays and mark-up on Direct Cost of changes as allowed by the Contract. Total cost and modified total cost claims will not be accepted and the Contractor agrees to waive the right to seek recovery by these methods. The claimed delay shall not result from a cause specified in the Contract Documents as a non-excusable delay.
 - h. The Contractor assumes all risk for the following items, none of which shall be the subject of any claim and none of which shall be compensated for except as they may have been included in the compensation described under Liquidated Indirect Costs: (1) home office expenses or any Direct Costs incurred allocated from the headquarters of the Contractor; (2) loss of anticipated profits on this or any other project, (3) loss of bonding capacity or capability; (4) losses due to other projects not bid upon; (5) loss of business opportunities; (6) loss of productivity on this or any other project; (7) loss of interest income on funds not paid; (8) costs to prepare,

negotiate or prosecute claims and (9) costs spent to achieve compliance with applicable laws and ordinances (excepting only sales taxes paid shall be reimbursable expense subject to the provisions of the Contract Documents).

- i. All non-time-related claim items for additional compensation for Direct Costs shall be properly documented and supported with copies of invoices, time sheets, rental agreements, crew sheets and the like.
 - j. Cost information shall be submitted in sufficient detail to allow for review. The basis for the budgeted or actual costs shall include man-hours by trade, labor rates, material and equipment costs etc. These costs shall be broken down by pay item and Construction Specification Institute (CSI) Division.
 - k. The documentation for budgeted cost shall, as a minimum, include:
 - i. Copies of all the Contractor's bid documents, bid quotes, faxed quotes, etc.
 - ii. Copies of all executed subcontracts.
 - iii. Other related budget documents as requested by the Architect/Engineer.
 - l. The documentation for actual cost shall, as a minimum, include:
 - i. Time Sheets.
 - ii. Materials invoices
 - iii. Equipment invoices
 - iv. Subcontractors' payments
 - v. Other related documents as required by the Architect/Engineer.
 - m. The Contractor shall make all his books, employees, work sites and records available to the Owner or its representatives for inspection and audit.
 - n. No payment shall be made to the Contractor by the Owner for loss of anticipated profit(s) from any deleted work.
- 6) As indicated above, the Architect/Engineer and the Field Representative shall be allowed full and complete access to all personnel, documents, work sites or other information reasonably necessary to investigate any claim. Within sixty (60) days after a claim has been received, the claim shall either be rejected with an explanation as to why it was rejected or acknowledged. Once the claim is acknowledged, the parties shall attempt to negotiate a satisfactory settlement of the claim, which settlement shall be included in a subsequent Work Order or Change Order. If the parties fail to reach an agreement on a recognized claim, the Owner shall pay to the Contractor the amount of money it deems

reasonable, less any appropriate retention, to compensate the Contractor for the recognized claim.

- 7) Failure of the Contractor to make a specific reservation of rights regarding any such disputed amounts in the body of the Change Order which contains the payment shall be construed as a waiver, abandonment, or relinquishment of all claims for additional monies resulting from the claims embodied in said Change Order. However, once the Contractor has properly reserved rights to any claim, no further reservations of rights shall be required and the Contractor shall not be required to repeat the reservation in any subsequent change order. Prior reservation of rights may however be modified, by express reference, in subsequent change orders. Notwithstanding the aforementioned, at the time of final payment under the Contract, the Contractor shall specify all claims which have been denied and all claims for which rights have been reserved in accordance with this section. Failure to so specify any particular claim shall be constructed as a waiver, abandonment, or relinquishment of such claim.

C. Disputes

- 1) The following provisions shall govern disputes under this Contract unless the Special Provisions to this Contract contain the requirement for the use of an alternate dispute resolution method. For example, for large projects of great complexity, a Dispute Review Board (DRB) may be employed by the Owner to settle disputes in lieu of the Department Director or OOM designee as specified below. In this case, the DRB alternative shall be specified by the individual department in the Special Provisions and, if utilized, shall supersede this dispute provision.
 - a. In the event the Contractor and Owner are unable to resolve their differences concerning any determination made by the Architect/Engineer or Owner on any dispute or claim arising under or relating to the Contract (referred to in this Section as a "Dispute"), either the Contractor or Owner may initiate a dispute in accordance with the procedure set forth in this article. Exhaustion of these procedures shall be a precondition to any lawsuit permitted hereunder.
 - b. For contracts with a value of \$5 million or less, all Disputes under this Contract shall be decided by the Department Director or his designee. For contracts valued at more than \$5 million, Disputes shall be decided by a designee appointed by the Office of the Mayor (OOM). Decisions rendered by the Department Director or OOM designee shall not be binding but shall be admissible in a court of competent jurisdiction.
 - c. As soon as practicable, the Department Director or OOM designee shall adopt a schedule for the Contractor and Owner to file written submissions stating their respective positions and the bases therefore. The written submissions shall include copies of all documents and sworn statements in affidavit form from all witnesses relied on by each party in support of its position. Within 20 working days of the date on which such written submissions are filed, the Department Director or OOM designee shall

afford each party an opportunity to present a maximum of one hour of argument. The Department Director or OOM designee may decide the Dispute on the basis of the affidavits and other written submissions if, in his opinion, there is no issue of material fact and the party is entitled to a favorable resolution pursuant to the terms of this Contract. As part of such decision, the Department Director or OOM designee shall determine the timeliness and sufficiency of each notice of claim and claim at issue as provided in this article. The Department Director or OOM designee shall have the authority to rule on questions of law, including disputes over contract interpretation, and to resolve claims, or portions of claims, via summary judgment where there are no disputed issues of material fact. Furthermore, the Department Director or OOM designee is authorized by both parties to strike elements of claims seeking relief or damages not available under the contract (such as, but not limited to, claims for lost profits, off-site overhead, loss of efficiency or productivity claims or claim's preparation costs) by summary disposition.

- d. In the event that the Department Director or OOM designee determines that the affidavits or other written submissions present issues of material fact, he shall allow the presentation of evidence in the form of lay or expert testimony directed solely to the issues which he may specifically identify to require factual resolution. The testimonial portion of the process shall not exceed one day in duration per side, including opening statements and closing arguments, if allowed by the Department Director or OOM designee at his reasonable discretion.
- e. No formal discovery shall be allowed in connection with any proceeding under this article. Notwithstanding the foregoing, both parties agree that all of the audit, document inspection, information and documentation requirements set forth elsewhere in this contract shall remain in force and effect throughout the proceeding. The Department Director or OOM designee shall not schedule the hearing until both parties have made all their respective records available for inspection and reproduction and the parties have been afforded reasonable time to analyze the records. The continued failure of a party to comply with the document inspection, examination, or submission requirements set forth in this contract shall constitute a waiver of that party's claims and/or defenses, as applicable. Hearsay evidence shall be admissible but shall not form the sole basis for any finding of fact. Failure of any party to participate on a timely basis, to cooperate in the proceedings, or to furnish evidence in support or defense of a claim shall be a criteria in determining the sufficiency and validity of a claim.
- f. The Department Director or OOM designee shall issue a written decision within 15 working days after conclusion of any testimonial proceeding and, if no testimonial proceeding is conducted, within 45 days of the filing of the last written submission. This written decision shall set forth the reasons for the disposition of the claim and a breakdown of any specific issues or

subcontractor claims. As indicated previously, the decision of the Department Director or OOM designee is not binding on the parties, but will be admissible in a court of competent jurisdiction.

- g. If either party wishes to protest the decision of the Department Director or OOM designee, such party may commence an action in a court of competent jurisdiction, within the periods prescribed by law, it being understood that the review of the court shall be limited to the question of whether or not the Department Director or OOM designee's determination was arbitrary and capricious, unsupported by any competent evidence, or so grossly erroneous to evidence bad faith.
- h. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract and in accordance with the Architect/Engineer's interpretation. Any presentation or request by the Contractor under this article will be subject to the same requirements for Submittal of Claims in this article.

D. Terminations

1) Termination for Convenience

- a. The Owner may at its option and discretion terminate the Contract, in whole or, from time to time in part, at any time without any default on the part of the Contractor by issuing a written Notice of Termination to the Contractor and its Surety, specifying the extent to which performance of work under the Contract is terminated and the date upon which such termination becomes effective, at least ten (10) days prior to the effective date of such termination.
- b. In the event of Termination for Convenience, the Owner shall pay the Contractor for all labor performed, all materials and equipment furnished by the Contractor and its Subcontractors, materialmen and suppliers and manufacturers of equipment less all partial payments made on account prior to the date of cancellation as determined by the Field Representative and approved by the Architect/Engineer. The Contractor will be paid for:
 - i. The value of all work completed under the Contract, based upon the approved Schedule of Values and/or Unit Prices,
 - ii. The value of all materials and equipment delivered to but not incorporated into the work and properly stored on the site,
 - iii. The value of all bonafide irrevocable orders for materials and equipment not delivered to the construction site as of the date of cancellation. Such materials and equipment must be delivered to the Owner to a site or location designated by the Department prior to release of payment for such materials and equipment.

- iv. The values calculated under i., ii. and iii. above shall be as determined by the Field Representative and approved by the Architect/Engineer.
- c. In the event of termination under this article, the Contractor shall not be entitled to any anticipated profits for any work not performed due to such termination.
- d. In the event of termination under this article, the Owner does not waive or void any credits otherwise due the Owner at the time of termination, including Liquidated Damages, and back charges for defective or deficient work.
- e. Upon termination as indicated above, the Field Representative shall prepare a certificate for Final Payment to the Contractor.

2) Termination for Default of Contractor

- a. The Contract may be terminated in whole or, from time to time in part, by the Owner for failure of the Contractor to comply with any requirements of the Contract Documents including but not limited to:
 - i. Failure to perform the work or failure to provide sufficient workers, equipment or materials to assure completion of work in accordance with the terms of the Contract, and the approved Schedule, or
 - ii. Failure to provide the Schedule for the Project by the date due, or
 - iii. Failure to provide adequate shop drawings by the dates indicated in the approved Schedule for the Project, or
 - iv. Failure to replace the superintendent in the time allotted, if required, or
 - v. Performing the work unsuitably or neglecting or refusing to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, after written directions from the Field Representative, or
 - vi. Violating the terms of the Contract or performing work in bad faith, or
 - vii. Discontinuing the prosecution of the work, or
 - viii. Failure to resume work which has been discontinued within a reasonable time after notice to do so, or
 - ix. Abandonment of the Contract, or
 - x. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or failure to maintain a qualifier, or

- xi. Allowing any final judgment to stand against him unsatisfied for a period of 10 days, or
 - xii. Making an assignment for the benefit of creditors, or
 - xiii. For any other cause whatsoever, fails to carry out the work in an acceptable manner or to comply with any other Contract requirement.
- b. Before the Contract is terminated, the Contractor and its Surety will be notified in writing by the Architect/Engineer or the Field Representative of the conditions which make termination of the Contract imminent. The Contract will be terminated by the Owner ten (10) days after said notice has been given to the Contractor and its Surety unless a satisfactory effort acceptable to the Owner has been made by the Contractor or its Surety to correct the conditions. If the Contractor fails to satisfactorily correct the conditions giving rise to the termination, the Owner may declare the Contract breached and send a written Notice of Termination to the Contractor and its Surety.
- c. The Owner reserves the right, in lieu of termination as set forth in this article, to withhold any payments of money which may be due or become due to the Contractor until the said default(s) have been remedied. In the event of Termination for Default, the Owner also reserves the right, in cases where the damages calculated by the Owner are expected to exceed the amount the Owner anticipated recovering from the Surety, to withhold amounts for work already performed.
- d. In the event the Owner exercises its right to terminate the Contract for default of the Contractor as set forth herein, the Owner shall have the option of finishing the work, through any means available to the Owner, or having the Surety complete the Contract in accordance with its terms and conditions. In case that the Owner decides to have the Surety take over the remaining performance of the Work, the time or delay between Notice of Default and start of work by the Surety is a non-excusable delay. If the Surety fails to act promptly, but no longer than thirty (30) calendar days after the Owner notifies the Surety of the Owner's decision to have the Surety complete the work, or after such takeover fails to prosecute the Work in an expeditious manner, the Owner may exercise any of its other options including completing the Work by whatever means and method it deems advisable. No claims for loss of anticipated profits or for any other reason in connection with the termination of the Contract shall be considered.
- e. Payments for the various Bid Items listed in the Bid Form will constitute full compensation for all expenses incurred in consequence of discontinuance of all or any portion of the Work except as provided in this section of the Contract Documents. In no event will compensation be made for anticipatory profits or consequential

damages as a result of a discontinuance of all or any portion of the Work.

- f. The Contractor shall immediately upon receipt communicate any Notice of Termination for Default issued by the Owner to the affected Subcontractors and suppliers at any tier.
- g. If, after Notice of Termination of the Contractor's right to proceed under the provisions of this article, it is determined for any reason that the Contractor was not in default under the provisions of this article, or that the Contractor was entitled to an extension of time under the Contract Documents, the rights and obligations of the parties shall be the same as if the Notice of Termination had been issued pursuant to the section of this article dealing with Termination for Convenience.

3) Termination for National Emergencies

- a. The Owner shall terminate the Contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction Contract as a direct result of an Executive Order of the President of the United States with respect to the prosecution of war or in the interest of national defense.
- b. When the Contract, or any portion thereof, is terminated before completion of all items of work in the Contract, payment will be made for the actual number of units or items of work completed at the Contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits or for any other reason in connection with the termination of the Contract shall be considered.

4) Implementation of Termination

- a. If the Owner cancels or terminates the Contract or any portion thereof, the Contractor shall stop all work on the date and to the extent specified in the Notice of Termination and shall:
 - i. Cancel all orders and Subcontracts, to the extent that they relate to the performance of the work terminated and which may be terminated without costs;
 - ii. Cancel and settle other orders and Subcontracts, except as may be necessary for completion of such portion of the Work not terminated, where the cost of settlement will be less than costs which would be incurred were such orders and subcontracts to be completed, subject to prior approval of the Field Representative;
 - iii. Settle outstanding liabilities and claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Owner, to the extent it may require, which

approval or ratification shall be final for the purposes of this Article;

- iv. Transfer title and deliver to the Owner, in the manner, at the time, and to the extent, if any, directed by it, in accordance with directions of the Field Representative, all fabricated or un-fabricated parts, all materials, supplies, work in progress, completed work, facilities, equipment, machinery or tools acquired by the Contractor in connection with the performance of the work and for which the Contractor has been or is to be paid;
- v. Assign to the Owner in the manner, at the times and to the extent directed by it, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the Owner will have the right, at its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- vi. Deliver to the Field Representative As-Built Documents, complete as of the date of cancellation or termination, plans, Shop Drawings, sketches, permits, certificates, warranties, guarantees, specifications, three (3) complete sets of maintenance manuals, pamphlets, charts, parts lists, spare parts (if any), operating instructions required for all installed or finished equipment or machinery, and all other data accumulated by the Contractor for use in the performance of the work.
- vii. Perform all work as may be necessary to preserve the work then in progress and to protect materials, plant and equipment on the site or in transit thereto. The Contractor shall also take such action as may be necessary, or as the Architect/Engineer may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Owner has or may acquire an interest.
- viii. Complete performance of each part of the work not terminated by the Notice of Termination;
- ix. Use his best efforts to sell, in the manner, at the time, to the extent, and at the price or prices directed or authorized by the Owner, property of the types referred to above; provided, however, that the Contractor (a) shall not be required to extend credit to any purchaser, and (b) may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner; provided, further, that the proceeds of any such transfer or disposition will be applied in reduction of any payments to be made by the Owner to the

Contractor under this Contract or will otherwise be credited to the price or cost of the work covered by this Contract or paid in such other manner as the Owner may direct;

- x. Termination of the Contract or a portion thereof shall neither relieve the Contractor of its responsibilities for the completed work nor shall it relieve its Surety of its obligation for and concerning any just claim arising out of the work performed.
- xi. In arriving at the amount due the Contractor under this article, there will be deducted, (1) any claim which the Owner may have against the Contractor in connection with this Contract and (2) the agreed price for, or the proceeds of sale of materials, supplies or other items acquired by the Contractor or sold, pursuant to the provisions of this article, and not otherwise recovered by or credited to the Owner.

5) Suspension of Work

- a. The Owner reserves the right to temporarily suspend execution of the whole or any part of the Work without compensation to the Contractor.
- b. In case the Contractor is actually and necessarily delayed by any act or omission on the part of the Owner, as determined by the Owner in writing, the time for completion of the Work shall be extended by the amount of the time of such delay as determined by the Owner, and an allowance may be made for actual direct costs, if any, which may have been borne by the Contractor. Such requests for additional time and/or compensation must be made in accordance with the applicable sections of the Contract Documents.
- c. Only the actual delay necessarily resulting from the causes specified in this Article, shall be grounds for extension of time. In case the Contractor is delayed at any time or for any period by two or more of the causes specified in this Article, the Contractor shall not be entitled to a separate extension for each one of the causes but only one period of extension will be granted for the delay.
- d. In case the Contractor is actually and necessarily delayed in the performance of the Work from one or more of the causes specified in this Article, the extension of time to be granted to the Contractor shall be only for such portion of the Work so delayed. The Contractor shall not be entitled by reason of such delay to an extension of time for the completion of the remainder of the Work. If the Contractor shall be so delayed as to a portion of the Work he shall nevertheless proceed continuously and diligently with the prosecution of the remainder of the Work. No demand by the Contractor that the Owner determine and certify any matter of extension of time for the completion of the Work or any part thereof will be of any effect whatsoever unless the demand

be made in writing at least 30 days before the completion date of the Work or any part thereof for which Liquidated Damages are established when meeting those dates is claimed to have been delayed by a suspension under this Article. Owner's determination as to any matter of extension of time for completion of the Work or any part thereof shall be binding and conclusive upon the Contractor.

- e. Permitting the Contractor to finish the Work or any part thereof after the time fixed for completion or after the date to which the time for completion may have been extended or the making of payments to the Contractor after any such periods shall not operate as a waiver on the part of the Owner of any rights under this contract.
- f. The Contractor shall insert in each subcontract a provision that the Subcontractor shall comply immediately with a written order of the Owner to the Contractor to suspend the Work, and that they shall further insert the same provision in each subcontract of any tier.

END OF ARTICLE

12. MISCELLANEOUS PROVISIONS

(June 12, 2012)

A. Third Party Beneficiary

No contractual relationship will be recognized under the Contract other than the contractual relationship between the Owner and the Contractor. There shall be no third party beneficiary to this Contract.

B. Venue

Any litigation which may arise out of this Contract shall be commenced either in the Eleventh Judicial Circuit Court in and for Miami-Dade County, Florida, or in the United States District Court, Southern District of Florida.

C. Governing Laws

- 1) The Contractor shall, during the term of this Contract and in the prosecution of the work, be governed by the statutes, regulatory orders, ordinances and procedures of the United States of America, the State of Florida and Miami-Dade County including but not limited to the Florida Building Code and the provisions of the Code of Miami-Dade County governing Community Small Business Enterprises (CSBEs) as applicable.
- 2) Specifically, the Contractor and his Subcontractors shall comply with Miami-Dade County Resolution Nos. R-1386-09 and R-138-10 governing the treatment of CSBE firms.
- 3) In addition the Contractor agrees to abide by all federal, state, and County procedures, as may be amended from time to time, regarding how documents to which the Contractor has access are handled, copied, and distributed, particularly documents that contain sensitive security information.

D. Successors and Assigns

The Owner and the Contractor each bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or sublet it as a whole without the written consent of the Owner, nor shall the Contractor assign any moneys due or to become due the Contractor hereunder, without the previous written notice to the Owner. Consent will not be given to any proposed assignment which would relieve the Contractor or his Surety of their responsibilities under the Contract.

E. Written Notice

- 1) Written notice to the Contractor shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to any officer of the corporation for whom it was intended or if delivered at or sent by registered or certified mail to the last business address known to those who give the notice.

- 2) Written notice to the Owner shall be deemed to have been duly served if delivered in person, delivered at or sent by registered or certified mail to the individual identified in the Special Provisions.

F. Indemnification

- 1) In consideration of this Agreement, and to the maximum extent permitted by Chapter 725, Florida Statutes, as may be amended, the Contractor agrees to indemnify, protect, defend, and hold harmless the Government, State, County, their elected officials, officers, employees, consultants, and agents from claims, liabilities, damages, losses, and costs including, but not limited to reasonable attorney's fees at both the trial and appellate levels to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the Contractor and other persons employed or utilized by the Contractor in the performance of the Work.
- 2) The indemnification obligation under this clause shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor and/or any Subcontractor under worker's compensation acts, disability benefit acts, or other employee benefit acts.
- 3) In the event that any claims are brought or actions are filed against the Owner with respect to the indemnity contained herein, the Contractor agrees to defend against any such claims or actions regardless of whether such claims or actions are rightfully or wrongfully brought or filed. The Contractor agrees that the Owner may select the attorneys to appear and defend such claims or actions on behalf of the Owner. The Contractor further agrees to pay at the Contractor's expense the attorneys' fees and costs incurred by those attorneys selected by the Owner to appear and defend such claims or actions on behalf of the Owner. The Owner, at its sole option, shall have the sole authority for the direction of the defense, and shall be the sole judge of the acceptability of any compromise or settlement of any claims or actions against the Owner.
- 4) To the extent this indemnification clause or any other indemnification clause in this Agreement does not comply with Chapter 725, Florida Statutes, as may be amended, this provision and all aspects of the Contract Documents shall hereby be interpreted as the parties' intention for the indemnification clauses and Contract Documents to comply with Chapter 725, Florida Statutes, as may be amended.
- 5) This Section shall survive expiration or termination of this Agreement.

G. Audit Rights

- 1) Access to Records
 - a. The Contractor shall, during the term of this Contract and for a period of five years thereafter, allow the Owner and its duly authorized representatives to inspect all payroll records, invoices for materials, books of account, job cost ledgers, Project correspondence and Project-related files and all relevant records pertinent to the Contract.

- b. The Owner retains the right to audit accounts and access all files, correspondence and documents in reference to all work performed under this Contract. The Owner shall be provided full access upon request to all documents, including those in possession of Subcontractors or suppliers during the work and for a period of five years after the completion of the Work. In case of any litigation regarding this Project, such rights shall extend until final settlement of such litigation. Failure to allow the Owner access shall be deemed a waiver of Contractor's claims.
- c. The Contractor shall maintain a banking account within Miami-Dade County for all payments to laborers, Subcontractors and vendors furnishing labor and materials under this Contract. All records shall be maintained in Miami-Dade County for the term of this Contract.

2) Inspector General

- a. According to Section 2-1076 of the Code of Miami-Dade County, Miami-Dade County has established the Office of the Inspector General (IG) which may, on a random basis, perform audits, inspections, and reviews of all, on any County/Trust contracts, throughout the duration of said contracts. This random audit is separate and distinct from any other audit by the County. To pay for the functions of the Office of the Inspector General, any and all payments to be made to the Contractor under this contract will be assessed one quarter (1/4) of one (1) percent of the total amount of the payment, to be deducted from each progress payment as the same becomes due unless this Contract is federally or state funded where federal or state law or regulations preclude such a charge or where such a charge is otherwise precluded by Special Condition. The Contractor shall, in stating its agreed prices, be mindful of this assessment which will not be separately identified, calculated or adjusted in the proposal or Bid Form.
- b. The Miami-Dade Office of the Inspector General is authorized to investigate County affairs and empowered to review past, present and proposed County and Public Health Trust programs, accounts, records, contracts and transactions. In addition, the Inspector General has the power to subpoena witnesses, administer oaths, require the production of witnesses and monitor existing Projects and programs. Monitoring of an existing Project or program may include a report concerning whether the Project is on time, within budget and in conformance with the Contract Documents and applicable law. The Inspector General shall have the power to audit, investigate, monitor, oversee, inspect and review operations, activities, performance and procurement process including but not limited to Project design, bid specifications, (bid/proposal) submittals, activities of the (Contractor/ Vendor/ Consultant), its officers, agents and employees, lobbyists, County and Public Health Trust staff and

elected officials to ensure compliance with the Contract Documents and to detect fraud and corruption.

- c. Upon ten (10) days written notice to the Contractor, the Contractor shall make all requested records and documents available to the Inspector General for inspection and copying. The Inspector General is empowered to retain the services of independent private sector inspectors general to audit, investigate, monitor, oversee, inspect and review operations, activities, performance and procurement process including but not limited to Project design, bid specifications, (bid/proposal) submittals, activities of the (Contractor/ Vendor/ Consultant), its officers, agents and employees, lobbyists, County staff and elected officials to ensure compliance with the Contract Documents and to detect fraud and corruption.
- d. The Inspector General shall have the right to inspect and copy all documents and records in the (Contractor/Vendor/Consultant's) possession, custody or control which in the Inspector General's sole judgment, pertain to performance of the contract, including, but not limited to original estimate files, change order estimate files, worksheets, proposals and agreements from and with successful subcontractors and suppliers, all Project-related correspondence, memoranda, instructions, financial documents, construction documents, (bid/proposal) and contract documents, back-change documents, all documents and records which involve cash, trade or volume discounts, insurance proceeds, rebates, or dividends received, payroll and personnel records and supporting documentation for the aforesaid documents and records.
- e. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence regarding the acquisition (bid preparation) and performance of this contract, for examination, audit, or reproduction, until three (3) years after final payment under this contract or for any longer period required by statute or by other clauses of this contract. In addition:
 - i. If this contract is completely or partially terminated, the Contractor shall make available records relating to the work terminated until three (3) years after any resulting final termination settlement; and
 - ii. The Contractor shall make available records relating to appeals or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.
- f. The provisions in this section shall apply to the (Contractor/Vendor/Consultant), its officers, agents, employees, subcontractors and suppliers. The (Contractor/Vendor/Consultant) shall incorporate the provisions in this section in all subcontracts and

all other agreements executed by the (Contractor/Vendor/Consultant) in connection with the performance of this contract.

- g. Nothing in this section shall impair any independent right to the Owner to conduct audits or investigative activities. The provisions of this section are neither intended nor shall they be construed to impose any liability on the Owner by the (Contractor/Vendor/Consultant) or third parties.

H. Severability

- 1) In the event any article, section, sub-article, paragraph, sentence, clause or phrase contained in the Contract Documents shall be determined, declared or adjudged invalid, illegal, unconstitutional or otherwise unenforceable, such determination, declaration or adjudication shall in no manner affect the other articles, sections, sub-articles, paragraphs, sentences, clauses or phrases of the Contract Documents, which shall remain in full force and effect as if the article, section, sub-article, paragraph, sentence, clause or phrase declared, determined or adjudged invalid, illegal, unconstitutional or otherwise unenforceable was not originally contained in the Contract Documents.

I. Payment and Performance Bonds

- 1) The Contractor shall, as a condition of contract, provide to the County two separate bonds, one bonding payment and one bonding performance. Each bond shall be for no less than 100% of the total maximum contract amount. The payment bond and performance bond shall be in the forms requested under Sections 713.23 and 255.05, respectively, of the Florida Statutes. These bonds shall be in substantial compliance with the requirements of the forms attached hereto as _____.

- a. The bonds shall be written through surety insurers authorized to do business in the State of Florida as Surety, with the following qualifications as to management and financial strength according to the latest edition of Best's Insurance Guide, published by A.M. Best Company, Oldwick, New Jersey:

<u>Bond (Total Contract) Amount</u>	<u>Best's Rating</u>
\$500,001 to \$1,500,000.....	B V
\$1,500,001 to \$2,500,000.....	A VI
\$2,500,001 to \$5,000,000.....	A VII
\$5,000,000 to \$10,000,000.....	A VIII
Over \$10,000,000	A IX

- 2) On Contract amounts of \$500,000 or less, the Bond provisions of Section 287.0935, Florida Statutes shall be in effect and surety companies not otherwise qualifying with this paragraph may optionally qualify by:

- a. Providing evidence that the surety has twice the minimum surplus and capital required by the Florida Insurance Code at the time the Invitation to Bid is issued.
- b. Certifying that the surety is otherwise in compliance with the Florida Insurance Code, and
- c. Providing a copy of the currently valid Certificate of Authority issued by the United States Department of Treasury under 31 U.S.C. 9304-9308.

Surety insurers shall be listed in the latest Circular 570 of the U.S. Department of the Treasury entitled "Surety Companies Acceptable on Federal Bonds", published annually. The Bond amounts shall not exceed the underwriting limitations as shown in this circular.

- 3) For Contracts in excess of \$500,000 the provisions of the Contract Documents will be adhered to, plus the surety insurer must have been listed on the U.S. Treasury list for at least three consecutive years, or currently hold a valid Certificate of Authority of at least 1.5 million dollars and listed on the Treasury list.
- 4) Payment and Performance Bonds guaranteed through U.S. Government Small Business Administration or Contractors Training and Development Inc. will also be acceptable.
- 5) The attorney-in-fact or other officer who signs Payment and Performance Bonds for a surety company must file with such Bonds a certified copy of his/her power of attorney authorizing him/her to do so.
- 6) The cost of the Bonds shall be included in the Bid.
- 7) The required Bonds shall be written by or through and shall be countersigned by, a licensed Florida agent of the surety insurer, pursuant to Section 624.425 of the Florida Statutes.
- 8) The Bonds shall be delivered to the Contracting Officer in accordance with the instructions within the Notice of Award.
- 9) In the event the Surety on the Payment and Performance Bonds given by the Contractor becomes insolvent, or is placed in the hands of a receiver, or has its right to do business in its State of domicile or the State of Florida suspended or revoked as provided by law, the Owner shall withhold all payments under the provisions of these Contract Documents until the Contractor has given good and sufficient Bonds in lieu of Bonds executed by such Surety.
- 10) Cancellation of any Bonds, or non-payment by the Contractor of any premium for any Bonds required by this Contract, shall constitute a breach of this Contract. In addition to any other legal remedies, the Owner at its sole option may terminate this Contract or pay such premiums, and deduct the costs thereof from any amounts that are or may be due to the Contractor.

J. Insurance

The Contractor shall maintain the insurance set forth in the Special Provisions throughout the performance of this Contract until the Work has been completed by the Contractor and accepted by the Owner.

K. Conflict of Interest

- 1) The Contractor or his employees shall not enter into any Contract involving services or property with a person or business prohibited from transacting such business with Miami-Dade County pursuant to Section 2-11.1 of the Code of Miami-Dade County, Florida, known as the Miami-Dade County Conflict of Interest and Code of Ethics Ordinance.
- 2) In the event the Contractor, or any of its officers, partners, principals or employees are convicted of a crime arising out of, or in connection with, the work to be done or payment to be made under this Contract, this Contract, in whole or any part thereof may, at the discretion of the Owner, be terminated without prejudice to any other rights and remedies of the Owner under the law.
- 3) In accordance with the Code of Miami-Dade County, no officer or employee of Miami-Dade County during his tenure or for two years thereafter shall have any interest, direct or indirect, in this Contract or the proceeds thereof.

L. Rights in Shop Drawings

- 1) Shop Drawings submitted to the Architect/Engineer by the Contractor, pursuant to the Work, may be duplicated by the Owner and the Owner may use and disclose, in any manner and for any purpose Shop Drawings delivered under this Contract.
- 2) This paragraph shall be included in all subcontracts hereunder at all tiers.

M. Patent and Copyright

- 1) If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, he shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the surety shall indemnify and save harmless the Owner, the Field Representative, and the Architect/Engineer from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the prosecution or after the completion of the work.
- 2) The Contractor shall warrant that the materials, equipment or devices used on or incorporated in the Work shall be delivered free of any rightful claim of any third party for infringement of any United States patent or copyright. The Contractor shall defend, or may settle, at his expense, any suit or proceeding against the Owner or the Architect/Engineer so far as based on a claimed patent or copyright infringement which would result in a breach of this warranty, and the Contractor shall pay all damages and costs awarded therein against the Owner or the Architect/Engineer due to such breach. The Contractor shall

report to the Architect/Engineer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this Contract of which the Contractor has knowledge. In the event of any claim or suit against the Owner on account of any alleged patent or copyright infringement arising out of the performance of this Contract or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall furnish to the Owner when requested, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Contractor.

- 3) The Contractor shall bear all costs arising from the use of patented materials, equipment, devices or processes used on or incorporated in the Work. In such case materials, equipment, devices or processes are held to constitute an infringement and their use enjoined, the Contractor, at his expense shall:
 - a. Secure for the Owner the right to continue using said materials, equipment, devices or processes by suspension of the injunction or by procuring a license or licenses; or
 - b. Replace such materials, equipment, devices or processes with non-infringing materials, equipment, devices or processes; or
 - c. Modify them so that they become non-infringing or remove the enjoined materials, equipment, devices or processes and refund the sum paid therefore without prejudice to any other rights of the Owner.
- 4) The preceding paragraph shall not apply to any materials, equipment or devices, specified by the Owner or the Architect/Engineer or manufactured to the design of the Owner or the Architect/Engineer or in accordance with the details contained in the Contract Documents; and as to any such materials, equipment or devices the Contractor assumes no liability whatsoever for patent or copyright infringement and the Owner will hold the Contractor harmless against any infringement claims arising therefrom.
- 5) Patent rights to patentable invention, item or ideas of every kind or nature arising out of the Work, as well as information, designs, specifications, know-how, data and findings shall be made available to the Government for public use, unless the Owner shall, in specific cases where it is legally permissible, determine that it is in the public interest that it not be so made available.
- 6) The sense of this article shall be included in all subcontracts. The foregoing states the entire liability of the Contractor for patent or copy infringement by use of said materials, equipment or devices.

N. Historical, Scientific and Archaeological Discoveries

All articles of historical, scientific or archaeological interest uncovered by the Contractor during progress of the Work shall be preserved and reported immediately to the Architect/Engineer. Further operations of the Contractor with respect to the find, including disposition of the articles, will be decided by the Owner.

O. Use of Owner's Name in Contractor Advertising or Public Relations

The Owner reserves the right to review and approve Owner-related copy prior to publication. The Contractor shall not allow Owner-related copy to be published in Contractor's advertisement or public relations programs until submitting the Owner-related copy and receiving prior approval from the Owner. The Contractor shall agree that published information on the Owner or the Owner's program shall be factual and in no way imply that the Owner endorses the Contractor's firm, service or product. The Contractor shall insert the substance of this provision, including this sentence, in each subcontract and supply Contract or purchase order.

END OF ARTICLE

13. ATTACHMENTS

(June 12, 2012)

END OF ARTICLE

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

STANDARD GENERAL CONTRACT CONDITIONS

ATTACHMENT “ A “

Certificate of Acceptance for Substantial Completion

Certificate of Final Acceptance

CERTIFICATE OF ACCEPTANCE FOR SUBSTANTIAL COMPLETION

RPQ No.: _____

Date : _____

Description : _____

Address : _____

Contractor : _____

Consultant : _____

Surety : _____

*The work performed under the subject Contract has been reviewed, and subject to the Contract requirements of **Article 29, Substantial Completion, Final Inspection and Acceptance**, all remaining work has been found to be Substantially Completed as of _____.*

*A **Punch List** of items to be completed or corrected, is appended hereto.*

*In the event that the Work, including the Punch List items, is not corrected by the Contract Completion date, the Contract stipulations regarding **Liquidated Damages** will be imposed until such time as the work is certified by the County's Resident Engineer or its Consultant and the Director, MDT to be complete in all respects and a **Certificate of Final Acceptance** is issued.*

(COMPANY SEAL)

Signed : _____

Contractor

Recommended : _____

Resident Engineer/Project Manager

Recommended : _____

Chief, Construction

Certificate of Final Acceptance

RPQ No.:

Description:

Address:

Contractor:

Consultant:

Surety:

The **UNDERSIGNED** hereby certify that, to the best of our knowledge and belief, based on observations of the punch list work required under the terms of the Agreement, we have found that the Work items identified in the **PUNCH LIST**, dated _____ (“**PUNCH LIST**”) were completed as of _____. We therefore recommend that the **FINAL ACCEPTANCE DATE** be established as: _____

Notwithstanding the above, this Certificate shall not be construed as a finding regarding whether work performed on this Contract was done in accordance with all applicable Contract requirements, and the County expressly reserves all of its rights and claims under the Contract, or otherwise, to seek recovery or indemnity for any defects in materials, equipment, or workmanship, or for non-conformance with any Contract requirements.

Recommended : _____

Resident Engineer/Project Manager

Recommended : _____

Chief, Construction

:

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

STANDARD GENERAL CONTRACT CONDITIONS

ATTACHMENT “B “

Contractor Release

Agreement on Final Quantities and Amounts

Final Affidavit

Labor Standards Provisions Final Certificate

Memorandum of Understanding

Certificate of Sub-Contractor Status

Final Release of Lien

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

CONTRACTOR RELEASE

RPO No.:

KNOW ALL MEN BY THESE PRESENTS : Pursuant to the terms of the Contract and in consideration of the sum of _____ paid by the ***Miami-Dade County*** under the Contract, the undersigned Contractor does, and by the receipt of said sum shall, for itself, its successors and assigns, remise, release and forever discharge MDC, its officers , agents and employees, of and from all liabilities, obligations, and claims whatsoever, in law and in equity, under or arising out of said Contract.

IN WITNESS WHEREOF, this release has been executed this _____ day of _____, 20____

(***COMPANY SEAL***)

Contractor

Signature

WITNESS :

Print Name : _____

Print Title : _____

NOTE : In the case of a corporation, witnesses are not required , but the ***CERTIFICATE*** below must be completed.

CERTIFICATE

I, _____, certify that I am the ***Secretary*** of the corporation named as Contractor in the foregoing release; that _____ who signed said release on behalf of the Contractor, was then _____ of said Corporation; that said release was duly signed for and on behalf of said corporation under the authority of its governing body, and within the scope of its corporate powers.

(***CORPORATE SEAL***)

Signature

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

AGREEMENT

ON

FINAL QUANTITIES AND AMOUNTS

RPO No.:

The Contractor and Resident Engineer agree that the **QUANTITIES** as shown on the **FINAL PAY REQUEST No.** are **EQUITABLY** paid for by application of the agreed **LUMP SUM PRICES**.

It is finally agreed that the right in the Contract clause to request negotiation of a different amount is **WAIVED** by the Contractor and the Authorized Representative of the Contracting Officer.

(*Company Seal*)

Contractor

Signature

Date

Resident Engineer

Date

Print Name

Print Name

Print Title

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

FINAL AFFIDAVIT

RPQ No.:

The undersigned Contractor, _____, certifies and warrants to ***Department of Transportation and Public Works*** that _____ has paid in full and completely discharged any and all claims, demands, obligations and liabilities of _____ in connection with or arising out of ***RPQ No.*** _____, including without limitation, all claims for labor performed and materials, supplies, equipment and other items furnished or used in connection with performance of said Contract.

(***COMPANY SEAL***)

Contractor : _____

Signature : _____

Print Name : _____

Print Title : _____

Date : _____

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

LABOR STANDARDS PROVISIONS

FINAL CERTIFICATE

RPQ No.:

The undersigned Contractor, _____, hereby certifies that all laborers, mechanics, apprentices and trainees employed by him or by any Subcontractor performing work under the Contract on the project have been paid ***wages at rates no less than those required by the Contract provisions***, and that the work performed by each laborer, mechanic, apprentice or trainee conformed to the classifications set forth in the Contract or training program provisions applicable to the wage rate paid.

EXCEPTION (S) :

Contractor : _____

(***COMPANY SEAL***)

Signature : _____

Print Name : _____

Print Title : _____

Date : _____

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

MEMORANDUM OF UNDERSTANDING

RPQ No.:

WHEREAS, _____, (hereafter referred to as the " Contractor ") and the *Miami-Dade Transit*, the parties hereto, have mutually agreed to the **total Contract amount** in the sum of _____ and a final payment of _____ for a **COMPLETE CLOSE-OUT** of *RPQ No.*

It is understood and expressly agreed that :

- (1) This Memorandum of Understanding is subject to the recommendations of the Assistant Director and the Director of Miami-Dade Transit.
- (2) In consideration of the payment by MDT of a **total Contract amount** of _____, (inclusive of all finalized Change Orders), the Contractor hereby withdraws with prejudice all Claims, Disputes, and Appeals of the Contractor or any of its Subcontractors or Suppliers under the subject Contract. MDT likewise, withdraws with prejudice, all Claims and/or Backcharges it has against the Contractor.
- (3) The retention withheld in *Pay Request No.* _____ is _____ and will be paid in full. Therefore, the Contractor acknowledges the final payment of _____ in *Pay Request No.* _____ as the outstanding balance due to date on the Contract.
- (4) MDT reserves the right to complete an audit upon the request of the Assistant Director, Engineering Services when warranted.
- (5) All terms and conditions of the Contract otherwise remain unchanged including the Contractor's liabilities for warranties, latent defects and the like.
- (6) The execution of this Memorandum and payment in accordance with these terms, and the finalized Contract Change Orders, shall constitute a full accord and satisfaction of all Claims and all rights of the parties against each other, except for claims of the Owner for latent defects discussed after the date of this Memorandum or for warranty items.

Memorandum of Understanding

Page 2

(COMPANY SEAL)

Contractor : _____

Signature : _____

Print Name : _____

Print Title : _____

Date : _____

RECOMMENDED

By : _____

Resident Engineer/Project Manager

By : _____

Chief, Construction Division

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

CERTIFICATE OF SUB-CONTRACTOR STATUS

This is to certify that the following is a complete list of sub-contractors who worked on

RPQ No.:

Name	Description of work	Original Contract Amount	Paid to date	Amount Owed

(COMPANY SEAL)

Contractor

Signature

Print Name & Title

Date

ALL SUBCONTRACTORS WORKING ON THIS PROJECT MUST COMPLETE THIS FORM.

FINAL RELEASE OF LIEN

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned, for and in consideration of the payment of the sum of _____ and _____ /100 dollars (\$_____) paid by the _____ receipt of which is hereby acknowledged, hereby releases and quit claims to the said _____ it successors and assigns, and _____ the owner, all liens, lien rights, claims or demands of any kind whatsoever, which the undersigned now has or might have against the building or premises legally _____ described _____ as _____ on _____ account of labor performed and/or material furnished for the construction of any improvements thereon. That all labor and materials used by the undersigned in the erection of said improvements have been fully paid for.

IN WITNESS THEREOF, I have hereunto set my hand seal this _____ day of _____, 20____.

WITNESSES:

_____ (SEAL)

_____ By _____

State of _____)

) ss

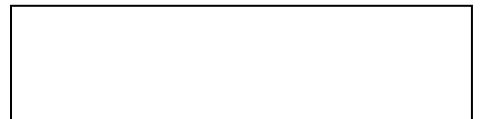
County of _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____ by _____ on behalf of _____ [] who is personally known to me or [] who has produced _____ as identification and who [] did [] did not take an oath.

Notary Signature: _____

Notary Seal:

Type or Print Name: _____



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

STANDARD GENERAL CONTRACT CONDITIONS

ATTACHMENT "C"

Sub-Contractor's/Supplier's Release of Claim

Consent of Surety Company to Requisition Payment

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
SUBCONTRACTOR'S / SUPPLIER'S RELEASE OF CLAIM

NOTE: The General Contractor shall attach this statement, completed by each Subcontractor whose work appears on the prior requisition for payment or has work in place since the last requisition for payment.

Project No.: _____ Date: _____

Project Title: _____

Subcontractor:

Requisition No.: _____ From: _____ To: _____

Before me, the undersigned authority, authorized to administer oaths and take acknowledgments appeared: _____ who, after being first duly sworn, upon oath, deposes and says that pursuant to the provisions of his contract for said project, all money due him under prior requisitions for payment have been paid to him by _____, the General Contractor.

(COMPANY SEAL)

Legal Name of Subcontractor

Title

Signature

State of _____)

) ss

County of _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____ by _____ on behalf of _____.

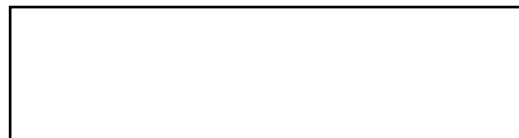
[] who is personally known to me or [] who has produced _____ as identification and who [] did [] did not take an oath.

Notary Signature: _____

Type or Print Name: _____

Notary Seal:

PROJECT RPQ No.: TP-0000008861



CONSENT OF SURETY COMPANY TO REQUISITION PAYMENT



PROJECT No. _____

PROJECT TITLE: _____

PROJECT LOCATION: _____

TO: _____ Re: PAY REQUEST No. _____ DATE: _____

IN THE AMOUNT OF: _____

CONTRACTOR: _____ RPQ No. _____

THE UNDERSIGNED SURETY COMPANY _____,

(INSERT NAME OF SURETY COMPANY)

_____, ON BOND OF

(ADDRESS)

THE CONTRACTOR LISTED ABOVE, HEREBY APPROVES THIS PAYMENT TO THE CONTRACTOR AND AGREES THAT THE PAYMENT TO THE CONTRACTOR SHALL NOT RELIEVE THE SURETY COMPANY OF ANY OF ITS OBLIGATIONS TO MIAMI-DADE COUNTY, INCLUDING THE SECURITY FROM ANY AND ALL LIENS, CLAIMS OR DEMANDS WHATSOEVER THAT MAY NOW EXIST OR BE MADE IN THE FUTURE BY ANY SUB-CONTRACTOR OR MATERIAL SUPPLIERS AGAINST THIS PROJECT AND CONTRACT.

THIS CONSENT OF SURETY RECOGNIZES THAT CLAIMS HAVE BEEN MADE BY THE FOLLOWING SUB-CONTRACTORS AND MATERIAL SUPPLIERS AGAINST THE CONTRACT IN THE AMOUNTS LISTED BELOW:

_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

SURETY RECOGNIZES THAT RELEASES OF LIEN OR RELEASES AND ASSIGNMENT OF CLAIM HAVE NOT BEEN REQUESTED OR RECEIVED FROM ALL THE SUB-CONTRACTORS AND MATERIAL SUPPLIERS FOR THIS FACILITY.

IN WITNESS THEREOF,

THE SURETY COMPANY HAS HEREUNTO SET ITS HAND THIS _____ DAY OF _____, 20____.

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

STANDARD GENERAL CONTRACT CONDITIONS

ATTACHMENT "D"

"Contractor Agent to Accept Service"



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

CONTRACTOR AGENT TO ACCEPT SERVICE

RPQ No.: _____

DATE: _____

CONTRACT TITLE: _____

CONTRACTOR: _____

NOTICE TO PROCEED (NTP) DATE: _____

CONTRACTOR ADDRESS: _____

CONTRACTOR TELEPHONE No.: _____

AGENT'S NAME: _____

AGENT'S TITLE: _____

AGENT'S ADDRESS: _____

AGENT'S TELEPHONE No. _____

Contractor Corporate Representative

Submitted By: _____

SIGNATURE

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

STANDARD GENERAL CONTRACT CONDITIONS

ATTACHMENT "E"

Force Account Daily Report:
Labor, Material & Equipment

FORCE ACCOUNT DAILY REPORT:

DATE: _____



CONTRACTOR: _____

CONTRACT No. _____ REPORT No. _____

CONTRACT CHANGE NOTICE / MDT LETTER: _____ PAGE No. _____ of _____

IMPORTANT-THIS FORM MUST BE SIGNED AND SUBMITTED NOT LATER THAN THE DAY FOLLOWING DATE WORK WAS PERFORMED.**The following work was performed this date requiring the use of the Labor Force, Materials, Equipment, Special Forces and Services listed hereon:**

Description of work performed: _____

LABOR					EQUIPMENT					
NAME	CRAFT	HRRAT	HOURS	TOTALS	MAKE	MODEL	DESCRIPTION	HOURS	RATE	EXT.

CERTIFIED CORRECT BY: _____

DATE _____

MATERIAL INVOICE ON UNIT PRICES TO BE PROVIDED. _____

QUAN.	UNIT	DESCRIPTION	MATERIALS	RECAP
				LABOR
				MATERIALS
				EQUIPMENT

CERTIFIED CORRECT BY: _____ DATE _____

TOTAL THIS SHEET _____

FOR ENGINEER'S USE

APPROVED AS TO SUBSTANCE

BY: _____
RESIDENT ENGINEER DATE _____

EXTENSION OF LABOR, MATERIAL & EQUIPMENT VERIFIED BY:

INSPECTOR _____ DATE _____

PROJECT RPQ No.: TP-0000008861

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

MIAMI-DADE TRANSIT CONSTRUCTION SAFETY MANUAL

(INCLUDES SECURITY ID REQUIREMENTS)



Miami-Dade Transit Construction Safety Manual



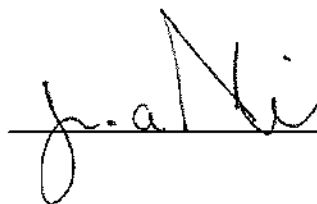
MIAMI-DADE TRANSIT

MIAMI, FLORIDA

CONSTRUCTION SAFETY MANUAL

Revision No. 6

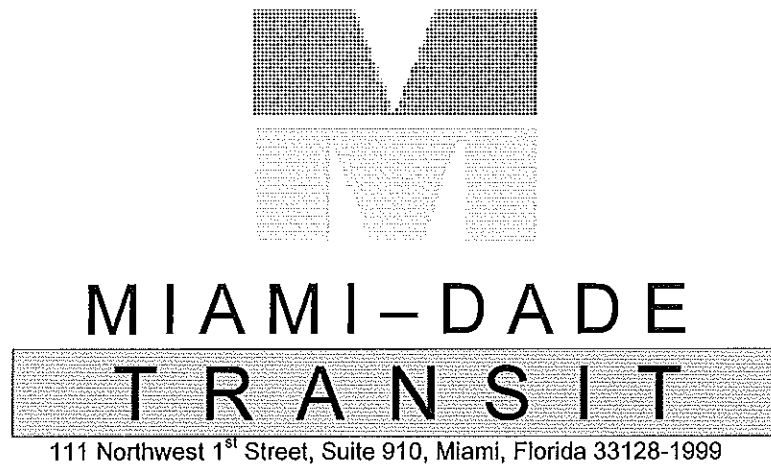
May 2012

 6/4/2012
Date

Approved By:
James A. Sumoski
Construction Manager 3
MDT Construction

 6/7/12
Date

Approved By:
Eric Muntan
Chief, MDT
Office of Safety and Security



Policy Statement

It is the policy of the Miami-Dade Transit (MDT) and Miami-Dade County (MDC) to maintain a safe working environment for all employees and the public. The Construction Safety Program has been designed in accordance with the William-Steiger Occupational Safety and Health Act of 1970. The success of the safety program requires the full support of every employee and contractor working on the MDT system.

Regardless of the urgency or monetary cost of a job; all safety precautions must be observed. Prevention of personal injury or damage to property and equipment must always remain paramount in the minds of every employee and contractor.

PREFACE

THE CONSTRUCTION SAFETY MANUAL (CSM) is one of the Miami-Dade County (MDC) Contract Documents. Contractors are required to assure that all employees, subcontractors, and their suppliers / vendors, while on the work site and in the conduct of MDC contractors, comply with the provisions of the CSM and the minimum standards set forth under the William-Steiger Occupational Safety and Health Act of 1970 and as amended, the Construction and General Industry Standards (29CFR1926/1910), and all other applicable Federal, State and Local laws. The Contractors are expected to be familiar with the contents applicable to their operations. The provisions set forth in this CSM will be strictly enforced. Non-compliance with the CSM will be treated the same as non-compliance with any contract provision. Willful or repeated noncompliance shall result in the suspension of part or all work.

Safety at the work site shall be the sole responsibility of the Contractor. The CSM shall be used as a guide in developing the Contractor's Accident Prevention Program. The Contractor shall assume full responsibility for compliance with all applicable Federal, State and Local safety related regulations and for complying with this Construction Safety Manual during the performance of all activities.

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A. DEFINITIONS

The following definitions apply for the purpose of this Construction Safety Manual.

ACCIDENT – An unforeseen event or occurrence which causes death, injury or damage to property.

ACCIDENT PREVENTION PROGRAM (APP) - A program designed to provide for the protection to life and health of employees and other persons; and for the prevention of damage to property, materials, supplies and equipment. The Contractor's APP shall be developed by the Contractor using the Contractor's Safety Manual as a guide. Once approved by MDC, the Contractor's APP shall be used by the Contractor and his subcontractors to insure the safe prosecution of the work.

ALARM CONDITION - Any abnormal condition that requires the attention or intervention of responsible personnel or an individual monitoring the transit system operations.

ANOMALY - Deviation from nominal performance, which does not cause a significant, effect on system performance but does warrant investigation and/ or repair.

AUDIT - Formal or official examination and verification.

AUTOMATIC - A term applied to a system, subsystem, or device which has the inherent capability to function without direct manual participation.

CENTRAL CONTROL - That place where train control or train supervision is accomplished for the entire Metrorail and Metromover system, the train command center.

CENTRAL DISPATCH - That place where bus, rail or mover supervision or dispatcher is accomplished for the entire transit system.

COMPETENT PERSON – A person who is capable of identifying existing or predicting hazards in the surroundings, or working conditions which are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

CONSTRUCTION SAFETY - The optimum degree of safety within the constraints of construction effectiveness, time and cost through specific application of safety management throughout all phases of the construction.

CONSTRUCTION SAFETY MANUAL (CSM) - This manual, issued as a contract document by the Miami-Dade Transit (MDT), to be used as a guide by the Contractors in developing the Accident Prevention Program.

CONTRACTOR'S AUTHORIZED SAFETY REPRESENTATIVE - The person designated as authorized safety representative who will be responsible for work site safety and for reporting all insurance claims. On contracts of over \$5 million in award amount this person shall have full-time safety responsibility, unless deemed by the Office of Safety and Security that due to the nature of the work, part-time oversight is adequate. On contracts of under \$5 million award amount, the person may have part time safety responsibility, unless deemed by the Office of Safety and Security that the nature of the work necessitates full-time safety oversight. Whether part-time or full-time, this person shall NOT report to the Contractor's superintendent.

CONTRACT DRAWINGS - The plans, profiles, typical cross-sections, general cross-section, elevations, schedules and details which show locations, character and dimensions of the work.

CONTRACTING OFFICER - The Director, Miami-Dade Transit.

CONTRACTOR - The individual, firm, partnership, corporation, or combination thereof, private, municipal, or public, including joint ventures which, as an independent contractor, has entered into a contract with MDC, who is referred to throughout the Contract Documents by singular in number and masculine in gender.

DEGRADATION - Falling from an initial level to a lower level in quality or performance.

EMERGENCY - A situation which is life threatening or which can cause serious damage on or in the immediate vicinity of any transit facility, structure, bus or train.

EMPLOYEE - A person employed by the Contractor or Subcontractor.

ENGINEER - MDC or its authorized representatives, including but not limited to the Resident Engineer; the Contracting Officer's Representatives and the Engineer of Record.

EQUIPMENT FAILURE - The state in which equipment no longer meets the minimum acceptable specified performance and cannot be restored through operator adjustment or control.

FTA - Federal Transit Administration, formerly UMTA.

FAILURE - An inability to perform an intended function.

HAZARD - Any real or potential condition that can cause injury or death; or damage to or loss of equipment or property.

HAZARD MANAGEMENT (LOSS CONTROL) - An element of the system safety management function that evaluates the safety effects of potential hazards considering acceptance, control, or elimination of such hazards with respect to expenditure or

resources. (The feasibility of hazard elimination must be considered in light of financial, legal, and human considerations).

HAZARD SEVERITY - A qualitative measure of the worst potential consequences that could be caused by a specific hazard.

Category I - Catastrophic. May cause death, serious injury/illness or major system loss.

Category II - Critical. May cause injury/illness, or major system damage.

Category III - Marginal. May cause minor injury/illness, or minor system damage.

Category IV - Negligible. Will not result in injury/illness, or system damage.

HAZARD INDEX - A quantitative measure, combining the numerical probability of occurrence with a hazard severity.

HAZARD RESOLUTION - The analysis and subsequent actions taken to reduce, to the lowest level practical, the risk associated with an identified hazard.

HAZARD PROBABILITY - The probability that a hazard will occur during the planned life of the system. Hazard probability may be expressed in quantitative or qualitative terms. An example of a hazard probability ranking system is:

- A Frequent
- B Probable
- C Occasional
- D Remote
- E Improbable

IMMINENT DANGER - Refers to any condition or practice where there is reasonable certainty that a danger exists that can be expected to cause death or serious physical harm and/or serious property damage immediately or before the danger can be eliminated through normal enforcement procedures.

INCIDENT - An unforeseen event or occurrence which does not necessarily result in injury or property damage.

MAINTENANCE - All actions necessary for retaining an item in or restoring it to an operable condition.

MALFUNCTION - Any anomaly or failure wherein the system, subsystem, or component fails to function as intended.

MDC - Miami-Dade County - the Board of County Commissioners of Dade County, Florida, a political subdivision of the State of Florida, and MDT, and office under the

County Manager of Miami-Dade County, Created March 1, 1974, by Administrative Order No. 3-8, under the authority of Sections 4.01 and 4.02 of the Miami-Dade County Charter – and any authority, board, body, commission, official or officials to which or to whom the powers now belonging to MDT in respect to the location, construction, equipment, maintenance and operation of transit facilities shall, by virtue of any act or acts, hereinafter pass or appertain.

MDT - Miami-Dade Transit, Miami-Dade County, located at 111 NW 1st Street, Suite 910, Miami, Florida 33128.

MISHAP - An unplanned event or series of events that result in death, injury, occupational illness, or damage to or loss of equipment or property. (See also ACCIDENT).

OFFICE OF SAFETY AND SECURITY (OSS) - Miami-Dade Transit, Miami-Dade County, located at 111 NW 1st Street, 4th Floor, Miami, Florida 33128.

OPERATOR - That person having direct and immediate control of the movement of a vehicle or machinery.

OPERATING TIME - The time period between turn-on and turn-off of a system, subsystem, component or part during which time operation is as specified. Total operating time is the summation of all operating time periods.

OSHA - The Occupational Safety and Health Administration. An agency of the U.S. Government which sets standards to provide for the safety of employees in the workplace. The area office is located in Ft. Lauderdale, Florida, phone (305) 424-0242.

PERSONAL PROTECTIVE EQUIPMENT (PPE) - Equipment designed and worn to provide protection against hazard to some part of an employee's body. Example of PPE are safety glasses, respirators, hard hats, gloves etc. All PPE used at MDT work sites must comply with applicable OSHA standards.

POWER RAIL - A rail mounted on insulators alongside the running surfaces, which provides Metromover traction power for train propulsion.

PROCEDURES - Established methods to perform a series of tasks.

RELIABILITY - The probability that the system or subsystem will perform satisfactorily for a given period of time when used under stated conditions.

REPAIR - The maintenance activity, which restores a failed item to operable state.

RISK - An expression of possible loss over a specific period of time or number of operational cycles. It may be indicated in terms of hazard severity and probability.

RISK MANAGEMENT - The Risk Management Division, Miami-Dade County, General Services Administration, located at 111 NW 1st Street, Suite 2340, Miami, Florida 33128; phone 305-375-4280.

RULE - A law or order authoritatively governing conduct or action.

SAFE - Secure from danger or loss.

SAFETY - A reasonable degree of freedom from those conditions that can cause injury or death to personnel; damage to or loss of equipment or property; and freedom from danger.

SAFETY CHECKLIST - A list for examining the safety aspect of equipment, procedures and personnel.

SAFETY DEVICES - Protective devices, which do not alter the fundamental nature of a hazard but which, do control the extent of the hazard in some manner.

SAFETY CRITICAL - A designation placed on a system, subsystem, element component device, or function denoting that satisfactory operation of such is mandatory to assurance of patron, personnel, equipment, or facility safety. Such a designation dictates incorporation of special safety design features.

SAFETY MANAGEMENT - An element of management that establishes safety programs requirements and ensures the planning, implementation and accomplishment of task and activities to achieve work place safety.

SAFETY PROGRAM - The combined task and activities of safety management and safety engineering that enhance operational effectiveness by satisfying the safety requirements in a timely, cost-effective manner throughout all phases of the work.

SAFETY SUBCONTRACTOR - A subcontractor who satisfies the Florida Department of Labor and Employment Security Industrial Safety and Health Program, Chapter 38F-44, and is duly approved by MDC.

SECURITY PROGRAM PLAN (SPP) - A program designed to provide guidelines to implement security procedures and describe the contractors' commitments and specific actions proposed to provide a secure project site. The Contractor's SPP shall be developed by the Contractor using the Contractor's Safety Manual as a guide. Once approved by MDC, the Contractor's SPP shall be used by the Contractor and his subcontractors to insure the safe prosecution of the work.

SERVICE CONTRACTS/CONTRACTOR - Those operations that are providing any services, or repair, replacement or maintenance functions that are indigenous to the construction process on the work site.

STATE - The State of Florida.

SUBCONTRACTOR - Any person, firm or corporation, other than the employees of the Contractor, who contracts with the Contractor to furnish labor and/or materials under this Contract. The contractor shall be responsible for ensuring that their subcontractors comply with this manual.

SUPPLIER/VENDOR - Those entities whose sole responsibility to the project is the delivery of goods or materials, exclusive of direct labor.

SYSTEM – A composite of people, procedures and equipment operating in a specific environment to accomplished a specific mission or task.

THIRD RAIL - A rail mounted on insulators alongside the running rail which provides Metrorail traction power for train propulsion.

TRANSIT SYSTEM – A transportation system comprised of fleets of motor buses and electrically propelled transit vehicles and all of their operational/support personnel and systems (e.g. maintenance facilities, tracks, structures, etc.) utilized for the mass movement of passengers within a metropolitan area.

UNUSUAL OCCURRENCE – An unforeseen event or incident which does not necessarily result in injury or property damage.

UNSAFE CONDITIONS – Any condition which if not corrected will endanger human life or property.

WARNING DEVICES – Sensors that monitor or detect conditions and provide visible and/or audible alerting signals as desired for selected events.

WORK SITE - The area enclosed by the limit of work indicated in the Contract Documents and boundaries of local streets and public easements in which the Contractor is to perform the work under the Contract. It shall also include areas obtained by the Contractor for use in connection with the Contractor, when contiguous to the limit of work.

B. CONTRACTOR'S ACCIDENT PREVENTION PROGRAM (APP) & SECURITY PROGRAM (SPP) PLANS

1) OBJECTIVES OF THE ACCIDENT PREVENTION PROGRAM

- to achieve an injury-free experience for the Project.
- to achieve maximum property conservation.
- to reduce direct and indirect costs.

Accomplishing the above objectives will provide for:

- a) A greater efficiency as a result of a safer working environment.
- b) A reduction of the construction work interruptions which develop when unsafe environments are created and when accidents occur.

2) METHODS OF ATTAINING OBJECTIVES:

Effectiveness of the Accident Prevention Program depends on the comprehensive participation and cooperation extended by all participants in support of the basic requirements listed below.

The Contractor's Authorized Safety Representative shall be informed immediately of any recognized hazards or potential hazards, related to health & safety, which may impact on the effectiveness of the Project's Accident Prevention Program that cannot be handled promptly as set forth herein, and report such to the Engineer.

The major accident prevention requirements are:

- a) Initiation and maintenance of programs, plans, training, etc. as necessary to comply with the requirements of this manual, and applicable Federal, State and Local standards.
- b) Allocating manpower, as required, for professional safety personnel assistance.
- c) Planning and coordinating all work to avoid personnel injury, property damage and loss of productive time.
- d) Establishing and maintaining a system for prompt detection, reporting, and correction or control of unsafe practices and unsafe conditions.
- e) Assuring the availability, and enforcing the use of appropriate personal protective equipment.

- f) Establishing and maintaining an effective and comprehensive system of tools and equipment inspection and maintenance including records required by applicable regulations or internal directives. The tool and equipment inspection and maintenance program shall include all employee-owned items brought onto the work site.
- g) Establishing and supporting an educational and job skill-training program designed to foster and maintain accident prevention knowledge and cooperation at all levels of employment by:
 - 1. providing for new employee's orientations.
 - 2. conducting targeted subject safety meetings.
 - 3. posting adequate safety and health requirements for all operations.
 - 4. maintaining a list of adequately trained and licensed employees authorized to operate specific equipment.
 - 5. maintaining a list of the trained and certified crane operators.
 - 6. maintain a list of employees who have been certified in accordance with Florida Department of Transportation to perform flagging operations and placement of traffic signs or devices (cones, barricades, warning signs, etc.).
 - 7. maintain a list of "Competent Person" employees who satisfy OSHA standard requirements to perform specific functions under the OSHA standards. A partial list of standards that require a competent person is included in appendix G of this CSM.
 - 8. investigating all accidents to determine causes (s) and taking prompt, reasonable and prudent necessary action to eliminate or control responsible factors.
- h) Providing visitor control and hazard protection.
- i) Providing work site security.
- j) Establishment and maintenance of a first aid and/or medical facility.
- k) Controlling the safe placement of materials or equipment received, or used, consistent with the traffic control pattern established and progression of construction on the work site.

- l) Providing maintenance of traffic control plans and procedures consistent with the work to be performed in accordance with the Contract Documents.
- m) Providing work site fire prevention/protection in coordination with local authorities and applicable standards.
- n) Establishment and maintenance of an effective program in accordance with Federal, State and Local regulations for the storage, use, and disposal of hazardous substances.
- o) Conducting accident/incident investigations.

3) MDC AND THE ENGINEER:

- a) The Engineer will:
 - 1. Receive from the Contractor an Accident Prevention Program and Security Program Plan no later than 25 days after approval of Award Recommendation by the Board of County Commissioners and no less than 15 days before the projected date for notice to proceed of the Contract. The Contractor shall assume full responsibility for compliance with all applicable Federal, State and Local safety related regulations and for complying with this Construction Safety Manual during the performance of all work performed prior to the approval of the Contractor's Accident Prevention Program and Security Program Plan. (See definition of Accident Prevention and Security Program).
 - 2. verify that Contractor plans and executes the work in compliance with the stated objectives of the Accident Prevention Program, Security Program Plan and applicable regulations.
 - 3. authorize work site inspections by MDC representatives to monitor Contractor compliance with this manual.
 - 4. require prompt remedial action to correct substandard or illegal safety and/or health conditions reported or observed by MDC representatives.
 - 5. verify that the Contractor has adequate fire prevention/ protection equipment; contained in ready-operating status at all times.

6. verify that the Contractor has temporary lighting and power systems during the construction phase set up and utilized in such a manner as to reduce hazards to a minimum.
7. ascertain that trained first aid personnel are available and certified for their work.
8. verify that good housekeeping procedures are maintained at all times by the Contractor and subcontractors.
9. establish procedures for the reporting of all fire incidents or damages as stated herein.
10. instruct the Contractor to establish an identification program for all employees at the work site.
11. verify that the Contractor reports all accidents immediately, as required by this manual and State and Federal regulations.
12. instruct the Contractor that employee access to unauthorized or restricted areas on Metromover or Metrorail property requires that the Contractor provide prior notification to, and receive authorization from Central Control.
13. establish procedures for timely reporting/notification to OSS for accidents and injuries.

4) CONTRACTOR: The Contractor Shall:

- a) Submit in writing to the Engineer an Accident Prevention Program and Security Program Plan for approval no later than 25 days after approval of Award Recommendation by the Board of County Commissioners and no less than 15 days before the projected date for notice to proceed of the contract. Provide the name, qualifications, and a "24 hour" phone number of the Contractor's Authorized Safety Representative who shall devote his time to the work site as defined by the definitions section of this Construction Safety Manual. No work on the work site shall begin until MDC approves the Contractor's authorized safety representative. The Contractor shall assume full responsibility for compliance with all applicable Federal, State and local safety related regulations and for complying with this Construction Safety Manual during the performance of all work performed prior to the approval of the Contractor's Accident Prevention Program. (See definition of Accident Prevention and Security Program). For furnish and install equipment contracts (non-construction), the stated approval period will commence ten (10) days prior to the beginning of work on the work site.

- b) Substantiate in writing to the Engineer that the Contractor's Authorized Safety Representative possesses at least two years of construction safety experience, is a managerial supervisory capacity, related to the work contemplated under this Contract.
- c) Maintain responsibility for project safety on the work site for his own or subcontractor's employees at any time, under any circumstances.
- d) After approval of the Contractor's Authorized Safety Representative, the Contractor, his Authorized Safety Representative and the Engineer will be required to attend a meeting with the MDT staff. At that time, a formal presentation and discussion of the Accident Prevention Program will be conducted.
- e) Follow all of the requirements and procedures of the Accident Prevention Program.
- f) Promptly provide the Engineer with a detailed written submission of the safety and/or health hazards not consistent to his work at the work site and a detailed program to control all such hazards. Such program must be consistent with the Accident Prevention Program and conform in all respects to all legal and safety requirements, including those of OSHA and Federal, State, and Local regulations. All such programs must be approved by the Engineer prior to the commencement of this work.
- g) Require each new employee, before he starts work, to be oriented by his supervisor on the safety and health rules, procedures, and requirements established for the work task (s) to be performed and procedures to be adhered to. Tool-box safety meetings are not an acceptable substitute for new employee orientation. The name of the employee and orientation date shall be on record at the work site.
- h) Provide an overall traffic control plan for pedestrians, vehicular traffic and construction operations; and establish a general visitor control program.
- i) Set up and implement a program to protect persons and property in the event of emergencies.
- j) Complete supervisory investigation reports of all injuries.
- k) Require supervisory employees and subcontractors to attend monthly supervisor's safety meetings.
- l) Schedule weekly "tool-box" safety sessions to be held by the job foremen for all employees. A record including date, employee attendance, and subject covered shall be kept of these meetings for the duration of the Construction

Project. The Engineer shall be advised of the time and location of the scheduled meetings. (See Appendix B for suggested format). The meeting should be used to review safety and health rules and procedures, applicable Federal, State or Local standards, and to discuss any problems related to safety at the work site. This would include information as to storage, use and disposal of hazardous materials at the work site.

- m) Schedule and preside at safety meetings to be held monthly at which appropriate supervisory staff of the Contractor and subcontractors will be required to attend. The Engineer shall be advised of the time and location of the scheduled meetings.
- n) Take immediate action to correct unsafe practices and unsafe conditions.
- o) Report to the Engineer and observed conditions or violations of job safety regardless of weather they are within the observer's power or responsibility to correct.
- p) Assure that supervisory employees at all levels have a good working knowledge of applicable safety and health standards as they pertain to their areas of supervisory control and encourage all supervisory personnel and employees to improve their accident prevention awareness.
- q) Provide the establishment of first aid facilities for treatment of employees.
- r) Obtain a personal copy of the OSHA Construction Industry Standards 29CFR1926 and OSHA General Industry Standards 29CFR1910 to be available for the Contractor's reference as required by this manual. (The OSHA standards may be obtained free, or at a minimal cost, by contacting the OSHA area office, phone (305) 424-0242, in Ft. Lauderdale).
- s) Ensure that prior to accessing restricted areas on Metrorail or Metromover property; he has provided proper notifications to and received proper authorization from Central Control through the Engineer.
- t) Ensure that during all times that employees are at the work site, an acceptable and reliable means of communication with local emergency response personnel is available.
- u) In addition to complying with this manual, comply with all applicable safety & health governmental standards including the OSHA Construction Industry Standards 29CFR1926/1910, the Florida Right to Know Law, the Federal Hazard Communication Act, Florida Worker's Compensation Laws, etc. Maintain the necessary documentation, program, and/or training required by such standards.

- v) Ensure all of his subcontractors, and subcontractor's employees, comply with the requirements of this Manual and applicable Federal, State and Local regulations.
- w) Comply with the current edition of the Florida Building codes unless specifically exempt, in writing by the Engineer.

5) EMERGENCIES

For the purposes of the Accident Prevention Program, emergencies are classified as follows:

- a) A fire, or major hazardous material leak or spill, requiring the response of the local fire or environmental protection department.
- b) Unplanned collapse of equipment used in the course of construction.
- c) Unplanned collapse of a substantial part of any structure at the work site.
- d) Any serious accident involving an employee.
- e) Any serious accident involving a member of the public.
- f) Any other occurrence which would require immediate protection of life or property.

6) HOW TO REPORT AN ACCIDENT TO THE MDT ENGINEER:

- a) The Contractor and all other participants in the Program shall instruct their employees and all other concerned personnel in how to report an accident which must include, at a minimum, the following procedures:
 - 1. Report the matter immediately to the supervisor who shall arrange for first aid or other required emergency medical treatment.
 - 2. In the event of serious injury or a death, in the absence of emergency first aid facilities on the work site, the supervisor of the injured employee is to arrange for necessary treatment. There shall be full compliance with all requirements of the Contractor's insurance carrier(s) with regard to accident reporting.
 - 3. The emergency phone number is: **911**

4. In case of a death, or if five or more employees are seriously injured in the same accident, the Contractor's Authorized Safety Representative shall, not later than 24 hours after the occurrence report the same to:
 - a. Office of the Area OSHA Director (305) 424-0242.
 - b. State of Florida, Bureau of Industrial Safety and Health (305) 377-5373.
5. The employer of any injured employee shall be required to complete the Notice of Injury Form, as required by State of Florida Worker's Compensation Division. (See appendix A).
6. The employer of any injured employee shall be required to record all work related injuries on Form 301 (or equivalent), Form 300 and complete/post the summary (Form 300A) at the beginning of the calendar year as required by OSHA 29CFR1904. (See appendix A).
7. The supervisor of the injured employee shall be responsible to immediately report the injury to the Engineer, to fill out the Supervisor's Report of Accident (Appendix A), and make it and the notice of Injury report available to the Engineer.
8. All participants in this Accident Prevention Program shall cooperate fully in the investigation of any accident and/or occurrence.
 - b) The contractors and other participants in the Accident Prevention Program shall instruct employees and all other concerned personnel of the following procedures if there is loss or damage to property of others, including damage to equipment or tools being used at the work site.
 1. Promptly report the loss or damage to the office of the Contractor's Authorized Safety Representative.
 2. In the event of a substantial loss or damage to the property of others, the Contractor is to immediately notify the Contractor's Authorized Safety Representative and the Engineer.
 3. There shall be full compliance with all requirements of the Contractor's insurance carrier (s) with regard to property loss and damages.

MDT SECURITY REQUIREMENTS

All Contractors are required to submit for review and approval a Security Program Plan (SPP), as defined in this Manual. This SPP shall provide guidelines to implement security procedures and describe the contractors' commitments and specific actions proposed to provide a secure project site. The Security Program Plan shall include, at a minimum:

- ✓ Procedures for inspecting perimeter security;
- ✓ Procedures for restricting who may visit the project site;
- ✓ Procedure for performing background checks;
- ✓ Procedure for overseeing security with respect to deliveries and other short-term visitors;
- ✓ Procedure for identification badges;
- ✓ Procedure for conducting periodic security meetings;
- ✓ Procedures for monitoring world-wide security threats and national security warnings and alerts;
- ✓ Emergency security procedures;
- ✓ Procedures for preparing, issuing and reporting security incidents.

MDT Contractor Identification Badges

All MDT contractors are to present identification along with documentation showing reason for visit. Following are the identification badge requirements for contractors.

1. Contractor's must be in possession of a photo identification card issued by MDT noting them as contractor's OR must be provided a VISITOR's BADGE upon the surrender of an approved government-issued photo identification.
2. All contractors under permanent, full-time assignment to MDT are required to display their MDT photo contractor identification. The identification is issued by the MDT Office of Safety and Security. A supervisory employee must be present with the contract employee for them to be issued identification.
3. All MDT employees who are involved in any way with contractor employees are to ensure that these security requirements are provided to those employees. MDT employees are to also assist contractors in meeting those requirements.
4. Contractor's requiring access to critical areas **MUST BE ACCOMPANIED BY AN MDT EMPLOYEE WITH AUTHORIZED ACCESS TO THAT AREA AT ALL TIMES. AT NO TIME MAY A CONTRACTOR BE LEFT UNSUPERVISED IN ANY CRITICAL OR SENSITIVE AREA.** These areas include, but are not limited to: bus and mover central control, bus dispatch, William Lehman Yard Tower,

traction power substations, switchgear rooms, train control rooms, electrical rooms, telephone rooms, computer server rooms, video monitoring areas, and communications rooms.

Visitor's to MDT Facilities

1. All visitors will be logged in before entering the premises.
2. Employees shall not allow any unauthorized persons to enter any MDT facility, including yard gates, buildings and other secure entrances. As necessary, MDT employees may direct visitor's to the security desk or, as necessary, request intervention by security personnel.
3. The employee entering the area is to ensure that each secured door is closed behind them and that no one else enters.
4. Any visitor who comes to our facilities for food delivery or any other personal type delivery will be met at the facility entrance by the employee who ordered the delivery. The delivery person shall not be allowed into the facility under any circumstances.
5. In instances where remote entry buttons are used at secure facilities, the entry button is not be used unless there is direct observation of the person entering. Direct observation includes visual observation and observation of closed circuit television monitors only.

All appropriate MDT field staff will be familiar with each contractor's approved Security Program and will comply with specific requirements of the plan when carrying out their assigned tasks. The contractors have the primary responsibility for developing and implementing the program; however, the Engineer will monitor the contractors' compliance with each contractor's security program.

C. GENERAL SAFETY AND HEALTH PROVISIONS

- 1) The Contractor shall ensure employees do not work under conditions, which are unsanitary, hazardous, or dangerous to their health or safety.
- 2) The Contractor shall initiate and maintain such programs as may be necessary to comply with this manual, and all applicable government regulations.
- 3) Such programs shall provide for the frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the Contractors; and shall include a program for the

performance of work, to promote its orderly and expeditious progress and ensure its safe completion within the prescribed time.

- 4) The use of any machinery, tool, material or equipment not in good working order, or which has had a safety feature removed or tampered with, is prohibited. Such machine, tool, material or equipment shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from the work site.
- 5) The Contractors shall permit only those employees qualified by training or experience to operate equipment and machinery. Applicable laws requiring employee to have a current license or certification (i.e., Class A Commercial Drivers License, etc.) to operate equipment are to be complied with.
- 6) The Contractor shall be solely responsible for the performance of the work in a manner, which will not create safety hazards, objectionable noise or other nuisance to the public.
- 7) Employees of the Contractor or subcontractors who are found to be intoxicated or appear to be under the influence of alcohol or drugs (other than as prescribed by a doctor) while on the work site shall be removed from the work site by the Contractor for the duration of the Contract. Employees who are found to be in possession of alcohol or drugs (other than as prescribed by a doctor) at the work site shall be removed from the work site by the Contractor for the duration of the Contract. An employee who is under a doctor's care and taking prescription drugs should inform his supervisor of same to determine if restrictions should be imposed.
- 8) Prior to the start of, and during the course of, any work, above or below ground level, the Contractor shall make a thorough survey of the entire work site to determine the type and locations of all utilities or other lines on the work site. The Contractors must verify this information by notifying the Underground Utilities Notification Center at 1-800-432-4770, other utilities not members of the Underground Utilities Notification Center, and notify the Engineer.
- 9) The Contractor shall instruct employees as to any precautions and procedures to be followed while working in the proximity of any utility or power line.
- 10) The Contractor shall develop and have readily available at the work site an emergency plan with the locations of any utility or line shut-offs or disconnects so that if any emergency arises, immediate action may be taken.
- 11) The Contractor will be required to identify and provide a notification procedure for all contingencies where cutting off a utility could adversely

affect any operation or render inoperative any protective apparatus in the surrounding area.

- 12) All structural repairs, alterations or reconstruction of any equipment used on the work site shall be certified in accordance with all applicable laws and regulations.
- 13) Portable toilets shall be chemical type or equal and shall be located convenient to work crews and maintained in proper sanitary conditions at all times.
- 14) Construction operations will normally be confined to those hours between dawn and dusk. Any work done other than during daylight hours must be approved by the Engineer. In requesting approval during other than daylight hours, the Contractor must present a written statement outlining the special precautions to be taken to control the extraordinary hazards presented by night work. This program shall include, but not limited to such items as supplementary lighting of work areas, illuminated barricades, proper supervision, availability of medical facilities, and security precautions.
- 15) Emergency lighting facilities, (i.e. battery operated or equivalent) shall be required in all construction areas where normal light failures would cause employees to be subjected to hazardous conditions. Such systems shall be maintained monthly.
- 16) Employees required to enter into confined or enclosed spaces shall be instructed as to the nature of the hazards involved, the precautions to take, and the use of protective and emergency equipment. The Contractor shall comply with all regulations applicable for working in dangerous or potentially dangerous areas.
- 17) The use of torpedo or salamander type heaters are prohibited.
- 18) No open burning of any kind shall be permitted without permits from appropriate local authorities and the Engineer.
- 19) Flammable storage cabinets shall be labeled in conspicuous lettering "Flammable – Keep Fire Away" and "No Smoking".

D. MEDICAL SERVICES AND FIRST AID

- 1) At least one person who has valid certificates in first-aid training from either the U.S. Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, shall be available at the work site to render first-aid. Further, a minimum ratio of one such qualified person to 50 employees shall be maintained throughout the course of the

construction. A suitable emblem shall be affixed to the qualified person's hard hat, or other suitable means of identification shall be used.

- 2) First-aid supplies, approved by a physician licensed to practice in the State of Florida, shall be accessible for immediate use. One 16-unit first-aid kit (or equivalent) shall be provided for each 50 persons or fraction thereof.
- 3) First-aid kit (s) shall be provided in a weatherproof container with individual sealed packages for each type item. The kits shall be checked by the Contractor before being sent out on each job and at least weekly on each job to ensure that the expended items are replaced.
- 4) A telephone shall be made available at the site before construction begins. Telephone numbers and locations of emergency facilities including emergency hospitals, physicians, ambulance service, police and fire department, as well as the complete street address of the work site, shall be posted in conspicuous locations at the work site, and at all telephone locations. The communication system for contacting necessary ambulance service or other emergency response personnel shall be operable at all times personnel are on the work site.
- 5) The location and number of approved stretchers provided for each contract shall be submitted to MDC for approval immediately after work commences on site. They will be maintained, properly protected and easily accessible at all times.
- 6) The Contractors, his supervisors and foreman, shall assure that any of his employees who suffers a job-related injury shall receive first aid and medical attention consistent with and as required by law.
- 7) The Contractor's first aid facility shall maintain a daily log of all injuries, both first aid and doctor cases. The log shall contain information to reflect the date, name of employee, employer, craft, supervisor, type of injury, how accident happened, time, disposition of patient and name of attendant.
- 8) The Contractor shall ensure that all OSHA and State of Florida record-keeping and reporting requirements are met.

E. DRINKING WATER

- 1) An adequate supply of potable water shall be provided in all places of employment.
- 2) Portable water containers shall be capable of being tightly closed and be equipped with a tap.

- 3) A common drinking cup is prohibited. Disposable cups shall be furnished.
- 4) Unused disposable cups shall be kept in a sanitary container, and a receptacle shall be provided for used cups.
- 5) All containers utilized for potable water shall be labeled as "Potable/Drinking Water Only".

F. PERSONAL PROTECTIVE AND LIFE SAVING EQUIPMENT

1) GENERAL

- a) The Contractor is responsible for requiring and enforcing the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions.
- b) The Contractors is to comply with all OSHA regulations (29CFR1926 Subpart E) regarding personal protection devices and life saving equipment.
- c) All persons on the Work Site shall utilize the proper foot protection which meets ANSI Z41 (toe), Z41.2 (metatarsal) and Z41.4 (electrical) standards.
- d) All persons on the Work Site shall utilize hand and body protection which meets ANSI/ISEA 105 and ASTM F23 standards.

2) HEAD PROTECTION

- a) All persons on the Work Site shall be protected by NON-METALLIC protective helmets, which meet ANSI Z89.2 standards. Helmets for the protection of employees against impact and penetration of falling and flying objects shall meet the specifications contained in ANSI Z89.1 Safety Requirements for Industrial Head Protection. Bump caps are not acceptable.
- b) All Work Sites shall have posted approved signs alerting all persons that hard hats are required on the site. The use of hard hats at the Work Site will be strictly enforced.

3) RESPIRATORY PROTECTION

- a) Whenever feasible administrative and/or engineering controls fail or are inadequate to prevent harmful exposures to employees; the Contractor shall

provide and require the use of appropriate respiratory protective devices in accordance with OSHA, 29 CFR 1910.134.

- b) Respiratory protective devices must be approved by the U.S. Bureau of Mines or acceptable to the U.S. Department of Labor for the specific contaminant to which the employee is exposed.
- c) Employers must have a written respiratory protection program as defined in 29 CFR 1910.134.
- d) Employees required to use respiratory protective equipment must be trained in the use and limitations of such equipment, fit tested annually and medically approved to wear respiratory protection as required by 29 CFR 1910.134.
- e) Respiratory protective equipment shall be inspected regularly and maintained in good condition. Defective or worn parts shall be replaced.

4) HEARING PROTECTION

- a) Feasible engineering or administrative controls shall be utilized to protect employees against sound levels in excess of those shown in the table below.
- b) When engineering or administrative controls fail to reduce sound levels within the limits of the Table below, protective hearing devices in accordance with OSHA (29CFR1926.101) shall be provided and used.
- c) Exposure to impulsive or impact noise should not exceed 140-db peak sound pressure level.
- d) In all cases, where the sound levels exceed the values shown in the Table below, a continuing, effective hearing conservation program shall be administered.
- e) PERMISSIBLE NOISE EXPOSURE TABLE (Source: OSHA, 29CFR1926.52)

<u>Duration per day, hours</u>	<u>Sound level dBA slow response</u>
8	90
6	92
4	95
3	97
2	100
1 –1/2	102

<u>Duration per day, hours</u>	<u>Sound level dBA slow response</u>
1	105
1 / 2	110
1 / 4 or less	115

- f) Plain cotton is not an acceptable protective device. Hearing protection shall be used only when it meets OSHA requirements and is suitable to correct the exposure.

5. EYE AND FACE PROTECTION

- a) Eye and face protection shall be provided and worn when machines or operations present potential eye or face injury.
- b) Eye and face protective equipment shall meet the requirements of ANSI Z87.1 – 2003, "Occupational and Educational Eye and Face Protection".
- c) Employees involved in welding operations shall be furnished with a welding helmet with minimum grade 10 shade filter lens for shielded arc welding or cutting. Welding goggles with a minimum grade 4 shade filter lens may be worn only for oxyacetylene gas welding or burning.
- d) Employees exposed to laser beams must be furnished suitable laser safety goggles, which will protect for the specific wavelength of the laser and be of optical density (0.0) adequate for the energy involved.

6. SAFETY NETS

- a) Safety nets shall be provided when workplace are over roads, guideways, or more than 25 feet above other surfaces where the use of ladders, scaffold catch platforms, temporary floors, safety lines, or safety belts is impractical. Safety net systems shall conform to OSHA 29 CFR 1926 502.
- b) Where nets are required, operations shall not be undertaken until the net is in place and has been tested & inspected by the Resident Engineer.

7. SAFETY BELTS, LIFELINES AND OTHER PERSONAL FALL ARREST SYSTEMS

- a) Approved personal fall arrest systems (in accordance with OSHA; 29 CFR 1926.104 and 29 CFR 1926.502) shall be worn by those employees whose

work exposes them to falling from the perimeter of a structure or through shaftways and openings. Protection must also be provided for employees who are exposed to the hazard of falling into/onto dangerous equipment,

- b) Employers must provide a training program for employees who might be exposed to fall hazards. The training shall include how to recognize such hazards and how the employees can minimize their exposure to such hazards. The training shall, at a minimum, comply with 29 CFR 1926.503. Re-training or refresher training must also be provided when necessary. Records of such training must be available for inspection by MDT.

8. WORKING OVER OR NEAR WATER

- a) Employees shall be provided with a U.S Coast Guard approved life jacket or buoyant work vest.
- b) Prior to and after each use, the buoyant work vest or life jacket shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used and be removed from the job site.
- c) Ring buoys with at least 90 feet of line shall be provided and available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.
- d) At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

G. SIGNS, SIGNALS, BARRICADES AND TRAFFIC CONTROL

- 1) All traffic signs or devices used for protection of construction workmen or the public shall conform to the State of Florida Department of Transportation's "Roadway and Traffic Design Standards" and applicable permit(s) conditions. All work areas on or around highways, roads and streets shall follow approved maintenance of traffic plans.
- 2) Barricades, cones and/or similar protective devices shall be used whenever men or equipment are exposed to traffic or similar hazards.
- 3) When traffic lanes are closed due to work activity, advance warning signals and high level warning devices shall be used as described in the State of Florida Department of Transportation's "Roadway and Traffic Design Standards" and applicable permit(s) conditions. All work areas on or around highways, roads and streets shall follow approved maintenance of traffic plans.

- 4) Flagmen and signalmen will be properly trained, certified, wear high-visibility clothing (as required by F-DOT FTDS600) and use appropriate procedures following the current F-DOT manual. Where flaggers are used, a flagger symbol or legend sign must also be used.
- 5) All employees within 15 feet of the edge of the travelway and/or where employees are exposed to roadway traffic shall be required to wear a high visibility vest/garment, per F-DOT manual.
- 6) Whenever and wherever possible and necessary, line voltage (12 volt) protected lights shall be used to mark fences and barricades and other such encroachments onto public streets or sidewalks. Warning lights shall be in accordance with F-DOT RTDS 600.
- 7) Where covered sidewalks are required they shall be provided with permanent lights to provide sufficient illumination for safe use by the public day or night. All bulbs shall be cage-protected.
- 8) Public walkways shall be kept clean and free of hazards at all times. When an existing pedestrian way or bicycle way is located within a traffic control work zone, accommodations must be maintained and include provisions for the disabled. Only approved temporary traffic control devices may be used to delineate a temporary traffic control zone for pedestrian and bicycle ways. Advanced notification of sidewalk closures and detours shall be provided by appropriate signs.
- 9) Where the Contractor is required to provide public walkway, they shall have abrasive, non-slip surface.
- 10) Where access to bus stop is disturbed or obstructed by the Contractors operations, safe access will be maintained or the bus stop relocated as directed by the Engineer. Coordination for maintaining or relocating bus stops with the appropriate agencies is the sole responsibility of the Contractors.
- 11) When steel plates or similar covers are used on public ways to cover excavations they shall be substantially secured to prevent movement imposed by traffic. Covers shall have non-slip surface, conforming to OSHA Specifications.
- 12) When such covers are located where there is pedestrian exposure, they shall be tapered at all sides with cut-back cold mix or similar material to eliminate tripping hazards. Covers shall have non-slip surface.
- 13) Free access shall be maintained to every fire extinguisher, fire hydrant, fire alarm box, fire escape and standpipe connection, street and traffic light control box. When required, hydrants shall be extended by suitable tube or piping to an

accessible point as approved by the Engineer. No obstructions shall be allowed at any time within 15 feet of a fire hydrant. Where materials are placed in the vicinity of a fire hydrant or a fire alarm box or fire extinguisher, and to such a height as to prevent the same from being readily seen, the position of such hydrant or fire alarm box or fire extinguisher shall be indicated by suitable signals, both day and night.

- 14) The Contractor shall erect and maintain fences and barricades to enclose the Contractor's work area, and provide watchmen where required to prevent unauthorized access.
- 15) No work shall be allowed above or below an active traffic lane. Contractor shall establish a work zone including appropriate lane closures following F-DOT RTDS 600 series.

H. MATERIAL HANDLING – (STORAGE, USE AND DISPOSAL)

- 1) All materials stored in tiers shall be secured to prevent sliding, falling or collapse.
- 2) Reinforcing steel shall not be used as a lifting ("Pick") point on any load nor as a guy line anchor.
- 3) Hooks, except special sliding choker hooks shall be securely moused when in use, or shall be provided with a functioning safety latch.
- 4) Scrap material of any kind, type or nature shall be placed daily into appropriate containers specifically supplied for this purpose. Containers shall be removed from the Work Site when full.
- 5) Loose material on open decks or other exposed locations shall be removed or secured at the end of each day to eliminate dislodgment by wind or other causes.
- 6) Compatibility of stored materials and storage methods will comply with all applicable OSHA, Fire Department and environmental agency standards.
- 7) Employees required to handle, use or dispose of hazardous materials shall be instructed regarding the safe handling, proper procedures, potential hazards, personal hygiene, and personal protective equipment required.
- 8) Disposal of materials shall be in accordance with all applicable Federal, State and Local regulations. All applicable recordkeeping and reporting requirements will be met by the Contractors.

I. TOOLS – HAND AND POWER

1) General

- a) Keep the work area clear of clutter
- b) Keep the work area well lighted
- c) Maintain and keep tools sharpened, oiled and stored in a safe place
- d) Supervisors instruct employees on using equipment and safe work practices before using equipment
- e) Inspect tools, cords and accessories prior to use
- f) Repair or replace problem equipment immediately
- g) Use 3-prong electrical plugs, double insulated tools and safety switches
- h) Machine guards must be in place and not removed
- i) Do not wear loose clothing or jewelry when operating equipment
- j) Install and repair equipment only if you are qualified to do so
- k) Use the right tool for the job (i.e. do not use a pipe wrench as a hammer)
- l) Carry a sharp tool pointed downward or place it in a tool belt/box
- m) Protect sharp blades with a shield/sheath
- n) Store tools in draws or chests with cutting edge down
- o) Proper personal protective equipment shall be worn
- p) All power hand tools shall be equipped with a “dead man” control where the power is shut down when the operator releases the tool
- q) Never leave a running tool unattended
- r) Tools of a non-sparking material and/or intrinsically safe tools must be used if fire or explosion hazards exist
- s) All fuel operated tools shall be stoped and allowed to cool prior to being refueled, serviced, or maintained and proper ventilating used when used in enclosed spaces
- t) Power grinding machines shall have proper grounding. Work rests must be kept at a distance not to exceed 1/8” from the wheel surface
- u) Avoid repetitive motion, hold tools in a neutral position

2) “Lock on” buttons on all hand held power drills are prohibited.

3) Powder Actuated Tools

- a) High velocity tools are prohibited. Only low velocity piston drive tools are permitted.
- b) Only employees who have been trained in the operation of the particular tool in use shall be allowed to operate a power actuated tool. ANSI STANDARD A10.3-1970.
- c) Firing of the tools shall be dependent upon at least two separate and distinct operations of the operator, with the final firing movement being separate from the operation of bringing the tool into firing position. The tool shall be so

designed so as not to be operable other than when being held against a work surface with a force of at least five pounds greater than the total tool weight. Caution must be exercised to ascertain that the proper color coded charge, for the materials involved, is utilized.

- d) In case of misfire, the operator shall hold the tool in the operating position for at least 30 seconds. He shall then try to operate the tool a second time. He shall wait again 30 seconds, holding the tool in the operating position. Then he shall proceed to remove the explosive load in strict accordance with the manufacturer's instructions. Misfired cartridges shall be placed carefully in a metal container filled with water and returned to the supervisor for disposal.
- 4) Grinding wheels shall not be operated at speeds in excess of the manufacturer's RPM rating as labeled on the wheel.
- 5) Face and eye protection or safety goggles shall be worn by all employees using grinding wheels, jackhammering, slag chipping, powder actuated tools or similar operations.
- 6) Radial Saws
 - a) The upper hood shall completely enclose the upper portion of the blade down to a point that will include the end of the saw arbor. The slides of the lower exposed portion of the blade shall be guarded to the full diameter of the blade by a device that will automatically adjust itself to the thickness of the stock.
 - b) Radial saw for ripping shall be provided with non-kickback finger or dogs approved by the manufacturer.
 - c) The saw and table shall be designed to prevent the blade from traveling beyond front of table.
 - d) Installation shall be in such a manner so that the front end of the unit be slightly higher than the rear, so as to cause the cutting head to return gently to the starting position when released by the operator.
- 7) Table saws shall be equipped with a functioning hood, guard, anti-kickback device and splitter.
- 8) Only power saws specifically designed by the manufacturer for cutting concrete block, or similar materials, shall be used for this purpose.
- 9) Cutting shall be done with water spray and the operator shall wear a face shield.

- 10) All hose couplings or any pneumatic or hydraulic equipment or tools shall be equipped with appropriate safety clips or retainers and shall be properly installed and maintained.
- 11) All appropriate machine and tool guarding devices shall be provided, shall be operational, and shall be use when the equipment is in operation.

J. WELDING AND CUTTING

- 1) Contractors shall instruct employees in the safe and proper use of cutting and welding equipment prior to using that equipment.
- 2) Oxygen and fuel gas pressure regulators, including their related gauges, shall be in proper working order while in use. Each regulator shall be provided with an anti-flashback device for protection against excessive oxygen back pressure in the fuel gas supply.
- 3) A minimum of one 10-pound all-purpose (ABC) dry chemical fire extinguisher shall be kept within 10 feet of any cutting or welding operation. The extinguisher shall be kept in a conspicuous place, free of any obstructions.
- 4) Proper personal protective equipment shall be worn while welding and cutting.
- 5) Welding screens shall be used in areas where prefabrication work is to be performed.
- 6) Oxygen and fuel gas regulators and hoses shall be maintained and in proper working order while in use.
- 7) All oxygen cylinders and fittings shall be kept free of grease and oil.
- 8) Do not weld without the approved goggles, hood and jacket/apron.
- 9) Always use approved gloves when welding.
- 10) Do not weld or burn in an area where fellow employees are working, without protective barriers, non-combustible flameproof screens/shields (blankets, covers, curtains etc.).
- 11) Do not weld where flammable or combustible material, such as waste, rags, paper, etc. can be ignited by the sparks or molten metal.
- 12) Do not weld in any location where open flame is not permitted.
- 13) Do not weld on a wooden bench or other structure that can burn.

- 14) Do not use leaky regulators, hose or other defective gas welding tools.
- 15) Do not use leaky gas cylinders.
- 16) Do not operate gas welding or cutting torches at pressure in excess of prescribed maximum.
- 17) Do not change or adjust pressure on regulators with torch valve closed.
- 18) Do not leave valves of gas cylinders open when not in use.
- 19) Do not leave valve key on gas cylinders when not in use.
- 20) Always remove all scale, rust, grease, protective surface coatings, oil and other foreign matter from metals before welding.
- 21) Always keep welding bench clear of dirt.
- 22) Always locate electric welding machine where it is protected from dirt, dust and harmful fumes.
- 23) Always see that the material being electrically welded is well grounded, and the ground connection from machine is tight.
- 24) Avoid fires on personal clothing from sparks or hot metal.
- 25) Always use protective clothing (welders legging, aprons, sleeves, jacket, etc.) when welding or burning.
- 26) Oxygen must not be used near flammable or combustible materials, such as grease, oil, etc., or any substance likely to cause fire.
- 27) Do not weld or cut in confined spaces without adequate ventilation.
- 28) Protect welding hose from being burned, trampled on or run over. Do not leave hose where it may be tripped over.
- 29) Valves on acetylene and oxygen tanks must be tightly closed when work is completed.
- 30) Carrying a lighted torch while climbing is forbidden.
- 31) Put rod stubs in a container. Stubs thrown on the floor become a slipping hazard.
- 32) Do not direct the flow of oxygen, from the torch, at clothing to remove dust, etc. This is a fire hazard.

- 33) Always have good ventilation when welding and gas cutting.
- 34) In the open air, when welding, cutting or heating metals having toxic substance(s), such as zinc, lead, cadmium, or chromebearing metals, approved respirator shall be used
- 35) When required have a certified fireguard while burning or welding. Fireguard must have a functional fire extinguisher present.
- 36) Use caution when removing eye protection. Hot slag may pop during cooling.
- 37) Remove manifold and replace protective caps on cylinders before storing welding unit (overnight, etc.).
- 38) Manifold hoses must be equipped with flash arrestors.

K. COMPRESSED GAS CYLINDERS

- 1) Valve protection caps shall be in place when compressed gas cylinders are transported, moved, or stored.
- 2) Cylinder valves shall be closed when work is finished and when cylinders are empty or are moved.
- 3) Compressed gas cylinders shall be secured in an upright position at all times, except when cylinders are actually being hoisted or carried.
- 4) Cylinders shall be kept at a safe distance or shielded from welding or cutting operations. Cylinders shall not be placed where they can contact an electrical circuit.
- 5) You are forbidden to lift or transport gas cylinders with hoisting equipment. Rough handling of loaded or empty gas cylinders is dangerous. Install protective caps onto cylinders before moving same. Transport cylinders on handcarts equipped with chains and secure the cylinder during movement. Do not accept cylinders, which do not have a protective cap.
- 6) Grease or oil on acetylene cylinders or oxygen cylinders is forbidden. It is extremely dangerous.
- 7) Avoid freezing acetylene cylinders.
- 8) Always remove leaky gas cylinders to open air, place them clear of flammable material or anything that might ignite them.

- 9) Always secure cylinders in an upright position. When a cylinder is empty, it must be marked "empty" and stored separately from full cylinders.
- 10) Protect cylinders from excessive heat. Do not store near steam pipes, furnaces, etc.
- 11) Oxygen cylinders should not be stored with acetylene or other highly combustible materials, including welding units. A minimum of 20 feet must be maintained from combustible and flammable gases.
- 12) All cylinders must be transported and stored with the protective cap securely in place. Never store cylinders with regulators/manifolds attached.
- 13) All cylinders must be clearly labeled as to content.

L. ELECTRICAL

- 1) Extension cords and temporary lighting electrical cords shall conform to the current edition of the National Electrical Code table 400.11. "Hard Usage" or "Extra Hard Usage", and shall be protected against all types of abrasion and damage.
- 2) All male plugs and female receptacle connections shall have cords physically interlocked to prevent accidental or unintentional separation and provide complete and positive continuity and grounding.
- 3) All power cords connected to panels of breaker boxes shall be connected using plugs. No direct wiring is permitted.
- 4) Temporary (extension) cords used to supply tools shall be limited to a maximum length of 200 feet, except that additional length may be used if supplemental positive equipment grounding is maintained within 200 feet of the tool or power use.
- 5) All portable power generators shall be grounded.
- 6) Ground-Fault Circuit Protection:
 - a) Ground-Fault Circuit interrupters will be installed on all 120 volts, single-phase, 15 and 20 ampere receptacles, on the Work Site.
 - b) An assured equipment grounding conductor program may be substituted for ground-fault circuit protectors, only after the following has been provided.

- c) Submit a written program, developed by a licensed electrician, including specific procedures adopted by the Contractor to the Engineer and MDC Risk Management.
- 7) All Work Site conditions will comply with requirements in OSHA 1926 Subpart K.
- 8) Before starting work on electrical equipment and lines, inspections and tests must be made to determine if they are alive or dead.
- 9) Use only tools or devices provided and see that they are in good condition.
- 10) Never touch two parts at different potentials or a single exposed live part at a dangerous potential to ground unless employee is insulated from other conducting surfaces, including ground.
- 11) Standing with hands behind back, with back toward generator or switchboard, is prohibited.
- 12) Employees working near live equipment and lines must protect themselves from tripping, slipping or falling, or from touching equipment or lines with body, tools or material.
- 13) Work on or about electrical circuit, apparatus or equipment only if qualified and with a thorough knowledge of its operating voltage and service, and then only when authorized by the immediate supervisor.
- 14) Do not use appliance, device, tool, flashlight, material or equipment that is not designed and approved for the maintenance and operation of the circuit on which it is to be used.
- 15) Insulation, weather proofing or covering on electrical wire, apparatus or equipment must not be depended upon for protection against shock.
- 16) Do not use bolt, rivet, cotter key or other object as a jumper in place of fuse.
- 17) Do not place clothing, lunch, tools, clothes hanger, or other unauthorized items in or about the power or control cabinet, switch box, battery box or on top of electrical apparatus.
- 18) Place "DO NOT OPERATE" warning tag on switch, set to de-energize line, apparatus or equipment. "Lock Out" procedures are preferred where feasible. At all times, when working on equipment that has the potential to cause harm or create a hazard, "Lockout/Tagout projection Televisions" procedure shall be followed. Lockout/Tagout procedure requires each employee to place a lock (if possible) or a safety tag on the energy source of any equipment that has the

potential to cause harm if the equipment is activated while it is being worked on. Refer to OSHA Standard 1910.147, "Control of Hazardous Energy".

- 19) Consider every circuit to be alive.
- 20) Use extreme care when using "snakes" in preparation of installing wire or cable. The coiled "snake" may fly loose and strike a person or electrified equipment.
- 21) Do not allow wet clothing, raincoats, etc., to come in contact with electrified equipment.
- 22) Do not lubricate electrical apparatus with power on.
- 23) Do not use water to put out electrical fires.
- 24) Do not change any wire or connections with power on.
- 25) Do not shift brushes in electrical motors with power on.
- 26) Do not leave the secondary of a current transformer open-circuited, or open up the secondary with power on.
- 27) Never wear ring(s) or jewelry on fingers on person when working near or handling electrical equipment.
- 28) Inspect all temporary cords and plug equipment for damage prior to use. Cords with damaged insulation, covers, plugs or missing grounding pins are not to be used.
- 29) Do not pass temporary cords through door openings or other areas where they are likely to be cut.
- 30) When temporary cords are used, care must be taken to ensure a trip hazard is not created.
- 31) Portable extension lights shall be visually inspected by employees using them. Lamp guards must be in place on all extension lamps.
- 32) Electrical plugs of portable extension cords, or cords attached to any electrical apparatus, shall be disconnected by grasping the plug and not by pulling the cord.

LADDERS AND SCAFFOLDS

1) Ladders:

- a) The use of ladders with broken or missing rungs or steps, broken or split side rails, or with other faulty or defective construction is prohibited. When ladders with such defects are discovered, they shall immediately be withdrawn from service.
- b) Portable ladders shall be placed on a substantial base at a 4-1 pitch, have cleat access at top and bottom, extend a minimum of 36 inches above the landing, and be secured against movement while in use.
- c) Portable metal ladders shall not be used for electrical work or where they may contact electrical conductors.
- d) Job-made ladders shall be constructed for this intended use. Cleats shall be inset into side rails $\frac{1}{2}$ inch, or filler blocks used. Cleats shall be uniformly spaced, 12 inches, top-to-top.
- e) Wooden ladders must not be painted. Split or rotted conditions would not be easily seen and constitute a hazard.
- f) The foot of a ladder shall be placed $\frac{1}{4}$ of its length away from vertical plane of its support and must be secured to prevent all possibility of slipping.
- g) Before climbing ladders, see that your shoes are free and clean of slippery substances. Watch out for broken rungs.
- h) Face the ladder while climbing either up or down.
- i) Never place a ladder in front of an unlocked door.
- j) Employees must not reach out from a ladder more than an arm's length.
- k) Ladders must be inspected by employees using them daily. Defective ladders are to be marked and kept separate from serviceable equipment and must be repaired before using.
- l) Do not "walk" a ladder while on it.
- m) Do not jump from or slide down any portion of any kind of ladder.

- n) When getting off a ladder, make certain of secure footing and avoid stepping on loose stones, debris or into a depression before releasing handhold on the ladder.
- o) A stepladder must be fully opened and spread properly before being used. Never stand on the top step of a stepladder.
- p) When carrying tools or other objects up a ladder presents a hazard, they should be raised with a rope and bucket.
- q) Two or more persons should raise, extend, shorten or move extension ladders. Never use the top section of an extension ladder as a single ladder, since it has no safety feet.
- r) Always rope off the area directly beneath ladders.
- s) Never leave extended ladders unattended. Remove ladders when there is a temporary stoppage of work.

2) Scaffolds:

- a) Platforms shall be tightly planked for the FULL width of the scaffold except for any necessary entrance opening. Platforms shall be secured in place, with proper guardrail and toe boards.
- b) Workmen shall not be allowed to climb or stand in cross bracing, or scaffold bucks.
- c) Adjustment screws on scaffold legs shall not be extended beyond the manufacturer's recommendations, or two-thirds of the threaded length, whichever is shorter.
- d) Casters shall be properly designed for strength and dimensions to support four times the maximum intended load. All casters shall be provided with a positive locking device to hold the scaffold in position. Casters shall be provided with a positive means of attachment to the scaffold legs.
- e) Scaffold support bearing shall not be comprised of concrete block or similar materials and footed securely on a solid, stable base.
- f) Materials shall not be stored on scaffolds in excess of the supplies needed for the immediate operation.
- g) The edges of scaffolds shall be protected with railings and toe boards.

- h) When using rollers for moveable scaffolds, lock or secure wheels.
- i) Do not use bent or twisted members on scaffolds.
- k) Always remove a scaffold as soon as there is no more need for it. A scaffold is a constant hazard.
- l) Always rope off the area directly beneath scaffolds.
- m) Use extreme caution and use approved fall protection equipment on elevated surfaces lacking side rail and/or approved guard.

FLOORS, WALL, OPENINGS AND STAIRWAYS

- 1) One-half inch mild plow steel cables or equivalent, or ¼ inch alloy steel chains may be used on bridge or guideway decks, open floor edges, and similar applications, in lieu of standard wooden top midrails. Such cables or chains shall be firmly anchored and kept taut. All connections or cables shall be looped and clamped. Standard toeboards shall be used in such instances.
- 2) Floor openings shall be guarded by a standard railing and toeboards or cover. In general, the railing shall be provided on all exposed sides, except at entrances to stairways. Temporary floor openings shall have standard railings.
- 3) Every open-sided floor or platform, six feet or more above adjacent floor or ground level, shall be guarded by a standard railing, or the equivalent, on all open sides except where there is entrance to a ramp, stairway, or fixed ladder.
- 4) Runways four feet or higher shall have standard railings on all open sides except runways more than 18 inches wide used exclusively for special purposes may have the railing on one side omitted where operating conditions necessitate.

RAILING

- 1) A standard railing shall consist of top rail, intermediate rail and posts, and have a vertical height of approximately 42 inches from upper surface of top rail to the floor, platform, etc.
- 2) The top rail of a railing shall be smooth-surfaced, with a strength to withstand at least 200 pounds. The intermediate rail shall be approximately halfway between the top rail and floor.

- 3) A stair railing shall be of construction similar to a standard railing, but the vertical height shall be not more than 34 inches nor less than 30 inches from upper surface of top rail of tread, in line with face of riser at forward edge of tread.
- 4) A standard toeboard shall be at least four inches in height, and may be of any substantial material either solid or open, with openings not to exceed one inch in greatest dimension.

CRANES, DERRICKS, HOISTS, ELEVATORS, PILE DRIVERS, & CONVEYORS

- 1) Prior to commencement of any work using any hoisting equipment on the Work Site, the Contractor will provide the Engineer with a valid certification of compliance for shore-based, or water borne equipment meeting all the provisions of OSHA 29CFR 1919.
- 2) Record Keeping Requirements:
 - a) Supervision of all testing, examinations, inspections, heat treatments and record keeping procedures shall be carried out by such persons as are so designated in OSHA 29CFR 1919.
 - b) Certificates issued by an accredited person (agency) shall be signed and all register entries made only by persons authorized by such accredited person (agency).
 - c) Certification shall not be issued until all conditions cited for correction on the semi-annual certification report form have been corrected in a manner satisfactory to the certifying agency.
 - d) In the event deficiencies remain uncorrected, no certification shall be issued.
 - e) An accredited person (agency) shall maintain records of all work performed including reports of work or tests performed by others (nondestructive testing, heat treating, etc.), in relation to each certification. Such records shall be available for examination upon request by MDC Risk Management, the Engineer or their authorized representatives.
 - f) A copy of each certificate relating to semi-annual examination and/or unit proof load test shall be available with each crane or derrick.
- 3) A checklist will be prepared and submitted to the Engineer by the Contractor for any lift where the load exceeds 80% of the load chart capacity for the crane or derrick, or, where the lift involves the use of two or more cranes. (See Appendix C).

- a) No lifts meeting the above criteria will be made without prior submission of a Critical Lift Checklist.
 - b) Where erection drawings are prepared for submittal to the Engineer, Appendix C, will not be required if all the information contained therein is shown on the drawing submitted.
 - c) Prior to making the lift, the conditions shown on the drawing submitted will be verified by the Contractor's representative at the Work site. Any deviations from the erection drawing submitted will be reviewed and verified as safe by the Contractor's representative.
- 4) Operation of boom equipment, or other equipment such as forklifts, backhoes, and the handling of any load in the proximity of electrical transmission lines is forbidden within a minimum of 10 feet. Further, if such equipment is positioned so that it is possible by rotation or any other movement, whether anticipated or not, to possibly contact high voltage, de-energizing of the lines, restraints, "hold-backs", or other positive physical means will be required. (Note: "High Voltage" is defined as voltage in excess of 400 volts).
- 5) All cranes shall be equipped with spirit level, or equivalent, to indicate the level of the crane fore and aft, and across the width. As nearly as possible, the crane shall be operated in level position.
- 6) After normal working hours and during other extended periods of non-usage, crane booms shall be lowered to a horizontal position to minimize the chance of movement due to wind. If this cannot be accomplished, load lines shall be securely fastened to a substantial anchoring point.
- 7) Except for floor-controlled overhead track cranes, a bell or other effective audible warning signal shall be provided for each crane equipped with power traveling mechanism, which shall be automatically engage and immediately audible when the crane begins to travel.
- 8) All pinch points drive mechanisms, and other hazardous moving parts shall be effectively guarded. (See Appendix C for suggested checklist).
- 9) Conveyor Systems
- a) Conveyor systems shall be equipped with an automatic audible warning signal sounded immediately **BEFORE** starting up the conveyor.
 - b) Whenever a conveyor is equipped with a catwalk, a safety cable shall be installed on the conveyor to stop it instantly in an emergency, so as it cannot be started until the actuating switch has been reset to the "On" position. The

cable shall not be less than 12 inches nor more than 18 inches above the conveyor belt and shall extend the entire length of the conveyor.

- 10) Catwalks shall be kept clean and free of tripping hazards.
- 11) Any anticipated use of helicopters for lifting operations shall require advance notice and approval by the Engineer and MDC Risk Management.
- 12) No person will be allowed to ride on a suspended load or hook for any reason.
- 13) No person shall be allowed to stand or pass under the elevated portion of any equipment whether loaded or empty.
- 14) Pile driving loftsmen shall use safety belts when working at elevations outside loft platforms. When the leads are to be rotated or moved, the loftsmen shall descend from the leads.
- 15) Exhaust pipes, steam lines, and other hot surfaces, located where employees could contact them, shall be effectively guarded or insulated.
- 16) Do not operate cranes or hoisting machines unless qualified to do so.
- 17) Do not stand under load being moved by crane.
- 18) Always test crane brakes and limit switches before operating on your tour of duty.
- 19) Always be sure that path of crane travel is clear of people or alerted by signal alarm in advance of moving load and while crane is in motion.
- 20) Always be sure that hooks, chains or cables are secure and properly placed before raising load.
- 21) Always be sure that loose parts are removed from load before raising it.
- 22) Only the operator is permitted to be in the operator's cab while crane is in operation, except when authorized maintenance is being performed or a new operator is being trained.
- 23) Hoisting hooks, chains or cables are to be visually inspected daily for flaws, cracks, etc., by employees using them and defects reported to their immediate supervisor. A monthly inspection with a certification record which includes the inspection date and signature of individual inspector must also be done.
- 24) Do not lift load with twists or kinks in the chain, rope or sling.

- 25) Operators of cranes that are moving loads in close proximity of exposed current carrying devices, are required to maintain a safe operating distance at least 10 feet from such devices to avoid contact with hoisting cables, blocks, hooks, etc.
- 26) Know the load rating of equipment when starting to raise an unusual or heavier than normal load (Load should not exceed limits of crane). Test brakes when load is a few inches from floor or ground.
- 27) When hoisting unusual material or machinery, attach a chain or cable well above the center of gravity to prevent the load from tilting or falling over when lift is made
- 28) When hoisting long shaped objects, a red tag line or other method of control is required to prevent load from turning end on end.
- 29) No employee shall ride or hang onto tongs, slings, hooks or load of hoisting equipment.
- 30) Before removing sling or chain from load, observe arrangement of load to be sure it has settled securely.
- 31) Keep from positioning yourself between the load being handled and a fixed object, (wall, stanchion or car) to avoid being pinned.
- 32) Leaving any hoisting equipment with a suspended load unattended, is forbidden.
- 33) Before hoisting a load, one (1) person must be designated to give signals, and all persons involved in the hoisting operation shall be notified who has been designated.
- 34) Before pulling a hoisting rope, wire, cable, chain or other such tackle, secure a firm footing, assume a braced position, and move clear in the event of adverse action.
- 35) Use both hands, when climbing into or leaving the crane cab. Lift tools and materials to the cab with a hand line.
- 36) If repairs to crane cause it to be laid up for a long period of time, lock the main switch in the open position to prevent use.
- 37) Make sure the controllers are in the "Off" position before opening or closing the main switch.
- 38) If power should go off, move the controllers to the "Off" position at once. Wait until power is restored before operating controllers again.

- 39) Never depend upon a limit switch to stop hoisting motor. Use your controls. Do not attempt to use two controls at the same time when approaching limits.
- 40) Whenever leaving the crane, place all controllers in the "Off" position, open the main switch and set the brakes.
- 41) When hoist operator's view is obstructed in the direction of movement, assign an employee to precede the hoist and warn others of its approach.
- 42) Do not shorten, repair or splice hoisting chain with wire, nails, bolts or other objects.
- 43) Use standard hoisting hand signals.
- 44) Do not make side pulls with a hoist, which will misalign the rope. It may cause the load to swing sideways or damage the rope itself.
- 45) Do not operate crane (move load) while the load is being raised or lowered.
- 46) Approved fire extinguishers are required in overhead cabs.
- 47) Any construction activity, including crane movement, occurring within 30' of the drip line of a Metromover or Metrorail guideway will also be subject to compliance with Miami-Dade Transit Adjacent Construction Manual requirements and OSS approval.

Q. WIRE ROPES, CHAINS, AND ROPES

- 1) Wire ropes, chains, ropes, and other rigging equipment shall be inspected prior to use and as necessary to assure their safety. Defective gear shall be tagged and removed from service.
- 2) Job or shop hooks and links, or makeshift fasteners, formed from bolts, rods, etc., or other such attachments, shall not be used.
- 5) The proper type of chain is to be used for the particular application (overhead lifting, transport, cargo securement, etc)
- 6) Any attachment, such as hooks or links, are to have a rated "working load limit" at least equal to the chain/rope with which it is used.
- 3) When U-bolts are use for eye splices, the U-bolt shall be applied so that the "U" section is in contact with the dead end of the rope.

- 4) When U-bolt wire rope clips are used to form eyes, the following table shall be used to determine the number and spacing of clips.

NUMBER AND SPACING OF U-BOLT WIRE ROPE CLIPS

Improved plow steel, rope diameter inches	<u>Number of clips</u>		Minimum Spacing (inches)
	Drop forged	Other material	
1/2.....	3	4	3
5/8	3	4	3-3/4
3/4.....	4	5	4-1/2
7/8.....	4	5	5-1/4
1.....	5	6	6
1-1/8.....	6	6	6-3/4
1-1/4.....	6	7	7-1/2
1-3/8.....	7	7	8-1/4
1-1/2.....	7	8	9

- 7) Slings are to be tagged for simple inclusion of sling type, working load limit, reach, serial number, chain size and grade.
- 8) State and federal regulations regarding size and number of chain systems required for securing loads on trucks are to be adhered too.

R. MOTOR VEHICLES AND MECHANIZED EQUIPMENT

- 1) All equipment that is left unattended adjacent to a roadway in normal use shall have appropriate lighted barricades placed around the location of the equipment
- 2) Loaders, backhoes, bulldozer and other similar equipment shall have their blades or buckets fully lowered and engines shut-off when left unattended.
- 3) All vehicles and equipment shall be checked at the beginning of each shift to ensure that the equipment is in proper operating condition and that accessories that affect safe operations are free from defects.
- 4) Heavy equipment, machinery, or parts thereof, shall be blocked to prevent falling or shifting before employees are permitted to work under or between them.
- 5) All equipment and vehicles with cabs shall have safety glass or equivalent windshields that are free of cracks and defects. Broken or cracked glass shall be replaced.

- 6) No person shall be allowed to ride in or on any equipment or vehicle except in seats, which are provided by the manufacturer.
- 7) Only trained, qualified and/or licensed persons are to operate equipment/vehicles.
- 8) All vehicles are required to have visual and audio back-up alarms.

S. EXCAVATION, TRENCHING AND SHORING

- 1) The Contractor shall call the Engineer who will call the Underground Utilities Notification Center at 1-800-432-4770 prior to any excavation regarding utilities. All initial excavation, which is done to expose all subsurface utilities, shall be done by hand to prevent damage. When exposed, they shall be protected at all times by suitable bridging, boxing, hangers or other supports during the prosecution of the work.
 - a) To provide access in emergencies, and for routine inspections of valves on water, gas or other mains, and to electrical power, communications, signal alarm and other service boxes, junction boxes and manhole that are decked over; trap door of a suitable size with suitable identifying steel plates securely attached thereto, shall be provided at all times in the decking.
 - b) The Contractors shall have a copy of the water main and gas drawings, clearly marked, to show the valves that control flow in the area and at the construction site. At least two valves in all directions outside the net lines shall be shown. The Contractor's superintendent shall mark and keep clear the location of valves for ready identification, should trouble develop.
- 2) Walkways shall be kept clean and free of all hazards at all times.
- 3) Internal combustion engines used in confined areas, such as in excavations or utility vaults where natural ventilation is limited, shall have exhaust fumes dispelled with forced ventilation or equivalent means.
- 4) All excavations and similar work areas where an exposure to the public or work personnel exists shall be promptly and completely fenced or barricaded, as shown in the Contact Drawings, except in those areas temporarily required to be open for the conduct of the work, then these openings shall be guarded to prevent access.
- 5) Adjustment screws on cross braces or trench jacks shall not be extended beyond the manufacturer's recommendations or 2/3 of the threaded length, whichever is more restrictive.

- 6) No one shall be permitted to climb or work from cross bracing.
- 7) Supervision – Excavation work shall at all times be under the immediate supervision of someone with authority to modify the shoring system or work methods, as necessary, to provide greater safety. He shall frequently examine the material under excavation and improve the shoring or methods beyond the minimum requirements, as necessary, to insure protection of workmen from moving material.
- 8) Removal of Shoring – No part of the shoring system of any excavation shall be removed until proper steps have been taken to avoid hazard to workmen from moving material. If a newly installed masonry or concrete wall is to be depended upon for this protection, it must have attained adequate strength to sustain resulting pressures.
- 9) Access and Egress – Convenient and safe means shall be provided for workmen to enter and leave the excavated area. This shall consist of a standard stairway, ladder, or ramp securely fastened in place at suitably guarded or protected locations where men are working and shall not require movement farther than 25 feet to reach such egress.
- 10) Blasting will not be permitted on the Work Site without prior approval of the Engineer and MDC Risk Management.
- 11) If any excavation (s) are required or requested to be left open by a utility company (s), municipality (s), or governmental agency, the excavations (s) will remain the sole responsibility of the Contractor for proper barricading and protection.

T. LASERS

- 1) Only qualified and trained employees shall be assigned to install, adjust, and operate laser equipment.
- 2) Employees shall wear proper eye protection where there is potential exposure to laser light greater than 0.005 watts (5 milliwatts).
- 3) Beams shutters or caps shall be utilized, or the laser turned off, when laser transmission is not actually required. When the laser is left unattended for a substantial period of time, such as during lunch hour, over-night, or at change of shifts, the laser shall be turned off and shall be secured in a manner, which will preclude indiscriminate or unauthorized activation.
- 4) Employees shall not be exposed to light intensities above: direct staring – 1 microwatt per square centimeter; incidental observing – 1 milliwatt per square

centimeter: diffused reflected light – 2 1/2 watts per square centimeter.
Employees shall not be exposed to microwave power densities in excess of 10 milliwatts per square centimeter.

- 5) The Engineer shall be notified of the location, time and qualifications of person or persons operating the laser.

U. ROLLOVER PROTECTIVE STRUCTURES, OVERHEAD PROTECTION AND REVERSE WARNING ALARMS

- 1) On **ALL** rubber-tired or crawler scrapers, bulldozers, front-end loaders, backhoes, motor graders, industrial tractors and forklift trucks, Rollover Protective Structures (ROPS) and Falling Object Protective Structures (FOPS) are required. (Note: See OSHA for structural performance standards).
- 2) On equipment where ROPS are required (above), seat belts shall be installed and worn by operators.
- 3) In lieu of a signalman, all bi-directional earthmoving, haulage or compacting equipment, and all trucks with a body capacity of 1-1/2 yards or more used to haul dirt, rock, concrete or other material shall be equipped with an automatically operated reverse signal alarm (such as buzzer, horn or bell) which is audible from a distance of 100 feet from the rear of the vehicle in operation. It shall be the duty of the contractor to inform his suppliers of these requirements.

V. CONCRETE

- 1) All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements for design, construction, inspection, testing, maintenance and operations as provided in OSHA.
- 2) Employees working more than six feet above adjacent working surfaces, placing and tying reinforcing steels in walls, piers, columns, etc., shall be provided with a personal fall arrest system (29CFR 1926.502), or equivalent device.
- 3) Employees shall not be permitted to work above vertically protruding reinforcing steel unless it has been protected to eliminate the hazard of implement.
- 4) Guying – Reinforcing steel for walls, piers, column and similar vertical structures shall be guyed and supported to prevent collapse.
- 5) Wire mesh rolls – Wire mesh rolls shall be secured at each end to prevent dangerous recoiling action.

- 6) Pumpcrete systems – Pumpcrete or similar systems using discharge pipes shall be provided with pipe supports designed for 100 percent overload. Compressed air hose in such systems shall be provided with positive fail-safe joint connectors to prevent separation of sections when pressurized. Safety chains shall be provided on all line two inches in diameter or larger.
- 7) Concrete buckets equipped with hydraulic or pneumatically operated gates shall have positive safety latches or similar safety devices installed to prevent aggregate and loose material from accumulating on the top and sides of the bucket.
- 8) Riding of concrete buckets for any purpose shall be prohibited, and vibrator crews shall be kept out from under concrete buckets suspended from cranes or cableways.
- 9) When discharging on a slope, the wheels of ready-mix trucks shall be locked and the brakes set to prevent movement. The use of chocks is also required.
- 10) Nozzlemen applying a cement, sand, and water mixture through a pneumatic hose shall be required to wear protective head and face equipment.
- 11) When temporary storage of reinforcing rods, materials, or equipment on top of formwork becomes necessary, these areas shall be strengthened to meet the intended loads.
- 12) The sills for shoring shall be sound, rigid, and capable of carrying the maximum intended load.
- 13) All shoring equipment shall be inspected prior to erection to determine that it is as specified in the shoring layout. Any equipment found to be damaged should not be used for shoring.
- 14) Erected shoring equipment shall be inspected immediately prior to, during, and immediately after the placement of concrete. Any shoring equipment that is found to be damaged or weakened shall be immediately reinforced or reshored.
- 15) Reshoring shall be provided when necessary to safety support slabs and beams after stripping or where such members are subjected to superimposed loads due to construction work done.
- 16) Metal tubular frames used for shoring shall not be loaded beyond the safe working load recommended by the manufacturer.
- 17) All locking devices on frames and braces shall be in good working order; coupling pins shall align the frame or panel legs; pivoted cross braces shall have

their center pivot in place; and all components shall be in a condition similar to that of original manufacture.

- 18) When checking the erected shoring frames with the shoring layout, the spacing between towers and cross brace spacing shall not exceed that shown on the layout, and all locking devices shall be in the closed position.
- 19) Devices for attaching the external lateral stability bracing shall be securely fastened to the legs of the shoring frames.
- 20) Formwork and shoring shall be designed, erected, supported, braced, and maintained so that it will safely support all vertical and lateral loads that may be imposed upon it during placement of concrete.
- 21) Working drawing showing the jack layout, formwork, shoring, working decks, and scaffolding, shall be available at the Work Site for review by the Engineer.
- 22) Stripped forms and shoring shall be removed and stockpiled promptly after stripping. In all areas which persons are required to work or pass, protruding nails, wire ties, and other form accessories not necessary to subsequent work shall be pulled, cut, or other means taken to eliminate the hazard.
- 23) Imposition of any construction loads on the partially completed structure shall not be permitted unless such loading has been considered in the design and approved by the Engineer.
- 24) Jacks and vertical supports shall be positioned in such a manner that the vertical loads are distributed equally and do not exceed the capacity of the jacks.
- 25) When checking the erected shoring towers with the shoring layout, the spacing between posts shall not exceed that shown on the layout, and all interlocking of tubular members and tightness of couples shall be checked.
- 26) All baseplates, shore heads, extension devices, or adjustment screws shall be in firm contact with the footing sill and the form material and shall be snug against the posts.
- 27) For stability, single post shores shall be horizontally braced in both the longitudinal and transverse directions, and diagonal bracing shall also be installed. Such bracing shall be installed as the shores are being erected.
- 28) All baseplates or shore heads of single post shores shall be in firm contact with the footing sill and the form materials.
- 29) Whenever single post shores are used in more than one tier, the layout shall be approved by the Engineer.

- 30) When formwork is at an angle, or sloping, or when the surface shored is sloping, the shoring shall be designed for such loading.
- 31) Adjustment of single post shores to raise formwork shall not be made after concrete is in place.
- 32) Fabricated single post shores shall not be used if heavily rusted, bent, dented, rewelded, or having broken weldments or other defects.
- 33) Timber shall not be used if it is split, cut, has sections removed, is rotted, or is otherwise structurally damaged.
- 34) Nails used to secure bracing or adjustable timber single post shores shall be driven home and the point of the nail bent over if possible. Double head nails will be permitted.

W. DEMOLITION

- 1) All sidewalks and walkways open to the public shall have abrasive non-skid surface and shall be kept clean and free of tripping hazards at all times.
- 2) "NO PARKING" zones with appropriate signs and barricades shall be displayed adjacent to buildings being demolished.
- 3) Water or other means of dust control shall be used where dust presents a health or environmental hazard, property damage potential, or nuisance.
- 4) See this Manual's section for Rollover and Falling Object Protection Structures, which also applies to demolition equipment.
- 5) Provide adequate protection to prevent damage to pipes, conduits, wires, cables, or structures above or below ground, which are not designated for removal.
- 6) Overhead protection shall be erected over sidewalks and shall extend at least ten feet beyond the building lines along direction of the sidewalks. Overhead planking shall be a minimum of three-inch full dimension lumber placed on adequately designed, metal or timber frames.
- 7) Substantial catch platforms shall be erected around all sides of the building prior to any demolition. Design must be approved by the Engineer.
- 8) Solid barriers of $\frac{3}{4}$ inch exterior fire rated B/D Plywood at least eight feet high shall be erected around the structure at ground or sidewalk level to protect the public. The barriers shall be framed with, at a minimum, 2"x3" fire rated studs 16" on center.

- 9) Full time flagman shall be provided to assist truck egress and ingress.
- 10) All mechanical, electrical, air conditioning, ducting, skylights, windows, and any other equipment, material or objects on roofs or walls of adjoining or adjacent structures to buildings under demolition shall be adequately protected from falling material and activity of wrecking crews and equipment.
- 11) No mechanical equipment (i.e. headache ball, impact equipment other than hand held) shall be used within six feet of any adjoining structure.
- 12) Employees engage in the demolition or removal of any pipes, structures or machinery covered or insulated with asbestos shall conform with all federal, state and local codes, rules, regulations and requirements including but not limited to:
 - a) 29CFR 1926.1101
 - b) 40CFR 61, Subpart M
 - c) Florida Statue 469.001-469.099
 - d) Miami-Dade Department of Environmental Resource Management
- 13) Employees engage in the demolition, removal or disturbance of any listed hazardous substance shall conform with all applicable federal, state and local codes, rules, regulations and requirements.

X. ADVERSE WEATHER CONDITIONS

- 1) Disassemble all scaffolds, loose formwork, radio antennas and secure properly.
- 2) All items that cannot be secured shall be stored inside secured storage areas or buildings.
- 3) All crane booms shall be lowered to ground level and secured to prevent movement.
- 4) All office trailers shall be tied down in compliance with MDC Tie Down Ordinance No. 77-1 upon original installation. All tie down straps, ground anchors, piers, etc., shall be checked for condition and operation.
- 5) All exposed glass on the Work Site shall be protected by a solid, rigid covering.
- 6) All free standing walls shall be shored from both sides.

- 7) Before employees are dismissed from the Work Site, the Contractors shall make a thorough inspection to verify all necessary precautions have been taken, and report to the engineer for any further instructions.
- 8) All precautions for construction sites during hurricane conditions, as required by the Florida Building Codes (Appendix D) shall be met.
- 9) All contractors shall develop a project specific hurricane plan. This plan will include a detailed description of all hurricane preparation activities for each MDT phase of hurricane readiness including:
 - a) Phase A – Pre-Season Preparedness
 - b) Phase B – Hurricane Advisory (48 hours prior to landfall)
 - c) Phase C – Hurricane Watch (24-48 hours prior to landfall)
 - d) Phase D – Hurricane Warning (24 hours prior to landfall)
 - e) Phase E – Landfall
 - f) Phase F – Recovery/Post Hurricane
- 10) Progression through the MDT phases of hurricane readiness will be declared by the MDT Hurricane Disaster Preparedness Coordinator (Coordinator). The Coordinator may accelerate preparedness levels based on prevailing conditions and expectations. The time of day the storm is expected to arrive, along with the Miami-Dade Emergency Operations Center levels of activation, are some of the factors that are considered. The MDT readiness phase will be communicated through the Resident Engineer or other MDT contract representative.

Y. HOUSEKEEPING

- 1) All refuse piles shall be removed from the Work Site immediately.
- 2) Stored and stacked materials shall be kept orderly, properly stacked, choked, and secured.
- 3) Any protruding nails, etc., shall be bent, removed or clinched immediately.
- 4) Oil, grease, and water spills shall be cleaned up immediately.
- 5) Loose materials, tools, or equipment shall be kept off stairs, out of walkways, ramps, platforms at all times when not in use.

- 6) Depressions and pot-holes in vehicle or walkway surfaces on the Work Site shall be properly filled and graded immediately.
- 7) Walkways, vehicle travel ways, ramps, railings, and stairways, shall be kept free from debris, properly installed and maintained.
- 8) Smoking or the use of open flames within 25 feet of flammable storage areas or fueling areas shall not be permitted.
- 9) Flammable storage areas shall be properly posted "**NO SMOKING**", provided with adequate fire extinguishers and free of combustible materials.
- 10) All sanitary facilities used on the Work Site shall be maintained on a daily basis.
- 11) All structures shall have a minimum of a 5-foot perimeter clearance that is to be free from any combustible debris or materials.

Z. HAZARDOUS SUBSTANCES

- 1) The Contractor shall develop, implement and maintain a written Hazard Communication/Right-to-Know Program and comply with all applicable requirements of OSHA Hazard Communication Standard 29CFR1910.1200.
- 2) The Contractor shall ensure that each container of hazardous substances in the workplace is labeled, tagged, or marked with the following information:
 - a) identify of the hazardous substance (s) contained therein
 - b) appropriate hazard warnings
- 3) The Contractor's written hazard communication program shall describe how the criteria for labeling; Material Safety Data Sheets (MSDS); employee information and training will be met and also include:
 - a) A list of the hazardous chemicals known to be present and their locations at the Work Site.
 - b) The methods the employer will use to inform employees of the hazards of non-routine tasks & the hazards associated with hazardous substances contained in unlabeled pipes in their work areas.
- 4) The Contractor shall maintain copies of the required Material Safety Data Sheet (MSDS) for each hazardous substance in the workplace, and shall ensure that they are readily accessible during each work shift to employees. (The Contractor may obtain the MSDS for a product by requesting it from the product's manufacturer, distributor, or importer.

- 5) Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the MSDS may be kept at a central location at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.
- 6) MSDS shall also be made readily available to fire & emergency response personnel, the Engineer and MDC Rick Management.
- 7) Contractors shall provide their employees with the following:
 - a) Information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
 - b) Any operations in their work area where hazardous chemicals are present.
 - c) The location and availability of the written hazard communication program, including the required list (s) of hazardous chemicals and material safety data sheets.
 - d) Information as to the employees' rights under the Florida Right-to-Know Law:
 1. The right to know of the listed toxic substances present in the workplace.
 2. The right to obtain a copy of the Material Safety Data Sheet for each listed toxic substance present.
 3. The right to refuse to work, under specified circumstances, with a listed substance, if not provided a copy of the Material Safety Data Sheet for that substance within 5 of the requesting employee's working days after submitting a written request to the employee's employer.
 4. The right to instruction, within 30 days of employment, and at least annually thereafter, on the adverse health effects of each listed toxic substance with which they work in the workplace, how to use each substance safely, and what to do in case of any emergency.
 5. The right to obtain further information on the properties and hazards of listed toxic substances from the Toxic Substance Information Center (1-800-367-4378).
 6. The right to protection against discharge, discipline, or discrimination for having exercised any of these rights.
- 8) The Contractor shall post the State of Florida Right-to-Know Poster at the Work Site. The poster and information/assistance in complying with the Right-to-Know Law is available from the Toxic Substance Information Center (1-800-367-4378). As soon as any environmental item is discovered, the Contractor shall immediately inform the Resident Engineer and the MDT Senior Professional Engineer (Environmental).

APPENDICES

- Appendix A - State of Florida, First Report of Injury or Illness; Supervisor's Report; OSHA 300 & 300A
- Appendix B - Tool Box Safety Meeting Document, Suggested Format
- Appendix C - Safety Inspection Checklist For Crane Inspection & Critical Lifts
- Appendix D - Special Hurricane Precautions
- Appendix E - OSHA General Industry and Construction Standards Requiring a Competent Person

APPENDIX A

INSTRUCTION - FIRST REPORT OF INJURY OR ILLNESS LES FORM DWC – 1

EMPLOYER -You are required by law to report all industrial accidents to the Division of Workers' Compensation within seven days of your first knowledge of the accident. A civil penalty of up to \$500 is provided for failure. Fully complete this form, using the employee's description of the accident, signs it, have the employees sign it and mail the original to the Division. Copies marked for the employee and your carrier (insurance company) must be sent to them.

If, for any reason, the employee cannot or will not sign the notice, **do not delay your report.**

EMPLOYEE -You are required by law to report your accident to the Worker's Compensation Division. Enter your description of the accident on this form, have your employer complete the form, then both of you should sign. If your employer refuses to sign or complete the report you should complete it. Send the original to the division, a copy to your employer.

For assistance, or for answers to questions on Workers' Compensation, call the toll free number shown on the form.

DISTRIBUTION: Part 1 - Division Copy
 Part 2 - Carrier Copy
 Part 3 - Employer Copy
 Part 4 - Employer Copy

CONSTRUCTION SAFETY MANUAL
May 2012

FIRST REPORT OF INJURY OR ILLNESS
FLORIDA DEPARTMENT OF FINANCIAL SERVICES
DIVISION OF WORKERS' COMPENSATION

For questions call 1-800-242-1743
 or fax to 1-800-242-1743
 Report to be filed within 24 hours (1-800-242-1743 or 305-392-1505)

REPORTED BY CLAIMS-MANAGING ENTITY	SENT TO DIVISION DATE	DIVISION RECEIVED DATE

PLEASE PRINT OR TYPE NAME (Last, First, Middle, Initial) HOME ADDRESS Street Apt # _____ City _____ State _____ Zip _____ TEL HOME Area Code _____ Number _____ OCCUPATION _____ DATE OF BIRTH _____ SEX <input type="checkbox"/> M <input type="checkbox"/> F		EMPLOYEE INFORMATION Social Security Number _____ Date of Accident (Month/Day/Year) _____ Time of Accident <input type="checkbox"/> PM <input type="checkbox"/> AM EMPLOYEE'S DESCRIPTION OF ACCIDENT (Include Cause of Injury) NATURE AND DATE THAT OCCURRED _____ PART OF BODY AFFECTED _____	
COMPANY NAME _____ D.B.A. _____ Street _____ City _____ State _____ Zip _____ TEL OFFICE Area Code _____ Number _____ EMPLOYER'S LOCATION (ADDRESS) (if different) Street _____ City _____ State _____ Zip _____ LOCATION # (if applicable) _____		EMPLOYER INFORMATION FEDERAL TAX NUMBER (FEIN) _____ DATE FIRST REPORTED (Month/Day/Year) _____ NATURE OF BUSINESS _____ ACCOUNT NUMBER _____ DATE EMPLOYED _____ FIRST DATE OF INJURY <input type="checkbox"/> YES <input type="checkbox"/> NO LAST DATE EMPLOYEE WORKED _____ WILL TO CONTINUE TO PAY WAGES INSTEAD OF WORKERS COMP? <input type="checkbox"/> YES RETURNED TO WORK <input type="checkbox"/> YES <input type="checkbox"/> NO LAST DAY WAGES WILL BE PAID INSTEAD OF WORKERS COMP? _____ DATE OF DEATH (if applicable) _____ AGREE WITH DESCRIPTION OF ACCIDENT? <input type="checkbox"/> YES <input type="checkbox"/> NO RATE OF PAY <input type="checkbox"/> HR <input type="checkbox"/> WK \$ _____ PER <input type="checkbox"/> DAY <input type="checkbox"/> MO Number of hours per day _____ Number of hours per week _____ Number of days per year _____	
PLACE OF ACCIDENT (Street, City, State, Zip) Street _____ City _____ State _____ Zip _____ COUNTY OF ACCIDENT _____		NAME, ADDRESS AND TELEPHONE OF PHYSICIAN OR HOSPITAL _____ _____ _____ AGREED BY EMPLOYEE <input type="checkbox"/> YES <input type="checkbox"/> NO	

CLAIMS-PENDING-END OF INFORMATION <input type="checkbox"/> 1(a) Denied Case - DWC-12, Notice of Denial Attached <input type="checkbox"/> 1(b) Involuntary Only Denied Case - DWC-12, Notice of Denial Attached <input type="checkbox"/> 2. Medical Only which became Lost Time Case (Complete all related DWC forms in #3) Employee's 8 th Day of Disability _____ Employee's Knowledge of 8 th Day of Disability _____ <input type="checkbox"/> 3. Lost Time Case - 1st day of disability _____ Full Salary (incl. comp) <input type="checkbox"/> YES <input type="checkbox"/> NO Full Salary End Date _____ Date First Payment Made _____ AMOUNT _____ COMP RATE _____ <input type="checkbox"/> T.T. <input type="checkbox"/> T.T. - 80% <input type="checkbox"/> T.P. <input type="checkbox"/> I.B. <input type="checkbox"/> P.T. <input type="checkbox"/> DEATH <input type="checkbox"/> SETTLEMENT ONLY Penalty Amount Paid by 1 st Payment \$ _____ Interest Amount Paid by 1 st Payment \$ _____			
ADAMSIR INSURER CODE # _____ EMPLOYER'S CLASS CODE _____ EMPLOYER'S NAICS CODE _____ SERVICE CODE # _____ CLAIMS-MANAGING ENTITY # _____		INSURER NAME CLAIMS-MANAGING ENTITY NAME, ADDRESS & TELEPHONE _____ _____ _____	

FORM DWS-1 (REV. 1-2008)



DE 1000

U.S. Department of Labor
Occupational Safety and Health Administration

OSHA's Form 300A (Rev. 01/2004)
Summary of Work-Related Injuries and Illnesses

התאחדות המורים והתנועה הלאומית, שיתוף פעולה עם הממשלה, ופיקוח על המערכת. המורים וההורים יתארגנו ויבצעו את המשימה. הממשלה תתמוך בהם. המערכת תתארגן ותבצע את המשימה. המערכת תתארגן ותבצע את המשימה.

[illegible]

Simplex, normal on plates, and after repeated attempts failed to reveal the cause of the infection. The laboratory failed to detect *C. jejuni* in the stool. The patient was discharged on 10 days of the antibiotic ceftriaxone. See Table 1 for details of the second outbreak of foodborne *C. jejuni*.

1880年12月25日

Total number of students	Total number of cases with dyspnea from work	Total number of cases with job transfer or no return	Total number of cases responsible cases
104	14	61	25

Wavelengths of 1000 nm

Total number of days away from work	Total number of days of job transfer or restriction
10	11

Small, steady fire dried

Total number of ... (4)

(1) Injured	_____	(4) Passengers	_____
(2) Killed	_____	(5) Firefighting	_____
(3) Stolen goods	_____	(6) All other libers	_____
(7) Rescuations and deaths	_____		

On 19 July 2001, a large number of people gathered in the main square of the city to celebrate the 10th anniversary of the end of the dictatorship.

[illegible]

உதவித் துணைத் தலைவர்

100

Only

Year: 2007

[illegible]

5

[illegible]

Employment Information if you don't have a degree, we do the job for you and help you get your education.

1000

There is no evidence of any other factors, such as

1. *Journal of the American Medical Association*, 1997; 277: 1033-1036.

I want to know how common it is?

2019-2020

100

Figure 1. The effect of the number of trials on the mean accuracy of the responses. The error bars represent the standard error of the mean.

OSHA's Form 301 **Injury and Illness Incident Report**

This report and OSHA's Injury and Illness Incident Report are used to record and report work-related injury or illness. It is used to determine if an injury or illness is a recordable injury or illness. The report is used to determine if an injury or illness is a recordable injury or illness. The report is used to determine if an injury or illness is a recordable injury or illness.

When a recordable injury or illness occurs, you must fill out this form or an equivalent. Some state workers' compensation, insurance, or other reports may be acceptable substitutes. To be considered an equivalent form, any substitute must contain all the information asked for on this form.

According to Public Law 91-595 and 29 CFR 1904, OSHA's record-keeping rule, you must keep this form on file for 5 years following the year to which it pertains.

If you need additional copies of this form, you may photocopy and use as many as you need.

Company _____ Date _____
Title _____
Phone _____

ATTENTION: This form contains information relating to an injury and illness incident in a manner that provides the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.



Information about the case

10. Date when incident occurred _____ (Please print date in full)
11. Date of injury or illness _____
12. Name of employee(s) _____
13. Title of employee(s) _____
14. What was the employee doing just before the incident occurred? Describe the activity, including the task, equipment, or material the employee was using, the specific equipment or material the employee was using, and the employee's position or job title.
15. What was the injury or illness? Describe the injury or illness, including the body part affected, the nature of the injury or illness, and the medical treatment received.
16. What was the cause of the injury or illness? Describe the cause of the injury or illness, including the hazard, the exposure, and the circumstances.
17. What subject or subjects are affected by the incident? Describe the subject or subjects, including the equipment, the material, the hazard, and the circumstances.
18. If the employee died, what did death occur? Date of death _____

Information about the employee

1. Full name _____
2. Sex _____
3. City _____ State _____ ZIP _____
4. Date of birth _____
5. Date of hire _____
6. Name of physician or other health care professional _____
7. Has the employee been given any medical advice, other than to rest? _____
8. Has the employee been given any medical advice, other than to rest? _____
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APPENDIX B
TOOL BOX SAFETY MEETING

FOREMAN/SUPERVISOR – PRINT NAME

Date and Shift

FOREMAN/SUPERVISOR – SIGNATURE

Section

TOPICS COVERED AT MEETING:

Name(s) of Personnel Present for Meeting _____

Name (print)	Signature	Job Title

MDC AUDIT: _____
(name) (signature) (date)

Original must be filed for length of construction project.

APPENDIX C: SAFETY INSPECTION CHECKLIST
Page 1 of 3

TITLE: JOB SITE ERECTION – Crane Inspection

AREA INSPECTED: _____

INSPECTED BY: _____ **DATE:** _____

INSPECTOR SUGNATURE: _____

PCI SAFETY MANUAL REFERENCE SECTIONS: _____

* Check items to be inspected in your area – disregard others not applicable

*	OK	ITEM INSPECTED	NOT OK	COMMENTS
		<u>The Crane Crew:</u>		
		Is the operator and crew properly trained and medically fit to perform their job?		
		Operating is a full time job – does the operator pay strict attention to his duties?		
		Do crane personnel wear hard hats when away from the crane?		
		Is the operator aware of the regulations involving working close to high voltage lines and electrical equipment?		
		High Voltage, even from a distance source, can be induced in metal parts of the crane. Is the operator aware of these situations?		
		Does the operator know the weight of each piece before he picks it?		
		Does the crane crew know the manufacturer's proper recommendations for making short moves on the job site?		
		Does the crew get help when lifting heavy items?		
		Does the crew periodically check for level?		
		Do they check outriggers for stability?		
		Do they check the boom angel indicator and other electronic load equipment for accuracy?		
		Does the operator allow anyone to ride the load or the hooks?		
		<u>The Ground Crew (hooking up product)</u>		
		Does the ground crew have, maintain and use proper safety equipment?		
		Are they familiar with the product erection sequence?		

CONSTRUCTION SAFETY MANUAL

May 2012

APPENDIX C: SAFETY INSPECTION CHECKLIST

Page 2 of 3

TITLE: JOB SITE ERECTION – Crane Inspection (continued)**AREA INSPECTED:** _____**INSPECTED BY:** _____ **DATE:** _____**INSPECTOR SIGNATURE:** _____**PCI SAFETY MANUAL REFERENCE SECTIONS:** _____*** Check items to be inspected in your area – disregard others not applicable**

*	OK	ITEM INSPECTED	NOT OK	COMMENTS
		(Continue) Are they familiar with the crane signals and general operation of the crane?		
		Do they know how to properly hook pieces and provide aerial stability?		
		Do they know how to properly use tag lines?		
		Are tag lines in good condition, strong enough?		
		Long Enough?		
		Two-way communication between the operator and erection foreman are becoming more common to provide safety on the job. Does the crew know how to operator and maintain the system? Are spare parts available for quick repair?		
		Is the crane swing radius roped off to prohibit the crane (during swing) from causing damage or hurting someone? Is entire swing checked? Including counterweights?		
		<u>The Machine:</u> Is the crane operated within all capacities?		
		Is the machine inspected daily?		
		Are the required crane inspections recorded?		
		Are all controls properly identified?		
		Are warning devices operative?		
		Is an operator's manual available to the crew for easy reference?		
		Are load charts, operating signals and other important information posted and/or readily available?		

APPENDIX C: SAFETY INSPECTION CHECKLIST
Page 3 of 3

TITLE: JOB SITE ERECTION – Crane Inspection (continued)

AREA INSPECTED: _____

INSPECTED BY: _____ **DATE:** _____

INSPECTOR SIGNATURE: _____

PCI SAFETY MANUAL REFERENCE SECTIONS: _____

* Check items to be inspected in your area – disregard others not applicable

*	OK	ITEM INSPECTED	NOT OK	COMMENTS
		(continued)		
		Are brakes within operating limits?		
		Are clutch and brakes surfaces dry?		
		Are all protective panels and guards in place?		
		Are electrical systems in good condition?		
		Are all of the sheaves properly aligned so as to reduce rope wear during work?		
		Is cable in good condition?		
		Are hooks in good condition?		
		Have hooks been inspected by magnetic particle inspection?		
		Are there safety latches on hooks?		
		Are fuel tanks in good condition and without leaks?		
		Are fire extinguishers available and routinely inspected?		
		<u>Slings</u> Are slings in good conditions? Is safety factor of 5 maintained?		
		Are slings stored properly?		
		Are sling inspected reports maintained?		
		Are "U" bolt wire rope clips correctly placed?		
		Are all other lifting devices in good condition?		

APPENDIX C (continued)
Page 1 of 2

CHECK LIST FOR CRITICAL LIFTS

NOTE: THIS FORM IS TO BE COMPLETED WHEN THE LOAD EXCEEDS 80% OF THE LOAD CHART FOR THE CRANE OR DERRICK OR WHERE THE PICK INVOLVES THE USE OF TWO OR MORE CRANES.

DATE: _____

(1) SUPERVISOR RESPONSIBLE FOR LIFT: _____

(2) DESCRIPTION OF ITEM TO BE LIFTED AND ESTIMATED WEIGHT:

(3) EQUIPMENT AND LIFT RELATIONSHIP:

(A) OPERATING RADIUS..... _____

(B) BOOM LENGTH..... _____

(C) ALLOWABLE LOAD (FROM LOAD CHART)..... _____

(D) RATIO OF LIFT TO ALLOWABLE LOAD..... _____

(E) CLEARANCE TO SURROUNDING FACILITIES..... _____

(F) SLING ANGLE..... _____

(4) CONDITION OF HOISTING EQUIPMENT AND RIGGING:

(A) HAS ALL EQUIPMENT BEEN REINSPECTED FOR THIS LIFT? ☐ YES ☐ NO

(5) STABILITY OF GROUND AREA:

(A) CHECK SOIL BEARING ALLOWABLE LOAD (COMMENTS):

(B) WILL MATS BE NEEDED? ☐ YES ☐ NO

APPENDIX C (continued)
Page 2 of 2

CHECK LIST FOR CRITICAL LIFTS (cont.)

- (B) ANY UNDERGROUND INSTALLATIONS NEEDING SPECIAL ATTENTION?
☐ YES ☐ NO

- (C) WILL IT BE NECESSARY FOR THE CRANE TO WALK WITH THE LOAD?
☐ YES ☐ NO

IF THE ANSWER IS "YES", ANSWER QUESTIONS E, F, & G.

- (E) IS AREA SURFACE LEVEL AND STABLE WHERE THE CRANE WILL BE WALKING
☐ YES ☐ NO

- (F) HAVE FACILITIES BEEN PROVIDED TO KEEP THE LOAD RADIUS FROM CHANGING?
☐ YES ☐ NO

- (G) HAVE ALL OVERHEAD FACILITIES BEEN CHECKED FOR CLEARANCE IN THE AREA WHERE THE CRANE WILL BE MOVING?

- (6) DOES THE OPERATOR HAVE THE NECESSARY EXPERIENCE ON THE CRANE AND ON THIS TYPE OF LIFT?
☐ YES ☐ NO

- (7) IF LIFT INVOLVES USE OF TWO CRANES ANSWER THE FOLLOWING:

- A) HAVE OPERATORS WORKED TOGETHER BEFORE? ☐ YES ☐ NO

- B) WHO WILL COORDINATE INSTRUCTIONS TO OPERATORS? _____

BY: _____
CONTRACTOR'S SUPERINTENDENT

APPENDIX D

SPECIAL HURRICANE PRECAUTIONS

During such periods of time as are designated by the United States Weather Bureau as being a hurricane warning or alert, all construction materials or equipment shall be secured against displacement by wind forces; provided that where a full complement of personnel is employed or otherwise in attendance, or engaged for such protection purposes, normal construction procedures or uses of materials or equipment may continue allowing such reasonable time as may be necessary to secure such materials or equipment before winds of hurricane force are anticipated. Construction materials and equipment shall be secured by guying and shoring, by tying down loose materials equipment and construction sheds.

APPENDIX E

OSHA General Industry and Construction Standards Requiring a Competent Person

The following OSHA standards require a competent person to perform specific functions under the standard. Standards are arranged numerically within the categories of General Industry and Construction. This list of standards requiring a competent person is to be used as a reference tool and does not supercede OSHA requirements.

General Industry (1910)

- 1910.66, Powered platforms for building maintenance.
- 1910.66 App C, Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms, Personal Fall Arrest System (Section I - Mandatory; Sections II and III - Non-Mandatory).
- 1910.109, Explosives and blasting agents.
- 1910.139, Respiratory protection for M. tuberculosis.
- 1910.183, Helicopters.
- 1910.184, Slings.
- 1910.268, Telecommunications.

Construction (1926)

- 1926.20, General safety and health provisions.
- 1926.53, Ionizing radiation.
- 1926.62, Lead.
- 1926.101, Hearing Protection.
- 1926.251, Rigging equipment for material handling.
- 1926.354, Welding, cutting, and heating in way of preservative coatings.
- 1926.404, Wiring design and protection.
- 1926.451, Scaffolds.
- 1926.454, Scaffolds, Training requirements.
- 1926.500, Fall Protections, Scope, application, and definitions applicable to this subpart.
- 1926.502, Fall protection systems criteria and practices.
- 1926 Subpart M App C, Personal Fall Arrest Systems - Non-Mandatory Guidelines for Complying with 1926.502(d).
- 1926 Subpart M App E, Sample Fall Protection Plan - Non-Mandatory Guidelines for Complying with 1926.502(k).
- 1926.503, Fall Protection, Training Requirements.
- 1926.550, Cranes and derricks.
- 1926.552, Material hoists, personnel hoists, and elevators.
- 1926 Subpart P App A, Excavations, Soil Classification.
- 1926 Subpart P App B, Excavations, Sloping and Benching.
- 1926.651, Specific Excavation Requirements.
- 1926.652, Excavations, Requirements for protective systems.
-

CONSTRUCTION SAFETY MANUAL
May 2012

- 1926.705, Concrete and Masonry Construction, Requirements for lift-slab operations.
- 1926.752, Steel Erection, Bolting, riveting, fitting-up, and plumbing-up.
- 1926.800, Underground Construction.
- 1926.803, Underground Construction, Caissons, Cofferdams, and Compressed Air, Compressed air.
- 1926.850, Demolition, Preparatory operations.
- 1926.859, Mechanical demolition.
- 1926.900, Blasting and the Use of Explosives.
- 1926.1053, Ladders.
- 1926.1060, Stairways and Ladders, Training requirements.
- 1926.1101, Asbestos.
- 1926.1101 App F, Work practices and engineering controls for Class I Asbestos Operations - non-mandatory.
- 1926.1127, Cadmium.

Memorandum



Date: June 25, 2015
To: Distribution
From: Eric J. Muntan, Chief
Office of Safety and Security
Subject: Background Checks for Contractors ID Procedures

Background Checks for Contractors: ID Procedures

Miami-Dade Transit (MDT) is implementing the following policies and procedures to govern both the issuance of new contractor and subcontractor ID cards, as well as renewal of currently existing contractor and subcontractor ID cards.

Procedures

All contractors and subcontractors are required to have a current ID card displayed while on MDT property at all times. In order to obtain a new or renewed Contract ID card, the following paperwork must be submitted in person:

- A completed, **original** contractor ID application, completed **in blue** ink, and signed by both the contractor/subcontractor and an MDT authorized representative.
- A completed, **original fingerprint card**.
- A completed, **original local background check** form with a proper raised seal from the issuing law enforcement agency.

All documents must be original, and can have no alterations or markings. Similarly, all documents must be produced in person. No emails, PDF files, or facsimiles will be accepted.

Copies

All copies of original documents will be maintained by an MDT inventory control specialist.

Ineligibility for issuance or renewal of contractor/subcontractor ID cards

Personnel may not be issued a new or renewed contractor or subcontractor ID if he/she currently or in the past has:

- Any felony, sexual, or domestic violence conviction
- Been discharged from the military under any conditions other than honorable
- Any history of irresponsible behavior including but not limited to an unreasonable driving record, or a problem employment record as determined by the county contract administrator or designee

- Any criminal activity listed in 49 US Code of Federal Regulations (CFR) section 1542.209, *Disqualifying Criminal Offenses* and 19 CFR 122.183, *Denial of Access*.

Display of ID card

All contractor and subcontractor personnel **must** at all times conspicuously display their contractor/subcontractor ID card. Prior to entry, and at all times while on MDT property, contract and subcontract personnel are subject to ID checks by any authorized MDT agent. Any personnel not in possession of their ID card will be denied access to MDT property, or if already on property will be immediately escorted off MDT property until such time as he/she can display proper ID.

All contract and subcontract personnel are subject to random ID checks while on MDT property, at any time for any purpose, by any authorized MDT agent.

Limit of Duration of Contractor/Subcontractor ID card

New or renewed contractor/subcontractor ID cards shall be valid for a time not to exceed one year. All issued contractor/subcontractor cards must be renewed prior to the completion of the one year period to maintain all contractor/subcontractor privileges included therein. Any contractor or subcontractor who fails to comply with the one year renewal requirement is strictly forbidden from entering any MDT property as a contractor/subcontractor until such time as the ID card is renewed and returned to valid status.



Contractor/Subcontractor New or Renewal ID Checklist

Each of the following tasks **must** be completed prior to issuance of any new or renewed contractor or subcontractor ID cards. Successful completion of the below requirements will help prevent any unnecessary delays or obstacles in obtaining your new or renewed contractor or subcontractor ID card.

Did you remember to:	Completed?
Complete your contractor ID application in blue ink?	<input type="checkbox"/>
Have your contractor ID application signed by an authorized MDT representative?	<input type="checkbox"/>
Complete a fingerprint identification card?	<input type="checkbox"/>
Complete an NCIC background check with proper seal?	<input type="checkbox"/>
Bring only original documents, not photocopies, and refrain from sending any email, PDF, or faxed documents?	<input type="checkbox"/>
Keep all original documents free of any unnecessary markings or alterations?	<input type="checkbox"/>
Verify that you have no convictions for any listed criminal acts that prohibit issuance or renewal of an ID card?	<input type="checkbox"/>
Read all requirements for obtaining, maintaining, and displaying your contractor/subcontractor ID card?	<input type="checkbox"/>

Upon successful completion of all of the above listed items, you are permitted to turn in the necessary original documents to request issuance of either a new or renewed contractor/subcontractor ID card.



MDT CONTRACTOR IDENTIFICATION CARD APPLICATION

Company Name: _____ Date: _____
Company address: _____
City: _____ State: _____ Zip: _____ 24 hrs Contact #: _____
Email Address: _____ Fax #: _____

Employee's Name: _____ Phone #: _____
Employee Address: _____
City: _____ State: _____ Zip: _____ SS #: _____

Certification: I hereby certify that all information made on this form is true to the best of my knowledge. Furthermore, I agree to abide by all County and MDT policies and procedure while on MDT property. I further agree that any identification cards and/or credentials issued to me are MDT property and shall be surrendered to MDT upon completion of any assignment/project at the property for which the identification was issued. I am aware if the ID is lost or stolen, the replacement fee will be \$10.00 the first time and \$20.00 every time there after. I further agree and understand that the MDT card is not to be used for free transportation on MDT Metrobus or Metrorail system.

Employee's Signature: _____ Print Name: _____

MDT accompanying Supervisor Statement: I hereby certify that all information made on this form is true to the best of my knowledge and that the applicant is a bona fide employee or sub-contractor of said Contractor.

MDT signature: _____ Print Name: _____
Title: _____ Phone #: _____

Contractor's Representative Statement: I hereby certify that all the information made on this form is true to the best of my knowledge and the applicant is a bona fide employee or sub-contractor of our company. I further agree that any identification cards/credentials issued to this person are MDT property and shall be surrendered to MDT upon completion of any assignment/project at the property for which the identification was issued.

Signature: _____ Print Name: _____
Title: _____ Phone #: _____

SECTION TO BE COMPLETED BY EMPLOYEE RELATIONS ONLY

Date: _____ Prox. Card #: _____ Station Card #: _____
Cyber Key #: _____ 311 Card #: _____
Expiration Date not to exceed 12 months after date of issue: _____

Identification given: License #: _____ Alien Card #: _____
Passport #: _____ Other: _____

ID in [] not returned [] Date: _____ Cyber key in [] not returned [] Date: _____
Station Card in [] not returned [] Date: _____ 311 Card in [] not returned [] Date: _____
Rev 10/9/15

APPLICANT

* See Privacy Act Notice on Back

LEAVE BLANK

TYPE OR PRINT ALL INFORMATION IN BLACK
LAST NAME NAM FIRST NAME MIDDLE NAME

FBI LEAVE BLANK

FD-258 (REV.12-10-07)

SIGNATURE OF PERSON FINGERPRINTED

ALIASES AKA

O
R
I

RESIDENCE OF PERSON FINGERPRINTED

DATE OF BIRTH DOB
Month Day Year

CITIZENSHIP CTZ

SEX

RACE

HGT.

WGT.

EYES

HAIR

PLACE OF BIRTH POB

DATE

SIGNATURE OF OFFICIAL TAKING FINGERPRINTS

YOUR NO. OCA

LEAVE BLANK

EMPLOYER AND ADDRESS

FBI NO. FBI

CLASS

ARMED FORCES NO. MNU

REF.

REASON FINGERPRINTED

SOCIAL SECURITY NO. SOC

MISCELLANEOUS NO. MNU

1. R. THUMB

2. R. INDEX

3. R. MIDDLE

4. R. RING

5. R. LITTLE

6. L. THUMB

7. L. INDEX

8. L. MIDDLE

9. L. RING

10. L. LITTLE

LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY

L. THUMB

R. THUMB

RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ADJACENT CONSTRUCTION MANUAL



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS ADJACENT CONSTRUCTION MANUAL

July 2017

**DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
ADJACENT CONSTRUCTION MANUAL**

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

OFFICE OF SAFETY AND SECURITY

MIAMI, FLORIDA

July 2017

A handwritten signature in black ink, appearing to read "Eric Muntan", is written over a horizontal line.

**Approved By:
Eric Muntan
Chief, DTPW
Office of Safety and Security**

8-4-17
Date

**DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
ADJACENT CONSTRUCTION MANUAL**

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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS ADJACENT CONSTRUCTION MANUAL

1.0 Introduction

This manual was prepared in the interest and for the guidance of those who may want to construct a non-Department of Transportation and Public Works (DTPW) physical structure (incl. any excavation, demolition or use of DTPW real property) on, adjacent to, or over, an existing DTPW facility and/or property. The purpose of this Manual is to provide uniform minimum standards and criteria for the construction, development and maintenance of all properties that have or may enter the **Safety Zone** (defined in Appendix A and C) that has been established for all DTPW property and extending on either side of the Metrorail and/or Metromover systems. This includes any equipment, regardless of distance from the guideway, which static or operational failure could directly or indirectly affect DTPW operations or structures.

These standards are intended to provide the basic guidance for the construction, development and maintenance of property adjacent to the operating guideway systems so as to:

1. Protect the safety of the general public and DTPW Employees.
2. Protect the guideway system and the DTPW property from physical damage.
3. Preserve the level of service and operational schedules so as to cause the least disruption for the ridership and use of the DTPW system.

This manual outlines the design guidelines and criteria to follow for the design and submittal of construction plans and specifications to DTPW for review prior to construction of the project. It is the general policy of DTPW to review designs for construction projects adjacent to or on DTPW property on a case-by-case basis to ensure that DTPW facilities are not damaged by the proposed construction, and that DTPW operations are not impacted during or after the adjacent construction.

DTPW maintains half-size "as-built" drawings in its Engineering, Planning & Development (EP&D) Library. Half-size copies of any of the drawings on file are available at printing costs. The full-size drawings on file are available at printing costs. The full-size drawings are normally in archival storage. Full size drawings may be obtained by special request. The Manager, DTPW Document Control, may be contacted (telephone: (786) 469-5268) for an appointment to review the drawings and to order prepaid copies as required.

The criteria provided herein are general in nature and for the sole purpose of providing a selective overview of the design requirements. Specific designs performed in the past by DTPW's consultants may not necessarily be in total conformance with this manual. It is considered to be the Developer's responsibility to obtain the original design computations, where available, from DTPW to completely understand the original design intent in order to accurately assess the impact of their proposed construction on the DTPW structures and facilities. A map of the DTPW Metrorail and Metromover system is provided in Section 2.0 (below) for use in locating "as-built" drawings.

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2.0 System Maps (Rail & Mover)

2.1 Metrorail System



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2.2 Metromover System



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3.0 General Procedures for Adjacent and Transit Right-of-Way Construction Activity

Developers or agencies contemplating any construction activity adjacent to or on Department of Transportation and Public Works (DTPW) facility, structure or property, including any excavation, maintenance, restoration, demolition or use of DTPW real property, should provide, for review, three (3) copies of their drawings and three (3) copies of their calculations, showing the relationship between their project and the DTPW facilities.

Sufficient drawings and details should be submitted to facilitate DTPW's review of the effects that the proposed project may or may not have on the DTPW facilities. A DTPW review requires internal circulation of the construction drawings to concerned departments. Drawings normally required for review are:

- Site Plan
- Drainage Area Maps and Drainage Calculations
- Architectural drawings (basement plans through top floor)
- Sections showing foundations and DTPW Structures
- Structural drawings (provide relative sections showing DTPW)
- Column load tables
- Pertinent drawings detailing an impact on DTPW facilities
- A copy of the geotechnical report

If uncertainty exists on the possible impacts a project may have on the DTPW facilities, and before making a formal application for a review of a construction project adjacent to the DTPW System, the developer or his agent may contact the **Chief, Right-of-Way and Utilities Division** should be contacted at **(786) 469-5244**.

Sheeting and shoring drawings should be accompanied by calculations. The drawings and calculations should contain comments, details, notes, and instructions describing the proposed sequence of construction.

When the design of foundations and site work of the project has progressed to the point considered complete and ready for review, the drawings and calculations, as applicable, should be sent to:

**Chief
Right-of-Way and Utilities
Department of Transportation and Public Works
701 N.W. 1st Court, Suite 1500
Miami, FL 33136**

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A period of 15 working days should be allowed for review of the drawings and calculations. Fifteen (15) days should be allowed for each successive review as required. Additional review time may be required for complex projects.

Reimbursement is required for the cost of providing support services for adjacent construction and joint development projects where access is required into the operating Metrorail/Metromover system; or the system is impacted. As part of the review procedure, and before any work may proceed, the developer will be required to sign a letter accepting this obligation.

The applicant must receive written approval for the design of a given project by the DTPW Chief, Right-of-Way & Utilities or DTPW Fire/Life Safety Technical Committee Chairperson (as applicable), prior to the start of construction.

Project Documents shall be reviewed and accepted by the appropriate DTPW Divisions for possible impact on DTPW facilities and operations, including all elements associated with the construction of the project and any temporary protection system needed to preserve the system safety.

Each "Part" of the project's design shall be reviewed and approved by the DTPW Design and Engineering Division (DED). A few of the more common "Parts" of a project are considered to be sheeting and shoring, overhead protection, dust protection, dewatering, temporary use of public space for construction activities.

The DTPW review process is outlined in Figure 1 below

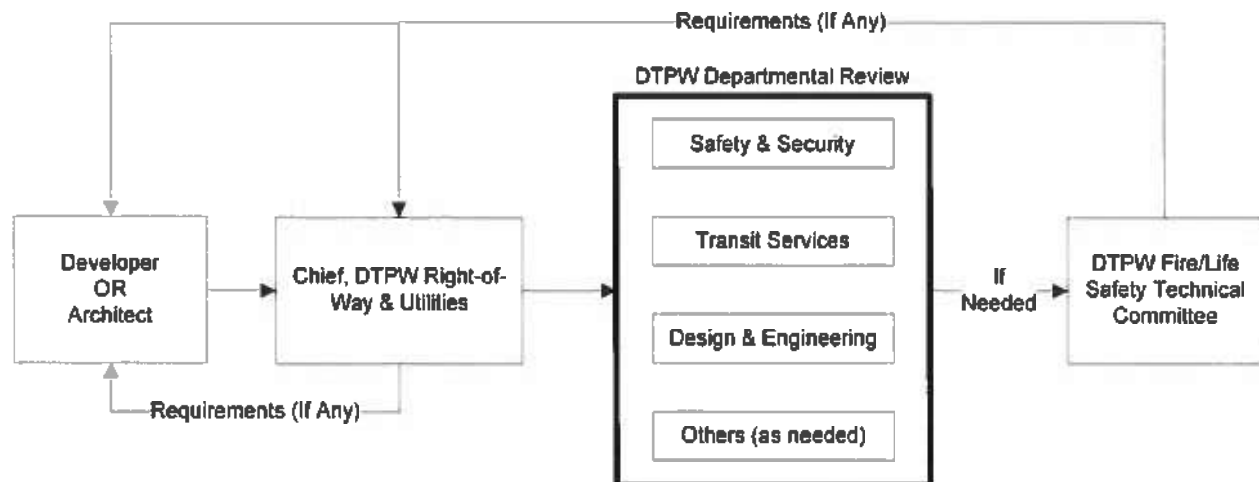


Figure 1

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS ADJACENT CONSTRUCTION MANUAL

3.1 Fire/Life Safety

DTPW Office of Safety and Security is charged with the responsibility to chair the DTPW Fire/Life Safety Technical Committee which was formed in 1978 to guide Department of Transportation and Public Works (DTPW), rapid transit operations, in developing and following emergency procedures and operational procedures to ensure all fire/life safety related equipment is in proper order and all associated personnel are appropriately trained; to prescribe testing and inspection procedures for fire/life safety equipment in accordance with appropriate codes; to assist the DTPW in developing and implementing a comprehensive joint training program for fire/rescue personnel and DTPW employees; and, to interpret and apply fire/life safety codes, criteria and standards to the design of the fixed guideway systems.

The DTPW Fire/Life Safety Technical Committee acts on behalf of the DTPW Director in accordance with the above to interpret and apply fire/life-safety requirements incorporated in the Florida Building code; National Fire Protection Association Codes and Standards; State Statutes and Fire Marshal's Office; South Florida Fire Protection Code; DTPW Criteria and Standards; other applicable codes, standards and criteria; and, as required, to develop, and verify implementation of, design standards for the DTPW to protect life and property. The Committee works closely with Transit Engineering for design of fire/life safety features and test and maintenance of alarm systems. For test and maintenance of fire suppression systems, the Committee works with facilities maintenance organizations.

As required by the current System Safety Program Plan, the Fire/Life Safety Technical Committee addresses fire/life safety concerns, as described above, for all phases of DTPW Metrorail, Metromover, Metrobus and Special Transportation Services Operations. The Committee also serves as liaison with all Miami-Dade County jurisdictions for development and coordination of emergency response procedures and annual emergency response drills.

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4.0 DTPW Review Policy

All design work will be reviewed based upon the assumption that the design will meet the applicable code adopted in the jurisdiction as well as the DTPW Design Criteria and DTPW Standard Specifications. The DTPW design concepts, as set forth herein, generally represent the design approach used by DTPW in the design of its facilities. The effect of adjacent construction upon DTPW structures should be examined based upon the same approach.

Permits, where required by the local jurisdiction, shall be the responsibility of the developer.

Monitoring of the temporary support of excavation structures for adjacent construction shall be required in all cases for excavations within the influence line of DTPW structures (Appendix B). The extent of the monitoring will vary from case to case. Structural design computations maybe required for the adjacent construction. When requested by DTPW, the calculations submitted for review shall include the following:

- A concise statement of the problem and the purpose of the calculation.
- Input data, applicable criteria, clearly stated assumptions and justifying rationale.
- References to articles, manuals and source material should be furnished with the calculations.
- References to pertinent codes and standards.
- Sufficient sketches or drawing references for the work to be easily understood by an independent reviewer. Diagrams indicating data (such as loads and dimensions) shall be included along with adequate sketches of all details not considered standard by DTPW.
- The source or derivation of all equations shall be shown where they are introduced into the calculations.
- Numerical calculations shall clearly show all English units.
- Identify results and conclusions.
- Calculations shall be neat, orderly, and legible.

Drawings should be drawn, to scale, showing the location and relationship of the proposed adjacent construction to existing DTPW structures at various stages of new construction along the entire adjacent alignment. The stresses and deflections induced in the existing DTPW structures should be provided.

The short-term and long-term effects of the new loading due to the adjacent construction on the DTPW structures should be provided. The soil parameters and other pertinent geo-technical criteria contained herein should be used to analyze the existing DTPW structures.

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DTPW structures shall be analyzed for differential pressure loadings caused by dewatering the adjacent construction site.

A system of earth retaining structures is required for new excavations adjacent to DTPW structures. Design calculations and drawings stamped and prepared by a Registered Professional Engineer experienced in this type of work, and registered in the state where the work will be performed, are required.

All DTPW underground concrete structures are designed using the ACI Alternate Design Method (working stress design) to curtail excessive deflections and cracking. DTPW underground structures shall be fully reevaluated, for the effects caused by the adjacent construction, using working stress techniques.

4.1 REVIEW SUBMITTALS - DRAWING CRITERIA

General

All designs for the protection, support (sheeting and shoring) and underpinning of existing DTPW structures shall be reviewed by DTPW's Design and Engineering Division (DED). The investigation of the feasibility of various underpinning and dewatering schemes for structures constructed adjacent to DTPW facilities shall be investigated by the developer. The developer's engineer should make recommendations concerning the best underpinning design for a particular structure.

The developer's contract drawings and specifications shall require his construction contractor to maintain, protect and be responsible for the safety, stability and integrity of all adjacent DTPW structures which may be affected by his work.

Drawing Details

The following information shall be included in the drawings submitted for review of an adjacent construction project:

- Dimensioned clearances, both horizontal and vertical, between the adjacent developer's construction and DTPW structures, track, roadways, parking areas and utilities.
- Details of the proposed modifications to DTPW's roadways, parking areas, and busways. Include sections and details showing the relationship of existing facilities and proposed facilities.
- Cross sections with the existing and proposed contours and limits of grading work shown in relation to the property lines and the impact or lack thereof on DTPW facilities. Where grading changes are required in DTPW property, provide the dimensions and square footage of the area required for construction easements.
- Hydrologic and hydraulic calculations showing the impacts on the DTPW drainage system are required if storm drainage from the proposed development is to be discharged into the existing DTPW drainage system. Appropriate sedimentation

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and erosion control measures should be included upstream of the discharge point onto DTPW property.

- Where modifications to DTPW utilities are required by adjacent construction, submit for review cross sections, plan and profiles, specifications and design calculations concerning the utility modifications. Details for maintaining electrical and water service to DTPW Stations should be shown when required.
- Where construction will impact a DTPW station entrance and the public, include in the submittal plans for temporary pedestrian and vehicular traffic circulation for the area around the station entrance. Where construction will be adjacent to or above a Metrorail/Metromover station entrance, protection will be required over the escalators in accordance with Section "Overhead Protection" of this Manual. Provide the construction plans, the shop drawings or the working drawings showing the phasing of adjacent construction as well as the construction details for overhead protection, pedestrian barricades, and sidewalk protection. Requests for relocation of bus stops and bus shelters shall be clearly shown on the plans. Barricades and signing necessary to direct the public through the construction zone will be required. Lighting will be required as part of all overhead protection structures.
- Provide construction protection details to preclude impacts on DTPW landscaping, street furniture, pylons, bus shelters and light fixtures.

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

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5.0 DTPW Operational Requirements

DTPW shall have the right to stop any work or construction activities that effects the safety of the DTPW patrons and or facilities or normal DTPW operations. DTPW will exercise reasonable advance notice, except for any matters related to immediate system concerns which will require no advance notice.

Construction work which may have any impact on the Metrorail/Metromover Systems may be scheduled during the Non-Peak Operating Hours or Non-Passenger Hours. Non- Peak Operating Hours are defined as weekdays prior to 6:30 A.M. or after 7:00 P.M. and between 10 A.M. and 3 P.M.; and all day Saturday and Sunday. Non-Passenger hours are defined as Monday through Sunday 12:30 A.M. to 4:30 A.M. Passenger hours may change without notice.

Construction work that may impact weekend or special operational conditions will be limited. Schedule requirements will be addressed on a project by project basis where the individual scheduling need of the project can be evaluated with respect to the operations of the DTPW system.

5.1 General Conditions for Construction Adjacent to the Metrorail or Metromover Guideway/Facilities

- A. Clear access is required on a 24 hour basis for ingress and egress for transit patrons, fire and rescue personnel, and maintenance personnel.
- B. A contact person will be named by the Contractor to act as liaison with the DTPW Office of Safety and Security for all matters related to safety of the DTPW System. A contact person shall also be named (may be the same person) to act as liaison with the DTPW Metrorail/Metromover Operations Division for all matters related to operation of the Transit System.
- C. DTPW shall have the right to review all plans and any construction with reasonable advance notice, except for any matters related to immediate system safety concerns which will require no advance notice.
- D. No construction elevators or cranes will be erected on the Metrorail/Metromover guideway side of the building/structure being constructed or demolished.
- E. The Metrorail/Metromover guideway shall not be used to support and/or brace construction scaffolding or equipment.
- F. For any activity within the **Safety Zone**, the following requirements may apply pending DTPW review.
- G. At least forty-eight hours notice describing the nature of the work shall be provided to the DTPW prior to commencement of work.
- H. The contractor will provide special protection, such as netting, barricades, walks, screens, scaffolds, etc., acceptable to DTPW, to help ensure the safety

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of DTPW property, patrons and employees. No work shall be permitted unless such protection is provided as determined necessary by DTPW.

- I. Best efforts will be used to schedule all construction work which may have any impact on the Metrorail/Metromover System during the Non-Peak Operating Hours or Non-Passenger Hours. Non-Peak Operating Hours are defined as weekdays prior to 6:30 A.M.; after 7:00 P.M. and between 10 A.M. and 3 P.M.; and all Saturdays and Sundays. Non-Passenger Hours are defined as Monday through Sunday 12:30 A.M. to 5:00 A.M. or such other hours as may be designated by the County as Non-Passenger hours. Passenger hours will change as required by DTPW.
- J. No crane lifts, other crane operations or any other operation shall be performed within the **Safety Zone** (Appendix A and C) without prior approval (in writing) from DTPW. This paragraph shall apply where any part of the load or crane (incl. counter weight), construction equipment or operation that is above the surface of the guideway running pad/rail.
- K. For any construction activity within the **Safety Zone** (Appendix A and C) or that may encroach into the Safety Zone, DTPW may deem, as necessary, at the contractor's expense, a DTPW employee or DTPW authorized contractor or consultant (Monitor), to coordinate the contractor's activities with Central Control. This employee will be responsible for monitoring construction activities and communicating with DTPW Central Control. DTPW will determine, in the reasonable exercise of its discretion, the number of hours the above-mentioned employee is needed. The construction contractor will reimburse DTPW for costs arising from the provision of the above-mentioned employee which will be charged at the current rate.
- L. DTPW may, at its discretion, modify any of the above conditions or impose additional conditions, to help ensure the safety of the public, and its patrons, employees or property.

5.2 DTPW Monitor and Contractor Coordination

A. Start-up

There will be continued meetings between representatives from DTPW, and Contractor/Developer's project manager, DTPW crane Monitors, the Contractor's crane operators and the form-work Contractor prior to the commencement of the phase work by the tower cranes and any other equipment or operation, adjacent to the DTPW Metromover/Metrorail Guideway System. In addition, DTPW Monitors and the contractor equipment/crane operators will continue to meet daily, at the beginning of the work day, of the project to establish a working relationship of the daily routines in and around the DTPW safety zone.

No construction work requiring a DTPW Monitor will commence until the Contractor provides the DTPW Monitor a functional Contractor radio, and sign off for same as per contractor procedures. Upon arrival at the project site, the DTPW Monitor will

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immediately contact the DTPW Central Control Facility, to advise of his/her presence at the project site.

If, at any time during the construction project, a new crane operator is brought on-site to operate any crane, he/she must be apprised of all of the rules and regulations outlined in this Plan by the Contractor's/Developer's Project Manager.

B. Special Provisions – Pre-Task Plan

At the discretion of DTPW, based on construction project proximity to DTPW system and scope of work, DTPW may assign a DTPW manager to log in arrival of DTPW Monitor(s), at the construction site. The assigned DTPW manager will contact the Contractor Senior Superintendent to request and receive a Contractor radio and meet with the Contractor Senior Superintendent and Contractor trade partner /Superintendent or Foreman to go over planned work. The Contractor Senior Superintendent, Contractor Trade Superintendent/Foreman, the DTPW Monitor and the assigned DTPW manager will complete and sign the Contractor Pre-Task Plan (PTP) Form, as specified in the DTPW Adjacent Construction Manual. Until this revised PTP form is accurately and completely filled out, scheduled work warranting a DTPW Monitor shall not proceed. After the PTP form is completed, if PTP is deemed by DTPW, the assigned DTPW manager and the DTPW Monitor shall walk to the selected area to commence monitoring duties, performing a radio check with the operator or crew on the other end of the Contractor radio. If the radio check is successful, the DTPW Monitor will use the DTPW radio to communicate to the Rail Central Control Facility to advise that the Contractor will commence with construction work.

C. Commencement of Work

Once receiving authorization from the appropriate Rail Traffic Controller, the DTPW Monitor will use the Contractor radio to communicate to the work crew that it is now permissible to begin work. The Contractor representative and the DTPW Monitor will sign the provided Central Control log form (as specified in the DTPW Adjacent Construction Manual), with the corresponding approval code, to confirm hearing the verbal approval from the Rail Central Control Facility over the DTPW radio before commencing with work. This log records the code, date, time, location, equipment being used, person giving code and DTPW Monitor receiving code.

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6.0 Construction Activity Considerations

The Contractor shall comply with the following requirements:

- The Contractor shall assume full responsibility for the compliance with all applicable Federal, State and local regulations and for complying with this Manual for construction adjacent to the right-of-way during the performance of all work.
- Provide an overall maintenance of traffic (MOT) control plan for pedestrians, vehicular traffic and construction operations. Establish a general visitor control program if required.
- Maintain responsibility for project safety on the work site for the company employees as well as its' subcontractor employees.
- Require each of the Contractor's personnel that may need access on the guideway, to attend the DTPW Orientation and Guideway Safety Class. The Contractor shall reimburse costs of these classes to the DTPW.

6.1 DTPW Personnel/Public/Property Safety & Security

6.1.1 Mechanical Criteria

Existing services to DTPW facilities, including chilled water and condenser water piping, potable and fire water, fire standpipes and storm and sanitary sewers, are not be interrupted nor disturbed without written approval of DTPW.

Clear access for the fire department to the DTPW fire standpipe system and guideways shall be maintained at all times. Construction signs shall be provided to identify the location of DTPW fire standpipes. Call **DTPW Office of Safety and Security (305-375-4240)** 48 hours in advance of any approved interruption to fire standpipe water service.

Modifications to existing DTPW mechanical systems and equipment, required by new connections into the DTPW System, will only be permitted with prior review and approval by DTPW.

The adjacent construction developer will be required to submit the design calculations, drawings, specifications, catalog cuts and any other information necessary to fully describe the proposed modification.

At the option of DTPW, the adjacent construction developer will be requested to perform the field tests necessary to verify the adequacy of the modified system and the equipment performance. Where a modification is approved, the developer shall be held responsible to maintain original operating capacity of the equipment and the system impacted by the modification.

6.1.2 Corrosion & Stray Current Protection

The developer should be aware that, since Metrorail/Metromover transit cars are powered by direct current (DC) electricity, direct current can enter the earth through

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unintentional leakage from the DTPW negative ground return system. The leakage or stray current may flow to the discharge from underground metallic elements (i.e. steel reinforcing, pipelines, grounding systems, etc.) which are in contact with any electrolyte, including earth, in the vicinity of the DTPW System. Because stray current may be corrosive to metal at locations where it flows into an electrolyte, the developer is cautioned to investigate the site for stray current and to provide the means for stray current mitigation when warranted.

Further information concerning stray current mitigation can be obtained by contacting The National Association of Corrosion Engineers (NACE), P.O. BOX 218340, Houston, Texas 77812, telephone (713) 492-0535.

6.1.3 Electrical System Interference

No interference to existing DTPW duct banks for the following electrical services shall be allowed:

- 13.8 K.V. service from Florida Power & Light
- 480 V. Florida Power & Light or from DTPW substations
- 480 V service to lighting in Parking Lots, Kiss and Ride areas, and 120 V service to Bus Shelters.

If any of the listed duct banks are affected by the adjacent construction, all information shall be submitted to the DTPW and utility company for review and approval.

No interference to existing DTPW duct banks for the following services shall be allowed:

- Telephone cables from Bell South
- DTPW train control and communications cables

Redesign of Facilities

The design for relocation or modification to existing DTPW parking lots, or Kiss & Ride areas and bus shelters shall be done in accordance with DTPW Design Criteria, Directive Drawings and Standard Specifications. To minimize interruption of DTPW operations, a phasing plan shall be developed and submitted for approval.

Proposed relocation of light fixtures, if any, shall be submitted for DTPW approval.

Existing ground-grids and ground conductors from ground-grids to DTPW facilities shall not be disturbed. No digging or cutting into existing DTPW facilities (ductbanks, wall, floor or ceiling) shall be permitted.

Access to personnel and equipment hatches for underground facilities shall not be blocked. In case any structure is built over an equipment access hatch, adequate passageway for entry of a heavy truck and clearance for the use of a crane to lower equipment from the truck into the hatch shall be provided.

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In case any structure is built adjacent to DTPW at-grade facilities (traction power substations, tiebreaker stations, train control or communications rooms), passageways for heavy trucks and adequate clearance for the use of cranes to move equipment from trucks into and out of the equipment hatches shall be provided.

Emergency access gates for at-grade or aerial sections of DTPW rail shall not be blocked. Adequate passage from the gates to public streets shall be provided.

6.1.4 Modifications/Direct Connections to a DTPW Station

Connections to Metrorail/Metromover Facilities shall be designed, built and paid for by the person requesting the connection in accordance with DTPW Design Criteria or through a Direct Connection Agreement. Below are the items that shall be considered in the design of the connections.

The connection shall have a bronze flexible gate installed between the two passageways. The gate or grate shall be keyed on both sides with separate locks. To open the gate both locks will have to be open. Where the connection has 24-hour manned security on the non-DTPW side of the connection, glass doors may be used in lieu of a gate. If doors are used, each door shall be locked from both sides.

When required, a Closed-Circuit Television (CCTV) will be installed at the developer's expense and connected to the DTPW Kiosk. Power for the cameras shall be run from the CCTV to the station power room. The existing conduit runs and spare breaker locations can be found in the DTPW "As Built" drawings. It is the developer's responsibility to have this research performed by a competent professional. Intrusion alarms shall be installed on the gate or door and control wires installed between the gate or door and the communications room by the developer's contractor. Final connection will be made by DTPW to the DTPW security system.

Finishes on the interior of the DTPW side of the connection shall be to DTPW standards and specifications.

Lights in the new passageway shall be run to the developer's power room and included in the development's emergency power panel.

In the event that a Direct Connection is to be maintained by DTPW then the design will be in accordance with DTPW Design Criteria and construction would be required to meet DTPW's standard construction specifications. Normally the Direct Connection passageway is designed to be compatible with the building of which they are constructed as a part.

Before removing the knock-out panel the contractor shall have an approved dust protection system in place and fully functional. Typically, a dust protection system shall consist of a stationary partition that isolates the knock-out panel from the station. The dust partition shall be constructed using only fire rated materials. All joints shall be sealed with tape. Construction of the partition shall be during non-passenger hours.

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Adjacent construction with a connecting passageway(s) to DTPW facilities will require special features to isolate one facility from the other for fire-safety, and may include automatic fire doors and dampers, sprinkler systems, smoke removal and ventilation systems and detection and alarm systems as required by the local fire code.

6.1.5 Signs, Signals, Barricades and Traffic Control General Requirements

1. All traffic signs or devices used for protection of construction workmen or the public shall conform to the State of Florida Manual on Traffic Control and Safe Practices on Street and Highway Construction.
2. Barricades, cones and/or similar protective devices shall be used whenever men or equipment are exposed to traffic or similar hazards.
3. When traffic lanes are closed due to work activity, advance warning signals and high level warning devices shall be used as described in the State of Florida Manual on Traffic Control and Safe Practices on Street and Highway Construction.
4. Flagmen and signalmen will be properly trained and use appropriate procedures, using the current FDOT manual.
5. All employees working adjacent to traffic shall be required to wear reflective vest, per FDOT manual.
6. Whenever and wherever possible and necessary, line voltage (12 volt) protected lights shall be used to mark fences and barricades and other such encroachments onto public streets or sidewalks.
7. Where covered sidewalks are required they shall be provided with permanent lights to provide sufficient illumination for safe use by the public day or night. All bulbs shall be cage-protected.
8. Public walkways shall be kept clean and free of hazards at all times.
9. Where the Contractors are required to provide public walkway, they shall have abrasive non-slip surface.
10. Where access to bus stop is disturbed or obstructed by the Contractors operations, safe access will be maintained or the bus stop relocated as directed by DTPW. Coordination for maintaining or relocating bus stops with the appropriate agencies is the sole responsibility of the Contractors.
11. When steel plates or similar covers are used on public ways to cover excavations they shall be substantially secured to prevent movement imposed by traffic. Covers shall have non-slip surface, conforming to OSHA Specifications.

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12. When such covers are located where there is pedestrian exposure, they shall be tapered at all sides with cut back cold mix or similar material to eliminate tripping hazards. Covers shall have non-slip surface.
13. Free access shall be maintained to every fire extinguisher, fire hydrant, fire alarm box, fire escape and standpipe connection, street and traffic light control box. When required, hydrants shall be extended by suitable tube or piping to an accessible point as approved by DTPW. No obstructions shall be allowed at any time within 15 feet of a fire hydrant. Where materials are placed in the vicinity of a fire hydrant or a fire alarm box or fire extinguisher, and to such a height as to prevent the same from being readily seen, the position of such hydrant or fire alarm box or fire extinguisher shall be indicated by suitable signals, both day and night.
14. The Contractor shall erect and maintain fences and barricades to enclose the Contractor's work area, and provide watchmen where required to prevent unauthorized access.

6.1.6 Material Handling (Storage, Use and Disposal) General Requirements

1. All materials stored in tiers shall be secured to prevent sliding, falling or collapse.
2. Reinforcing steel shall not be used as a lifting ("Pick") point on any load or as a guy line anchor.
3. Hooks, except special sliding choker hooks shall be securely moused when in use, or shall be provided with a functioning safety latch.
4. Scrap material of any kind, type or nature shall be placed daily into appropriate containers specifically supplied for this purpose. Containers shall be removed from the work site when full.
5. Loose material on open decks or other exposed locations shall be removed or secured at the end of each day to eliminate dislodgment by wind or other causes.
6. Compatibility of stored materials and storage methods will comply with all applicable OSHA, Fire Department and environmental agency standards.
7. Employees required to handle, use or dispose of hazardous materials shall be instructed regarding the safe handling, proper procedures, potential hazards, personal hygiene, and personal protective equipment required.
8. No explosive or flammable materials shall be stored under the guideways.
9. Disposal of materials shall be in accordance with all applicable Federal, State and Local regulations. All applicable recordkeeping and reporting requirements shall be met by the Contractors.

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6.1.7 Adverse Weather Conditions General Requirements

1. Disassemble all scaffolds, loose formwork, radio antennas and secure properly.
2. All items that cannot be secure shall be stored inside secured storage areas or buildings.
3. All crane booms shall be lowered to ground level and secured to prevent movement.
4. All office trailers shall be tied down in compliance with MDC Tie-Down Ordinance No. 77-1 upon original installation. All tie down straps, ground anchors, piers, etc., shall be checked for condition and operation.
5. All exposed glass on the Work Site shall be protected by a solid, rigid covering.
6. All free standing walls shall be stored from both sides.
7. Before employees are dismissed from the Work Site, the Contractors shall make a through inspection to verify all necessary precautions have been taken.
8. All precautions for construction sites during hurricane conditions, as required by the Florida Building Code shall be met.

6.1.8 Housekeeping General Requirements

1. All refuse piles shall be removed from the Work Site immediately.
2. Stored and stacked materials shall be kept orderly, properly stacked, choked, and secured.
3. Any protruding nails, etc., shall be bent, removed or clinched immediately.
4. Oil, grease, and water spills shall be cleaned up immediately.
5. Loose materials, tools, or equipment shall be kept off stairs, out of walkways, ramps, platforms at all times when not in use.
6. Depressions and pot-holes in vehicle or walkway surfaces on the Work Site shall be properly filled and graded immediately.
7. Walkways, vehicle travel ways, ramps, railings, and stairways, shall be kept free from debris, properly installed and maintained.
8. Smoking or the use of open flames within 25 feet of flammable storage areas or fueling areas shall not be permitted.

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9. Flammable storage areas shall be properly posted **"NO SMOKING"**, provided with adequate fire extinguishers and free of combustible materials.
10. All sanitary facilities used on the Work Site shall be maintained on a daily basis.
11. All structures shall have a minimum of a 5-foot perimeter clearance that is to be free from any combustible debris or materials.

6.1.9 Overhead Protection

Overhead protection from falling objects shall be provided over DTPW facilities whenever there is a possibility, due to the nature of a construction operation, that objects could fall in or around DTPW guideway, at-grade sections, DTPW facilities, DTPW station entrances and areas designated for public access to DTPW facilities. Erection of the overhead protection for these areas shall be done in strict accordance with the requirements of this Manual and applicable standards cited herein.

The design live load for all overhead protection shall be in compliance with the minimum required by the current Florida Building Code and/or other(s) enforceable code. Overhead protection design shall include provision for impact loading when located adjacent to demolition projects or construction / maintenance projects where it is foreseeable that construction debris could fall on or near DTPW Facilities. Overhead protection for impact loading must be designed for a minimum of 300 pounds per square foot and to resist the force of impact of the largest foreseeable member or building element as taken from the elevation of that element. All overhead protection shall be designed by a licensed professional engineer. The design wind load on the temporary structures shall be in accordance with the calculated loads for components and claddings per the latest edition of the ASCE 7 Code.

Overhead protection over sidewalks and pedestrian areas shall be constructed of fire resistant materials. The vertical clearance between walking surface and the lowest projection of the overhead protection shall be 6'- 8". Construction materials and equipment shall not be stored on the completed walkway and pedestrian areas of the overhead protection roofs. A clear path from any DTPW emergency exit to the public street shall be maintained at all times.

The contractor will provide special protection, such as netting, barricades, walks, screens, scaffolds, etc., acceptable to DTPW, to help ensure the safety of DTPW property, patrons and employees. No work shall be permitted unless such protection is provided as determined necessary by DTPW. Erection of protective structures shall not be done during normal passenger hours unless by written authorization through DTPW.

Lighting of overhead protection at sidewalks and pedestrian areas is required and shall be provided under the overhead protective to maintain a minimum level of ten (10) foot candles at the walking surface. The temporary lighting will be maintained by the contractor.

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With written DTPW authorization, the Overhead or Fall Protection structure may be constructed over the right of way and the guideway, if designed for the use for which it is intended, as well as in accordance with the above minimum design load requirements. The shield shall be constructed or installed during non-passenger hours. Once installed, limited work may proceed above the overhead protection during non-passenger hours.

6.1.10 Cranes and Swing Stage Scaffolding

General Requirements

The erection or staging of cranes, construction elevators and man lifts, swing stage or scaffolding, debris chutes or gantries shall not be performed within the 30 feet of the guideway drip line during passenger hours, without an authorized DTPW "Monitor" under radio communication with Central Control, on site.

Crane lifts located within 30 feet of the DTPW guideway drip line are permitted during non-peak passenger operating hours only when coordinated by an authorized DTPW crane Monitor or DTPW authorized employee under radio communication with Central Control on site. Under no conditions will loads be permitted to be swung over or within 5 feet of the guideway.

Crane lifts and exterior building operation conducted from swing stage that are located within the DTPW Right of Way or within 30 feet of the guideway drip line are permitted only during non-peak operating hours and only when coordinated by an authorized DTPW Monitor under radio contact with Central Control.

No construction elevators or cranes will be erected on the Metrorail / Metromover guideway side of the building /structure.

The contractor must ensure that all cranes are operated only by trained, experienced and competent operators who hold either an Operating Engineers, Local Union, Verification of Competence and Experience or equivalent licensure.

The contractor must also ensure that the men who direct, rig and handle loads are adequately trained, able to establish load weights, judge distance, heights and clearance and capable of selecting tackle and lifting gear suitable for the loads lifted.

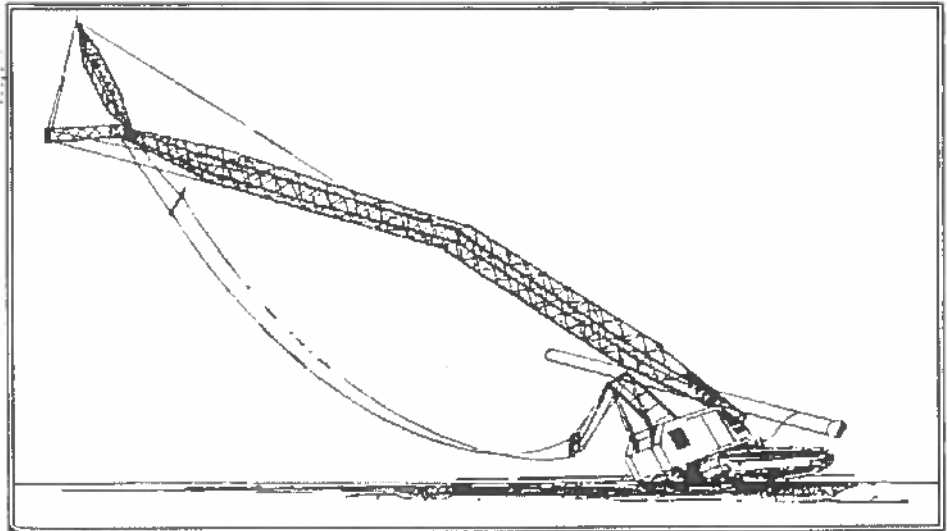
All crane/scaffolding operations within the DTPW Right of Way and 30 feet of the guideway drip line are subject to inspection by the DTPW Design and Engineering Division, Metromover Maintenance Division and DTPW Office of Safety and Security. Cranes operated within DTPW Right of Way and Safety zones shall have complete maintenance, repair and inspection logs present on the machine and available for review. DTPW reserves the right to refuse the operation of any machine that the structural condition or stability of the machine is questioned regarding the task attempted by the contractor.

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MOBILE CRANES

Over 50% of all
Crane Accidents
are "caused"
when the
machine is
improperly set
up.



The size, boom length and capacity of all cranes operated on projects within the DTPW Right of Way and Protective Safety Zones must be clearly shown on a site plan as part of an DTPW Access Permit application. The swing radius of the machine must be shown on the site plan with respect to the location of DTPW facilities.

Adequate care must be demonstrated by the contractor to DTPW representatives when setting up cranes and booms. Cranes shall be erected in strict conformance with the manufacturer's specifications and standard of good construction practice. Outriggers and support shall be adequately cribbed and blocked so as to properly brace the crane frame.

Adequate swing clearance shall be provided at the counterweight of the crane cab. At no time shall the counterweight swing clearance be less than 5 feet from the DTPW guideway drip line, without an authorized DTPW crane Monitor or employee under radio communication with Central Control on site. Overturning boom stops are required on all cranes when the boom angle exceeds 50 degrees from horizontal.

Mechanical swing limit switches and stops may be required to limit crane swing over and adjacent to the DTPW guideway and DTPW facilities. At no time will loads be allowed to be swung over the DTPW guideway, DTPW Stations or DTPW facilities.

Sheet pile and driven pile crane operations should be erected so that the crane and boom are situated perpendicular to the DTPW guideway. Staging and erection of piling should be adequately restrained or stayed such that the piling cannot topple into DTPW facilities during setup operations.

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Tower Cranes

Tower cranes may be employed on projects that are adjacent to the DTPW facilities and guideway systems and that are tall enough, have sufficient jib length to reach a distance of 30 feet from the guideway drip line or that loads could be swung over DTPW facilities, are regulated by this manual. In general all tower cranes with base of tower located at a distance from the DTPW guideway drip line less than the height of the tower crane are subject to the restrictions in operation of this chapter.

Tower cranes are subject to wind movement and must be able to weather-vane during periods of high wind. Weather-vaning tower cranes, when cranes are not in use, are allowed to swing over DTPW guideway or facilities during passenger hours.

Tower cranes are subject to fatigue cracking and failure at the tower and jib connections. A certified structural inspection log of the Crane tower, jib, cables and haulage assemblies must be provided to DTPW on all tower cranes located in areas that they could affect DTPW facilities.

6.1.11 Excavations, Foundations and Sheet Piling

Until provisions for permanent support have been made, all excavations shall be properly guarded and protected so as to prevent the same from becoming dangerous to life and property and shall be sheet piled, braced and/or shored, where necessary, to prevent the adjoining earth from caving in; such protection to be provided by the person causing the excavation to be made. No excavation, for any purpose, shall extend within five (5) feet of the angle of repose of any soil bearing footing or foundation unless such footing or foundation is first properly underpinned or protected against settlement.

The design of all soils excavations, stabilization, modifications, underpinning or laterally protected with sheet piling shall be designed by a licensed professional engineer known to the Building Official to be qualified to evaluate the bearing capacity of soils. This design shall include a Geotechnical Soils investigation such that the registered Professional Engineer shall submit to the Building Official a letter attesting that the site has been observed and the foundation conditions are similar to those upon which the designed is based. The letter shall be signed and bear the impress seal of the engineer or architect, as applicable. Geotechnical soils sampling shall be conducted at sufficient frequency to ensure that the soils conditions on the project site are representative of the design conditions.

Angle of Repose

The angle of repose of all support soils within the DTPW Right of Way and safety zones shall be considered as 1:1 ratio. No excavation, for any purpose, shall extend within five (5) feet of the angle of repose of any DTPW soil bearing footing or foundation unless the design capacity of that footing is evaluated by the design Engineer of Record and his recommendations are approved by DTPW with respect to the design engineers modifications. Refer to Appendix B for clarification.

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Pilings

Sheet pilings, driven pilings, auger cast pilings or other operations that create significant soils vibration shall be closely monitored with seismic accelerometers to verify the energy transmitted into the DTPW structures is less than 0.22 inches per second. Additional detailed survey analysis may be required to verify that no settlement has occurred in the course of the work.

Excavators

Excavation equipment operated within the DTPW Right of Way and Safety Zones must take extra care to avoid causing damage to DTPW facilities. Track excavators have similar swing geometry problems as mobile cranes and are capable of causing significant damage if improperly operated. Similarly, improper operation of wheel loaders, excavators, dump trucks and vibratory rollers can cause impact and vibration damage to structures.

The contractor must ensure that all heavy excavation equipment is operated only by trained, experienced and competent operators who hold either an Operating Engineers, Local Union, Verification of Competence and Experience or equivalent licensure.

Excavations may be conducted within the DTPW Right of Way and Safety Zones only during non-passenger hours. Excavation operations within the DTPW Right of Way and Safety Zones require a trained DTPW Monitor, in radio communication with DTPW Central Control, during all excavation operations.

Protection of underground site utilities is the responsibility of the contractor. All utilities must be located by an approved utilities locator service prior to the start of any excavation or piling activities.

DTPW may, at its discretion, modify any of the above conditions or impose additional conditions, to help ensure the safety of the public, and its patrons, employees or property.

6.1.12 Demolition

No Demolition of structures adjacent to DTPW facilities by blasting shall be permitted. During piece-by-piece demolition, it is essential that the DTPW escalators, and/or other DTPW equipment be protected from dust generated by the demolition. The DTPW equipment must be covered with polyethylene sheets during demolition to prevent dust from entering the equipment. Guideway protection diagrams and location plans shall be submitted by the contractor when appropriate or requested by DTPW. Such plans shall clearly show the alignment of the DTPW right-of-way together with the setback dimensions of the portions of the building to be demolished.

Application

This section is intended to apply to all activity on the exterior of buildings located within the Safety Zone including maintenance, inspections, probing, demolition operations and shall comply with the American National Standard (ANSI) A 10.6 standard for demolition

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operations. In cases of practical difficulty and unnecessary hardship, or where other extenuating circumstances exist, DTPW may grant exceptions to the requirements stated herein, or may permit alternative methods, but only when it is clearly evident that equivalent protection is thereby secured.

Demolition Plan

The contractor must submit a detailed demolition plan to DTPW Engineering for review as part of the permit application package. This Demolition plan must include the scope of proposed demolition, location plan and building elevation of the proposed demolition work detailing the setback distance to DTPW facilities. Additionally the anticipated contractor means and methods, anticipated protective methods, equipment list including sizing of all demolition equipment should be supplied in the demolition submittal plan. The plan shall describe the type of construction (concrete, steel frame, masonry, etc.) and the overall construction configuration.

Guideway protection diagrams and location plans shall be submitted by the contractor when appropriate and requested by DTPW. Such plans shall clearly show the alignment of the DTPW right-of-way together with the setback dimensions of the portions of the building to be demolished.

Protection

During demolition, it is essential that the DTPW facilities be protected from dust generated by the demolition. The DTPW stations, escalators, train control and traction power rooms/buildings must be covered with polyethylene lined sheets during demolition to prevent dust from entering the DTPW switch gear and equipment.

Structural Condition and Analysis Survey

Prior to starting any demolition operation within the safety zone, an engineering survey of the structure shall be made to determine the condition at all locations of the exterior walls adjacent to the DTPW system. The purpose of the survey is to determine the condition of the framing, floors, and walls so that actions can be taken, if needed to prevent premature collapse of any portion of the structure. Such survey shall be made on the outside utilizing swing stages with full rail protection. The survey shall consist of documenting all locations displaying loose, cracked, and/or deteriorated stucco, tile, or other building facade materials in which such condition could result in falling debris.

An exterior crack survey may be required as part of the engineering survey of building to be demolished. A crack survey should be prepared locating all significant cracks including a location sketch, description, width, estimated recent activity, and the existence of previous repairs. Cracks of any significance shall be physically marked so that future observation may be made with telescopic equipment at the ground level. A stucco condition survey locating all significant irregularities in the stucco facade including bulges, micro/map cracking, hollow and de-bonded areas, discoloration due to water absorbance effervesce scaling, or other abnormalities should be included in the crack / engineering survey.

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Guideway Protection Diagrams and Location Plans shall be submitted by the contractor when appropriate and requested by DTPW. Such plans shall clearly show the alignment of the DTPW right-of-way together with the setback dimensions of the portions of the building to be demolished.

Similarly a window / wall opening survey of the condition of window vents, plywood covers, sill stability, and other characteristics from which conclusions can be made as to the security of such openings. Where a hazard exists from fragmentation of glass or instability of the window frame/vent, all glazed openings shall be removed or protected.

Scheduling

Exterior building element demolition activities located within the safety zone are permitted only during non-passenger operating hours and only when coordinated by an authorized DTPW "Monitor" under radio communication with Central Control on site.

Protective Measures

Remove all loose materials by hand which are in imminent danger of falling. The removal of such loose materials must also include a temporary repair or stabilization at any location where the removal results in an opening or area, which can allow water to penetrate resulting in further or future deterioration.

Pedestrian Site Security and Safeguards

Prior to the engineering survey of the building exterior and other invasive activities, it is necessary to fully protect the public and in particular, DTPW facilities. Every sidewalk, train guideway, station platform, stairs, escalator, or public thoroughfare adjacent to or near enough to be affected by the operations on the building shall be closed, relocated or protected as specified in overhead protection above.

Demolition Observer

Provide a full time observer who is classified as a qualified person and who is capable of recognizing changes in the building facade and appearance. The purpose of this person is to provide warnings to the DTPW operators in the event of a sudden change in the building's outward appearance or stability so that service on a rail section may be discontinued. The observer and shall remain at the site at all times DTPW is in operation and providing service to the public

Periodic Demolition Reports

A certification shall be provided by a licensed engineer after each periodic inspection stating that the building components are secure and that it is safe to operate the DTPW system in that location.

Demolition Means and Methods

No wall sections shall be permitted to stand alone without lateral bracing. Additionally, all walls shall be left in a stable condition at the end of each shift. Masonry walls or other sections of masonry shall not be permitted to fall upon the floors of the building unless qualified persons have determined the impact of such masses will not exceed the safe carrying capacities of the floors.

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Chutes

Materials shall be dropped only through chutes to any point lying outside the exterior walls of the building and chutes at any angle exceeding 45 degrees from the horizontal shall be entirely enclosed. Also, chutes shall be designed and constructed to eliminate hazards of impact of materials or debris

Particle Velocity and Seismograph Reports

When required, the contractor shall measure and furnish reports of particle velocity caused by impacts in accordance with provisions in Appendix E of this document.

Additional Requirements

DTPW may, at its discretion, modify any of the above conditions or impose additional conditions, to help ensure the safety of the public, and its patrons, employees or property.

6.1.13 Exterior Building Maintenance

Pressure Washing

Painting

Window Washing

Sandblasting

Stucco Damage Repair

Other Maintenance Operations

Structural/ Non-Structural Inspections

General

In general, some routine maintenance activities associated with the exterior building envelope of buildings may not require a building permit. However, to adequately ensure the safety of the DTPW system, provisions are made in this manual detailing specific requirements and limitations of allowed building maintenance activities within the DTPW Safety Zone. A DTPW Access Permit is required on all exterior building maintenance activities for buildings located within the Safety Zone.

Access to exterior building components located within the Safety Zone including window cleaning operations and roofing operations is prohibited during DTPW passenger hours without a DTPW Monitor. The simple DTPW policy is that "there shall not be any exterior building maintenance activity at or above the elevation of the DTPW guideway during normal passenger operations without a DTPW Monitor".

Maintenance

This section is intended to apply to all activity on the exterior of buildings located within the Safety Zone including maintenance, inspections, probing, stucco repair, painting and waterproofing operations. In cases of practical difficulty and unnecessary hardship, or where other extenuating circumstances exist, DTPW may grant exceptions to the requirements stated herein, or may permit alternative methods, but only when it is clearly evident that equivalent protection is thereby secured.

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Small Particle Protection

Routine exterior building cleaning is required to some extent on most structures. Much of this work is commonly accomplished by access to the building exterior via either swing stage or boson chair. Access on building exteriors located within the safety zones is prohibited during passenger hours without a DTPW Monitor.

Pressure cleaning and sandblasting activities produce over spray, dirt and particle fallout below the work area. DTPW guideway, stations and facilities must be adequately protected from the fallout of the dirt, particles, sand, loose paint, etc. prior to the start of any exterior building cleaning activity. Such protection may be in the form of polyurethane lines, canvas tarps or other catchment devices. Design of required protection must be approved by DTPW.

Stucco probing and repair, painting and waterproofing activities produce falling debris. DTPW guideway and DTPW Facilities must be adequately protected with overhead protection as described in this manual as part of the DTPW Work Order for stucco repair and painting activities.

DTPW may, at its discretion, modify any of the above conditions or impose additional conditions, to help ensure the safety of the public, and its patrons, employees or property.

DTPW Operations and Scheduling

DTPW shall have the right to stop any work or construction activity that affects the safety of DTPW patrons and or facilities or normal DTPW operations. DTPW will exercise reasonable advance notice, except for any matters related to immediate system safety concerns which will require no advance notice.

Construction work which may have any impact on the Metrorail/Metromover System may be scheduled during the Non-Peak Operating Hours or Non-Passenger Hours. Non- Peak Operating Hours are defined as weekdays prior to 6:30 A.M. or after 7:00 P.M. and between 10 A.M. and 3 P.M.; and all day Saturday and Sunday. Non-Passenger hours are defined as Monday through Sunday 12:30 A.M. to 4:30 A.M. or such other hours as may be designated by the County as Non-Passenger Hours. Passenger hours may change without notice as needed by DTPW.

Weekends / Holidays & Special Events

Construction work that may impact weekend or special operational conditions will be limited. Schedule requirements will be addressed on a project to project basis where the individual scheduling needs of the project can be evaluated with respect to the operations of the DTPW systems.

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APPENDIX A: GLOSSARY

The following terms shall, for the purpose of this Manual, have the meanings respectively ascribed to them:

ACCIDENT -	An unforeseen event or occurrence that causes death, injury or damage to property. Any abnormal condition that requires the attention or intervention of responsible personnel or an individual monitoring the transit system operation.
ALARM CONDITION -	Deviation from nominal performance, which does not cause a significant, effect on system performance but does warrant investigation and/or repair. Sanctioned or accepted by the building official and Department of Transportation and Public Works.
AUTOMATIC -	A term applied to a system, subsystem, or device, which has the inherent capability to function without direct manual participation.
CATCH PLATFORM -	A temporary structure erected around or attached to, and abutting a building for the purpose of safeguarding the employees, and the public, by catching and retaining falling objects or debris.
CENTRAL CONTROL -	That place where train control or train supervision is accomplished for the entire Metro-rail and Metro-mover system; the train command center.
CONSTRUCTION SAFETY -	The optimum degree of safety within the constraints of construction effectiveness, time and cost through specific application of safety management throughout all phases of the construction.
CONSTRUCTION SAFETY MANUAL -	Issued as a contract document by Department of Transportation and Public Works (DTPW), to be used as a guide by the Contractor in developing his Accident Prevention Program.
DTPW ACCESS PERMIT -	Issued written authorization from DTPW for work in the DTPW Right of Way and DTPW Safety Zones. Construction Work Orders are specific with regard to the scope, extent, additional requirements or limitations, and allowable

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schedule of approved work to be completed in the DTPW Right of Way and Safety Zones.

CONTRACT DRAWINGS -

The plans, profiles, typical cross-sections, general cross-sections, elevations, schedules and details which show locations, character and dimensions of the work.

CONTRACTOR'S AUTHORIZED SAFETY REPRESENTATIVE -

The person designated as authorized safety representative who will be responsible for work site safety and for reporting all insurance claims.

CONTRACTOR-

The individual, firm, partnership, corporation, or combination thereof, private, municipal, or public, including joint ventures, which, as an independent contractor, has entered into a contract with MDC, who is referred to throughout the Contract Documents by singular in number and masculine in gender.

CHUTE-

A trough or tube used to guide and transport sliding objects, materials, or debris from a higher to a lower level.

DEGRADATION -

Falling from an initial level to a lower level in quality or performance.

DEMOLITION -

Dismantling, razing, destroying, or wrecking any fixed building or structure or any part thereof.

EMERGENCY -

A situation which is life threatening or which can cause serious damage on or in the immediate vicinity of any transit facility, structure, bus or train.

EMPLOYEE -

A person employed by the Contractor or Subcontractor.

EQUIPMENT FAILURE - The state in which equipment no longer meets the minimum acceptable specified performance and cannot be restored through operator adjustment or control.

FTA -

Federal Transit Administration, formerly UMTA.

FAILURE -

An inability to perform an intended function within specified tolerances.

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HAZARD - Any real or potential condition that can cause injury or death; or damage to or loss of equipment or property.

HAZARD MANAGEMENT (LOSS CONTROL) - An element of the system safety management function that evaluates the safety effects of potential hazards considering acceptance, control, or elimination of such hazards with respect to expenditure or resources. (The feasibility of hazard elimination must be considered in light of financial, legal, and human considerations).

HAZARD SEVERITY – A qualitative measure of the worst potential consequences that could be caused by a specific hazard.

Category I Catastrophic	May cause death, serious injury/illness or major system loss.
Category II Critical	May cause injury/illness, or major system damage.
Category III Marginal	May cause minor injury/illness, or minor system damage.
Category IV Negligible	Will not result in injury/illness, or system damage.

HAZARD RESOLUTION - The analysis and subsequent actions taken to reduce, to the lowest level practical, the risk associated with an identified hazard.

IMMINENT DANGER - Refers to any condition or practice where there is reasonable certainty that a danger exists that can be expected to cause death or serious physical harm and/or serious property damage immediately or before the danger can be eliminated through normal enforcement procedures

INCIDENT - An unforeseen event or occurrence that does not necessarily result in injury or property damage.

MAINTENANCE - All actions necessary for retaining an item in or restoring it to an operable condition.

MALFUNCTION - Any anomaly or failure wherein the system, subsystem, or component fails to function as intended.

MAY - A permissive condition. Where the work "may" is used, it is considered to denote permissive usage

MIAMI DADE COUNTY - The Board of County Commissioners of Dade County, (MDC) Florida, political subdivision of the State of Florida, and the DTPW, an office under the County manager of Miami Dade County, Created March 1, 1974, by Administrative

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Order No. 3-8, under the authority of Sections 4.01 and 4.02 of the Miami Dade County Charter - and any authority, board, body, commission, official or officials to which or to whom the powers now belonging to DTPW in respect to the location, construction, equipment, maintenance and operation of transit facilities shall, by virtue of any act or acts, hereinafter pass or appertain.

- DTPW -** Department of Transportation and Public Works, Miami-Dade County, located at 701 N.W. 1st Court, Suite 1700, Miami, Florida 33136
- DTPW RIGHT OF WAY-** As defined by the legal description of the properties that the DTPW facilities occupy or are situated above and supportive easements. For the purpose of this manual the Right of Way shall be defined as those properties located within the drip lines of the DTPW rails, stations and facilities and include those properties used for access and egress to the DTPW facilities by the general public and normal DTPW operations.
- MISHAP -** An unplanned event or series of events that result in death, injury, occupational illness, or damage to or loss of equipment or property. (See also ACCIDENT).
- MONITOR -** An authorized DTPW employee, DTPW contractor or DTPW consultant monitoring the movement of construction equipment or materials that may infringe upon the 30' "Safety Zone" (that area of the Department of Transportation and Public Works Guideway (Metrorail and/or Metromover) that lies within 30' of the outermost edge of the superstructure) which has the potential to interfere with Department of Transportation and Public Works operations and/or maintenance. This person(s) shall ensure the safety of Department of Transportation and Public Works patrons, employees, property and the public. DTPW contractors and DTPW consultants shall be trained per DTPW Rail Services Metromover and Metrorail training packages before they perform duties as Monitors.
- OPERATOR -** That person having direct and immediate control of the movement of a vehicle or machinery.
- OPERATING TIME -** The time period between turn-on and turn-off of a system, subsystem, component or part during which time operation is as specified. Total operating time is the summation of all operating time periods

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OSHA -	The Occupational Safety and Health Administration. An agency of the U.S. Government which sets standards to provide for the safety of employees in the workplace. The local area office is located in Ft. Lauderdale, Florida, phone (305) 527-7292
PERSONAL PROTECTIVE EQUIPMENT (PPE) -	Equipment designed and worn to provide protection against hazard to some part of an employee's body. Examples of PPE are safety glasses, respirators, hart hats, gloves etc. All PPE used at DTPW work sites must comply with applicable OSHA standards
POWER RAIL -	Three separate rails center mounted on insulators on the guidebeam which provides traction power for vehicle propulsion. (Metromover)
PROCEDURES -	Established methods to perform a series of tasks.
QUALIFIED PERSONS -	Those who by possession of a recognized degree, certificate, or professional standing, or by extensive knowledge, training, and experience in the demolition industry have successfully demonstrated their ability to solve or resolve problems relating to the subject matter of demolition.
QUALIFYING BUILDINGS -	Buildings located within 30 feet of DTPW Right of Way corridor, and greater than 35 feet, in height, that have a building footprint located adjacent to a Safety Zone where the elevation of the building encroaches into the Vertical Safety Zone extensions as defined in Safety Zone above and at the rate of 1 foot horizontal offset per 4 feet of building height above DTPW facility. See the definition of Safety Zone above and attached drawing CZ-1 (Appendix C).
QUALIFYING STRUCTURES -	Cranes whose boom swing infringes within the 30 feet Safety Zone or DTPW Right-of-Way corridor. Signs located within the safety zone. Temporary scaffolding or construction towers within the Safety Zone or DTPW Right of Way corridor with heights greater than 30 feet.

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QUALIFYING WORK-	Any construction, demolition, equipment operations or building maintenance activity performed on or in a building or structure which may be hazardous to persons or property within the DTPW Right of Way or protective safety zones.
RELIABILITY -	The probability that the system or sub-system will perform satisfactorily for a given period of time when used under stated conditions.
REPAIR -	The maintenance activity which restores a failed item to operable state.
RISK -	An expression of possible loss over a specific period of time or number of operational cycles. It may be indicated in terms of hazard severity and probability.
RISK MANAGEMENT -	The Risk Management Division, Miami Dade County, General Services Administration, located at 111 N.W. 1 st Street, Suite 2340, Miami, Florida 33128; phone 375-4280.
RULE -	A law or order authoritatively governing conduct or action.
SAFE -	Secure from danger of loss.
SAFETY -	A reasonable degree of freedom from those conditions that can cause injury or death to personnel; damage to or loss of equipment or property; and freedom from danger.
SAFETY CHECKLIST -	A list for examining the safety aspects of equipment, procedures and personnel.
SAFETY CRITICAL -	A designation placed on a system, sub-system, element, component, device, or function denoting that satisfactory operation of such is mandatory to assurance of patron, personnel, equipment, or facility safety. Such a designation dictates incorporation of special safety design features.
SAFETY DEVICES -	Protective devices which do not alter the fundamental nature of a hazard but which do control the extent of the hazard in some manner.
SAFETY MANAGEMENT -	An element of management that establishes safety program requirements and ensures the planning, implementation and accomplishment of task and activities to achieve work place safety.

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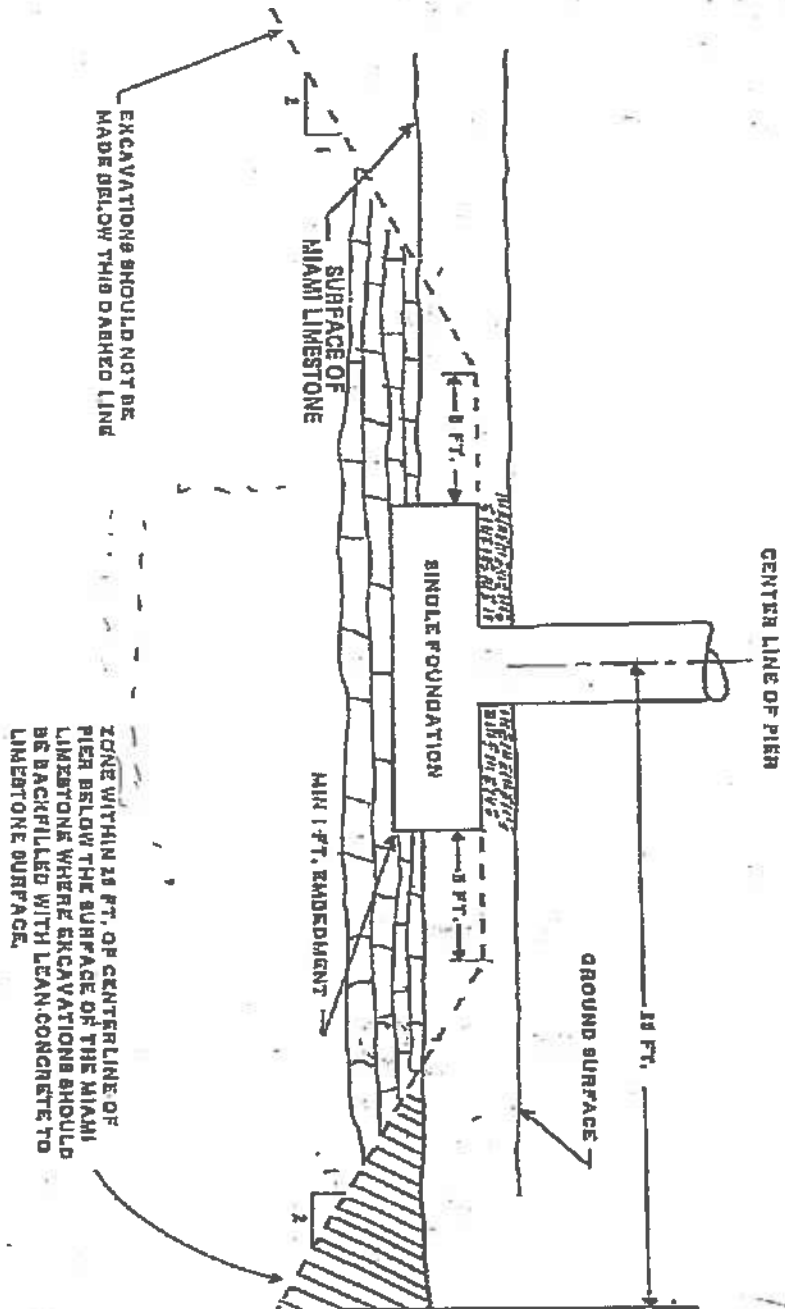
SAFETY PROGRAM -	The combined task and activities of safety management and safety engineering that enhance operational effectiveness by satisfying the safety requirements in a timely, cost-effective manner throughout all phases of the work.
SAFETY SUBCONTRACTOR -	A subcontractor who satisfies the Florida Department of Labor and Employment Security Industrial Safety and Health Programs, Chapter 38F-44, and is duly approved by MDC
SAFETY ZONE -	Safety Zones are defined as a protective safety buffer zone adjacent to the DTPW Right of Way. Safety Zones include all lands public or private within 30 feet (horizontally) of the DTPW Right of Way measured from the drip line of the facility/guideway. No work is allowed at the exterior of any building located within the protective safety zone without an approved DTPW Access Permit.
SERVICE CONTRACTS/ CONTRACTOR -	Those operations that are providing any services, or repair, replacement or maintenance functions that are indigenous to the construction process on the Work Site.
SHALL -	A mandatory condition. Where certain requirement are described with the "shall" stipulation, it is mandatory that these requirements be met.
SHOULD -	An advisory condition. Where the "should" is used, it is considered to be advisable usage, recommended but not mandatory.
STATE -	The State of Florida.
SUBCONTRACTOR -	Any person, firm or corporation, other than the employees of the Contractor, who contracts with the Contractor to furnish labor and/or materials under this Contract.
SUPPLIER/VENDOR -	Those entities whose sole responsibility to the project is the delivery of goods or materials, exclusive of direct labor.
SYSTEM -	A composite of people, procedures and equipment operating in a specific environment to accomplish a specific mission or task
THIRD RAIL -	A rail mounted on insulators adjacent to running rails which provides traction power for train propulsion. (Metrorail).

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TRANSIT SYSTEM -	A transportation system comprised of fleets of motor buses and electrically propelled transit vehicles and all of their operational / support personnel and systems (e.g. maintenance facilities, tracks, structures, etc.) utilized for the mass movement of passengers within a metropolitan area.
UNUSUAL OCCURRENCE -	An unforeseen event or incident which does not necessarily result in injury or property damage.
UNSAFE CONDITION -	Any condition which if not corrected, will endanger human life or property.
WARNING DEVICES -	Sensors that monitor or detect conditions and provide visible and/or audible alerting signals as desired for selected events.
WORK SITE -	The area enclosed by the limit of Work indicated in the Project Drawings and boundaries of local streets and public easements in which the Contractor is to perform the work under the Contract. It shall also include areas obtained by the Contractor for use in connection with the Contract, when contiguous to the Limit of Work.

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APPENDIX B: CRITERIA FOR EXCAVATION ADJACENT TO SINGLE FOUNDATIONS



METROPOLITAN DADE COUNTY
TRANSIT IMPROVEMENT PROGRAM
LINE SECTION 4



LAW ENGINEERING
TESTING COMPANY

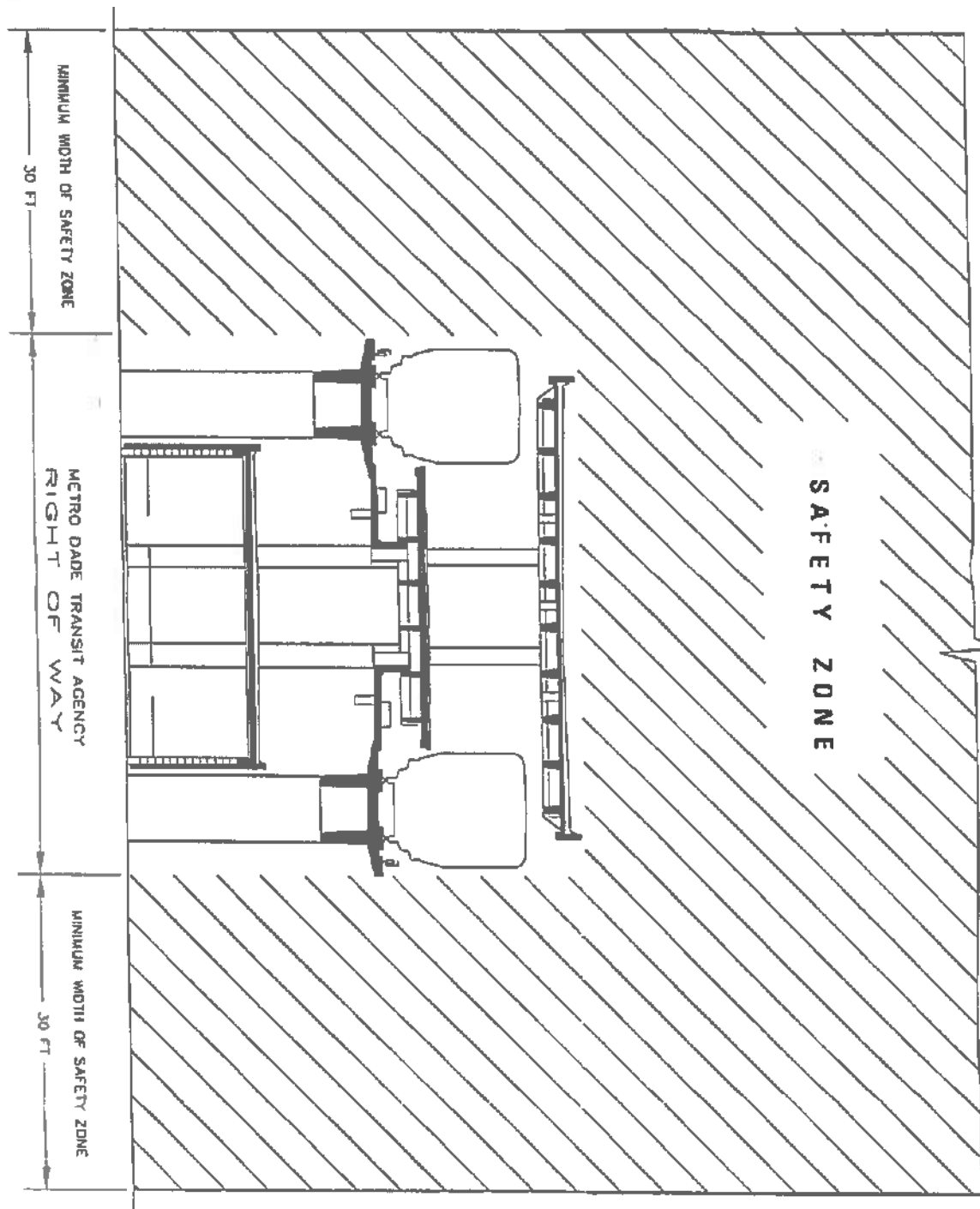
CRITERIA FOR EXCAVATION ADJACENT
TO SINGLE FOUNDATIONS

DRAWN *SKA*
CHECKED *KPS*

ENGINEER 115

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APPENDIX C: SAFETY ZONE CRITERIA



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APPENDIX D: SAMPLE CRANE SAFETY INSPECTION CHECKLIST

CRANE SAFETY INSPECTION CHECKLIST				
Location: _____				
Area Inspected: _____				
Inspected By: _____			Date: _____	
* Check items to be inspected in your area - Disregard others as not applicable				
#	OK	ITEM INSPECTED	NOT OK	COMMENTS
THE CRANE CREW				
		Is the operator and crew properly trained?		
		Operating is a full time job—does the operator pay strict attention to his duties?		
		Do crane personnel wear hard hats when away from the crane?		
		Is the operator aware of the regulations involving working close to high voltage lines and electrical equipment?		
		High voltage, even from a distant source, can be introduced in metal parts of the crane. Is the operator aware of these situations?		
		Does the operator know the weight of each piece before he picks it?		
		Does the crane crew know the manufacturer's proper recommendations for making short moves on the job site?		
		Does the crew get help when lifting heavy objects?		
		Does the crew periodically check for level?		
		Do they check the outriggers for stability?		
		Do they check the boom angle indicator and other electronic load equipment for accuracy?		
		Does the operator allow anyone to ride the load or to the hooks?		
THE GROUND CREW (HOOKING UP THE LOAD)				
		Does the ground crew have, maintain and use proper safety equipment?		
		Are they familiar with the product erection sequence?		
		Are they familiar with the crane signals and general operation of the crane?		
		Do they know how to properly hook pieces and provide aerial stability?		
		Do they know how to properly use tag lines?		
		Are the tag lines in good condition, strong enough and long enough?		

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**APPENDIX D: SAMPLE CRANE SAFETY INSPECTION CHECKLIST
(CONT)**

*	OK	ITEM INSPECTED	NOT OK	COMMENTS
		Is two way communication between the operator and the erection foreman being used? Does the crew know how to use and maintain the equipment? Are spare parts available for quick repair?		
		Is the crane swing radius roped off to prohibit the crane (during swing) from causing damage or hurting someone? Is entire swing checked including the counterweights?		
THE MACHINE				
		Is the crane operated within all capacities?		
		Is the machine inspected daily?		
		Are the required crane inspections recorded?		
		Are all controls properly identified?		
		Are warning devices operative?		
		Is the manufacturer's rating plate visible?		
		Is the operator's manual available to the crew for easy reference?		
		Are load charts, operating signals and other important information posted and/or readily available?		
		Are brakes within operating limits?		
		Are clutch and brake surfaces dry?		
		Are all protective panels and guards in place?		
		Are electrical systems in good condition?		
		Are all of the sheaves properly aligned so as to reduce rope wear during work?		
		Is cable in good conditions?		
		Are hooks in good condition?		
		Have hooks been inspected by magnetic particle inspection?		
		Are there safety latches on the hooks?		
		Are fuel tanks in good condition and without leaks?		
		Are fire extinguishers available and routinely inspected?		
SLINGS				
		Are slings in good condition? Is safety factor of 5 maintained?		
		Are slings stored properly?		
		Are sling inspection reports maintained?		
		Are "U" bolt wire rope clips correctly placed?		
		Are all other lifting devices in good condition?		

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APPENDIX D: CHECKLIST FOR CRITICAL LIFTS

CHECKLIST FOR CRITICAL LIFTS

This form is to be completed when the load exceeds 80% of the load chart for the crane or derrick or where the pick involves two or more cranes.

LIFT DATE: _____

1) Supervisor responsible for the lift: _____

2) Description of item to be lifted and estimated weight: _____

3) Equipment and Lift Relationship:

a. Operating Radius _____

b. Boom Length _____

c. Allowable Load (From Load Chart) _____

d. Ratio of Lift to Allowable Load _____

e. Clearance to Surrounding Facilities _____

f. Sling Angle _____

4) Condition of Hoisting Equipment and Rigging

a. Has all equipment been reinspected for this lift: _____ Yes _____ No

5) Stability of Ground Area:

a. Check Soil/Ground Bearing Allowable Load (List Conditions) _____

b. Will mats be needed? _____ Yes _____ No

c. Any underground installations needing special attention? _____ Yes _____ No

d. Will it be necessary for the crane to walk with the load? _____ Yes _____ No

e. Is the surface level and stable where the crane will be walking?

_____ Yes _____ No

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APPENDIX D: CHECKLIST FOR CRITICAL LIFTS (CONT)

- f. Have facilities been provided to keep the load radius from changing?
_____ Yes _____ No
- g. Have all overhead facilities been checked for clearance in the area where the crane will be moving/operating? _____ Yes _____ No
- 6) Does the operator have the necessary experience on the crane and this type of lift?
_____ Yes _____ No
- 7) If the lift involves the use of two cranes answer the following:
- a. Have operators worked together before? _____ Yes _____ No
- b. Who will coordinate instructions to operators? _____

By: _____
Contractor's Superintendent

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APPENDIX E: RECOMMENDED VIBRATION LIMITS

Seismological research by the U.S. Bureau of Mines, foreign investigative groups, and individual seismologists has established criteria relating the occurrence of structural damage to certain frequencies and levels of ground motion.

USBM Report of Investigations 8507¹ states that residential structures are most prone to damage as a result of vibration energy within the frequency range of 4-12 hertz. Within this range, a 0.5-inch per second maximum particle velocity is recommended to preclude 'threshold' damage to the plaster-on-wood-lath interior portions of older structures.

Threshold damage is defined by the USBM as the loosening of paint, small plaster cracks at joints between construction elements or the lengthening of old plaster cracks. A maximum of 0.75 inch per second is recommended for the protection of modern drywall interior construction. The damage threshold is normally considerably higher for load bearing or other structural portions of a house.

Above 12 hertz, the allowable vibration increases as the frequency increases, up to 40 hertz, above 40 hertz, a constant 2.0 inches per second level is recommended to protect the interior walls and ceilings of structures, regardless of construction material. A graphic representation of the USBM recommended criteria is shown in the velocity versus frequency curve on the following page, and the vibration analysis of the recordings are plotted on graphic representations at the end of this report.

It should be noted², however, that it is almost impossible in actual practice to visually determine if the recorded peak vibration on a typical seismogram is actually within the Bureau's 4-12 hertz range. This is because ground vibration is usually a complex mixture of many frequencies that cannot be accurately separated by visual analysis of a seismogram.

Proper implementation of the Bureau's limit can only be accomplished by a computerized technique that analyzes the seismographic data in terms of both peak particle velocity and frequency. Therefore, in order to best determine the potential effects of ground vibrations recorded in this study, a computerized response versus frequency technique known as RSVP was used in the preparation of this report.

RSVP TECHNIQUE

The Response Spectrum Velocity Profile (RSVP) technique used in this study was developed by Dr. Kenneth Medearis. It is a powerful vibration analysis tool which not only conforms to USSM recommendations, but also provides insight into the responses of various types of residences to a given vibration episode.

² Siskind, David *et al.* Structural Response and Damage Produced by Ground Vibration From Blasting. U.S. Bureau of Mines, RI, 1980.

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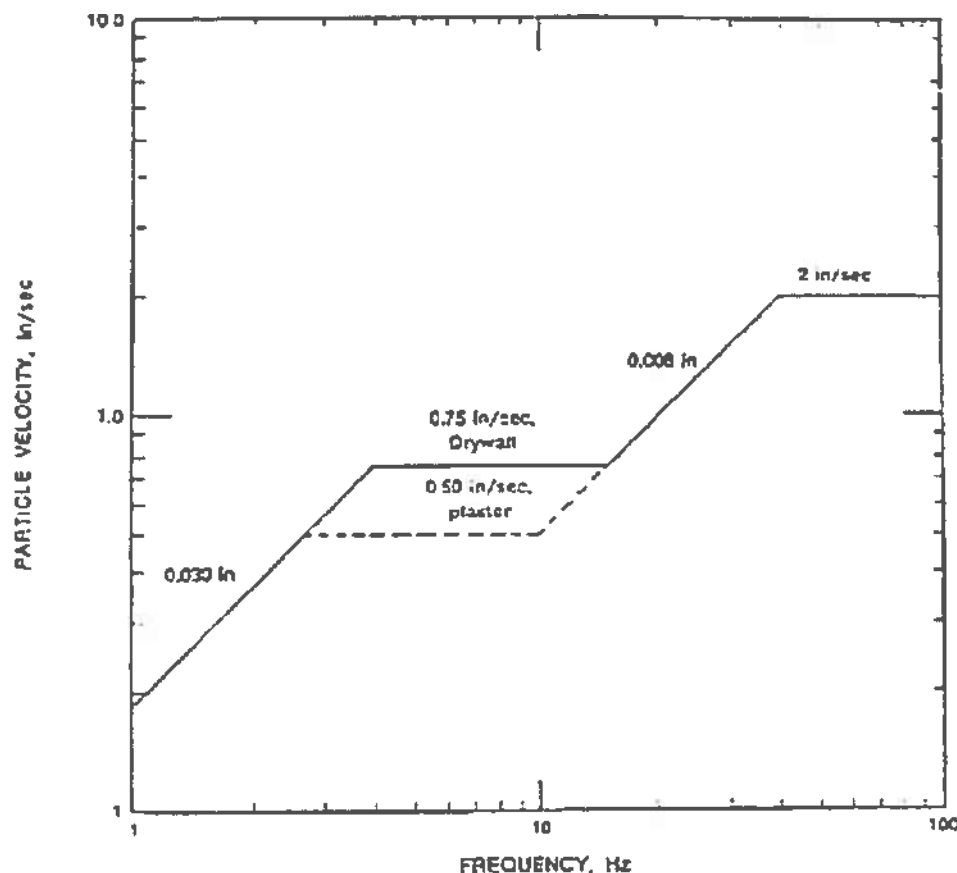
APPENDIX E: RECOMMENDED VIBRATION LIMITS (cont)

All buildings are characterized by a single natural fundamental frequency. This means that, as with a pendulum or a tuning fork, there is one dominant frequency at which a particular building will vibrate when excited. The fundamental natural frequency of a building depends primarily upon its height. Tall buildings are more flexible and vibrate at low frequencies. Low-rise structures, being stiffer, vibrate at higher frequencies.

When the frequency of a ground vibration wave matches the structure's natural frequency, the ground motion will be amplified within the structure. According to the USSM, the natural frequency of typical residential structures ranges between 4 and 12 hertz. Thus, it is within this range that the vibration limits recommended by the USBM are most stringent.

By applying the computerized RSVP Technique to the data obtained in this survey, both the ground particle velocity and response characteristics of residential structures are considered over a wide range of frequencies. The results are then related to the USSM velocity versus frequency curve discussed previously, and are plotted on the analysis sheets at the end of this report.

When particle velocities exceed the limits of the USBM Curve, non-damage probability calculations are performed, based on the research of Medearis. These probabilities are given under the graphs on the analysis sheet for 1, 1-1/2, and 2story houses. When no figures are given, probability of non-damage is essentially 100 percent.



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID DOCUMENTS

USS EQUIPMENT REPLACEMENT - PHASE 1

PROJECT NO. IRP151

RPQ NO. TP-0000008861

TECHNICAL SPECIFICATIONS

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01.11.00
Summary of Work

Unit Substation equipment replacement – Phase 1

RPQ No.: TP-0000008861
Project No. IRP 151

Background:

Miami-Dade, Department of Transportation and Public Works (DTPW) is replacing the Unit Substation equipment at four Passenger Stations, and at the William Lehman Center in Phase 1. The Unit Substation equipment at these locations has exceeded its life expectancy (30 years), the failure rate and associated maintenance cost has increased exponentially, and spare parts are no longer available.

The Life Expectancy for the new Equipment shall be 30 years.

There is no change to the operating cost. The operation of the new equipment should be the same as that of the equipment being replaced

Project Manager:

Ian Pereira, Field Engineer
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305-884-7544

1.0 Technical Specifications for Siemens Unit Substation equipment:

This Document describes the technical requirements for the equipment to be provided under this contract. The Table on the following page shows the equipment to be provided under this contract.

Siemens Unit Substation equipment

Location	Load Interrupter Switch A Qty	Load Interrupter Switch B Qty	Xformer A KVA	Xformer B KVA	SWBD A Qty	SWBD B Qty	Main BRK A Amps	Main BRK B Amps	TIE BRK A Amps	TIE BRK B Amps	Interrupter Switch Fuse A KV Qty	Interrupter Switch Fuse B KV Qty	ATS Qty
DLS	1	1	750	750	1	1	1600	1600	1600	1600	0	0	2
DLN	1	1	1000	1000	1	1	1600	1600	1600	1600	0	0	2
SMI	1	1	750	750	1	1	1600	1600	1600	1600	0	0	2
UNV	1	1	750	750	1	1	1600	1600	1600	1600	0	0	2
PYD	2	2	1000 x qty2	1000 x qty2	2	2	1600	1600	1600	1600	3 x 2	3 x 2	0

Legend:

DLS – Dadeland South unit substation – 9090 South Dixie Hwy, Miami FL
 DLN – Dadeland North unit substation – 8310 South Dixie Hwy, Miami FL
 SMI – South Miami unit substation – 5801 South Dixie Hwy, Miami FL
 UNV – University unit substation – 5400 Ponce de Leon Blvd, Coral Gables FL
 PYD – Lehman Center unit substations 1 and 2 – 6601 NW 72nd Ave, Miami FL

Xformer - Transformer
 SWBD – Switch Board
 BRK – Breaker
 ATS – Automatic Transfer Switch
 USS – Unit Sub Station

Equipment to be provided at Dadeland South (DLS):

(contractor shall refer to one line diagram, equipment specifications and site visit for accuracy)

Load Interrupter Switch A

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Load Interrupter Switch B

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Transformer A

750KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Transformer B

750KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Switchboard A

480Y/277 3phase/4wire WYE, 1,600A bus with tie breaker - Siemens

Switchboard B

480Y/277 3phase/4wire WYE, 1,600A bus - Siemens

Automatic Transfer Switch 1 for traction power substation

260A, 480Y/277V – Siemens Russelectric

Automatic Transfer Switch 3 for train control & communication

400A, 208Y/120V – Siemens Russelectric

Equipment to be provided at Dadeland North (DLN):

(contractor shall refer to one line diagram, equipment specifications and site visit for accuracy)

Load Interrupter Switch A

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Load Interrupter Switch B

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Transformer A

1,000KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOL

Transformer B

1,000KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOL

Switchboard A

480Y/277 3phase/4wire WYE, 1,600A bus with tie breaker - Siemens

Switchboard B

480Y/277 3phase/4wire WYE, 1,600A bus - Siemens

Automatic Transfer Switch 1 for traction power substation

260A, 480Y/277V – Siemens Russelectric

Automatic Transfer Switch 3 for train control & communication

400A, 208Y/120V – Siemens Russelectric

Equipment to be provided at South Miami (SMI):

(contractor shall refer to one line diagram, equipment specifications and site visit for accuracy)

Load Interrupter Switch A

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Load Interrupter Switch B

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Transformer A

750KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Transformer B

750KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Switchboard A

480Y/277 3phase/4wire WYE, 1,600A bus with tie breaker - Siemens

Switchboard B

480Y/277 3phase/4wire WYE, 1,600A bus - Siemens

Automatic Transfer Switch 1 for traction power substation

260A, 480Y/277V – Siemens Russelectric

Automatic Transfer Switch 3 for train control & communication

400A, 208Y/120V – Siemens Russelectric

Equipment to be provided at University (UNV):

(contractor shall refer to one line diagram, equipment specifications and site visit for accuracy)

Load Interrupter Switch A

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Load Interrupter Switch B

15KV, 600A, 61KA, No fuses required – Siemens Siebreak

Transformer A

750KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Transformer B

750KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Switchboard A

480Y/277 3phase/4wire WYE, 1,600A bus with tie breaker - Siemens

Switchboard B

480Y/277 3phase/4wire WYE, 1,600A bus - Siemens

Automatic Transfer Switch 1 for traction power substation

260A, 480Y/277V – Siemens Russelectric

Automatic Transfer Switch 3 for train control & communication

400A, 208Y/120V – Siemens Russelectric

Equipment to be provided at Lehman Center USS1 and USS2 (PYD):

(contractor shall refer to one line diagram, equipment specifications and site visit for accuracy)

Load Interrupter Switch A1

15KV, 600A, 61KA, Fuses required – Siemens Siebreak

Load Interrupter Switch B1

15KV, 600A, 61KA, Fuses required – Siemens Siebreak

Load Interrupter Switch A2

15KV, 600A, 61KA, Fuses required – Siemens Siebreak

Load Interrupter Switch B2

15KV, 600A, 61KA, Fuses required – Siemens Siebreak

Transformer A1

1,000KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Transformer B1

1,000KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Transformer A2

1,000KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Transformer B2

1,000KVA, 13.2-0.480KV, NEMA 1 indoor enclosure – Siemens GEAFOI

Switchboard A1

480Y/277 3phase/4wire WYE, 1,600A bus with tie breaker - Siemens

Switchboard B1

480Y/277 3phase/4wire WYE, 1,600A bus - Siemens

Switchboard A2

480Y/277 3phase/4wire WYE, 1,600A bus with tie breaker - Siemens

Switchboard B2

480Y/277 3phase/4wire WYE, 1,600A bus - Siemens

2.1 SYSTEM REQUIREMENTS

The new Siemens Unit Substation equipment shall be designed, manufactured, and factory tested to meeting the following **DETAILED SPECIFICATIONS** (contractor shall verify accuracy with existing site equipment and one line diagrams):

2.1.1 LOAD INTERRUPTER SWITCH

Siemens - 15KV Primary Switch, Siebreak
15KV Rated, 13.2KV, 3 Phase 3 Wire, 60Hz, Transformer Primary SieBreak, Type 1 Indoor,
Non-Siesmic, Enclosure with Rear Access, Copper/Silver Plated Bus, Glass Polyester Bus Support

15KV, 600A, 61KA, Asym Single Switch 72"D Section
Orientation – left and right in coordination with the transformers
Manually Operated Switch
Main incoming line from bottom
Fuses (only in locations where required) – quantity3
Blown Fuse Window with Indicator BFI (as required)
Infrared View Ports
1500kcmil mechanical (clamp) line lugs
Dry Type Transformer Connection
15KV Distribution Class Type Lightning Arrestors - quantity3
Current Transformers 600:5 Std Accuracy - quantity3
Voltage Transformers 13.2KV - quantity2
Current Test Switch
Voltage Test Switch
Short Circuit Terminal Block
Zinc Dichromate Bus Hardware
UL Certification
Front Door with standard quarter turn latches
Rear Bolted Panels
Half Voltage (240V AC/120V AC) Heaters
Fixed Thermostat
Nameplates
Digital Metering

2.1.2 TRANSFORMER

Siemens – GEAFOL 3-phase Dry type Cast Resin Transformer
750 KVA, 13.2-0.480 KV, NEMA 1 indoor enclosure
1,000 KVA, 13.2-0.480 KV, NEMA 1 indoor enclosure

Model: GEAFOL
TUDES (internal ref): 2455
Transformer type of duty: Continuous
Standard: ANSI C57.12.01.2015
Rated power: 750 KVA or 1,000 KVA as required
Rated voltage (KV) HV/LV: 13.2-0.480 KV
Temperature rise: 115C
Cooling method: AA
Vector group: Dyn1
Winding material HV/LV: Aluminum/Aluminum
Insulation class HV/LV: 180C/180C
Frequency: 60Hz
Taps: +-2x2.5%
Max ambient temperature: 40C
Site altitude upto: 3,300 f.a.s.l.
BIL HV/LV: 110/10 KV
Impedance/Tolerance: 5.75% z +-7.5%
Enclosure: NEMA 1 indoor
Material of Enclosure/Painting: Steel / ANSI 61
Dimensions w/enc LxWxH: 91x67x79 inch
Weight with enclosure: 5,800 lbs
Efficiency DOE: Yes
UL: Yes

2.1.3 SWITCHBOARD A WITH TIE BREAKER 1,600A

Siemens – SB3 Switch Board
SB3, Material group 3: VCT, Incoming Location: Top, Incoming Position: Left/Right,
Service Entrance: No, System: 480Y/277 3phase4wire WYE AC, 65,000A,
Bus Bracing: 65,000A, Bus Material: 65C Copper Bus Rating: Non Tapered,
Incoming Bus Amperage: 1,600A, Enclosure Rating: 1 – Indoor (Standard)

Main:
Section Type: Main Service
1600 CU Siemens Dry Type XFMR Conn (SB3)
Undercoating (Includes Floor Plates) (SB3)
Master Nameplate
Standard Frame
1,600 Copper Section Bus
65C Copper Neutral
1,600 Amp Bottom Thru Bus
1,600 Amp Top Thru Bus

Copper Ground Bus
#6-300 MCM Ground Lug
Keyed DAS selector switch
XFMR Connection per 13-D-5243
Wire Marker Labels
Sm@rt DAS (Dynamic Arc Flash Sentry) (SB3)
1,600 A/3 Main WL Breaker
1,600 A/3P WL Breaker 1,600 A Rating Plug
Cradle Catalog #(SB3): GS2316BXXXXXXN
Catalog #: S2D316TYXCXCWXN
Motor Operator Without Cut Off Switch
Remote Close Coil (SB3)
Draw-out Mounted
S Class – Frame Size 2
MODBUS Communications (SB3)
Sm@rt DAS Light/Switch (SB3)
ETU776 Trip Unit w/GF Alarm + Trip LSIG
Shunt Trip, Control Power by Siemens Control Power by
24VDC WL LCD Power Supply
Draw-Out Mounting (SB3)
Ground Fault Type: Standard Residual

Auxiliary Compartment:
Auto throwover M-T-M PLC S7-1200 (SB3)
PLC Communication
HMI Display
UPS Backup Control Power

Distribution:
Section Type: Indiv Branch + Panel
Undercoating (Includes Floor Plates) (SB3)
Standard Frame
1,600 Copper Section Bus
1,600 Amp Bottom Thru Bus
65C Copper Neutral
Copper Ground Bus
WL Combo HD Section
Keyed DAS selector switch
1,600 Amp Interconnection Components
Wire Marker Labels
Potential Transformer 480VAC-120VAC for Control Power
CTR Relay (Control Power Transfer) (SB3)
1,600 A/3 Branch WL Breaker

Catalog #: S1F316TVXCXCCXN
Motor Operator Without Cut Off Switch
Remote Close Coil (SB3)
Fixed Mounted
S Class – Frame Size 1
500KCMIL AL/CU MECH Load Lugs
1600 A/3P WL Breaker 1,600 A Rating Plug
ETU776 Trip Unit LSI
24VDC WL LCD Power Supply
Shunt Trip, Control Power by Siemens Control Power by
A/3P 3VA53-HJAS Branch Breakers
THERMAL_80 3VA Breaker
Catalog # 3VA53406EC310AAO
Model TM230 FTAM
1-600 KCMIL CU/AL
250 A/3P 3VA52-HFAS Branch Breaker
250 A/3P 3VA52
THERMAL_80 3VA Breaker
Catalog # 3VA52256EC310AAO
Model TM230 FTAM
6-350 KCMIL Cu/Al

2.1.4 SWITCHBOARD B 1,600A

Siemens – SB3 Switch Board
SB3, Material group 3: VCT, Incoming Location: Top, Incoming Position: Left/Right, Service Entrance: No, System: 480Y/277 3phase4wire WYE AC, 65,000A, Bus Bracing: 65,000A, Bus Material: 65C Copper Bus Rating: Non Tapered, Incoming Bus Amperage: 1,600A, Enclosure Rating: 1 – Indoor (Standard)

Main:
Section Type: Main Service
1600 CU Siemens Dry Type XFMR Conn (SB3)
Undercoating (Includes Floor Plates) (SB3)
Master Nameplate
Standard Frame
1,600 Copper Section Bus
65C Copper Neutral
1,600 Amp Bottom Thru Bus
1,600 Amp Top Thru Bus
Copper Ground Bus
#6-300 MCM Ground Lug
Keyed DAS selector switch
XFMR Connection per 13-D-5243
Wire Marker Labels
1,600 Amp Interconnection Components
CTR Relay (Control Power Transfer) (SB3)

Potential Transformer 480VAC-120VAC for Control Power
1,600 A/3 Main WL Breaker
1,600 A/3P WL Breaker 1,600 A Rating Plug
Cradle Catalog #(SB3): GS2316BXXXXXXN
Catalog #: S2D316TYXCXCWXN
Motor Operator Without Cut Off Switch
Remote Close Coil (SB3)
Draw-out Mounted
S Class – Frame Size 2
MODBUS Communications (SB3)
Sm@rt DAS Light/Switch (SB3)
ETU776 Trip Unit LSI
Shunt Trip, Control Power by Siemens Control Power by
24VDC WL LCD Power Supply
Draw-Out Mounting (SB3)
Distribution:
Section Type: Indiv Branch + Panel
Undercoating (Includes Floor Plates) (SB3)
Standard Frame
1,600 Copper Section Bus
1,600 Amp Bottom Thru Bus
65C Copper Neutral
Copper Ground Bus
Sm@rt DAS (Dynamic Arc-Flash Sentry) (SB3)
WL Combo HD Section
Keyed DAS selector switch
1,600 Amp Interconnection Components
Wire Marker Labels
1,600 A/3 Branch WL Breaker
Catalog #: S1F316TYXCXCCXN
Motor Operator Without Cut Off Switch
Remote Close Coil (SB3)
Fixed Mounted
S Class – Frame Size 1
500KCMIL AL/CU MECH Load Lugs
1600 A/3P WL Breaker 1,600 A Rating Plug
ETU776 Trip Unit w/GF Alarm + Trip LSIG
24VDC WL LCD Power Supply
Shunt Trip, Control Power by Siemens Control Power by
Ground Fault Type: Standard Residual
400 A/3P 3VA53-HJAS Branch Breaker
400 A/3P 3VA53 for Portable Generator Plug – Kirk Key Interlock with Main A & Main B
THERMAL_80 3VA Breaker
Catalog # 3VA53406EC310AA0
Model TM230 FTAM
1-600 KCMIL CU/AL
250 A/3P 3VA52-HFAS Branch Breaker
250 A/3P 3VA52
THERMAL_80 3VA Breaker

Catalog # 3VA52256EC310AA0

Model TM230 FTAM

6-350 KCMIL Cu/Al

2.1.4 SWITCHBOARD B 1,600A

Siemens – SB3 Switch Board

SB3, Material group 3: VCT, Incoming Location: Top, Incoming Position: Left/Right, Service Entrance: No, System: 480Y/277 3phase4wire WYE AC, 65,000A, Bus Bracing: 65,000A, Bus Material: 65C Copper Bus Rating: Non Tapered, Incoming Bus Amperage: 1,600A, Enclosure Rating: 1 – Indoor (Standard)

Section Type: Main Service

1600 CU Siemens Dry Type XFMR Conn (SB3)

Undercoating (Includes Floor Plates) (SB3)

Master Nameplate

Standard Frame

1,600 Copper Section Bus

65C Copper Neutral

1,600 Amp Bottom Thru Bus

1,600 Amp Top Thru Bus

Copper Ground Bus

#6-300 MCM Ground Lug

Keyed DAS selector switch

XFMR Connection per 13-D-5243

Wire Marker Labels

1,600 Amp Interconnection Components

CTR Relay (Control Power Transfer) (SB3)

Potential Transformer 480VAC-120VAC for Control Power

1,600 A/3 Main WL Breaker

1,600 A/3P WL Breaker 1,600 A Rating Plug

Cradle Catalog #(SB3): GS2316BXXXXXXN

Catalog #: S2D316TYXCXCWXN

Motor Operator Without Cut Off Switch

Remote Close Coil (SB3)

Draw-out Mounted

S Class – Frame Size 2

MODBUS Communications (SB3)

Sm@rt DAS Light/Switch (SB3)

ETU776 Trip Unit LSI

Shunt Trip, Control Power by Siemens Control Power by

24VDC WL LCD Power Supply

Draw-Out Mounting (SB3)

Distribution:

Section Type: Indiv Branch + Panel

Undercoating (Includes Floor Plates) (SB3)

Standard Frame

1,600 Copper Section Bus

1,600 Amp Bottom Thru Bus

65C Copper Neutral

Copper Ground Bus

Sm@rt DAS (Dynamic Arc-Flash Sentry) (SB3)

WL Combo HD Section

Keyed DAS selector switch

1,600 Amp Interconnection Components

Wire Marker Labels

1,600 A/3 Branch WL Breaker

Catalog #: S1F316TYXCXCCXN

Motor Operator Without Cut Off Switch

Remote Close Coil (SB3)

Fixed Mounted

S Class – Frame Size 1

500KCMIL AL/CU MECH Load Lugs

1600 A/3P WL Breaker 1,600 A Rating Plug

ETU776 Trip Unit w/GF Alarm + Trip LSIG

24VDC WL LCD Power Supply

Shunt Trip, Control Power by Siemens Control Power by

Ground Fault Type: Standard Residual

400 A/3P 3VA53-HJAS Branch Breaker

400 A/3P 3VA53 for Portable Generator Plug – Kirk Key Interlock with Main A & Main B

THERMAL_80 3VA Breaker

Catalog # 3VA53406EC310AA0

Model TM230 FTAM

1-600 KCMIL CU/AL

250 A/3P 3VA52-HFAS Branch Breaker

250 A/3P 3VA52

THERMAL_80 3VA Breaker

Catalog # 3VA52256EC310AA0

Model TM230 FTAM

6-350 KCMIL Cu/Al

2.1.5 AUTOMATIC TRANSFER SWITCH

Siemens – Russelectric

RTSCD 260 Amp

RTSCD 400 Amp

3.1 CONTRACTOR RESPONSIBILITY

The Contractor shall perform the following tasks to accomplish the replacement of the Secondary Unit Substations and Automatic Transfer Switches at all 5 locations:

3.1.1 The contractor shall furnish all components and subcomponents listed above and shall be responsible for all shipping to site and unloading at site.

The Secondary Unit Substations will be replaced one (1) at a time starting with **B** side, the **A** side shall remain in service to provide power to the Passenger Station and all auxiliary equipment, temporary jumpers to some of the sub panels and/or a Portable Generator May be necessary to provide power to some auxiliary equipment. Secondary Unit Substation **B** shall be fully tested and commissioned before placed back into service. No work shall be performed on Unit **A** prior to Unit **B** acceptance.

The contractor shall provide all manuals and technical information of the new equipment installed.

The contractor shall provide all manuals and technical information of the new equipment installed.

The contractor shall provide full set of as-builts after completion.

The contractor shall provide a minimum of 16 hours of Operation and Maintenance training for all maintenance personnel. Training shall be provided before to the first completed substation is placed into service.

3.1.2 The contractor shall be responsible for removing the existing Unit Substation equipment and Automatic Transfer Switches (ATS).The removed equipment shall be turned over to DTPW for re-use or disposal.

3.1.3 The contractor shall install the new Unit Substation equipment and Automatic Transfer Switches and connect to the existing feeder cables.

3.1.4 The contractor shall provide the services of a manufacturer's representative to oversee the installation and prepare the necessary test procedures to place the new equipment in service, perform the Post Installation Checkout and Commissioning of the new Equipment.

3.1.5 The contractor shall remove all existing alarm and indication wiring up to the nearest interface terminal block and connect new wiring for alarms and indications circuits.

3.1.6 The contractor shall clean the area where the new Unit Substation equipment shall be placed and verify the integrity of the floors and switchgear. The Contractor shall repair floors and switchgear pads as needed.

3.1.7 The contractor shall be responsible for the installation and termination of the conduits and cables necessary to connect the Tie Breakers in Switchboard A and Switchboard B.

3.1.8 The Contractor shall be responsible for connecting all control, alarms, indications, and power cables to complete the installation.

3.1.9 The Contractor shall be responsible to connect all dry contacts received from Central Control Facility at the existing Interface Terminal Cabinet.

3.1.10 The Contractor shall ensure that the hardwired interface is reconnected to existing Equipment inside the Unit Substation (USS).

3.1.11 Includes but shall not be limited to all Wiring to the Central Control Facility. As well all wiring to and from existing equipment inside the Unit Substation (USS).

3.1.12 The contractor shall perform Post Installation Test for all the installed equipment under this contract at a substation prior to Commissioning and Integrated Test.

3.1.13 The contractor shall submit all Test procedures for DTPW review and approval 10 days prior to scheduled test date
All testing shall be properly documented and witnessed by DTPW personnel.

The contractor shall provide a project schedule which shall include all tasks required to restore the Secondary Unit Substation to normal operation.

Provide all labor and tools to complete these tasks.

All waste created by electrical contractor will be removed by the contractor and disposed of in compliance with all Federal, State, and local requirements. All work shall comply with National and Local Codes. Electrical Installations shall meet the National Electrical Code and Florida Building Code.

Provide a warranty on all labor and materials that are provided. The warranty shall apply to the labor, work, electrical installation of material, fixtures, equipment, and other items supplied by the contractor for a period of one (1) year from the date of acceptance of the completed work.

3.1.14 Verification and Acceptance:

DTPW Traction Power Maintenance personnel shall perform the following test and verification procedures prior to acceptance of the contractor's work:

Test and verify the operation and functionality of all equipment affected by the work performed.

Full acceptance shall be required prior to the project being confirmed as having been completed.

4.1 DTPW RESPONSIBILITY

4.1.1 DTPW forces shall provide suitable access to the USS and suitable room inside the substations for temporary storage and staging of the works.

4.1.2 DTPW shall remove the disconnected equipment from the substation for reuse of parts and/or disposal.

4.1.3 DTPW shall De-Energize the existing equipment by opening and racking out the corresponding feeder breaker in the Traction Power Substation (TPS). The contractor shall apply their own Padlock and Red Tag to the corresponding feeder breaker.

4.1.4 Deleted

4.1.5 DTPW shall provide wiring diagrams for nearest Terminal Block for remote control, and metering.

5.1 REQUIRED TESTING

5.1.1 The Contractor shall provide Test Procedures for DTPW's Review 14 Days before the scheduled Test for DTPW's Review. The Tests shall be carried based upon the approved procedure. All testing requires 48 hours advance notification. All testing to be witnessed by DTPW.

5.1.2 The Contractor shall provide the services of a manufacturer's representative to perform the following tests:

- a. Factory Acceptance Test (FAT)**
- b. Auto Throw over Circuit Operation**
- c. Post Installation Testing.**
- d. Final Acceptance Test**
- e. SCADA Test (Alarms/Indications)**

5.1.3 The Contractor shall provide to DTPW the Test Reports for the test listed above no later than 10 business days after the completion of each test.

6.0 SPARE PARTS

- 6.1** A recommended spare parts list shall be submitted for approval by DTPW with prices. The Contractor shall designate on the recommended list, the operation time upon which the recommended list is based. Spare parts from the recommended spare parts list shall be purchase using the funds from the Spare Parts Dedicated Allowance.

7.0 PERSONNEL TRAINING

- 7.1** This section covers the requirements for training of DTPW personnel in the operation and maintenance of equipment furnished under this contract.
- 7.2** Space for classroom lectures and practical training on equipment will be furnished at DTPW facilities.
- 7.3** Use of training equipment such as slide projectors, movie projectors, screens, easels, and similar equipment will be furnished by DTPW if available and in working order. Contractor shall provide whatever equipment is needed for training if not available from DTPW.
- 7.4** The Contractor may use spare parts furnished under the contract for use as training aids and for demonstration of and practical exercises for adjusting testing, disassembly, and assembly of equipment. However, the Contractor shall be responsible to ensure spare parts are repackaged and returned to storage in acceptable condition for installation in the system.
- 7.5** Practical training on installed substation equipment will be allowed if not an inconvenience to the installation Contractor, and operation of the installed system shall not be disturbed.

8.0 COURSE OUTLINES

- 8.1** A detailed outline of each course shall be furnished, thirty (30) days before first delivery of equipment to DTPW for approval. The course outline shall include the lists of course materials, training aids, necessary training equipment, names, and qualifications of proposed instructors for each course and time periods when required.

8.2 TRAINING SCHEDULE

- 8.2.1** Schedule personnel training course after delivery of operation and maintenance manuals. All DTPW personnel shall be trained on the operation of the equipment before the first station goes online. The courses shall be scheduled to accommodate personnel from 3 different shifts. Complete the courses within a six-week period after the above date. The exact starting dates for courses will be determine by DTPW.

8.3 COURSES

- 8.3.1** Courses shall be provided on the subjects indicated below and for the minimum number of hours and number of students listed following the course title.

Course Subject	Minimum No. of Hours	Minimum No. of Students	Maximum No. of Students
Operation of Equipment	8	6	12
Maintenance of Equipment	8	6	12

8.4 OPERATION OF EQUIPMENT COURSE

- 8.4.1** Content of this course shall include, as a minimum, descriptions of procedures and in-service training or simulation for placing system into operation, making necessary adjustments while equipment is in operation, and shutting down the equipment. It shall also include troubleshooting procedures and thorough instruction in emergency procedures. This course shall be directed toward Technicians who are experienced in the operation of the Unit Substation equipment but lack experience on the new electrical equipment used for the upgrade. The course shall prepare the trainee for operation of the new equipment.

8.5 MAINTENANCE OF EQUIPMENT COURSE

- 8.5.1** Content of this course shall include, as a minimum, review of basics of safety and electrical equipment maintenance: and classroom description and in-service training on performance of testing, maintaining, troubleshooting, adjusting, assembling, and disassembling of all items of equipment. This course shall be directed to technicians without prior experience in maintenance of the new Unit Substation equipment. The course shall prepare the trainee for maintenance of the new equipment.

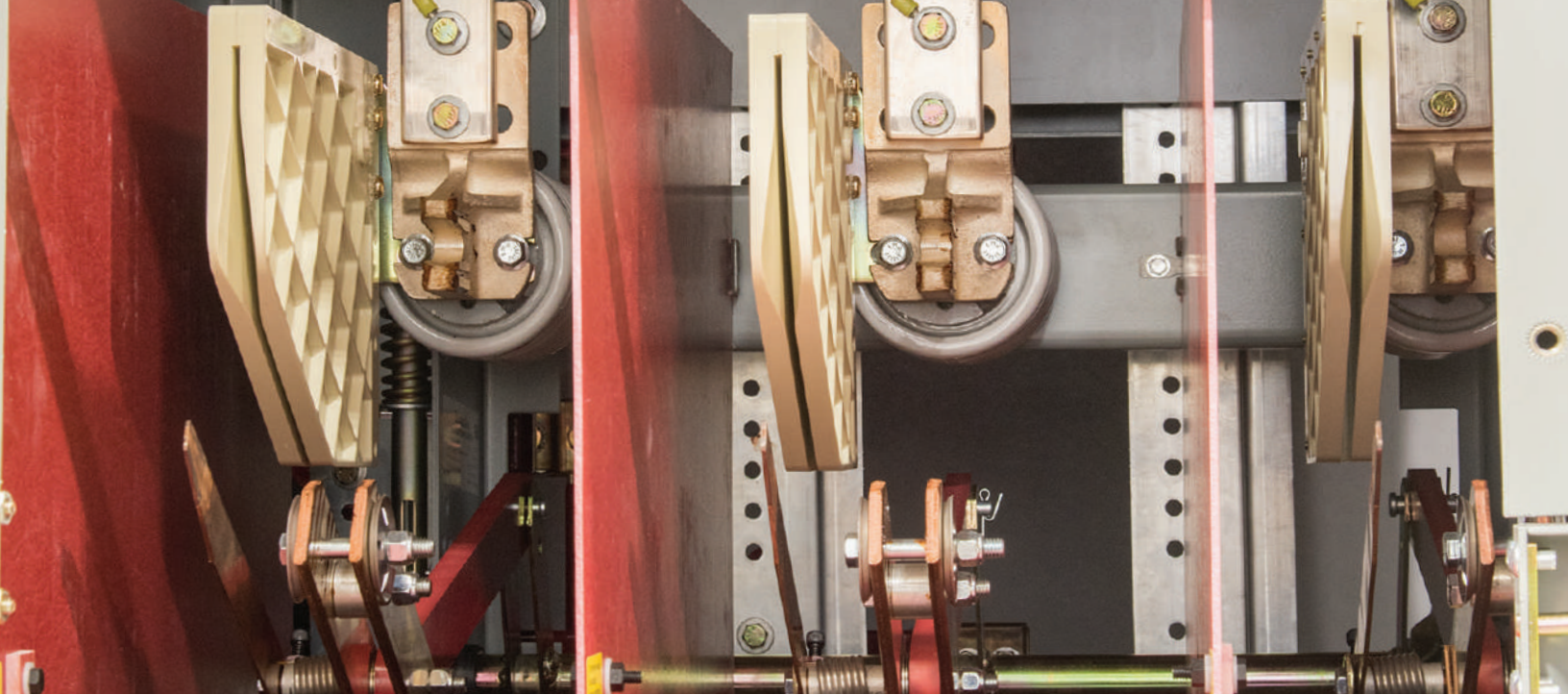
8.6 TRAINING MATERIAL

- 8.6.1** Any printed material or audio-visual material prepared by the Contractor as teaching aids shall become the property of DTPW at the completion of the training program.

9.0 QUALITY ASSURANCE

The contractor shall submit and maintain a quality assurance plan to include schedule of program installation and testing that will ensure compliance with DTPW's requirement of quality control. All test documentation to be turned over to DTPW after acceptance by DT

10.0 USS EQUIPMENT BROCHURES



SIEBREAK™

Medium-voltage metal-enclosed switchgear

Up to 15 kV, 1,200 A, 95 kV BIL
usa.siemens.com/mvswitchgear

Siemens type SIEBREAK load-interrupter switchgear is a modular assembly of switches, fuses, and bus assemblies that are fully integrated both mechanically and electrically to provide the highest level of medium-voltage circuit protection.

Features and benefits:

- 5 kV and 15 kV voltage classes
- 600 A and 1,200 A continuous current
- Non-fused or current-limiting fused
- Indoor type 1 enclosure
- Single, duplex, and selector switch types
- Large 8" x 18" (203 mm x 457 mm) viewing window

- Hinged, grounded metal barrier in front of switch blades
- 11-gauge doors, covers, and barriers
- Silver-plated copper bus
- Provisions for key interlocking
- Mechanical door and switch interlock
- Upper and lower ventilation louvers
- Glass-polyester bus supports
- Non-corrosive nameplate
- Space heater with thermostat (optional)
- NEMA CC1 hole patterns for cable termination.
- Trained and certified local personnel in U.S. available for start-up, commissioning, and maintenance.

Optional:

- UL or C-UL Listing
- Explosion fuses or current-limiting fuses
- Indoor type 2 drip-proof enclosure
- Indoor type 12 dust-resistant enclosure
- Outdoor non-walk-in type 3R enclosure
- Motor-operated mechanism
- High-track resistance bus supports
- Auxiliary switches (2 NO-2 NC)

SIEMENS

- Fuse-monitoring system (FMS) with blown-fuse indication and blown-fuse trip
- Mimic bus
- Ground studs
- Screens and filters (indoor)
- Tin-plated copper bus.

Standard outdoor features:

- Long-life space heaters (half-voltage)
- Bottom cover plate
- Externally removable filters
- 6" (152 mm) formed steel base.

Standards:

The equipment meets or exceeds applicable standards from ANSI, IEEE, CSA, EEMAC, and NEMA.

Technical ratings

Characteristics	Unit	Voltage class							
Rated maximum voltage	kV	5.0	5.0	5.0	5.0	15.0	15.0	15.0	15.0
Rated continuous current	A	600	600	1,200	1,200	600	600	1,200	1,200
Rated lightning impulse-withstand voltage	kV peak	60	60	60	60	95	95	95	95
Momentary current (unfused) asymmetrical	rms kA	39	59	39	59	39	59	39	59
Short-time current, 2 seconds symmetrical	rms kA	25	38	25	38	25	38	25	38

Standard configuration	Single	Duplex	Selector	Lineup
Types 1, 2, 12, and 3R enclosure	•	•	•	•
36" (914 mm) wide types 1, 2, 12, and 3R	•		•	
72" (1,829 mm) wide		•		
60" (1,524 mm) wide for front-access design	•			•
2.62" (67 mm) width transition to dry-type transformer for type 3R outdoor	•	•	•	
18" (457 mm) width transition to liquid-filled transformer	•	•	•	
92" (2,337 mm) height types 1 and 12 enclosures	•	•	•	•
105" (2,667 mm) height type 3R enclosure	•	•	•	•
99" (2,515 mm) height type 2 enclosure	•	•	•	•
62" (1,575 mm) depth standard types 1, 2, and 12 enclosure	•			•
72" (1,829 mm) depth for types 1, 2, and 12 (optional)		•	•	
72" (1,829 mm) depth for type 3R enclosure	•	•	•	•
56" (1,422 mm) depth for front-access design	•			•

Legal Manufacturer

Siemens Industry, Inc.
7000 Siemens Road
Wendell, North Carolina 27591
United States of America

Telephone: +1 (800) 347-6659
usa.siemens.com/mvswitchgear

Order No. EMMS-B40045-02-4AUS
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This document contains a general description of available technical options only, and its effectiveness will be subject to specific variables including field conditions and project parameters. Siemens does not make representations, warranties, or assurances as to the accuracy or completeness of the content contained herein. Siemens reserves the right to modify the technology and product specifications in its sole discretion without advance notice.

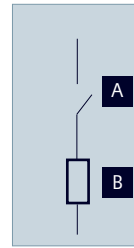
Applications:

- Standalone bay
- Transformer primary
- Lineups.

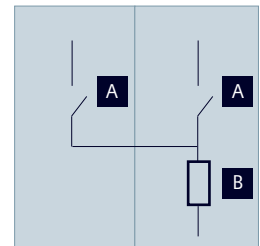
Modular configurations to mount:

- Surge arresters
- Instrument transformers
- Control power transformers
- Power meters
- Other auxiliary equipment.

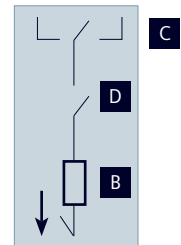
Single



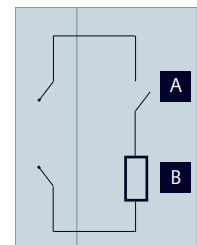
Duplex



Selector



Single front access



Item	Description
A	600 A or 1,200 A interrupter switch
B	Fuses
C	600 A no-load selector switch
D	600 A interrupter switch

GEAFOL® Cast-Resin Transformers

Environmentally friendly dry-type transformers



Discover our dry-type transformers

Cast-resin DT portfolio

- Applications:** Everywhere, however particularly where special fire security, water protection or constructive regulations are required
- Function:** to convert voltage levels in distribution networks, as generator transformer or for the operation of static converter
- Ratings:** ≤ 50 MVA
 ≤ 52 kV

Main advantages:

- Practically maintenance-free
- High overload capacity ensures high reliability
- Excellent fire behavior – flame resistant and self-extinguishing
- Environmental friendly technology, completely recyclable
- Practically no restrictions concerning place of installation
- Available for practically all standards and regulations

1) On request, we also offer dry-type transformers with copper windings, named CARECO.
February 2021

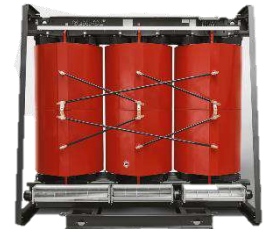
GEAFOL Neo¹⁾

- Innovative clean design
- Small dimensions and low weight
- Use almost everywhere
- up to 6,3 MVA
- up to 40,5 kV



GEAFOL¹⁾

- High efficiency → low TCO
- With off-circuit or on-load tap changer
- Compact design
- up to 50 MVA
- up to 52 kV



GEAFOL Converter Transformer¹⁾

- High short circuit withstand capability
- High overload capability
- High operational reliability
- up to 50 MVA
- up to 52 kV



Discover our dry-type transformers

Main features and customers' benefit at a glance

Safe and reliable



- High power-frequency voltage and impulse voltage strength
- Free from partial discharges up to twice the rated voltage
- Huge overload capability
- Moisture-resistant and tropicalized
- High and low temperatures

Adaptable



- Increase of rating up to 50 % by mounting of fans

Environmentally acceptable



- No liquid insulator
- Low noise level
- Flame-resistant and self-extinguishing
- Recyclable

Compact



- Small ground area requirement

Economical



- Installation at load centers permits optimum system design
 - high efficiency = cost optimization
- Simple rearrangement of power supplies when changing sites
- No special rooms or protection needed

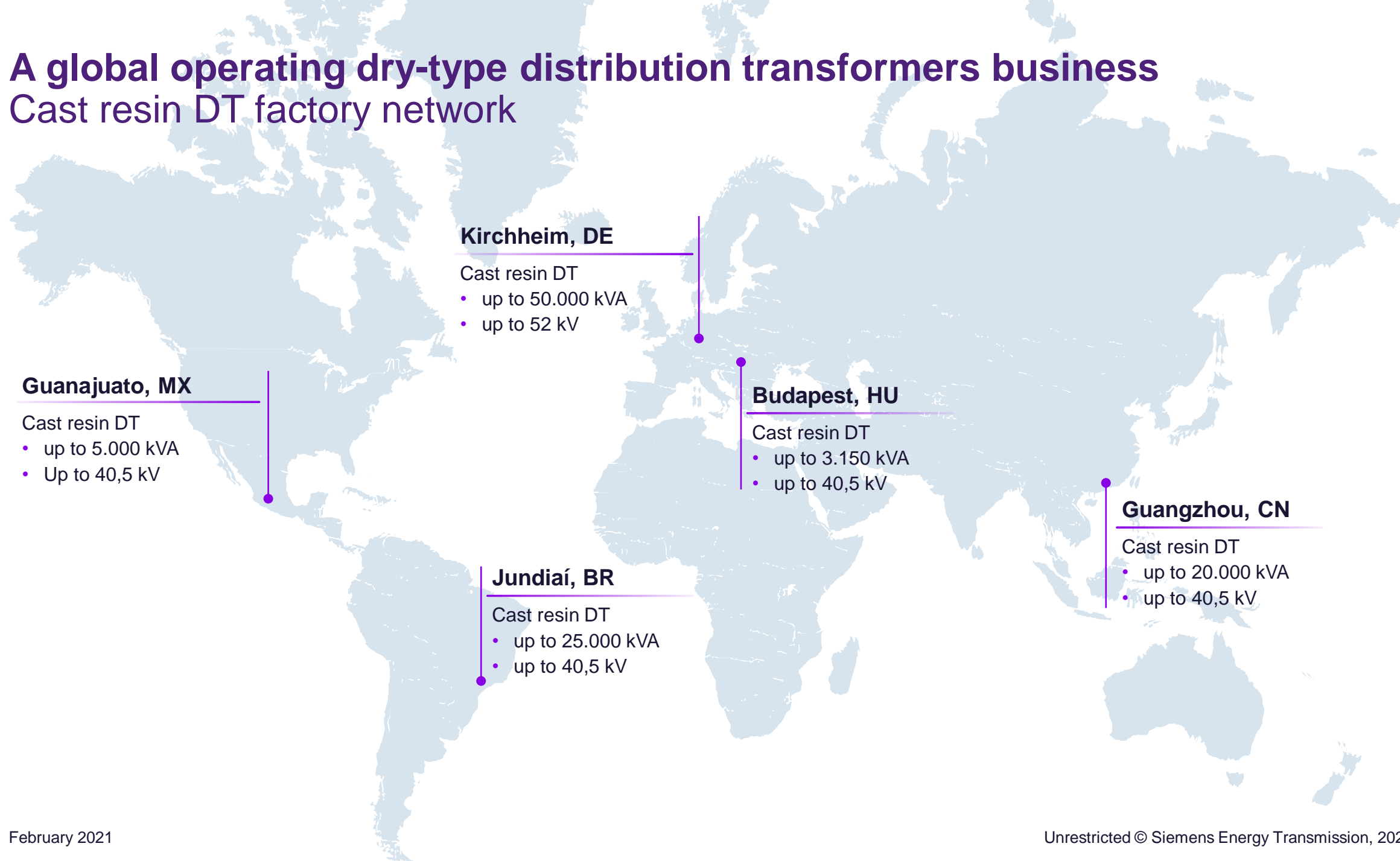
Practically maintenance-free



- No specific maintenance needed
- Only cleaning and inspection recommendation by system owners

A global operating dry-type distribution transformers business

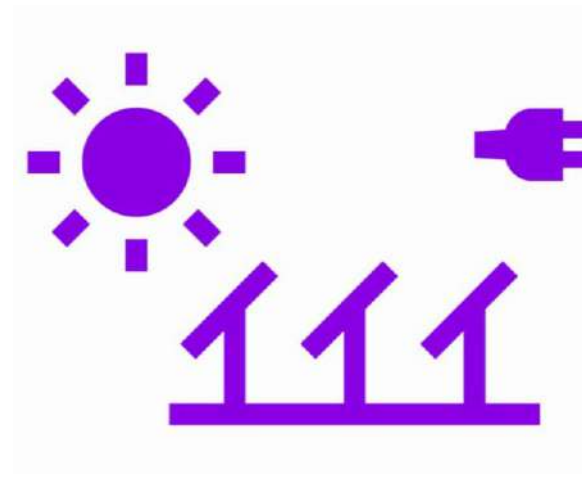
Cast resin DT factory network



Reference: GEA FOL® cast-resin transformers for photovoltaic in Brazil

Key facts

- Project: PV Plant Porteirinha I
- Customer: Mori Energia
- Destination: Minas Gerais – Brazil
- Order: FY20



Highlights

- Low losses transformers for a booming market
- Customized design for 30 plants in more than 17 cities in Brazil

Product specification

- 1000kVA 13,8/0,6kV ANAN
- 500kVA 13,8/0,6kV ANAN
- Outdoor solution IP54



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Transmission
Freyeslebenstr. 1
91058 Erlangen
Germany

For more information, please visit our website:
[siemens-energy.com](https://www.siemens-energy.com)

© Siemens Energy, 2021



www.usa.siemens.com/switchboards

Siemens Switchboards

Product Description

Siemens Industry leading switchboards provide a solution for a wide range of applications. From 400A at 120V through 6000A at 600V.

Every aspect of the design of Siemens switchboards has been aimed at improving layout convenience, reducing installation costs and minimizing the impact and cost of changes to the system.

Siemens switchboards provide a rugged design and the flexibility necessary in electrical systems for all types of applications. Some examples are:

- Commercial buildings
- Industrial plants
- Retail chain stores
- Health care facilities
- Hi-rise complexes

Standards & Certifications

- UL891
- NEMA PB-2
- Seismically qualified
- NEC
- cUL (also complies with CSA C22.2 No. 31)
- Other equipment is UL listed as applicable

Features & Benefits

- Up to 6000 ampere main bus rating
- Up to 600 volts AC
- Bus bracing up to 200KAIC
- Tin plated aluminum bus, silver plated copper bus or tin plated copper bus
- Bussing can be temperature or density rated
- Type 1 and Type 3R enclosures
- Main and branch circuit breakers and fusible switches
- Thermal magnetic and solid state circuit breakers
- ACCESS power monitoring on mains and branches
- Surge protective devices
- Utility metering provisions
- Ground fault protection on mains and distribution devices
- Busway and transformer connections

Additional Information

For complete application and pricing information contact your local sales office.

For further information on the product, visit our website at www.usa.siemens.com/switchboards.

For detailed configuration information consult the selection & application guide on the website.

Individual Switchboard Product Lines

Distribution Switchboards

Distribution switchboards (types SB1, SB2 & SB3) meet the market need for power distribution for a wide range of applications.

SB1 switchboards have been specifically designed for the shortest lead times and for applications where floor space is at a premium. SB2 switchboards have been designed to be able to incorporate additional features over an SB1. SB3 switchboards are designed for custom options to provide a solution for nearly any electrical distribution requirement.

Commercial Multi-Metering Switchboards

Commercial multi-metering switchboards (types SMM & MMS) provide a reduced footprint and installation time for projects requiring commercial metering.

These switchboards provide utility metering for multiple tenants. They are the ideal solution for shopping centers, office buildings or any other commercial metering application. Completely engineered and assembled, Siemens commercial multi metering switchboards require minimal time and cost for installation. These switchboards are specifically designed to meet the unique requirements of any local utility.

Stock Switchboards

Stock switchboards (types Blue Pennant, BCT & SCT) provide pre-packaged service entrance equipment.

These switchboards are stocked at Siemens distribution centers and are available for immediate delivery to match the needs of the construction market. Stock switchboards are suitable for service entrance equipment and combine utility metering provisions with a main disconnect

Integrated Power Systems

Integrated Power Systems (type IPS) switchboards integrate electrical equipment that's typically mounted in separate enclosures into a single assembly.

The IPS switchboard design results in a large reduction in footprint in an electrical room. In addition to a reduced footprint, factory installed wiring significantly reduces installation time and cost.

Gen Ready Switchboards™

Gen Ready quick connect switchboards meet the market need of quick connection of a generator for temporary back-up power.

These switchboards incorporate Crouse Hinds Cam Loks® for quick connection of generator to a normal switchboard. The most common application of these switchboards are retail stores with perishable items, nursing homes and hospitals. However, these types of switchboards should be applied in any application that is sensitive to power outages.

Rear Connection Switchboards

Rear connected switchboards (type RCS) individually mount main and feeder devices.

Due to this method of mounting, access to outgoing cable terminations must be from the rear of the switchboard. When many large feeder breakers are required, the RCS switchboard design significantly reduces the footprint of the equipment.

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Building Technologies Division
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Norcross, GA 30092

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info.us@siemens.com

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RTSCD

Commercial Duty Transfer Switches 260A - 400A

Product Description

Russelectric® RTSCD Automatic Transfer Switches utilize Ultra Modern Designs and deliver Russelectric's reputation for reliability and ease of operation.

Typical Applications

- Commercial buildings
- Educational campuses
- High-rise complexes
- Industrial plants
- Manufacturing facilities

Standards & Certifications

- UL1008 up to 480 VAC
- NFPA 110
- NEC Articles 700, 701, 702
- Enclosure UL Type 1
- Seismic Standards: IBC 2018
CBC2019

Key Features

- Available in 2, 3 & 4 Pole with solid or fully rated switched neutral
- User friendly, intuitive keypad and display with both icons and word markings
- Historical event log standard
- Front Connected
- Rapid and reliable arc quenching
- Manual Transfer with rapid arc interruption and permanently affixed handle
- Quick-Break, Quick-Make high speed preloaded, over-center transfer
- Double throw, mechanically held contactor mechanism
- Contacts easily accessible for fast contact inspection
- Flame retardant SIS switchboard type wiring

Optional Accessories

- PM – Power Monitoring Package (PM)
- AP1 - Auto/Load Test Key Switch and Load Shed Relay (XK1, LSR)
- AP2 – Selector Switch for Auto/Manual, Pushbuttons for Manual Transfer (XK12, XP12, XP13)
- Space Heater / Thermostat

The RTSCD line of transfer switches deliver Russelectric's legendary reputation for quality and reliability in a Commercial Duty switch.

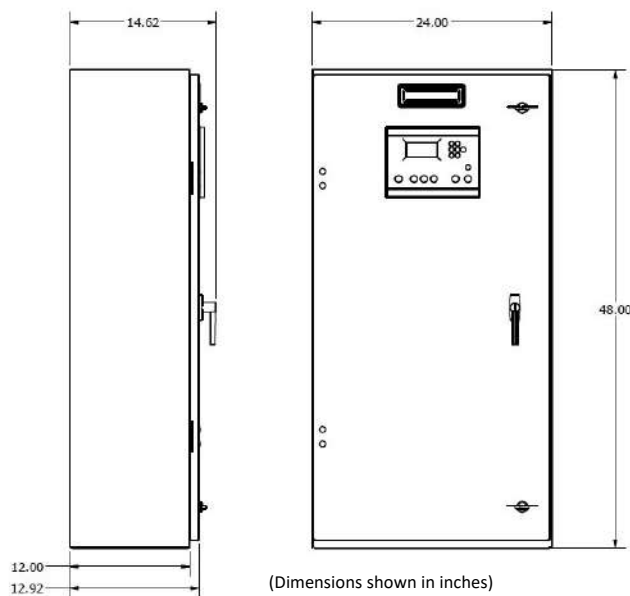
The RTSCD has a user friendly operator interface panel (O.I.P.), which utilizes softkeys and intuitive operation. Like all Russelectric transfer switches, the RTSCD features preloaded springs and an electric operator-driven over-center mechanism for extremely quick switching operations. This unique ATS design instantaneously opens and closes the ATS contacts and provides for rapid full arc interruption, even under maximum voltage and amperage. This considerably reduces contact erosion and effectively increases the switch's useful life.

A manual operator is permanently fixed to the ATS switching chassis.

Model Numbering System for RTSCD Transfer Switches																							
Model	Operation Type		Switch Type		Operator		Current Rating	Poles	Voltage		Terminal Type		Enclosure Type		Enclosure Rating	PM Power Mtr.		API XK1, Load Shed		AP2 XK12, XP12, XP13		Space Heater/Thermostat	
RTSCD	A	Automatic	T	Transfer Switch	A	LV Open Transition	260	2	A	277/480	M	Mechanical	W	Wall Mount	1	X	N	X	N	X	N	X	N
							400	3	B	480						M	Y	1	Y	2	Y	3	Y
								4	C	120/208													
									D	208													
									E	120/240													
									F	240													
									K	120													
									P	220/380	50 HZ												
									Q	380													

Example: RTSCD-ATA2603AMW1XXXX - Open Transition, 260A, 3 Pole with Solid Neutral, 480/277V, No Accessories

Short Circuit Closing and Withstand Ratings Specific Circuit Breaker Manufacturers				
Short-circuit current (kA)	Max. Voltage (VAC)	Manufacturer	Type	Max. current Rating 1.5 cycle
65	480	Siemens	3VA5	250
65	480	Siemens	3VA6	250
50	480	Siemens	3VA6	400
50	480	Siemens	3VA6	600
65	480	Schneider Electric	NSX	400
100	480	Schneider Electric	JJ	250
100	480	Schneider Electric	JL	250
100	480	Schneider Electric	JR	250
65	480	ABB (GE)	SFL	250
100	240	GE	SFL	250
50	480	Eaton	LGH	400
Short Circuit Closing and Withstand Ratings When Protected by Current Limiting Fuses				
Short-circuit current (kA)	Max. Voltage (VAC)	Fuse Class	Rating (Amperes)	
100	480	J	600	
Mechanical Lug Sizing				
(1) 4-600MCM or (2) 1/0 – 250MCM				



Approximate Shipping Weights Type 1 Wall-mounted Enclosed	
260a, 3 pole	187lbs.
260a, 4 pole	205lbs.
400a, 3 pole	208lbs.
400a, 4 pole	215lbs.

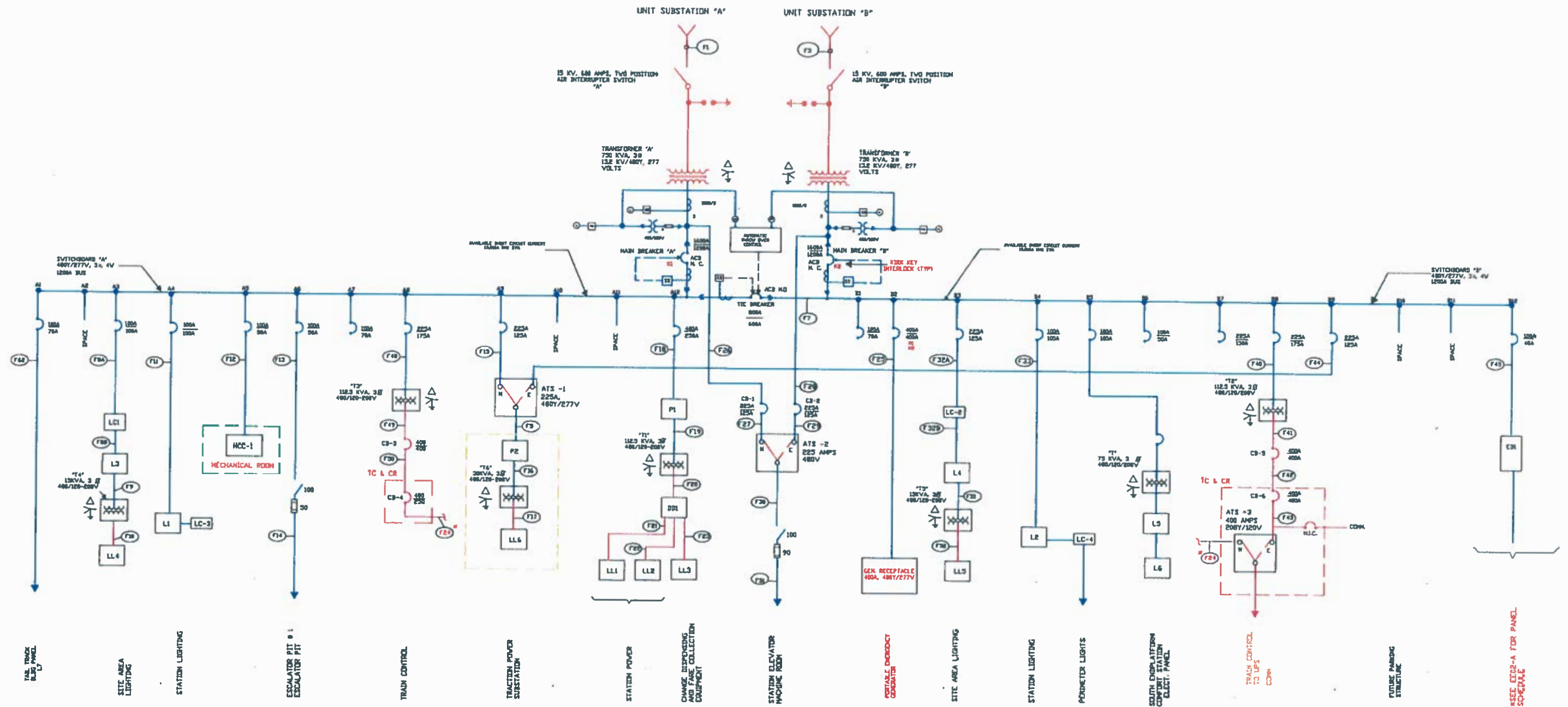
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Rev. 5/21/2020

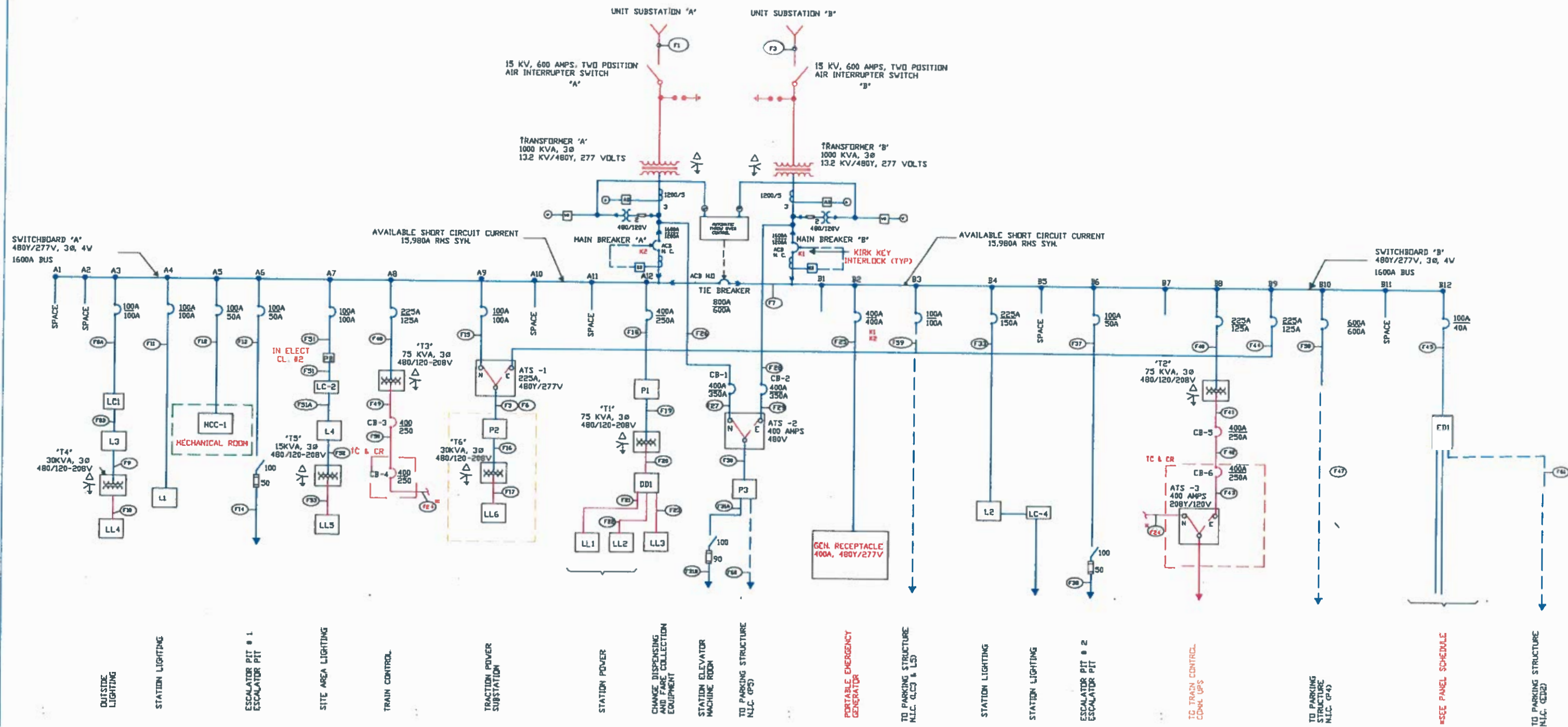
11.0 USS ONE LINE DIAGRAMS

FROM 15 KV SWITCHGEAR
IN TRACTION POWER SUBSTATION
(Maximum available short circuit = 5000va symmetrical)



13.2 KV
480V
120-208V

FROM 15 KV SWITCHGEAR
IN TRACTION POWER SUBSTATION
Maximum available short circuit: 500MVA symmetrical



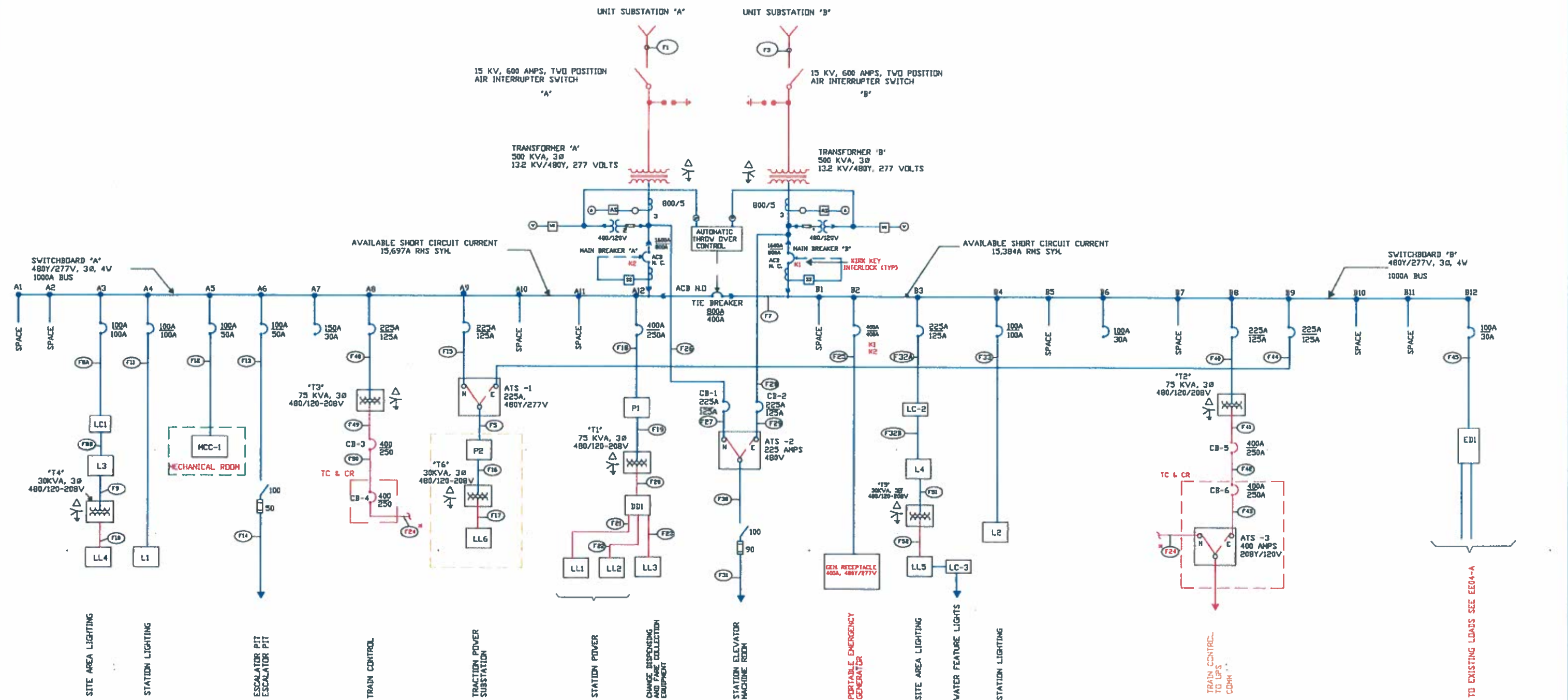
— 13.2 KV
— 480V
— 120-208V

MIAMI DADE TRANSIT		POWER SYSTEM ONE LINE DIAGRAM		
SIZE 24 x 36	FROM NO. EE03	DWG NO. A. G. ALONSO	REV 2/1	REV 2/1
Scale N.T.S.		LOCATION DAELAND NORTH STATION		



MIAMI DADE TRANSIT			UPS POWER SYSTEM ONE LINE DIAGRAM		
SIZE 24 x 36	FROM NO.	DWG NO. EE02-1	REDRAWN BY: A. G. ALONSO	REV 2/28	
Scale N.T.S	LOCATION SOUTH MIAMI STATION			Sheet S-356-20	

FROM 15 KV SWITCHGEAR
IN TRACTION POWER SUBSTATION
(Maximum available short circuit : 500mva symmetrical)

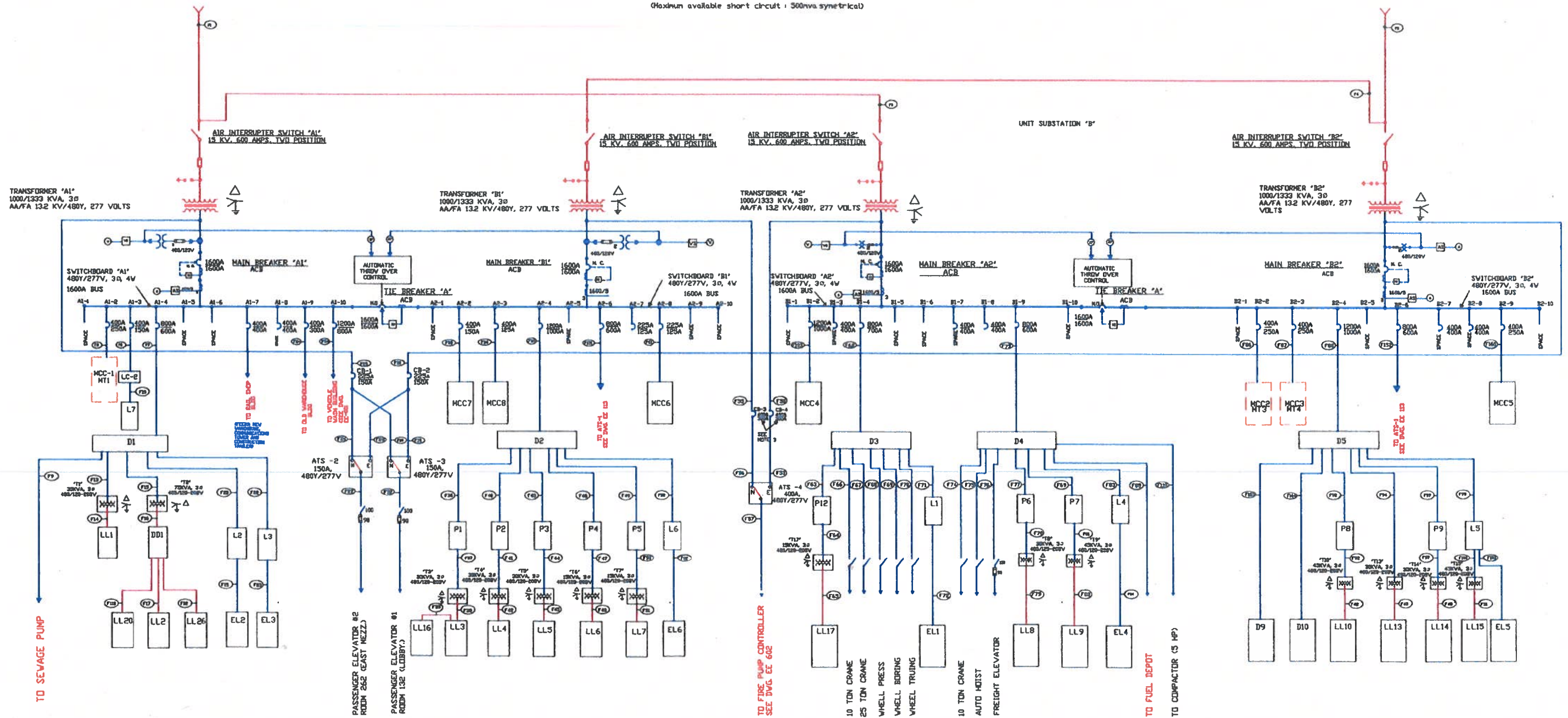


— 13.2 KV
— 480V
— 120-208V

MIAMI DADE TRANSIT		POWER SYSTEM ONE LINE DIAGRAM			
SIZE 24 x 36	FIG. NO. EE04	DWG. NO. EE04	REDRAWN BY: A. G. ALONSO	REV 3/05/04	
Scale N.T.S.	LOCATION UNIVERSITY STATION	S-346-273			

FROM 15 KV SWITCHGEAR IN TRACTION POWER SUBSTATION

(Maximum available short circuit: 5000va symmetrical)



NOTE.

1. FOR DRY TYPE TRANSFORMERS AND AUTOMATIC TRANSFER SWITCH SCHEDULES SEE DWG. EE 195
2. CB-3 & CB-4 MAG BREAKERS SET AT THE NEXT HIGHER STANDARD RATING ABOVE THE LOCKED ROTOR CURRENT

BREAKER INTERRUPTING RATING
MAIN BREAKERS: 1600A-50,000 AIC SYM.

FEEDER BREAKERS:
100A - 25,000 AIC SYM.
225A - 30,000 AIC SYM.
400A - 30,000 AIC SYM.
600A - 30,000 AIC SYM.
800A - 30,000 AIC SYM.
1200A - 30,000 AIC SYM.

MIAMI DADE TRANSIT				POWER SYSTEM	
				ONE LINE DIAGRAM	
SIZE	FROM NO.	DWG NO.	REV.		
24 x 36		EE03			
Scale N.T.S.	LOCATION	WILLIAM LEHMAN		Sheet	Y-241-268

12.0 USS Typical Layout photos













END OF SECTION

SECTION 01 14 00

SITE AND WORK RESTRICTIONS

1.01 DESCRIPTION:

- A. This section includes specifications for the general requirements and procedures for access to the various areas within the site to perform the required construction operations to complete the facilities as depicted in the Contract documents. The Contractor is to coordinate through DTPW on access and coordination issues.

2.01 SUBMITTAL REQUIREMENTS:

- A. The construction schedule for the project needs to take the restrictions described herein into account for the planning of the work. The schedule of work activities needs to take into account the site and work restrictions identified herein demonstrating the sequencing of the work so as not to impact the Contract duration due to the site and work restrictions presented herein.
- B. The Contractor shall submit any required notice, request for access and any other procedural documents, as contained herein or referenced herein per the minimum lead times indicated in these procedures.
- C. Contractor is to ensure that municipalities are properly informed of all work contemplated within their jurisdictions by preparing and submitting all necessary documents and permits to work within their right of way .

1. Definitions:

- a. *Engineer-of-Record (EOR)* – The engineering design firm and all designated representatives who were involved in the preparation of all the Contract Documents.

2. Authority:

The safety of Bus patrons and property shall be a primary consideration during the prosecution of the work. Therefore, any direction given by the duly designated DTPW representative regarding train traffic or train safety shall be considered final and is to be followed immediately. If the Contractor has an objection to the request, the Contractor shall obey the request and subsequently seek relief under the applicable Contract Sections.

3. Delays in Vacating Premises:

It is absolutely essential that work operations not be disrupted. All Contractor personnel (including suppliers, sub-contractors, vendors, etc.) shall cease work within

thirty (30) minutes after receipt of directions by the EOR and/or DTPW authorized representative.

4. Special Events:

Certain special events require extended and/or more frequent service (football games, concerts, etc...) and may force work to revise the revenue service schedule and time constraints heretofore cited in this section. The Contractor shall expect and plan for these special events and reflect the impact of these special events in the project schedule and phasing plan.

5. Work Conditions and Access Requirements:

Access to any given site must be accompanied by proper documentation permits and paid fees. This request shall also include written details, including but not limited to, placement of cranes, materials, form work, personnel, and equipment; the sequence and timing of the work, and any other factor which may be construed by the DTPW representative to affect transit safety or revenue service.

6. Special work Protection:

Any work under and/or near the Bus stop , which could potentially cause damage or in any way endanger the safety of the Metro Bus patrons or the public, at the sole discretion of work, shall require protection such as barriers, nets, tarps, plywood, etc.... The Special work Protection must reflect the Contractors work activities and shall be designed by a Professional Engineer and submitted to work for approval. A minimum of six (6) weeks prior to performing any such work, the Contractor shall present this plan for the Special work Protection to work for approval.

7. Access to Controlled Areas: N/A

Contractor access to areas requiring track allocation is prohibited unless prior approval is granted by the DTPW representative.

8. Foreign Objects on Existing Guideway:

At no time will the Contractor be allowed to throw or discard any objects, construction materials, debris, scaffolds, etc... onto the Guideway. Appropriate measures will be employed by the Contractor to insure that the

9. End of Day Inspections and Other Inspections of Site work :

The Contractor with the DTPW representative shall on a daily basis, conduct an inspection of the active site work after completion of work and immediately remove any foreign objects. No materials, attachments, anchorage systems, formwork or obstructions will be allowed to be left scattered or not cleaned. Contractor is

responsible to maintain a clean and organize construction area. Prior to any hurricanes or other major storms, the Contractor and DTPW shall inspect the Contractor's work site and the Contractor shall immediately secure any materials that in the sole opinion of work may pose a danger to Metro Bus and/or facilities.

10. Emergencies:

Notwithstanding any of the above, in the event of an emergency, the Contractor maybe instructed to vacate the work area by either the EOR and/or the DTPW representative. Any such direction shall require immediate action by the Contractor. Prior to vacating the work area, the Contractor shall clear the work area of all materials, equipment, etc... at the discretion of either the EOR and/or the DTPW representative.

11. Work Restrictions:

The contractor must attend the weekly DTPW Track Allocation meeting and submit his schedule to work on the platform level, minimum one week prior to the work being performed. The contractor will only be allowed to work on the platform during non-revenue hours (1:00 AM to 3:30 AM). The contractor can request to work outside these hours at the DTPW Track Allocation meeting for approval. The contractor will be allowed to work outside the platform area during off-peak-hours (9:30 AM to 3:00 PM or 7:00 PM to 6:00 AM).

The DC Switchgear Upgrade will be performed in one Traction Power Substation at a time starting at the Gap Tie 1 Substation and working south. The substation being upgraded shall be completed, certify, and placed back in service before moving to the next substation.

All Fiber Optic installation in the cable trays on the Metrorail Rail Guideway shall be performed during non-revenue hours or on weekends if approved by DTPW at the Track Allocation weekly meeting committee.

All Fiber Optic splicing and terminations in the Communications Equipment Racks shall be performed during non-revenue hours

DTPW forces shall provide suitable access and room inside the substation being upgraded for temporary storage and staging of the works.

DTPW forces shall de-energized the existing equipment by disconnecting the feeder cables of all the substation breakers from the 3rd Rail Potheads and turn off all of the Control Power to the Switchgear so that the switchgear and feeder cables are entirely de-energized before turning the substation over to the contractor.

DTPW forces shall remove the disconnected equipment from the substation for reuse of parts and disposal.

DTPW shall provide wiring diagrams for nearest terminal block for remote control and metering.

DTPW forces shall reconnect all 3rd Rail feeder cables once work is completed at the substation.

The Contractor must be escorted by DTPW Personnel when working on DTPW property. It is the Contractors responsibility to request the DTPW Escort 48 hours in advance (not including weekends) to assure availability. Work in non-public areas of the stations will be performed from 6:00 a.m. to 2:00 p.m. (1st Shift), 2:00 p.m. to 10:00 p.m. (2nd Shift), or 10:00 p.m. to 6:00 a.m. (3rd Shift). Work in the public areas of the stations shall not be performed during peak hours (normally 6am to 9am and 3pm to 6:30pm). Peak hours may change due to special circumstances. Work areas shall be segregated using appropriate barriers in order to comply with DTPW's working practices and to minimize DTPW's Patrons' inconvenience and maximize safety. If access to the Metrorail guideway is required for any part of the work, such work must be scheduled in advance through DTPW's Track Allocation meeting and performed as agreed upon at the meeting. Work on the Metrorail guideway is normally performed only between the hours of 11pm and 3am.

END OF SECTION

SITE AND WORK RESTRICTIONS

SECTION 01 21 00

ALLOWANCES

PART 1: GENERAL

1.01 DESCRIPTION:

This section specifies allowances to be used in the Contract.

2.01 ALLOWANCE ACCOUNT FOR UNFORESEEN CHANGES:

An Allowance Account has been established for the purpose of funding portions of the work which are unforeseeable at the time of execution of the Agreement, or for special work deemed desirable by the County to be incorporated into the Agreement.

3.01 PAYMENT:

- A. Unforeseen changes will be paid from the Allowance Account for Unforeseen Changes.
- B. Any unused portion of the allowance shall not be billed to work.

END OF SECTION

SECTION 01 26 13

REQUEST FOR INFORMATION (RFI)

1.01 DESCRIPTION:

- A. This section covers Request for Information (RFI) from the Contractor. RFI in this section is defined as: the solicitation by the Contractor for clarifications, interpretations, verifications and/or corrections of the Contract Documents.
- B. The Contractor shall comply with this section for all such requests for information. All costs incurred by the Contractor in preparing these requests shall be borne by the Contractor and are part of this Contract.
- C. Any delays or impacts caused by the Contractor's failure to conform to the requirements of this section shall be solely the Contractor's responsibility and shall not be cause for any time extension and/or additional compensation.

1.02 REQUEST FOR INFORMATION REQUIREMENTS:

- A. The Contractor is responsible for reviewing all Contract Documents related to a particular work product well in advance of the performance of such work in accordance with this contract. This review shall be planned to allow sufficient time to obtain resolution of any required RFI, as defined in this section.
- B. All RFI's shall be submitted to the DTPW representative and the Engineer-of-Record (EOR) in the format within this section or in a pre-approved format equivalent to this section inclusive of the following information:

RFI's shall be signed by the Contractor's project manager or by a designated alternate and include the following:

- 1. Date Submitted
- 2. Contract Number and Title
- 3. Contractor Name, Address and Phone Numbers
- 4. Description of the request, including any supportive drawings, sketches and/or additional information deemed necessary for clarification.
- 5. List of schedule activities which may be impacted by the request and a brief explanation as to why there would be a schedule impact and specific date constraints.
- 6. Clear description of what response the Contractor is expecting and from who the response who come from.

2.01 RFI PROCESSING PROCEDURES:

- A. Upon receipt of the RFI, the EOR shall promptly date stamp the request. The EOR is required to keep a log of all RFI's including receipt date and date returned to the Contractor.
- B. The EOR shall review the request to determine if further information is required from the Contractor, once the RFI is resubmitted by the Contractor, the RFI shall be re-stamped. The EOR will coordinate a response and transmit the answer to the RFI to the Contractor and send a copy to the DTPW representative.

3.01 TIME ALLOWED FOR PROCESSING RFI's:

- A. Although every attempt will be made to expeditiously resolve all RFIs, DTPW and the EOR shall have ten (10) working days in order to respond to the RFI, from the date the RFI is received by the EOR, including all necessary information needed to formulate a response. Failure by the Contractor to allow sufficient time for work to formulate a response to an RFI, as specified in this section, shall not constitute grounds for a delay claim from the Contractor.

4.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

5.01 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION



REQUEST FOR INFORMATION

DATE: _____

RFI No.: _____

CONTRACT No. _____

CONTRACT TITLE: _____

CONTRACTOR: _____

DESCRIPTION OF REQUEST: (ATTACH ADDITIONAL SHEETS AS REQUIRED)

DRAWING No. _____

SPEC. REFERENCE: _____

CPM ACTIVITIES OF POTENTIAL IMPACT AND TIME CONSTRAINTS:

SUBMITTED BY: _____

*(CONTRACTOR / PROJECT MANAGER)

DATE

REVIEWED BY: _____

TITLE

DATE

DATE RETURNED TO CONTRACTOR: _____

*CONTRACTOR'S SIGNATURE AFFIRMS THAT CONTRACTOR HAS REVIEWED THE CONTRACT DOCUMENTS AND THAT THE INFORMATION REQUESTED CANNOT BE OBTAINED FROM SUCH A REVIEW.

SECTION 01 31 19

PROJECT MEETINGS

1.01 DESCRIPTION:

- A. This Section includes specifications for project meetings. The Contractor, along with Contractor's superintendent, project manager, superintendents of major sub-contractors, and on-site safety representative, as a minimum, shall attend meetings scheduled by DTPW and EOR.

2.01 SPECIAL MEETINGS:

- A. Special meetings between DTPW, EOR and the Contractor will be scheduled and conducted by DTPW throughout the course of construction as deemed necessary by DTPW and/or EOR.

3.01 PRECONSTRUCTION MEETING:

- A. A pre-construction meeting will be scheduled and conducted by DTPW not more than five (5) working days after the effective date of the Notice to Proceed (NTP). Contractor's project manager, superintendent, safety representative, quality control supervisor, EEO officer, sub-contractor representatives shall attend the pre-construction meeting. DTPW will provide Contractor written notice of this meeting not less than five (5) working days prior to the date of the meeting.
- B. DTPW will discuss the following at this meeting:
 - 1. Introduce representatives of work, governmental agencies, public and private utilities.
 - 2. Explain and discuss the responsibilities and authorities of DTPW, EOR and contractor.
 - 3. Discuss Equal Employment Opportunity (EEO), Disadvantaged Business Enterprise (DBE), and affirmative action requirements along with the community relations functions. Work will be handling all of the community relations functions with coordination from the Contractor and EOR as needed.
 - 4. Discuss Contractor's construction control requirements.
 - 5. Define and establish requirements for safety, first aid, emergency actions, security, and full-time safety representatives.

6. Explain and discuss selected laws, codes, traffic regulations, and permit requirements of public agencies and their regulations.
 7. Discuss procedures for processing change notices, change orders, correspondence documents, RFI's, shop drawing submittals, product data, and samples.
 8. Discuss monthly progress payment procedures.
 9. Discuss final payment procedures.
 10. Discuss proposed project schedule.
- C. The Contractor shall discuss the following at this meeting:
1. Introduce Contractor's representatives, and briefly describe each person's responsibilities.
 2. Distribute and discuss the list identifying Small Business and Disadvantaged Business Enterprises (SBE and DBE) sub-contractors including their areas of responsibility.
 3. Discuss use of office, streets, right-of-way, haul routes, storage areas, staging areas, construction areas, and temporary easements.
 4. Define housekeeping procedures.
 5. Discuss construction means and methods.
 6. Describe general worksite layout, erosion and sedimentation control plans, haul routes, noise abatement, air and water pollution control, temporary street closings, and street restoration.
 7. Discuss coordination and notifications required for utility work and services.
 8. Discuss deliveries and priorities of major equipment mobilization.
 9. Discuss breakdown of schedule of values for lump sum items.
 10. Discuss construction project schedule.
 11. Discuss public safety measures.

4.01 CONSTRUCTION PROGRESS MEETINGS:

- A. Construction progress meetings will be scheduled and conducted by DTPW and EOR and held each week during the period of performance of the Contract for the competent and timely execution of the Contract. Progress meetings shall include representatives of sub-contractors who are or will be performing work during the current and following month.
- B. The Contractor shall distribute notices of these meetings prior to date to all sub-contractors.
- C. The agenda for construction progress meetings will be prepared by the work and will generally include the following:
 - 1. Introduce new attendees and areas of responsibility.
 - 2. Review minutes of previous meetings, amend minutes if necessary, and accept minutes.
 - 3. At the first meeting of each month, analyze work accomplished since previous meeting, offsite fabrication problems, product delivery problems, submitted schedule slippages, proposed changes, and circumstances that might affect progress of work.
 - 4. At each meeting, display and discuss the status of the critical path activities. If they are behind schedule describe the methods intended to be used to bring these activities back on schedule. Discuss corrective measures to maintain progress.
 - 5. Discuss work quality observations, problems, and employee work standards.
 - 6. Discuss coordination of utility work.
 - 7. Discuss work by outside parties.
 - 8. Discuss changed conditions, time extensions, and other relevant subjects as they affect the progress of the work.
 - 9. Discuss the status of Contract changes: new changes, status of negotiations and completed changes.
 - 10. Discuss SBE and DBE issues.
 - 11. Each of the Contractor's inquiries, requests for information or requests for solutions of problems presented during such meetings shall be answered,

when possible, during the meeting; those not answered during the meeting will be answered by the appropriate party at least by the date of the next meeting. Answers provided orally at the meetings shall be recorded in the minutes.

12. All parties shall review the minutes of the meetings prepared by EOR and submit any requested corrections. Minutes will be prepared in action-item format with named responsible parties and dates for required completion indicated for each item.

5.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

6.01 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 32 16

PROJECT SCHEDULE

1.01 DESCRIPTION:

- A. This section covers the preparation of a schedule in the Cost Loaded Construction in the Critical Path Method (CPM). The Contractor will be allowed to use his preferred scheduling system, if approved by DTPW. If the Contractor wishes to propose his own system, he shall so request prior to the required submittal time tables listed in this section.
- B. Final Schedule:
 - 1. A bar chart schedule shall be used by the Contractor to control the progress and time fixed for completion of this project. This system shall be implemented by the Contractor. Prior to approval of the final construction schedule, the Contractor shall provide work with letters from all his sub-contractors and suppliers indicating that they have reviewed the Contractor's schedule and concur with the sequence of events, activity durations and rates of production implied therein.
 - 2. All work shall be done in accordance with the schedule and all costs incurred by the Contractor to correctly implement the schedule shall be borne by the Contractor and are a part of his Contract.
 - 3. The schedule must be updated monthly and submitted with the Contractor's pay request. No payment will be made to the Contractor unless this monthly updated schedule and progress report is submitted with the Contractor's pay request. Even if no invoice is submitted in a particular month, the Contractor shall submit monthly schedule updates and progress reports to the satisfaction of work.

2.01 PREPARATION OF FINAL SCHEDULE:

- A. Within five (5) working days after the date of Notice to Proceed (NTP), such as FP the Contractor shall develop and submit a comprehensive and detailed final schedule. Work performed prior to NTP shall not be allowed under this Contract.
- B. When completed, the bar chart diagram shall represent the Contractor's own plan for the project as well as the sequence of each operation and all the involved parties. The schedule shall also identify the project's critical path. It shall be the responsibility of the Contractor to ensure that all of this work is described by the diagram and that the diagram does correctly represent the sequence in which he plans to do his work and the time in which he expects to do it.
- C. As a minimum, the final schedule will cover the following areas:

1. Shop drawing preparation, review and approval
 2. Procurement of major equipment or material
 3. Permit acquisition activities
 4. Material samples
 5. Material delivery
 6. All major work elements
 7. Punch list activities
 8. Rates of Production
 9. Submittals
 10. Work Elements by other &L, AT&T, etc...
- D. The final schedule will be printed on a 11" x 17" sheet suitable for reproduction. The Contractor will submit three (3) copies of this schedule.
- E. A written narrative on separate 8 1/2" x 11" sheets will be included with the Contractor's final schedule. This narrative will describe the Contractor's general approach for performing the work and any additional or unusual requirements not clearly represented in the schedule including, but not limited to, equipment to be used and the time equipment is to be on-site, anticipated delivery dates for material and/or equipment, crews and crew sizes, estimated quantities and rates of production. The narrative shall explain the basis for the Contractor's determination of durations for major work items and describe his approach for meeting the interim and final completion dates in his schedule. The narrative shall also address workdays per week, hours per shift, rain days, holidays or any other non-work periods that the Contractor is assuming in the planning of the work. Activities which may be expedited by the use of overtime or additional shifts shall be identified. Sequencing and other restraints such as manpower, material or equipment shall be identified and explained.
- F. When completed, the final schedule shall be submitted to work for their approval. The Contractor shall incorporate work schedule review comments within ten (10) working days after receipt. DTPW shall be the final authority in deciding the acceptability of the schedule. Upon approval work, this shall become the Final Schedule for the Contract. No deviations from the final schedule will be allowed without the prior written approval of DTPW.
- G. The Contractor shall identify all available float or slack time in his schedule in a format suitable to DTPW. Float or slack time is not for the exclusive use or benefit of either the Contractor or work. Float or slack time is considered project float as it is for the benefit of both parties. As such, it is not to be used exclusively by either party, but is to be used by the party that needs it first. No more than 15% to 25% of the activities in the Contractor's

schedule may be on or near the critical path ("Near the critical path" is defined as any activity having float of ten (10) days or less).

3.01 MONTHLY SCHEDULE UPDATES:

- A. The Contractor shall submit monthly schedule updates to show progress, as applicable, on all activities in progress. Such progress shall be shown in a format suitable to DTPW. Three (3) 11" X 17" copies of the updated schedule shall be submitted by the Contractor.
- B. The Contractor shall submit an updated narrative in the form of monthly progress reports in a format acceptable to work. Such reports shall include sections for describing "progress this period", "planned progress for next period", "problems and solutions" (including a listing of all delayed activities, the reasons for delay and proposed recovery actions) and "changes since last period". Any special concerns and or questions regarding the schedule should also be included in the progress report. Information included in the updated narrative will not relieve the Contractor of the notice requirements contained in the Contract documents. As applicable, signed material delivery tickets indicating when material was delivered on-site or to the fabrication plant will be provided with the narrative on a monthly basis.
- C. The Contractor shall submit on a weekly basis a simplified two-week look-ahead bar chart schedule showing all anticipated work scheduled to take place during the next fourteen (14) calendar days. This two-week look-ahead schedule shall be based on the approved baseline schedule.

4.01 PAY REQUESTS:

- A. The Contractor's pay request shall be based on completed activities and shall include an update of the final schedule. The Contractor will not be eligible to receive payment until his Contract baseline schedule and schedule of values is approved and no payment will be made to the Contractor unless this schedule update and schedule of values is submitted with the pay request.
- B. 10% of each Contractor's pay request amount will be held as retainage.
- C. All Contractor pay requests will be submitted in a form suitable to DTPW based on the approved schedule of values under the contract.
- D. No payment will be made to the Contractor for uncompleted activities.

5.01 MEASUREMENT AND PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

BASELINE NARRATIVE FORM FOR BAR CHART SCHEDULES

Contract Title: _____

Contract No.: _____

Contractor: _____

Baseline and/or Update No.: _____

1. Contractor's general approach for completing the work:

Including but not limited to any additional or unusual requirements not clearly represented in the schedule, the basis for the Contractor's determination of durations for major work items and his approach for meeting the interim and final completion dates in his schedule.

Use additional sheets if necessary.

2. Equipment to be used:

Including time that the equipment is to be on-site. Use additional sheets if necessary.

BASELINE NARRATIVE FORM FOR BAR CHART SCHEDULES

Contract Title: _____

Contract No.: _____

Contractor: _____

Baseline and/or Update No.: _____

3. Anticipated delivery dates for material/equipment:

Use additional sheets if necessary.

4. Crews and Crew Sizes:

Use additional sheets if necessary.

5. Rates of Production and Estimated Quantities:

Use additional sheets if necessary.

BASELINE NARRATIVE FORM FOR BAR CHART SCHEDULES

Contract Title: _____

Contract No.: _____

Contractor: _____

Baseline and/or Update No.: _____

6. Work Days per week/Hours per Shift:

Use additional sheets if necessary.

7. Non-work Periods assumed in the planning of the work:

Including holidays, rain days and any other non-work period assumed by the Contractor.

Use additional sheets if necessary.

8. Activities which may be expedited by the use of overtime or additional shifts:

Use additional sheets if necessary.

BASELINE NARRATIVE FORM FOR BAR CHART SCHEDULES

Contract Title: _____

Contract No.: _____

Contractor: _____

Baseline and/or Update No.: _____

9. Sequencing and other restraints affecting the work:

Including manpower, material and equipment restraints. Use additional sheets if necessary.

MONTHLY SCHEDULE UPDATE NARRATIVE FORM FOR BAR CHART
SCHEDULES

Contract Title: _____

Contract No.: _____

Contractor: _____

Baseline and/or Update No.: _____

1. Progress This Period:

Including all activities started, completed or in progress and signed material delivery tickets indicating when material was delivered on-site or to the fabrication plant as applicable.

Use additional sheets if necessary.

2. **Planned Progress for Next Period:**

Use additional sheets if necessary.

MONTHLY SCHEDULE UPDATE NARRATIVE FORM FOR BAR CHART
SCHEDULES

Contract Title: _____

Contract No.: _____

Contractor: _____

Baseline and/or Update No.: _____

ii. **Problems and Solutions:**

Including a listing of all delayed activities, the reasons for delay and proposed recovery actions. Use additional sheets if necessary.

- iii. **Changes Since Last Period:**
Use additional sheets if necessary.

MONTHLY SCHEDULE UPDATE NARRATIVE FORM FOR BAR CHART
SCHEDULES

Contract Title: _____

Contract No.: _____

Contractor: _____

Baseline and/or Update No.: _____

- iv. **Special Concerns and/or Questions regarding the Schedule:**
Use additional sheets if necessary.

END OF SECTION

SECTION 01 33 00

SUBMITTALS SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1.01 DESCRIPTION:

- A. This section includes specifications for the general requirements and procedures for preparing and submitting design and construction information and data for information and review. Other requirements for submittals are specified under applicable sections of the Contract Documents.
- B. General requirements for submittals are detailed in this section. Schedule of Submittals: Within ten (10) days after the effective date of Notice to Proceed (NTP), the Contractor shall submit a completed submittal schedule and list of products for all items requiring the Engineer-of-Record's (EOR) review and approval, as follows:

1.02 QUALITY CONTROL:

- A. Contractor shall utilize a work-approved quality assurance program to oversee the work of the contract and to ensure delivery of all final products in accordance with section 01 43 00.
- B. Prepare shop drawings and record documents to a high standard of quality, such as set forth in DOD-STD-100, ANSI Y14 series, or other relevant lower-tier specification defining equal drafting quality.
- C. Reference standards: American National Standards Institute (ANSI) ANSI Y14 Series American Drafting Standards.

1.03 SUBMITTALS (CDRL):

- A. Shop Drawings: Fabrication or layout drawings required by individual Technical Provisions - Systems sections for permanent incorporation in the Work.
- B. Working Drawings: This refers to the Contractor's plan for temporary equipment or structures such as decking, temporary bulkheads, support of excavation, support of utilities, ground water control, and forming, and for such other work as may be required for construction but does not become an integral part of the permanent work. Submit working drawings and signed and sealed associated calculations as required by contract sections for temporary work that will not become a part of permanent structures included in this contract.

- C. Samples: Samples of materials or equipment submitted to DTPW for review before incorporating in the work as required by individual contract sections.
- D. Certification: Notarized certificates or certified test results submitted that demonstrate proof of compliance with Technical Provisions - Systems for products, materials, equipment, systems, and qualifications of personnel, manufacturers, fabricators, and installers.
- E. Calculations: Where required by individual Technical Provisions - Systems sections, signed and stamped by a professional engineer.
- F. Test Procedures and Reports: Provide test procedures for review by DTPW before commencement of testing. Provide test reports, in DTPW-reviewed format, for review by DTPW.
- G. Documentation: Documents required to be submitted by the contract, including miscellaneous items such as delivery tickets, batch tickets, and bills of materials.
- H. Product Data: Manufacturer's literature, catalog cuts, and material safety data sheets.
- I. Operations and Maintenance Manuals: Operations and maintenance manuals for equipment and systems as required by the contract.
- J. Systems Design Packages: Submitted to DTPW for review as required by the contract.
- K. Software: Any software utilized in any processor-driven component.

1.04 SUBSTITUTIONS:

- A. In addition to the requirements of this section, Substitution of a product must be done in accordance with Section 01 62 00.
- B. Substitutions consist of preparing, submitting, amending, and updating lists of products or methods of construction which the Contractor proposes to furnish and install instead of those indicated.
- C. Propose substitutions in accordance with provisions indicated, and include documentation on methods of construction, materials, products, and supplies that are proposed for substitution instead of items shown or methods indicated or implied in the contract documents. All substitutions must be approved by the Engineer.

1.05 CHANGES:

Changes proposed by the Contractor to items listed in DTPW-reviewed submittals will not be permitted unless those changes have been submitted to, and reviewed in writing by DTPW.

1.06 MASTER LIST OF SUBMITTALS:

Identify submittals required and determine the date on which each submittal is required in order to conform to the contract's submittal schedule.

1.07 SUBMITTAL FORMAT AND INSTRUCTIONS:

Drawings:

Submittals: Show the following information when applicable:

1. Names of Contractor, subcontractors, suppliers, manufacturers, and, when applicable, the seal and signature of a professional engineer
2. Identification of product by description, model number, style number, serial
3. number or lot number, and finish numbers
4. Subject identification by contract drawing or technical provisions reference
5. Relation to adjacent structures or materials
6. Field dimensions, clearly identified as such
7. Applicable standards, such as ASTM or federal specification numbers
8. Identification of deviations from contract documents
9. Contractor's sealed, signed and dated, certifying the following:
 - I. Review of submittals for compliance with contract requirements
 - II. Verification of field measurements
 - III. Verification of subcontractors' work for accuracy
 - IV. Compatibility of the work shown thereon with affected trades and other contracts
 - V. Action Block: Include a blank space, 5 inches wide by 2.5 inches high, in the lower right corner, just above the title block, in which DTPW may indicate action taken. Shop drawings without this space will be returned without review for compliance.
 - VI. Technical details of equipment to be installed shall be supplied at the same time that equipment general arrangements and layout drawings for the area are submitted. Include all space requirements for installation, maintenance and replacement, service connections required, environmental requirements, weights, foundation and fixing details, etc.
 - VII. Make submittals sufficiently in advance so review may be made by DTPW at least 3 calendar days before commencement of related work.
 - VIII. Allow 3 calendar days for review of each submittal cycle by DTPW.
 - IX. Ship submittals prepaid by overnight express delivery or hand-carry them to DTPW.

SUBMITTALS

01 33 00-3

- X. Accompany submittals with a Contractor transmittal form containing the following information:
 - a. Contractor's name, address, and telephone number for home office or field office
 - b. CDRL number and title
 - c. Submittal number based on individual volume title, section number, and date
 - d. Contract title and number
 - e. Supplier's, manufacturer's, or subcontractor's name, address, and telephone number
 - f. Subject identification, including contract drawing, volume title, section, and article reference
 - g. Identification of deviations from contract documents, if any
 - h. Copy of subcontractor's or supplier's transmittal to Contractor
- XI. Provide sufficient data with subsequent submittals initiated by the Contractor for consideration of corrective procedures for review. Make subsequent submittals in the same manner as initial submittals.
- XII. Incomplete or partial submittals may be returned to the Contractor without review.
- XIII. Illegible facsimile copies of any portion of a submittal will not be accepted.

2.01 QUANTITIES:

- A. One reproducible sepia and three prints of each shop drawing and working drawing (Reproducible sepia and prints that are of poor quality are not acceptable.)
- B. Three copies of manufacturer's standard schematic drawings
- C. Three copies of manufacturer's calculations, and four copies of manufacturer's standard data
- D. Three copies of manufacturer's printed installation, erection, application, and placing instructions
- E. Three samples of each item specified in the various Technical Provisions - Systems sections, unless otherwise specified
- F. Three copies of inspection reports, test reports, and certificates of compliance
- G. Three copies of engineer's calculations, with seal and signature of an engineer
- H. Three copies of design packages
- I. Three copies of Contractor's weekly report.

SUBMITTALS

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3.01 CONTRACTOR'S REVIEW:

Review all submittals, and stamp and sign them as reviewed and approved, before submission to DTPW. Failure to comply with this requirement will result in immediate return of the submittal without review.

4.01 DTPW'S REVIEW:

DTPW will provide timely reviews of the Contractor submittals identified in the CDRL and throughout the contract documents. The Contractor may continue with the work, pending receipt of DTPW's review comments, at its (the Contractor's) own risk.

A. Review Stamp

1. Review of submittals and the action taken, either NO EXCEPTIONS TAKEN or EXCEPTIONS TAKEN, may be indicated with a review stamp. DTPW's representative may affix the review stamp, mark the action block, and sign and date the stamp.
2. The review stamp action block marks have the following meanings:
 - I. NO EXCEPTIONS TAKEN: Every illustration and description appears to conform to the respective requirements of the contract documents; that (a) design development may continue, or that (b) fabrication, assembly, manufacture, installation, application, and erection of the illustrated and described product may proceed, in the case of final submittals; and that the submittal need not be resubmitted.
 - II. EXCEPTIONS TAKEN: The submittal is deficient to the degree as described by the notes on the actual submittal and/or as contained in the letter of exception and clarification attached to the returned submittal; that the Contractor shall not assume that the reviewer has completed a thorough review of the submittal; and that the submittal needs revision and it must be corrected to conform to the respective requirements of the contract documents. Re-submittal requirements shall be described in the letter of exception and clarification.

B. Review by Other Agencies

Various agencies designated by DTPW may have review stamps or other acceptance methods different from those of DTPW. The Contractor shall work with the designated agencies and obtain acceptance in the clearest and most straightforward manner possible. If a submittal requires review, acceptance, or approval from an agency other than DTPW, the Contractor shall gain such concurrence prior to submission to DTPW.

- C. Review of submittals by DTPW or a designated agency shall not relieve the Contractor from responsibility for errors or omissions in the submittals, or from deviations from the contract documents, unless submittals containing such deviations were submitted to DTPW with the deviations specifically called to the attention of DTPW in the letter of transmittal, and reviewed by DTPW as a contract change order.
- D. The Contractor shall notify DTPW in writing immediately of any review comments or suggested revisions by DTPW or other entity which the Contractor considers contrary to the requirements of the contract.
- E. After review of submittals, the Contractor shall distribute prints or copies of accepted documents to the following:
 - 1. Contractor's field office
 - 2. DTPW representative's field office
 - 3. Affected and concerned subcontractors, suppliers, and fabricators
 - 4. Affected and concerned members of the Contractor's workforce

5.01 CONTRACTOR'S RESPONSIBILITIES:

- A. Coordinate each submittal with requirements of the work. Place particular emphasis on ensuring that each submittal of one trade is compatible with other submittals of that trade, and with submittals of other trades.
- B. Review by DTPW of submitted drawings and associated calculations does not relieve Contractor of responsibility for errors or omissions in the drawings and associated calculations, or from deviations from the contract documents, unless such deviations were specifically called to the attention of DTPW in the letter of transmittal submitted with the drawings. The Contractor is responsible for correctness, accuracy, and completeness of the drawings; for shop fits and field connections, dimensions, and quantities; and for results obtained by use of such drawings.
- C. Contractor's liability to DTPW, in case of deviations in the submittals from requirements of the contract documents, is not relieved by DTPW review of submittals containing deviations, unless DTPW expressly approves deviations by issuing a change notice.
- D. Do not start work for which submittals are required until submittals bearing the stamp of DTPW, and signatures indicating review, have been received.
- E. Before making submittals, ensure products are available in quantities required by the contract.
- F. Verify field measurements, catalog numbers, and similar data.

- G. Re-submittals: Make any corrections required by DTPW and resubmit for review. The Contractor shall direct specific attention in writing on resubmitted shop drawings to revisions other than the corrections by DTPW on the previous submittal.

H. Contract Deliverable List

1. Prepare, and keep up to date, a contract deliverable list showing numbers and titles of each submittal, months and years in which submittals will be made, and current status of review by DTPW.
2. Indicate review priority for any items required on an early basis.
3. Send copies of the entire list to DTPW at monthly intervals.
4. Distribute copies of revised pages of the list whenever a drawing is revised and resubmitted.

6.01 SHOP DRAWINGS:

- A. Prepare shop drawings on a sheet, maximum size of 22 inches by 36 inches, to a scale large enough to easily depict and annotate each of the various pertinent items. Provide blank space for the action stamp.
- B. Submit final, corrected, reproducible sepia of each shop drawing, and show the work as actually installed, placed, erected, and applied.

7.01 BOOK OF PLANS:

The Contractor shall submit a complete Book of Plans upon acceptance of the system.

8.01 PRODUCT DATA:

- A. Modify the manufacturer's standard schematic drawings to delete information that is not applicable to the contract. Supplement standard information with additional information applicable to this contract.
- B. Modify the manufacturer's standard catalog cuts, brochures, diagrams, schedules, performance charts, illustrations, calculations, and other descriptive data to delete information that is not applicable to the contract. Failure to comply with this requirement will result in rejection of the submittal. Indicate dimensions, clearances, performance characteristics, capacities, wiring and piping diagrams, controls, and other information as required.
- C. Modify the manufacturer's printed installation, erection, application, and placing instructions to delete information that is not applicable to the contract.
- D. Include appropriate information as required herein and by the contract.

- E. Submit certificates of compliance to DTPW for those products for which no samples and test results are specified; certificates should be submitted not later than 3 days before products are installed. A copy of the certificate should accompany the product for which the certificate is prepared. Include on the certificate the following:
 - 1. A statement that the product complies with respective requirements indicated
 - 2. A certified copy of test results pertaining to the product
 - 3. Submittal date, Contractor's name and address, contract title and number, product represented and its location in the contract, producer's name, product trade name and catalog number, place of product origin, test date, testing organization's name and address, quantity of the product furnished, and related contract drawing, volume title, and section numbers
 - 4. A notarized signature of an officer or other authorized representative of the manufacturer or producer
- F. When materials or equipment are required to conform to the standards of organizations such as the American National Standards Institute (ANSI), the American Society for Testing and Materials (ASTM), the National Electrical Manufacturers Association (NEMA), or Underwriters Laboratories (UL), submit proof of such conformance to DTPW for review. If an organization uses a label or listing to indicate compliance with a particular standard, said label or listing will be acceptable evidence, unless otherwise specified in individual sections. In lieu of a label or listing, Contractor may submit a certificate from an independent testing organization (one that has been reviewed by DTPW, and found competent to perform acceptable tests). The certificate shall state that item has been tested in accordance with the specified organization's standard.

9.01 SAMPLES:

- A. Submit samples of sizes and quantities to clearly illustrate full color range and functional characteristics of products and materials, including attachment devices. Indicate country of origin.
- B. Erect field samples and mock-ups at the work site, as specified in contract sections and as may be necessitated by the Contractor submitting value engineering proposals or substitutions; locations must be acceptable to DTPW.
- C. Include appropriate information as required, and indicate the pertinent contract section. Submit product data to accompany samples.
- D. Review of a sample shall only be for the characteristics or use named in such review, and shall not be construed to change or modify any contract requirements. Materials and equipment incorporated in work shall match reviewed samples.

- E. Certain samples may be tested by DTPW as specified. Reviewed samples not destroyed in testing will be retained by DTPW. Samples not destroyed in testing and reviewed with exception taken will be returned to Contractor at Contractor's expense, if so requested at time of submission.
- F. Failure of any material to pass specified tests will be sufficient cause for refusal to consider, under contract, any further samples of same brand and make of that material. DTPW reserves the right to take exception to any material or equipment that previously has proved unsatisfactory in service.
- G. Samples of various materials or equipment delivered on site or in place may be taken by DTPW for testing. Samples failing to meet contract requirements will automatically void previous reviews of items tested.
- H. When tests are required, only one test of each sample proposed for use will be made at DTPW's expense. Samples that do not meet contract requirements will be rejected. Retesting of additional samples will be made by DTPW at Contractor's expense.
- I. DTPW reserves the right to require submission of samples or site mock-ups of any material, whether or not such submission is specifically mentioned in the contract.

10.01 WORKING DRAWINGS:

- A. Identify working drawings by a submittal number based on volume title and section number, and provide a reference to pertinent contract drawing numbers. Use a working drawing sheet with a maximum size of 22 inches by 36 inches. B. Have working drawings prepared, stamped, and signed by an engineer of the involved discipline.
- B. Verify field measurements and coordinate with pertinent contract drawings from other contracts, where applicable.
- C. Do not begin work for which working drawings and associated calculations are required until drawings and calculations have been reviewed by DTPW; DTPW's corrections, if any, have been addressed; and submittals have been returned to the Contractor with the required review stamps and signatures.
- D. Distribute copies of working drawings and calculations after DTPW review.

11.01 CALCULATIONS:

Have calculations required by Technical Provisions - Systems sections stamped and signed by a professional engineer of the involved discipline. When calculations accompany drawings in a submittal, the body of the calculations must contain cross references to the individual drawing to which the page of the calculations pertains.

12.01 DESIGN SUBMITTALS:

Submit designs for the work to DTPW for review. Submit in the following stages:

Conceptual Submittal:

- A. Identify all systems, subsystems, equipment, or other elements that will later be the subject of preliminary and final submittal submissions, and which together constitute the whole design for Contractor's Work.
- B. Identify the function of each system, subsystem, equipment, or other element within the overall design, and specify relationships and interfaces between such elements.
- C. If at any time in the preparation of the preliminary and final designs, the Contractor wishes to modify conceptual submittal by dividing any system or subsystem into a number of smaller systems (or by reconfiguring interfaces or for any other reason), the Contractor shall resubmit conceptual design for re-review.

D. Preliminary Submittal:

- A. Make a separate preliminary design submission for each element of the overall design, as identified in the conceptual design.
- B. Submit in sufficient detail to evaluate progress and technical adequacy of the selected design approach.
- C. Submission shall represent, at a minimum, a 50 percent completion level.
- D. Clarify and confirm as necessary all technical aspects of all interfaces with other elements of Contractor's overall design, and of any interfaces with facilities.

E. Final Submittal:

- A. Make a separate final design submission for each element of overall design, as identified in the conceptual design.
- B. Submission shall represent not less than 95 percent completion.
- C. Note that DTPW will not normally review a final design submission until at least a satisfactory preliminary design submission has been received for all interfacing elements, and will give only a conditional review until such time as the final design submission has been received for all interfacing elements.

13.01 SOFTWARE:

License and disclose to DTPW software utilized in any processor-driven component, according to the nature of the software selected:

A. Commercially Available Software: Pass on to DTPW the following:

All documentation, new and unused, received with the software from supplier.

A non-exclusive license in perpetuity to use software in all processor devices in which it is installed by Contractor.

B. High-Level Software and Operating Systems: For any software that is the property of the Contractor, provide the following support:

1. A non-exclusive license in perpetuity to utilize software in all processor devices in which it is installed by Contractor.
2. An undertaking, in effect for as long as the software is in operation, to provide DTPW with updated software if any defects or deficiencies in software become known to the Contractor from any source.
3. Full and detailed documentation of software. Place the documentation in escrow such that it will become property of DTPW if the software owner ceases trading as a commercial company.

C. Application Software and Databases: Provide the following support:

1. A non-exclusive license in perpetuity to use software in all processor devices in which it is installed by Contractor.
2. Full and detailed documentation, including operational descriptions, flow diagrams, and detailed program or data listings to allow DTPW to maintain and modify the software or ensuing databases without seeking additional information from the Contractor.

14.01 SUBSTITUTIONS:

- A. In addition to the requirements of this section, Substitution of a product must be done in accordance with Section 01 62 00.
- B. The list of materials, products, and supplies, and the list of methods of construction proposed for substitution of those indicated, will be considered only if those requests have been submitted. Review of substitute items or methods will be only for characteristics and the use named in the acceptance. This review will not be interpreted as a modification of the contract, nor will it establish precedence of products and methods for other portions of the project. Review of a substitution does not relieve the Contractor of responsibility for fulfilling requirements of the contract documents. DTPW will judge the quality and suitability of substitute items or methods, and its decisions are final. If use of substitute products or

SUBMITTALS

01 33 00-11

methods involves redesign of other parts of the work, the Contractor shall perform the redesign and submit it for review by DTPW, bear the cost of redesign, and include the direct cost of evaluating substitutions by DTPW.

C. Include the following information with documentation for materials, products, and supplies:

3. Complete data substantiating the compliance of the proposed substitution with the requirements of the contract documents.
4. Identification of materials, products or supplies, including manufacturer's name, address, catalog name, and number.
5. Installation characteristics, installation drawings, and manufacturer's literature, including product description, performance and test data, and reference standards (if pertinent).
6. Name and address of projects on which the product was used under similar circumstances, and date of installation.
7. Itemized comparison of proposed substitution with the item specified. Include in a tabular form differences in materials, size, finish, estimated life, estimated maintenance, availability of spare parts and repair services, energy consumption, performance capacity, salvageability, and manufacturer's warranties.
8. Effect of the change on the construction schedule.
9. Accurate cost data for the proposed substitution in comparison with the product specified.
10. Equitable adjustment and credit which the Contractor proposes to offer DTPW.
11. When applicable or requested by DTPW, provide off-the-shelf samples of the specified item and the proposed substitution.

D. Certify the following when making a request for substitution:

1. The individual submitting the request has personally investigated the proposed item and determined it to be equivalent, or superior, to that indicated. Update the information as new or different data becomes known.
2. Furnish the same warranty for substitution as for the product specified.
3. Coordinate installation of the reviewed substitution into the work, and make those changes, subject to review by DTPW, required for the work to be complete in all respects.
4. Waive claims for additional costs related to substitution.
5. Provide complete cost data, including related costs, except the costs of the DTPW redesign or review of the Contractor's design.

- E. Substitutions that are merely indicated or implied on shop drawings or product data submittals will not be considered unless a formal request for substitution has been submitted in conformance with this section.
- F. Include the following information in documentation for construction methods:
 - 1. Detailed description of proposed methods.
 - 2. Working drawings illustrating the methods.
 - 3. Itemized comparison of proposed substitute methods with methods shown, and with product implied or specified. Include differences in estimated time for execution, labor, materials, and revisions to the construction process, and cost.

15.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

15.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 43 00

QUALITY ASSURANCE REQUIREMENTS

1.0: QUALITY ASSURANCE

The Contractor shall develop an effective Quality Assurance Plan (**QAP**) for the Traction Power Switchgear Replacement Project to assure adequate quality throughout all phases of the Contract Work and shall describe the methods used and means employed for the implementation of the plan. The Contractor's QAP shall, at minimum contain the fifteen (15) quality elements of the FTA Quality Management System (QMS) Guidelines (FTA-PA-27-5194-12.1) as revised. The QAP shall ensure compliance with the requirements of the contract documents within the Contractor's, subcontractor's and supplier's organizations.

The FTA QMS Guidelines web link is provided to the Contractor as a reference document to assist with the preparation and approval of the QAP which is located at the following link:

http://www.fl.dot.gov/FINAL_FTA_QMS_Guidelines_December_2012.pdf.

Refer to Chapter 2 on page 2-1 of the guidelines link for the details on the fifteen (15) quality elements that need to be included in the QAP as specified above. In addition to the link on the FTA QMS Guidelines, a QAP template shall be attached to the contract documents for further guidance in the development of the Contractors QAP.

2.0 : ORGANIZATION

- 2.1 Personnel performing Quality Assurance/Quality Control (QA/QC) functions shall have sufficient, well-defined responsibility, authority and the organizational freedom to identify and evaluate quality problems, and to initiate, recommend or provide solutions.
- 2.2 The Contractor's QAP shall be subject to MOT's verification at any time. Verification may include but not be limited to:
 1. Surveillance of the operations.
 2. Auditing of records and activities.
 3. Inspection to measure quality of items and/or works to ensure compliance with requirements.
 4. Review of Quality Records to ensure proper records keeping of activities affecting quality. These records shall be available for review by MDT at any time.

3.0: APPLICABILITY

The responsibility for providing QA/QC disciplines to verify that the work is performed in accordance with the Contract document rests with the Contractor. The Contractor's QAP shall be used to control quality throughout the duration of the project. Any inspections, audits or tests provided by MDT or designee shall not relieve the Contractor of the responsibility of providing work that strictly complies with the Contract requirements.

4.0 : REQUIREMENTS

The Contractor's QAP shall be in-line with the FTA QMS Guidelines (FTA-PA-27-5194-12.1) and shall also include:

- 4.1** An organizational chart indicating lines of authority and reporting relationship including QA/QC personnel.
- 4.2** Detailed Quality Procedures and Inspection Forms.
 - 1. The QAP and associated quality procedures and inspection forms should be submitted to MDT five (5) days after Notice to Proceed (NTP) for review and approval.

Note: All work undertaken by the Contractor before the approval of the Contractor's QAP by MDT QAD will be at the Contractor's risk and expense.
- 4.3** Records for all material tests, audits, and inspections performed, including data on conforming as well as nonconforming items shall be maintained by the Contractor at the job site current, up to date, and available for MDT inspection at any time throughout the contract work.
- 4.4** The Contractor's Daily Inspection Reports (DIR) is required by this Section and shall be available for review by MDT.
- 4.5** Test Records and Calibration Identification status of testing equipment required for the project shall be maintained by the Contractor and available for inspection by MDT at any time throughout the contract work.

S.O: NONCONFORMANCE AND REPAIR ACTION

- 5.1** The Contractor shall maintain an effective system for controlling nonconforming material, including procedures for its identification, segregation, and disposition.
- 5.2** All nonconforming material shall be positively identified to prevent unauthorized use, shipment, or intermingling with conforming material. Disposition for the use or repair of nonconforming material shall require the approval of MDT.
- 5.3** The Contractor shall be responsible for all costs associated with the removal of components and/or devices, the shipping charges to and from the Contractor's facilities and the costs associated with their reinstallation and/or repair.

END OF SECTION

PROJECT QUALITY ASSURANCE PLAN

PROJECT TITLE

PROJECT/CONTRACT NUMBER

COMPANY NAME

REVISION DATE

COMPANY NAME: _____

Revision Date: mm/dd/yyyy

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PROJECT QUALITY ASSURANCE PLAN

SIGNATURE SHEET

This Quality Assurance Plan dated (*input revision date identified on page 1*):
__ __ __ __ __ was prepared or revised in accordance with the project/contract requirements.

Prepared by (Quality Representative Signature): __ __ __ __ __ Date: __ __

Approved by (Project Manager Signature): _____ Date: __ __

PROJECT QUALITY ASSURANCE PLAN

REVISION LOG

Any changes to this document will be re-submitted for review and approval by Miami-Dade County (MDC).

REVISION DATE	AFFECTED PAGES	REASON FOR CHANGE
<i>SAME DATE AS IDENTIFIED ON PAGE / :</i>	<i>ALL PAGES</i>	<i>INITIAL ISSUE</i>

PROJECT QUALITY ASSURANCE PLAN

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PROJECT QUALITY ASSURANCE PLAN

1. MANAGEMENT RESPONSIBILITY

The successful implementation of this Quality Assurance Plan (QAP) for this project rests on the level of commitment by top management that ensures that the quality elements are understood, implemented, and maintained throughout all phases of the project.

Contractor input:

STATEMENT OF COMMITMENT to QUALITY:

(Input quality statement)

_____ (Approved by highest level of management) DATE: _____

In this section, identify management's commitment to quality, and ensure that the commitment is understood, implemented, and maintained. Personnel assigned to this project shall be identified in an organizational chart format. Those personnel responsible for assuring quality must be independent of those having direct responsibility for the work being performed:

ORGANIZATIONAL CHART

(Insert the company's organizational chart)

COMPANY NAME: _____

Revision Date: mm/dd/YYYY

PROJECT QUALITY ASSURANCE PLAN

Roles & Responsibilities: Include in this section assigned personnel duties and responsibilities within this project that are identified in the organizational chart.

Contractor input:

In this section, document the roles and responsibilities of key personnel (by functional position only) assigned to the project:

Example Positions:

Project Manager:

Quality Assurance Representative:

Inspection Personnel:

C

COMPANY NAME: _____

Revision Date: mm/dd/yyyy

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PROJECT QUALITY ASSURANCE PLAN

2. Documented Quality Management System (QMS)

The Quality Assurance Plan (QAP) applies to all quality activities performed under the contract. In order to ensure continued adherence to the standard practices, procedures and policies established for the project, periodic reviews, revisions, and redistribution of this QAP shall be performed.

Documentation records testifying to the satisfactory execution of the required activities for the project (i.e. construction, inspections, & testing) are readily available and delivered to authorized personnel as directed. An integral part of this project is the list of instructions, procedures, drawings, specifications, inspection test reports, and quality assurance reports to be prepared, submitted, or made available for review or approval, in accordance with contract requirements.

Contractor input:

In this section, document the method of insuring that all key documents are developed, reviewed, and updated. Also, any plan or procedure should include a statement of purpose, scope, and should contain any references to applicable codes, standards, or specifications to ensure compliance to contract requirements.

PROJECT QUALITY ASSURANCE PLAN

3. Design Control: (if applicable)

Note: If the design process does not apply, you may put "N/A" in this section.

The Contractor shall establish and maintain QA/QC procedures to control and verify the design in order to ensure that the design criteria, technical and relevant regulatory requirements are in compliance with Contract Documents and FFA guidelines for this project. Design control includes ensuring that the design requirements are understood, planned, verified, executed and that changes are reviewed and approved throughout the design process and project completion as applicable. The Final Design establishes criteria for the inspection and testing on items that affect safety, reliability, service life, and ADA requirements.

Contractor input:

In this section, document the design process, including quality control reviews for assuring design Integrity is established throughout all phases of development, and what methods will be used to control the design within the key elements identified below:

Note: Key elements of the design process include, but not limited to:

- Design Planning:
- Design Input:
- Design Output:
- Design Verification:
- Design Validation:
- Design Changes:

PROJECT QUALITY ASSURANCE PLAN

4. Document Control

Procedures shall be established and maintained for the control of project documents and data. Quality procedures shall describe methods for review and approval of project documents by authorized personnel, distribution and storage of documents, correction and deletion of documents, and control of changes to these documents. These controls are required to be implemented in order to provide project participants and organizations with access to the latest version of each document.

Contractor Input:

In this section, identify which documents will be controlled and the process to ensure that they are maintained and current throughout the project:

Example of Documents:

- *Contractors Project Quality Assurance **Plan** (QAP)*
- *Contractors inspection Procedures.*
- *Contract Documents.*
- *Drawings*

PROJECT QUALITY ASSURANCE PLAN

5. Purchasing (If applicable)

Note: If the purchasing process does not apply, you may put "**N/A**" in this section

Procedures shall be established and maintained to ensure that purchased services or products conform to specified technical requirements. Purchasing requirements apply to all Contractors and Suppliers.

Receiving Inspection

The receiving inspection of all materials will be performed by the Contractor's QA/QC staff at their facility in accordance with approved Contractor's QAP. The Contractor's QAP shall provide methods to control and ensure that all materials received are properly inspected. Any nonconforming materials shall be identified.

Approved Supplier List

The Contractor shall develop and maintain an approved Supplier list available for review and approval.

Contractor input:

In this section, document the purchasing process and how all products are received, inspected and maintained:

PROJECT QUALITY ASSURANCE PLAN

6. Product Identification and Traceability (If applicable)

Note: If the product identification and traceability process does not apply, you may put "N/A" in this section.

The purpose of product identification and traceability is to ensure the control of materials, parts, components, equipment, and products, and the identification and traceability of these materials to prevent the use of incorrect or defective items. They also ensure that only correct and acceptable items are used or installed. These requirements apply to all materials, parts, components, equipment, and products, including partially fabricated or assembled components, produced for incorporation into the project.

Identification

All materials, supplies, and components that are intended for use in this Project shall be identified from the time of initial fabrication, or receipt, up to and including installation or end use. Items shall be identified by positive markings and/or certifications. They shall be segregated and/or stored with identification data to ensure control and proper identification as applicable.

Item identification methods include use of physical markings. If physical markings are either impractical or insufficient, other appropriate means of identification such as physical separation, container labels, barcodes or tags shall be employed.

Traceability

Item identification methods ensure that traceability is established and maintained in a manner that allows an item to be traced to applicable drawings, specifications, or other documents during all stages of production, delivery, and installation or end use.

Contractor input:

In this section, document how materials, components, equipment, and products will be identified:

PROJECT QUALITY ASSURANCE PLAN

7. Process Control

The Contractor shall identify and plan the installation and/or construction processes that directly affect quality and ensure these processes are performed under controlled conditions. Controlled conditions shall include the following:

- Qualifications requirements for personnel.
- Implementing documents defining the manner of design and/or construction process.
- Use of suitable products for design and/or construction equipment, and a suitable working environment.
- Compliance with reference standards/codes, quality plans, and/or documented procedures.
- Monitoring and control of suitable process parameters and product characteristics.

A major issue in process control is to ensure that work is performed in the proper sequence.

Contractor input:

In this section, document how the process will be controlled:

PROJECT QUALITY ASSURANCE PLAN

8. Inspection and Testing

Activities affecting quality shall be inspected and documented by experienced personnel who are independent of those performing the work. Inspections and tests shall be performed in accordance with approved documents to determine that contract activities meet the established requirements of the specifications.

Contractor input:

In this section, identify the types of inspections/testing to be performed and the procedures/forms to be used to perform tire Inspections and/or testing:

PROJECT QUALITY ASSURANCE PLAN

9 Inspection, Measuring, and Test Equipment

All equipment used in the inspection or testing process shall be identified, calibrated, and maintained under controlled conditions. Provisions shall be established for scheduled re-calibration. Such equipment shall meet the National Institute of Standards and Technology (NIST) standards of accuracy for the measurements and tests required.

Contractor input:

In this section, document which, inspection and test equipment will be identified, calibrated and maintained to ensure accuracy of the inspections and testing as required. Also, identify the calibration intervals or frequency for each, equipment that is subject to calibration:

PROJECT QUALITY ASSURANCE PLAN

IO Inspection and Test Status

A means should be provided for identifying the inspection and test status of the work during the installation process. The purpose of this is to ensure that only work that has passed the required inspections and tests is accepted.

The test and inspection status should be identified by means of markings, stamps, tags, labels, routing cards, inspection records, test software, physical location, or other suitable means.

Contractor input:

In this section, document the method to be used to identify the inspection and testing status on the work to be performed:

PROJECT QUALITY ASSURANCE PLAN

11 Nonconformance

Where practicable, nonconforming items should be segregated. When segregation is not possible, nonconforming items should be clearly identified as such. Those activities affected by the nonconforming work should be notified. Nonconforming work should be identified, documented, and evaluated to determine appropriate disposition.

Contractor input:

In this section, document the method to be used to identify, document, evaluate and address nonconforming products. It is highly recommended that a "log of nonconformances" is kept and that it includes the corrective actions to address the nonconformances:

PROJECT QUALITY ASSURANCE PLAN

12 Corrective Action

The corrective action plans should include the investigation of the root cause of any nonconforming work and the preventive action needed to prevent recurrence.

Contractor input:

In this section, document the method to be used to implement a corrective action plan to address all nonconformances. It's highly recommended that a log be kept to track all nonconformances and the proposed corrective action plans as necessary:

PROJECT QUALITY ASSURANCE PLAN

13 Quality Records

Procedures should be established and maintained for all quality records. These procedures should identify which records should be kept, responsibility for production and collection, and responsibility for indexing, filing, storage, maintenance, and disposition of all quality records.

Contractor input:

In this section, identify which quality records will be controlled and the process to ensure that they are maintained, stored and dispositions appropriately:

Example of Quality Records:

- *Inspection Reports*
- *Test Data*
- *Calibration Records*
- *Nonconformance Reports*
- *Corrective Action Reports*
- *Audit Reports*
- *Training Records*
- *Product Certification*

PROJECT QUALITY ASSURANCE PLAN

14 Quality Audits (if applicable)

Note: If quality audits does not apply, you may put "N/A" in this section

Quality audits are not the same as financial audits. A quality audit program should be established to ensure that the elements of the contractor's quality program are functioning as intended.

Quality audits should be performed by the Contractor's qualified quality personnel, and should be independent, scheduled, and performed to standards and/or checklists. A final report that identifies the audit results should be generated, distributed, and a log developed to track both the findings and corrective action plans.

Contractor input:

In this section, document the audit program that should include an audit scheduled, the activities to be audited and how the contractor will address the audit findings:

PROJECT QUALITY ASSURANCE PLAN

15 TRAINING

The contractor should establish and maintain procedures for identifying the training needs and provide for the training of all personnel performing the activities affecting quality.

Records of the training and evaluations should be maintained. A training matrix can be used as an effective tool for determining which personnel require what type of training.

Contractor input:

In this section, document the training program, personnel qualification and any certification needed as necessary:



PROJECT QUALITY ASSURANCE PLAN

APPENDICES

Contractor input

In This section, the Contractor may include any references, procedures, process, flow charts, forms and acronyms/definitions that apply to this project:

SECTION 01 45 00

CONTRACTOR CONSTRUCTION CONTROL REQUIREMENTS

1.01 DESCRIPTION:

- A. This Section specifies the Contractor's requirements for defining and controlling in-process work. The Contractor is responsible for implementing and maintaining a program that will define how the work is to be performed and who is responsible to ensure work meets Contract Document requirements. This shall be detailed by Construction Work Plans (CWP) for each phase of the work to be performed.
- B. Work may impose hold points in CWPs to verify compliance with Contract Documents during any phase of the work and the Contractor may not proceed with the work until a hold point has been released by DTPW.
- C. The Contractor shall identify all safety-critical submittals associated with the Contract Specifications and Standard Specifications Section Article numbers referenced in the submittals.

2.01 GENERAL:

- A. DTPW and EOR will have access to areas where work is performed under the Contract to conduct audits, surveillance, inspections, and tests to verify compliance with the Contract requirements. Access includes on-site and off-site work areas of the Contractor, sub-contractors, manufacturers, and suppliers.

3.01 SUBMITTALS:

- A. The Contractor shall develop a list of Construction work Plans within forty-five (5) days after Notice to Proceed (NTP).
- B. Test Plan within forty-five (5) days after NTP.
- C. Test Reports shall be submitted within seven (7) days of receipt from laboratory
- D. List of suppliers & fabricators shall be submitted within forty-five (5) days after NTP.
- E. Responses to Nonconformance Reports
- F. Names and qualifications of personnel performing special processes

4.01 CONSTRUCTION WORK PLANS:

A. Construction work Plans are detailed descriptions of a specific work activity. The EOR, in consultation with the Contractor, will determine which work activities require submission and approval of a CWP. The Contractor shall prepare and submit a list of CWPs to the EOR. The EOR may add CWPs to the list. Upon approval of the CWP list, the Contractor shall prepare and submit a CWP for each of these work activities. No work shall begin without work acceptance of a CWP. As a minimum, each CWP shall include:

1. Scope of work
2. List of persons responsible for supervision of the work
3. List of required submittals, drawings, and job hazard analysis
4. Planned start-work date, progress rate expected, and work hours
5. Sequence of events and construction methods for performing the work. Include work hold points and inspection requirements
6. Tests required by Contractor and/or work
7. Prerequisite activities and related construction safety issues
8. Off-site activities and locations
9. Procedures for controlling hazardous materials as applicable
10. Actions defined as “Special Events”, which may expose the general public to danger or inconvenience, and which may require a third party to be notified
11. Safety-critical installations, inspections, and tests

5.01 READINESS REVIEW:

A. Upon approval of a CWP and before beginning associated work activities, DTPW and the EOR will conduct a Readiness Review Meeting with Contractors, sub-contractors, and applicable third party representatives to discuss all elements contained in the CWP. The EOR will document the meeting with an agenda and minutes of the meeting including an attendance record.

6.01 TESTING:

A. Test Plan:

Submit a Test Plan defining the types and frequency of tests and which laboratory will perform each test.

B. Control of Inspection, Testing, and Monitoring Equipment:

C. Contractor and its Testing Laboratory shall calibrate and certify all testing equipment and monitoring devices. Calibration and certification requirements shall include the following:

1. Calibration to known national standards.
2. List the current status of calibration, and date re-calibration or certification is required.
3. List on a log that tracks all calibration and certifications. The tracking log shall identify the testing equipment or monitoring devices by name and serial number and shall show the date of calibration, date of next calibration, name of person or agency conducting the certification or calibration and shall contain a brief description of use. All testing equipment and monitoring devices shall be stored in a safe and secure location. They shall be maintained throughout the Contract and shall only be used for testing or monitoring work for which they are designed.
4. Re-issue is required if equipment is suspected of being out of calibration, broken, dismantled, or damaged.
5. Requirements apply to sub-contractors, Suppliers, and all others performing tests.

D. Test Reports: Test reports are considered Contract Record documents and shall be submitted to the Engineer. Test records shall contain as a minimum:

1. Contract or Project Identification Number
2. Identification of items tested
3. Quantity
4. Date Test was conducted
5. Name of Technician
6. Acceptance Criteria

7. Results
8. Location where sample was taken (i.e. Coordinates, stationing, and landmarks.)
9. Reference to Contract or Standard Specifications requirement or test procedure
10. Quantity of item tested Authorized signature.

E. Contractor performed tests are subject to verification by DTPW and EOR.

F. Testing conducted by DTPW or any other approved testing laboratory does not relieve the Contractor of the responsibility to meet the requirements of the Contract Documents.

7.01 INSPECTIONS:

A. The Engineer and his staff are responsible for performing Quality Control Inspection for work identified in the Contract Documents unless otherwise stated. Provide 48-hour notice to the Engineer for inspection coverage of work activities.

8.01 SUPER CONTROL:

A. Submit a list of all suppliers and fabricators that will be used to supply materials and items referenced in the Contract Documents. The list shall include:

1. Name of the supplier or fabricator
2. Address and telephone number of the supplier or fabricator
3. Description of material or fabricated item to be procured from the supplier or fabricator
4. Contract Specifications Section, Article number and/or drawing references of the material or item to be purchased

9.01 CONTROL OF MATERIALS:

A. Submit a CWP for Control of Materials. The CWP shall include provisions to ensure materials, equipment, parts, and components processed through the Contractor's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.

B. Handling, storage, and maintenance of materials/equipment shall be in accordance with manufacturer's recommendations.

- C. All materials, equipment, parts, and components are subject to receipt inspection by DTPW.

10.01 CONTROL OF SPECIAL PROCESSES:

- A. Submit CWP's for Control of Special Processes (e.g., welding, soldering, and HDPE installation.)
- B. Contractor or Sub-Contractor personnel performing special processes shall be qualified in accordance with applicable codes, standards, and manufacturers recommendations. Qualification records of personnel performing special processes shall be current and maintained in the worksite files.
- C. Submit qualification records of personnel performing special processes to work before they start work on the project.

11.01 CONTROL OF NON-CONFORMING ITEMS:

- A. The Contractor will document nonconforming items on a Non-Conformance Report (NCR). The Engineer may issue a Non-Conformance Report if the Contractor fails to issue the Non-Conformance Report in a timely manner.
- B. The Contractor will be responsible for controlling Non-Conformance Reports through use of a sequential numbering system and updated by use of a Non-Conformance Log.
- C. Upon receipt of a Non-Conformance Report, the Contractor shall be responsible for investigating and describing the root cause of the nonconformance and recommending a disposition by means of a Corrective Action Report (CAR). The Quality Assurance Requirements shall reflect this procedure. The following disposition codes shall be used for determining disposition:
 - 1. "USE AS IS" - allows the use of an item that does not meet specified Contract requirements without the need for corrective action.
 - 2. "REPAIR/REWORK" - item must be reworked or repaired to bring it into conformance with the requirements of the Contract.
 - 3. "REJECT" - item is unsuitable for its intended use, is economically or physically incapable of being reworked or repaired, and must be replaced to bring it into conformance with the Contract Requirements.
 - 4. Nonconforming items disposed as "USE AS IS" or "REPAIR/REWORK," require review and approval of the Engineer.

12.01 DOCUMENT CONTROL:

- A. Submit a CWP for Document Control detailing the control of receipt, status, maintenance, and transmittal of Project records and documents.
- B. The Contractor shall establish a document control system to store and record the large quantity of correspondence, drawings, progress reports, technical reports, specifications, Contract Documents, Submittals, calculations, and administrative documents generated under the Contract. The Contractor shall establish correspondence routing, filing, control, and retrieval methods that are compatible with the system currently in use by DTPW or as approved otherwise by DTPW.
- C. Technical document control, storage, and retrieval methods shall include the use of both hard copies and electronic records. Technical document control methods shall be capable of handling documents being developed (progress), finalized documents (for construction) and documents representing as-built conditions.
- D. All correspondence of the Contractor to and from DTPW and its representatives (including the EOR) shall be serialized, and the Contractor shall maintain separate incoming and outgoing correspondence logs.
- E. Within five (5) work days of issuance of the NTP, the Contractor and the EOR shall each designate, in writing, their respective authorized representatives to receive copies of all or specified correspondence. All correspondence shall include the Project Name, Contract Name, and Contract Number, along with the specific subject of the letter. All replies shall refer specifically to prior correspondence to which it relates.
- F. Do not change or alter Contract records or documents without DTPW written approval.
- G. Ensure current revisions of procedures, instructions, drawings, and other documents are provided at work locations.
- H. Identify and maintain records and documents in an organized manner. Make records available to work upon request.
- I. Protect records and documents from damage, deterioration, and loss. Keep records in fireproof cabinets at the Contractor's work site or maintain a duplicate set at another location.

13.01 RECORDS:

- A. Records are defined as documentation required by the Contract. Record documents include, but are not limited to, correspondence, submittals, test reports, Contract and shop drawings, schedules, certificates of compliance, pay requests, change documents, requests for information, and schedules.
- B. All records shall be maintained and retained in accordance with the Contractor's Document Control CWP.
- C. All record documentation shall be made available and is subject to audit by DTPW or its designee.

14.01 AUDITS:

- A. work may perform audits and surveillances on and off site during any phase of the work. Audits are multi-day functions, which include scheduled reviews of the Contractors work activities as required by the Contract, including formal notification, audit entrance/exit meetings, an audit plan, performance of the audit, and issuance of an audit report. Surveillance is unscheduled review of the Contractor's work activities and generally focuses on a specific activity. Surveillance does not include formal notification, entrance/exit meetings or written plan, but is documented in a surveillance report. The Contractor shall facilitate audits/surveillance by providing access to its facilities, personnel, and records.

15.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

15.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 45 23

TESTING LABORATORY SERVICES

PART 1: GENERAL

1.01 **REQUIREMENTS INCLUDED:** In accordance with the terms and conditions of the CICC 7360 Contract Section 2.89 TESTS as outlined states that “All tests required to be performed by the Contractor, shall be made at the expense of the Contractor.” It is the responsibility of the Contractor to pay for MDC’s independent Testing Laboratory to perform the required testing. The Contractor will ensure all material test reports supplied by the Testing Laboratory are complete, accurate, and document acceptable test results for all material samples selected and tested.

- A. The Contractor shall cooperate with the laboratory to facilitate the execution of the Laboratory required services.
- B. Employment of a laboratory by MDC shall in no way relieve the Contractor of its obligation to perform the Work.

1.02 **SCOPE OF WORK:**

The Independent Testing Laboratory shall perform all tests required by the Contract Documents, applicable codes, Manufacture’s recommendations, governing laws, rules and regulations and those tests required for approvals by public agencies and authorities.

1.03 **LIMITATIONS OF AUTHORITY OF TESTING LABORATORY:**

- A. The Laboratory is not authorized to:
 - (1) Release, revoke, alter or enlarge on the requirements of the Contract Documents.
 - (2) Approve or accept any portion of the Work.
 - (3) Perform any duties of the Contractor.

1.04 **CONTRACTOR’S RESPONSIBILITIES:**

- A. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
 - (1) When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred due to Contractor’s negligence.
- B. Cooperate with laboratory personnel; provide access to Work, and to Manufacturer’s operations.

- C. Secure and deliver to laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- D. Provide to the Engineer a preliminary design mix proposed to be used for concrete, and other materials mixes which require control by testing laboratory as specified in the Contract.
- E. Furnish incidental labor and facilities:
 - (1) To provide access to Work to be tested.
 - (2) To obtain and handle samples at Project site or at source of product to be tested.
 - (3) To facilitate inspections and tests.
 - (4) For storage and curing of test samples.
- F. The Contractor shall review all material test reports received from the Testing Laboratory for completion of testing data with acceptable test results for material samples selected and tested. Ensure that any failures recorded in the test reports are resolved by appropriate methods to assure testing compliance with the contract documents.
- G. The Contractor shall maintain at the job site and throughout the construction project, records for all material samples selected with results by the Testing Laboratory for quality control verification of final test results received from the laboratory. A record control system shall be established for the review, maintenance and filing of all Testing Laboratory Reports received during the construction phase.
- H. Employ and pay for services of a separate, equally qualified independent testing laboratory (approved by DTPW) to perform additional inspections, sampling and testing required:
 - (1) For Contractor's convenience.
 - (2) When initial tests by MDC's testing Laboratory indicate Work does not comply with Contract Documents and the Contractor wants a second opinion.
- I. Make arrangements with laboratory and pay for additional samples and tests required for Contractor's convenience.
- J. Pay for removal costs of rejected materials, reinstallation of new materials and the costs of other corrective action.

PART 2: PRODUCTS

No Product required.

PART 3: EXECUTION

See PART 1.

PART 4: MEASUREMENT AND PAYMENT

The work of MDC's Testing Laboratory will be paid by Contractor unless additional costs are incurred by the Laboratory due to the MDC's request.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES

1.01 DESCRIPTION:

- A. This section specifies furnishing, installing, operating, maintaining and removing temporary facilities required for the prosecution of the work.

2.01 QUALITY ASSURANCE:

- A. Temporary electrical power and lighting shall be provided in accordance with the applicable requirements of OSHA, Part 1926, Safety and Health Regulations for Construction and installed in accordance with the NEC and all other applicable local and National Codes.
- B. Temporary Sanitary Facilities, first aid services and fire protection shall be provided in accordance with the applicable requirements of OSHA, Part 1926, Safety and Health Regulations for Construction.

3.01 FIRST AID SERVICES:

- A. Supplies:

Not less than one 16-unit first aid kit for each fifty (50) persons, or fraction thereof, employed at the work site.

- B. Personnel:

Not less than one certified person for each 50 persons, or fraction thereof, employed at the work site. Provide each member of the first aid staff with a hard hat with the first aid emblem affixed to the rear of the hat. First aid personnel may be assigned other duties not interfering with their duties as first aid personnel.

4.01 PROJECT SIGN:

- A. A project sign is to be supplied by DTPW. The sign will be picked-up and installed by the Contractor at the locations designated by DTPW.

5.01 ELECTRICAL POWER AND LIGHTING:

- A. Locate and arrange electrical components so that they will not interfere with operations. Adequately support and protect from damage.

- B. Maintain system in an operable condition. Promptly replace burned-out lamps, damaged conduits, defective wiring and other non-operating or defective components.
- C. Remove temporary electrical power and lighting systems when the permanent electrical power and lighting systems have been approved for use in place of the temporary systems.

6.01 SANITARY FACILITIES:

- A. Locate the facilities in a manner and at locations to remain accessible, functional and secluded from public observation, insofar as practicable to do so. Relocate portions of the facilities as required as the activity center of the construction advances.
- B. Anchor portable facilities to prevent dislocation.
- C. Service toilet facilities as often as necessary to prevent accumulation of wastes and unsanitary conditions. In no event shall toilet facilities be serviced less frequently than twice each seven days.
- D. Permanent sanitary facilities constructed as a part of the work shall not be used as temporary facilities. Evidence of use of permanent sanitary facilities by construction personnel shall constitute reason for rejection of such facilities.

7.01 FIRST AID FACILITIES:

- A. Instruct construction personnel as to the location of the first aid facilities.
- B. Check first aid kits at least weekly and replace expended items.

8.01 FIRE PROTECTION:

- A. Locate the system in a manner and at locations to remain accessible, functional and readily identifiable during the entire period of construction. Relocate portions of the system as required when the activity center of the construction advances. Instruct construction personnel as to the location and proper use of each item of the temporary fire protection system.

9.01 PROJECT SIGNS:

- A. Install, maintain and remove temporary project signs as indicated by DTPW.
- B. Anchor signs in a manner so as to prevent destruction and overturning due to high winds.
- C. Install temporary project signs at the locations indicated by DTPW. Maintain signs in a neat and clean condition. Remove and replace damaged or deteriorated signs.

10.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

10.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 56 00

TEMPORARY BARRIERS

1.01 DESCRIPTION:

- A. This section specifies furnishing, installation maintenance, relocation and removal of temporary pedestrian barricades.

2.01 MATERIALS:

- A. Temporary vehicular and pedestrian barricades will be installed, maintained and removed by the Contractor and all sub-contractors as necessary during the entire duration of the project construction. The type and location of the temporary barriers must be approved by DTPW and the EOR before installation.
- B. Submit plan showing number and location of all vehicular and pedestrian barricades for review and approval by DTPW and the EOR.

3.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

4.01 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

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END OF SECTION

SECTION 01 60 00

PRODUCT MATERIAL AND EQUIPMENT REQUIREMENTS

1.01 DESCRIPTION:

- A. This section includes specifications for general requirements for materials and equipment, including the packaging, handling, delivery, and storage thereof. Additional requirements are included in the general requirements and technical specifications.

2.01 QUALITY CONTROL:

- A. Provide products, materials and equipment of the same generic kind from a single source. Where products or materials, by nature, are available only from sources that do not individually comprise sufficient quantity for the total project requirement, select products and materials from those individual sources that are most nearly equal and uniform in the indicated qualities.

3.01 PRODUCT SCHEDULE:

- A. Prepare a schedule listing the principal products (by generic names) required for the work. For each product show the proprietary product names and manufacturer names proposed for incorporation in the work.
- B. Submit the product listing schedule within five (5) calendar days of the NTP.
- C. The list of products is not a substitute for required submittals, acceptance of products or a vehicle for submitting substitutions to products specified.

4.01 PROCEDURES FOR SELECTING PRODUCTS:

- A. The specified requirements for individual products indicated in the Contract are multiple in nature and may include generic, descriptive, proprietary, performance, prescriptive, proscriptive, compliance with standards, compliance with codes, conformance with graphic details, and other similar forms of requirements.
 - 1. Provide products conforming to all specified requirements unless otherwise directed. Other products will be considered only if requested as substitution.
 - 2. Contractor's options: Where an option or choice is indicated, provide only one of the options. The choice of an option is the Contractor's. Where submittals are required, state which option has been chosen.

3. An option is not a consideration of whether a product or method shall be provided, but which of the several indicated products or methods shall be provided.
 4. Non-compliance of a named product: If it is known that a named product or product source does not comply with requirements or is no longer available, advise the DTPW before proceeding.
 5. Equivalent materials and equipment: Whenever a material or article is specified or described by using the name of a proprietary product or the name of a particular manufacturer or vendor, the specific item mentioned is understood as establishing type, function, dimension, appearance, and quality desired.
- B. The Contractor's options for selecting products are limited by the specified requirements and governing regulations. Following are some of the various selection procedures for specified requirements:
1. Qualities or Performance Requirements:

Provide products that comply with the specific qualities indicated, and which are recommended or certified in writing by manufacturer for the specific use indicated. General performance of a product is implied where product is specified for specific performances.
 2. Prescriptive Requirements:

Provide products produced in accordance with the prescriptive requirements, using the specified ingredients and components, and complying with the specified requirements for mixing, fabricating, curing, finishing, testing, and similar operations.
 3. Standards, codes, and regulations:

Provide product that complies with the specified standards, codes, and regulations and with the other requirements.
 4. Or Equal:

Where named products or sources are accompanied by the term "or equal" or other language of similar effect, provide one of the specified products, or submit a request for substitution for a product not named, in accordance with the requirements of Section 01 62 00 – Substitutions and Product Options, which the Contractor judges to be of equal or better quality.

5. Product names:

Unless otherwise indicated, products identified by name mean a manufacturer's product as recorded in published literature, of latest issue preceding the date of Contract Documents. Submit request for substitution in order to use products of a later or earlier model.

6. Visual Selection:

Where product requirements include "... as selected from manufacturer's standard colors, patterns, textures..." or words of similar effect, the selection of manufacturing source and basic product, which complies with the requirements, is the Contractor's option, but the selection of color, pattern and texture is the Engineer of Record's responsibility.

C. Non-Conforming Products:

Use of a product not conforming to specified requirements may only be approved by means of a request for substitution as specified elsewhere.

D. Precedence of Specification by Qualities, Reference Standard, and Source:

If it occurs that a product cannot be supplied to meet all requirements, the following order of precedence will be followed:

1. Qualities:

For product specified by qualities or description, and also by reference standard or by source and name, the specified qualities or description shall take precedence.

2. Reference standards:

For product specified by reference to a published standard, and by source or name, the reference standard shall take precedence over the source.

5.01 PRODUCT REQUIREMENTS:

- A. Where available, provide standard products of types that have been produced and used previously and successfully on other projects, and in similar applications.

6.01 NAME PLATES:

- A. Except as otherwise indicated for required labels and operating data, attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of the products either in occupied spaces or on the exterior of the work.
- B. Labels:
 - 1. Locate required product labels and stamps on a concealed surface.
 - 2. Attach labels where required for observation after installation, on inconspicuous accessible surfaces in occupied spaces.
- C. Equipment Nameplates:
 - 1. Provide a permanent nameplate on each item of service-connected or power-operated equipment. Indicate the manufacturer, product name, model number, serial number, capacity, speed, ratings, and similar essential operating data. Equipment nameplates shall be stainless steel.
 - 2. Locate nameplate on an accessible surface, which, in occupied spaces, is not conspicuous.

7.01 MANUFACTURERS' INSTRUCTIONS:

- A. When the Contract Documents require that installation of work comply with manufacturers' instructions, obtain and distribute copies of such instructions to parties involved in the installation and five (5) copies to the DTPW. Maintain one set at the site until installation is complete.
- B. Handle, install, connect, clean, condition, and adjust products in strict compliance with the instructions and specified requirements. Should job conditions or specified requirements conflict with the manufacturers' instructions, notify the DTPW. Handle all equipment in strict accordance with the manufacturer's written handling instructions.
- C. Perform work in accordance with the manufacturer's instructions. Do not omit any steps unless specifically modified or exempted by the Contract Documents.

8.01 HANDLING OF MATERIALS:

- A. Handle all materials and equipment to be incorporated in the work in a manner that will prevent misalignment of parts or the occurrence of damage of any kind.

- B. Protect all materials and equipment at all times from all environmental conditions that might cause damage in a secure and dry storage facility.
- C. Verify with the manufacturer all information regarding scheduling, delivery, and preparations necessary for installation.
- D. Verify that equipment and installation supplied under other Contracts, but required for the work in this Contract, are compatible.
- E. Contractor shall ensure that each item is marked in accordance with referenced codes and standards.
- F. Ship each unit securely wrapped, crated or packaged, and labeled for safe handling in shipment and to avoid damage or distortion.
- G. Supply all necessary supervision and coordination information to accommodate the installations of equipment.
- H. Adhere to manufacturer's handling requirements when off-loading equipment and materials at the jobsite.

9.01 STORAGE OF MATERIALS AND EQUIPMENT:

- A. All equipment and materials shall be stored in accordance with the manufacturer's recommendations, or as specified in the Contract Documents to preserve their quality and fitness for the work. Stored equipment and materials, although determined acceptable for the work upon delivery or during storage, must again be inspected by the Contractor before their incorporation into the work. Stored equipment and materials shall be located and arranged to facilitate inspection by DTPW.
- B. Work-furnished materials or materials paid for before incorporation shall be stored in secure locations approved by DTPW in a manner that will preserve their full value. Such materials shall be prominently labeled as property of work and shall not be co-mingled with non-work materials. If necessary, storage shall be in controlled environment buildings.

10.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

10.02 PAYMENT:

PRODUCT MATERIAL AND
EQUIPMENT REQUIREMENTS

01 60 00-5

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 62 00

SUBSTITUTIONS AND PRODUCT OPTIONS

1.01 DESCRIPTION:

- A. This Section specifies the procedures to be followed for preparing, submitting, amending and updating of lists of products proposed to be incorporated in the work.

2.01 SELECTED PRODUCTS:

- A. Within ten (10) days after the effective date of NTP, submit five (5) copies of the list of selected products. Arrange the list in the order of each Section's appearance in the specification.
 - 1. For products specified only by reference standards, any product satisfying those standards may be selected. Show name and address of manufacturer; trade name, model number or catalog designation of the product; manufacturer's reference standards and pertinent performance and test data.
 - 2. For products specified by naming one product or by naming several products, this establishes a product standard. Any other product, which is equal in the opinion of DTPW and EOR may be furnished. A request must be submitted to the DTPW as required for substitutions, for acceptance of products not specifically named.
 - 3. **Approve Equal:** Where named products or sources are accompanied by the term "or equal" or other language of similar effect, provide one of the specified products, or submit a request for substitution for a product not named, in accordance with the requirements of Section 01 62 00 – Substitutions and Product Options, which the Contractor judges to be of equal or better quality.
 - 4. Amend and update list as changes concerning the information become known.

3.01 LIST OF SUBSTITUTE PRODUCTS AND METHODS:

- A. Formal requests from the Contractor will be considered by DTPW and EOR for substitution of products and methods in place of those specified, but only if these requests are submitted within ten (10) days after effective date of NTP. No substitutions request will be considered after ten (10) days. Acceptance of substitute products and methods shall be only for the characteristics and use named in the acceptance, and shall be interpreted neither as a modification to the Specification and Drawing requirements nor to establish acceptance of products and methods for other portions of the Transit System. DTPW and the EOR shall judge the quality and suitability of the substitute product and method and his decision shall

- be final. Where use of a substitute product and method involves redesign of other parts of the work, the cost and time required to affect that redesign will be considered in evaluating the suitability of the substitute product and method.
- B. Submit five (5) copies of list of substitute products and methods, including the following information:
1. Complete data substantiating compliance of the proposed substitution with the requirements of the Specifications and Drawings.
 2. For products:
 - a. Product identification, including manufacturer's name and address
 - b. Manufacturer's literature, including product description, performance and test data and pertinent reference standards
 3. For construction methods:
 - a. Detailed description of proposed method
 - b. working drawings illustrating methods
 4. Itemized comparison of proposed substitution with product specified. Comparison shall include cost, differences in estimated life, estimated maintenance, availability of spare parts and repair services, energy consumption, performance capacity, salvage-ability, manufacturer's warranties and other material differences.
 5. Data relating to changes in construction schedule.
 6. Accurate cost data on proposed substitution in comparison with product and method specified except that cost data will not be required on substitutes proposed as equal, equivalent or superior to specified brand names and for which no request is made for price adjustment to the sub-contract.
 7. Equitable adjustment and credit that the Contractor proposes to offer work if the substitutions are not equal, equivalent or superior to specified brand names.
- C. In making request for substitution, Contractor shall verify:
1. That he has personally investigated the proposed product and method and that to the best of his knowledge, information and belief, the product and method is either equivalent or superior to that product and method specified and that he will update information as new or different data become known to him.

2. That he will furnish the same guarantee for substitution as he would for the product and method specified.
 3. That he will coordinate installation of the accepted substitution into the work and will make those changes required for the work to be complete and operable.
 4. That cost data is complete and includes related costs and excludes cost of engineering redesign.
 5. That he waives claims for additional time and costs related to the substitution, which become apparent.
- D. Amend and update list as changes concerning information on the list become known to him.
- E. Substitutions will not be considered, if indicated or implied on Shop Drawings or Product Data submittal for which no formal request for substitution has been submitted. Requests for substitutions will not be considered if acceptance will require substantial revisions of drawings and specifications or both.

4.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

5.01 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 71 13

MOBILIZATION

1.01 DESCRIPTION:

- A. This section specifies the mobilization of the construction equipment at the worksites for material and supplies necessary for the prosecution of the work, but not to be incorporated in the work; for temporary storage of equipment and material at the site and for demobilization of the construction equipment. Mobilization should also include the costs of bonds and insurance required by the Contract Documents.
- B. Construction equipment, material, supplies, and other items necessary for mobilization shall be available at the work site at the times they are to be built, used, installed or operated.

2.01 SUBMITTALS:

- A. Submit within seven days after the effective date of NTP, a layout of the proposed construction plan site including fences, parking, and storage areas.

3.01 EQUIPMENT:

- A. Construction equipment shall be of the capacity, type, quality, function and in the quantity necessary for the timely prosecution of the work.

4.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

5.01 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

1.01 REQUIREMENTS INCLUDED:

- A. Contractor is responsible for all cutting, fitting and patching, including attendant excavation and backfill required to complete the work to:
 - 1. Make its several parts fit together properly.
 - 2. Uncover portions for the work to provide for the installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to requirements of Contract Documents.
 - 5. Remove samples of installed work as specified for testing.
 - 6. Remove routine penetrations of non-structural surfaces for installation of piping and electrical conduits.

2.01 SUBMITTALS:

- A. Submit a written request to the DTPW and/or EOR well in advance of executing any cutting or alteration which affects:
 - 1. Work of the DTPW or any separate Contractor.
 - 2. Structural value or integrity of any element of the Project.
 - 3. Integrity or effectiveness of weather-exposed or moisture resistant elements or systems.
 - 4. Efficiency, operational life, maintenance or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- B. Include with each request:
 - 1. Identification of the Project.
 - 2. Description of affected work.
 - 3. The necessity for cutting alteration or excavation.

4. Effect on work of DTPW or any separate Contractor, or on structural or weatherproof integrity of Project.
 5. Description of proposed work:
 - a. Scope of cutting, patching, alteration, or excavation.
 - b. Trades who will execute the work.
 - c. Products proposed to be used
 - d. Extent of refinishing to be done.
 6. Alternatives to cutting and patching.
 7. Cost proposal, when applicable.
 8. Written permission of any separate Contractor whose work will be affected.
- C. Should conditions of work or the schedule indicate a change of products from original installation, submit request for substitution.
- D. Submit written notice to DTPW and EOR designating the date the time the work will be uncovered.

3.01 INSPECTION:

- A. Inspection existing conditions of Project, including elements subject to damage or movement during cutting or patching.
- B. After uncovering work, inspect conditions affecting installation of Products, or performance of work.
- C. Report unsatisfactory or questionable conditions to DTPW and EOR in writing; do not proceed with work until the Engineer has provided further instruction.

4.01 PREPARATION:

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of work.
- B. Provide devices and methods to protect other portions of Project from damage.
- C. Provide protection from elements for that portion of the Project which may be exposed by cutting and patching work, and maintain excavations far from water.

5.01 PERFORMANCE:

- A. Executive cutting and demolition by methods which will prevent damage to other work, and which will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.
- C. Employ original Installer or Fabricator to perform cutting and patching for:
 - 1. Weather-exposed or moisture-resistant elements.
 - 2. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- E. Restore work which has been cut or removed, install new products to provide complete work in accord with requirements of Contract Documents.
- F. Fit work airtight to pipes, sleeves, ducts, conduit and other penetration through surfaces.
- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

6.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

6.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 74 00

CLEANING

1.01 DESCRIPTION:

- A. This section specifies the maintenance of the work site in a clean, orderly hazard-free condition.

2.01 QUALITY ASSURANCE:

- A. Conduct cleaning and disposal operations in accordance with local ordinances and anti-pollution laws. Rubbish, volatile wastes, and other construction wastes shall be neither burned nor buried on the work site, and shall not be disposed of into storm drains, sanitary drains, streams or other waterways.
- B. Final cleaning shall be accomplished either men experienced in cleaning operations or by professional cleansers.

3.01 CLEANING MATERIALS:

- A. Cleaning materials shall be as recommended by the manufacturer of the surface to be cleaned.

4.01 SAFETY REQUIREMENTS:

- A. Maintain work site in accordance with local ordinances and anti-pollution laws applicable to work site cleanliness and in a neat, orderly and hazard-free condition until final acceptance of the work. Catwalks, accessible underground structures, work site sidewalks and walkways adjacent to the work site shall be kept free from hazards caused by construction activities.
- B. No volatile substances are to be used on the job site.
- C. Prevent accumulation of waste, which creates hazardous conditions.
- D. Artificially ventilate spaces, which are not naturally ventilated when noxious substances are being used in those spaces.

5.01 INTERIM CLEANING:

- A. Perform cleaning every workday for duration of the work. Structures, ground, and areas of the work site and public and private properties shall be maintained free from accumulations of waste materials and rubbish caused by construction

operations on the work site. Waste material will be removed from the work site daily.

- B. Remove or secure loose material on open decks and on other exposed surfaces at end of each day's work or more often to maintain work site in hazard-free condition. Prevent dislodgment of materials due to wind and other forces.
- C. Empty on-site waste containers whenever necessary so that trash overflow does not occur. Legally dispose of contents at either public or private dumping areas.
- D. Control the handling of materials, debris and rubbish; do not drop or throw from heights.
- E. Immediately remove spillages of construction-related materials from hauling routes.
- F. Perform cleaning operations dust and other contaminants resulting from cleaning processes will not fall on structures or pedestrian traffic below.

6.01 FINAL CLEANING:

- A. In preparation for substantial completion, conduct final inspection of exposed interior and exterior surfaces and of concealed spaces.
- B. Remove grease, dust, dirt, stains, labels, fingerprints and other foreign materials from finished surfaces.
- C. Maintain cleaning operations until project has been finally accepted.
- D. All skylights shall be professionally cleaned on both interior and exterior.

7.01 DAMAGE TO EXISTING FINISHES:

- A. Repair any concrete damaged.
- B. Repaint to match existing areas of damaged paint due to Contractors operation.

8.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

8.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

CLEANING

01 74 00-3

Project No. IRP338

RPQ NO. TP-0000008861

SECTION 01 78 00

CONTRACT CLOSE-OUT

1.01 SUBSTANTIAL COMPLETION:

- A. Substantial Completion shall be determined in accordance with the Contract documents and this Section. Should a conflict arise between the General Conditions and this Section, the General Conditions shall take precedence.

2.01 FINAL CONSTRUCTION REVIEW:

- A. When Contractor considers work is complete, he shall submit a written certification that work is acceptable and that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been reviewed for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in the presence of the EOR and are safe for operation.
 - 5. Work is completed and ready for final construction review.
- B. DTPW and the EOR will make a construction review to verify status of completion with reasonable promptness after receipt of such certification.
- C. If, during construction operations or during inspections for substantial or final completion, DTPW and/or EOR should fail to reject defective work or materials, whether from lack of discovery of such defect or for any other reason, such initial failure to reject shall in no way prevent his later rejection when such defect is discovered, or obligate work to final acceptance, and the Contractor shall make no claim for losses suffered due to any necessary removals or repairs of such defects.

3.01 CONTRACTOR'S CLOSE-OUT SUBMITTALS:

- A. Upon receipt of notice of acceptability from DTPW and EOR, the Contractor shall furnish evidence of compliance with requirements of governing authorities and Contract Documents to work, as follows:
 - 1. As-built drawings and other project record documents.
 - 2. Operating and maintenance data, instructions to work personnel.
 - 3. Warranties and Bonds

4. Spare parts and maintenance materials (if applicable).
5. Evidence of payment to all sub-contractors, material men and equipment suppliers (i.e. releases of liens).
6. The Contractor shall pack, label, ship and store spare parts, equipment components, special tools and test equipment to the work Maintenance Facilities as designated by the DTPW representative.

4.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

5.01 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 01 78 36

WARRANTIES

PART 1: WARRANTY

1.01 DESCRIPTION OF WORK:

- A. The warranties provided by the Contractor shall be for the longest period, starting on the date of final acceptance, of those specified as follows:
 - 1. One (1) year from final acceptance on all the work as specified in the Contract.
 - 2. Warranty period(s) as specified by the approved material or equipment manufacturers.
 - 3. Longer warranty period(s) as specified in the technical specifications.
- B. The Contractor shall provide certifications and other commitments, extended warranties and agreements for continuing services as specified elsewhere in the Contract Documents.

1.02 DISCLAIMERS AND LIMITATIONS:

- A. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the work that incorporates the products, nor does it relieve suppliers, manufacturers, and sub-contractors required to countersign special warranties with the Contractor.

1.03 DEFINITIONS:

- A. Standard product warranties are reprinted written warranties published by the individual manufacturers for particular products and are specially endorsed by the manufacturer to Department of Transportation and Public Works (work).

1.04 WARRANTY REQUIREMENTS:

- A. Related Damages and Losses:

When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.

B. Reinstatement of Warranty:

When work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost:

Upon determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective work regardless of whether the DTPW has benefited from use of the work through a portion of its anticipated useful service life.

D. DTPW Recourse:

Written warranties made to the owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the work can enforce such other duties, obligations, rights or remedies.

E. Contractor shall provide a written guarantee, to the work, that proprietary parts and oil absorption material or their generic equal will be made available to the work at least for 10 years from the date of the system start-up.

F. Rejection of Warranties:

Work reserves the right to reject warranties and to limit selections to products with acceptable warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

G. The DTPW reserves the right to refuse to accept work for the project where a special warranty, certification, or similar commitment is required on such work or part of the work, until evidence is presented that entities required to countersign such commitments are willing to do so.

H. All warranties including standard three (3) year warranty shall start at date of substantial completion of the Contract, or when work of an area is substantially completed, accepted, and taken over for use by DTPW. Ensure that all warranties comply with this stipulation prior to submission of same.

I. The DTPW will give prompt notice in writing to the Contractor of any defects noted during the warranty periods requesting him to promptly remedy such defects.

- J. Prior to final acceptance, the Contractor shall formally assign to DTPW all extended warranties given by sub-contractors for their work on the project, and such sub-contractor shall be formally advised of the assignment.
- K. Asset life expectancy: Contractor to provide the necessary documents securing the life expectancy at no less than 25 years
- L. Asset maintenance: As per grant agreements asset are to be maintained by the municipality

1.05 SUBMITTALS:

- A. Submit written warranties to DTPW prior to the date of the final acceptance inspection.
- B. When a special warranty is required to be executed by the Contractor, or the Contractor and a sub-contractor, supplier, or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the DTPW for approval prior to final execution.
- C. Submit a list of all warranty items within ten (10) days after notice to proceed.
- D. Prior to final acceptance compile two (2) copies of each required warranty, and bond properly executed by the Contractor, or by sub-contractor, supplier or manufacturer.
- E. Bind warranties and bonds in heavy duty, commercial quality, durable 3-ring vinyl covered loose leaf binders, thickness as necessary to accommodate contents, and sized to receive 8 1/2 inch by 11-inch paper.
- F. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
- G. Identify each binder on the front and the spine with the typed or printed title, "WARRANTIES AND BONDS", the project title or name, and the name of the Contractor.
- H. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

1.06 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

1.07 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

PART 2: ADDITIONAL THREE-YEAR WARRANTY (EXTENDED WARRANTY) OPTION

2.01 GENERAL:

This contract contains a Three-Year Warranty Option. If it is determined that there are sufficient funds to support the bid options, MDC will exercise its option and award the contract to the lowest responsive and responsible bidder.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

1.01 DESCRIPTION:

- A. This Section specifies the maintaining, marking, recording and submitting of project record documents.

DEFINITIONS:

1. Conformed Contract Documents:

The conformed documents provided to the Contractor at the time the construction Contract was executed, prior to the start of construction.

2. Contractor Document Transmittal (CDT):

Drawings, catalog cuts, samples or other documents submitted by the Contractor for County and consultant review and approval showing in detail how the Contractor proposes to carry out the work.

3. As-Builts:

During construction, two set of conformed drawings and specifications, kept current by marking in red all “as-built” construction conditions and changes arising out of RFIs, clarifications, directed field changes and sketches. At the conclusion of construction activities, the information contained in these blue lines and specifications shall be incorporated into the Compact Disk (CD) containing the latest conformed drawings including revisions made by the EOR during construction. Prior to Contract completion, work will provide the Contractor with a CD containing the latest conformed drawings. (Changes to specifications are typically only effected through change orders. However, in some occasions clarifications may require a modification to the specifications). The revised CADD drawings which include the information incorporated from the drawings and specifications become As-Builts.

2.01 SUBMITTALS

- A. Upon completion of the work, the Contractor shall submit the As-Builts to the EOR in time to be used for the final inspection and acceptance and for verification by DTPW and EOR. Availability of As-Builts shall be prerequisite to scheduling a final inspection of this Contract. Non-availability of As-Builts or inaccuracies therein may be grounds for cancellation and postponement of any scheduled final inspection by the either DTPW or EOR until such time as the discrepancy has been corrected. Upon completion of the work, the As-Builts shall become the property of work. The Contractor will transmit the As-Builts to DTPW with an attached Project Records “As-Built Drawings Index Form” uniquely identifying and describing each document.

B. Specifically, the following documents shall be submitted by the Contractor after construction is completed, but prior to submitting the request for final inspection:

1. The Contractor shall submit two (2) CDs labeled “As-Builts”, one in PDF format and the other in CAD format. The Contractor shall date and mark each drawing as “As-Built” using the revision block, and each drawing should be electronically signed by the Contractor certifying the accuracy and validity of the information contained therein. The Contractor shall also submit two (2) printouts from the CD containing the As-Builts reflecting all change notices, change orders, requests for information and field changes in red. The information regarding field conditions and changes is to be maintained in a set of record drawings and specifications during construction. Prior to Contract completion, DTPW will provide the Contractor with a CD containing the latest conformed drawings, including revisions made by the EOR. At the end of construction the “as-built” conditions are incorporated into the latest conformed drawings provided by DTPW. These final CADD drawings become As-Builts.
2. The Contractor’s engineer shall sign each record drawing, certifying the accuracy and validity of the as-built information contained therein.

3.01 QUALITY ASSURANCE:

- A. Project record documents shall conform to a high standard of quality, similar to that set forth in the National CADD Standard ANSI and ISO, or other relevant lower tier specification defining drafting quality and electronic file formatting.

4.01 ACCESS TO AND RETENTION OF DOCUMENTS:

- A. The Contractor shall provide DTPW and any of its authorized representatives, subject to entering into non-disclosure agreements, access to any work, books, documents, papers and records of the Contractor which pertain or relate to this Agreement or the work for the purposes of making audits, examinations, excerpts and/or transcriptions during the performance of the work and for a period of four (4) years after the date of the issuance of the acceptance certificate, except in the event of litigation or settlement of claims regarding or arising from the performance of this contract or the work, in which case the Contractor shall maintain all such documents until all such litigation or settlement of claims have been fully completed and all appeals or exceptions exhausted.

5.01 MAINTENANCE OF DOCUMENTS:

- A. The Contractor shall maintain at field office, one copy of each of the following:
1. Contract Documents
 2. Conformed Contract Drawings and Conformed Specifications

3. Construction Safety Manual
4. Change Orders, Change Notices and other modifications to the Contract
5. Engineer Field Order or written instruction
6. Approved shop drawings, product data and samples
7. Field test reports/records
8. Updated record drawings marked in red to show field changes
9. Request for Information (RFI)
10. All directed Field Changes and sketches

B. Equal Employment and Affirmative Action Records.

6.01 RECORDING “AS-BUILT” DRAWINGS:

A. A flowchart explaining this process is included with this section.

1. Record information concurrently with construction progress on a conformed set of blue lines and specifications. During construction, this set of blue lines and specifications are known as “As-Built” drawings.
2. Do not conceal any work until the required information is recorded.
3. Drawings should be legibly mark in red to record actual construction depicting the as-constructed configurations resulting from field and/or design changes:
 - a. Horizontal and vertical location of underground utilities and appurtenances, referenced by dimensions to permanent, visible and accessible features of the structure.
 - b. Location of internal utilities, electrical conduits and appurtenances, referenced by dimensions to permanent, visible and accessible features of the structure.
 - c. Field changes of dimension and detail.
 - d. Details not on original conformed Contract Drawings.
 - e. Changes made by Change Notice or by Change Order.
4. Legibly mark up each section of specifications to record:
 - a. Manufacturer, trade name, catalogue number, and supplier of each product and item of equipment actually installed.
 - b. Changes made by Change Notice or by Change Order.
5. Any changes due to RFI’s, clarifications and field sketches shall be incorporated into the record drawings by affixing sketches and other 8 1/2” x 11” sheets to the record drawings.

This information will be incorporated into the CD containing the latest conformed drawings once construction is complete.

1. Do not use the record drawing set for construction progress purposes.

7.01 DOCUMENT MAINTENANCE:

- A. Provide files and racks for storage of documents to maintain in clean, dry and legible condition.
- B. Do not use record documents for construction purposes.
- C. Make documents available for inspection by DTPW, EOR, Federal Government and State Government representatives.

8.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

9.01 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

VOLUME 1
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ELECTRICAL
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SECTION 26 01 02

CABLE DISTRIBUTION

SYSTEM

PART 1: GENERAL

1.01 DESCRIPTION

The work specified in this section consists of design, furnishing, and installation of a cable distribution system as required.

1.02 DEFINITION

The cable distribution system shall provide for the logical interconnection and intra- connection of system components and facilitate the shared use of metallic cable plant.

1.03 DESCRIPTION OF COMPONENTS

- A. Main Distribution Frame (MDF): Shall provide a common access and cross-connect point for twisted pair system interfaces. The MDF shall consist of a series of co- located, contiguous terminal blocks mounted on frames in a single area.
- B. Cables: Connecting cables from various systems.
- C. Cross-Connections: Jumpers (cross-connections) shall be installed between various blocks on the MDF and distributed terminal blocks as part of the installation procedure associated with each system.

PART 2: SUBMITTALS (CORL)

Refer to SECTION 01 33 00, Submittals for submittal procedures.

A. Preliminary Design:

- 1. Block diagrams: Showing terminal blocks, frames, manufacturer's model numbers, and location of equipment.
- 2. Certification: Manufacturer's certification that all cable and equipment meet specified requirements.
- 3. Product data: Manufacturer's catalog cuts, material specifications, installation instructions, and other pertinent data for all furnished products.

B. Final Design Submittal:

- I. Elevation drawings of MDFs detailing cabling routing, bay number, terminal block number, and application.

2. OEM practice publications for all apparatus supplied.
 3. Documentation detailing screens and operator interface to database software user application and system manager application programs.
- C. Pre-Acceptance Requirements:
1. Operations and maintenance manual that includes as-built drawings and written documentation of articles 1.4 A and B, accurately depicting the cable distribution system's in-service condition.
 2. In-service database software, complete with all connections of the cable distribution systems and the operations manuals.
- D. Test Procedures and Reports: Submitted as required by contract.

PART 3: PRODUCTS

3.01 MDF -TRAIN CONTROL AND EQUIPMENT ROOMS

- A. Main Distribution Frame(MDF):
1. Construction: Double-sided (vertical and horizontal sides), floor mounted, equipped with end and guard rails, grounding buses and all mounting hardware.
 2. Verticals: Shall be assigned as follows as required:
 1. Vertical #1: Used for outside plant cable termination on protectors.
 2. Vertical #2: Used for termination of internal house distribution and tie-cables.
 3. Vertical #3: Reserved for analog terminations of fiber optic digital channel banks only. Provide additional verticals as required per Contractor's design.
 4. Horizontal shelves: Shelves B through E, inclusive; used only for PABX terminations.
 3. Height: 2.75 meters
 4. Level "A" vertical and horizontal block positions shall not be used.
- B. Connectorized Terminal Blocks: Blocks connectorized on the equipment side may be used. The cross connect side shall be wire-wrap. All blocks shall be 8 26 terminals on the cross-connect side, unless otherwise approved. All unused block locations shall be equipped with an equal number of one-side connectorized and wire-wrap on both sides. All blocks, except protector connectors, shall be mounted on swivels.
- C. MDF Identification: MDF verticals shall be numbered from left to right and lettered "A" through "L" from bottom to top; the letter "I" shall not be used. MDF horizontal shelves shall be lettered "A" through "L" from bottom to top; the letter "I" shall not be used. Horizontal side columns shall be numbered from right

to left to coincide with the vertical side of the frame.

3.02 TERMINAL BLOCKS: All blocks shall be connectorized on the house/tie cable side and punch-down for solid and stranded wire on the drop side.

3.03 DATABASE SOFTWARE (APPLIES TO BOTH OPTICAL AND NON-OPTICAL CABLES)

- A. Database and supporting database applications software shall:
1. Document all cable distribution systems' metallic and non-metallic cable plant.
 2. Facilitate the sorting, tracing, printing, and manipulation of records for engineering and maintenance use.
- B. Database: Database shall consist of a collection of records.
- Record: Document each connection to terminal block documented with one record.
- 1 Fields: Field information shall agree with other documentation submitted under this contract.
 - 2 Station: This two-character alpha field shall designate the particular station where the terminal block is located.
 - 3 Room: This three-digit numeric field shall designate the room where the terminal block is located.
 - 4 Terminal Block Bay: This two-digit numeric field shall specify the bay in which the terminal block is located. A blank entry shall indicate "not applicable."
 - 5 Terminal Block Rack: This two-digit numeric field shall specify the rack in which the terminal block is located. A blank entry shall indicate "not applicable."
 - 6 Terminal Block Number: This two-digit numeric field shall specify the vertical position of a MDF terminal block in the rack. For non-MDF terminal blocks, a number shall be assigned to identify a specific terminal block.
 - 7 Pin Number(s): This six-digit numeric field shall designate the pin numbers on the terminal block of particular connections. This field shall be used to specify a maximum of two terminal block connections, using three digits per conductor. Entries with "O" in the second field indicate a one-conductor circuit.
 - 8 Description: This 16-character alphanumeric field shall define the service and equipment functions of the connections.
 - 9 Cable Number: A unique three-digit numeric field shall be assigned to each cable within a station.
 - 10 Wire Numbers: This six-digit field shall designate the specific cable wires with the connections on the terminal block. This field shall be used to specify a maximum of two conductors using three digits per conductor.

- 11 Entries showing a "O" in the second field shall indicate a one conductor circuit.
 - 12 Cable Binder: This two-character alpha field shall designate the cable binder. A null entry in this field means "not applicable." A null entry shall be permitted for connectorized cables.
 - 13 Cable Color Code: This eight-character alpha field shall designate the color code of the wires in the binder group. A null entry in this field shall designate "not applicable." A null entry shall be permitted for connectorized cable
 - 14 Circuit Number: A six-digit number shall be assigned to each complete circuit within a given station. This number shall be used consistently in each record used to document the complete circuit.
- C. Applications Programs: Provide two applications programs that operate on an MS Windows -compatible machine.
1. User Application Program:
 - I. Preclude the ability to create or modify database records.
 - II. Provide the capability of displaying and printing reports. Reports shall consist of all records sorted by specific station, room, terminal block number, description, cable, wire number, and circuit number fields.
 2. System Manager Application Program:
 - I. Provide for the entry of new records or the modification of existing records.
 - II. Include a facility to provide a time-stamped backup of the database.
- D. Operations Manuals:
1. User Operations Manual: Describes the application of user software; it shall provide detailed step-by-step examples of typical software use.
 2. System Manager's Manual: Describes the use and application of the system manager's software, and provides examples of the features and functionality of the software.

PART 4: EXECUTION

4.01 MDF INSTALLATION -TRAIN CONTROL AND EQUIPMENT ROOMS

- A Install the equipment room frame in the space designated by design drawings. Frame and all shields shall be grounded.
- B Install connectorized and non-connectorized blocks.
- C Connect connectorized and non-connectorized cables to terminal blocks and install jumpers as individual systems are installed. Tie all shields together on MDF and ground.
- D Prepare database records for the equipment room MDFs.

5.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

5.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 01 20

CONFIGURATION MANAGEMENT

PART I: GENERAL

1.01 DESCRIPTION:

This section specifies requirements for the Contractor's configuration management program, which includes planning, identification, definition, implementation, control, and accountability for the proposed systems.

1.02 CONFIGURATION MANAGEMENT PROGRAM

- A. Maintain and make available to DTPW accurate and current configuration records throughout the period of performance of the contract, and for a three-year period after final contract payment.
- B. Do not procure nor produce any hardware or software until such items have been approved by DTPW.
- C. All items, beginning with the lowest level of repair or replacement, that are identified by the same part number shall have the same physical and functional characteristics, be equivalent in performance and durability, and be interchangeable without alteration to themselves or associated items, other than normal field adjustments. An item shall not be considered interchangeable if it requires modification for fit or performance. Old and new configuration items that require segregation shall be identified either by a new drawing number or with a dash number added to the original drawing.
- D. Hardware Identification: Mark all hardware components to the lowest level of repair and replacement, with part number identification. The hardware identification marking shall coincide with officially released engineering data. Nameplates on major equipment items shall provide space for DTPW numbers to be added by the Contractor at the direction of DTPW. Serialization is required on each item of equipment delivered unless otherwise directed by DTPW. Assign an individual serial number in a numerical sequence established for the type or model series equipment being supplied. Do not use duplicate serial numbers within a type or model series.
- E. Change Control: These specifications identify the procurement baseline for this proposed system. Changes to the procurement baseline-including any new work item or equipment desired by DTPW during DTPW input process, after the contract award- shall be controlled by the processing of Engineering Change Proposals (ECPs) in accordance with the procedures described herein. All ECPs shall be reviewed by the Contractor's organization responsible for configuration control for total impact evaluation prior to recommendation and submittal to DTPW for review and approval.

F. Classification of Changes

1. A proposed engineering change to any part, assembly, or equipment item for the supplier's product shall be designated as a Class I change when one or more of the following is affected:
 - I. Form, fit, and functional interchangeability
 - II. Reliability and maintainability
 - III. Weight or balance (where it is a factor)
 - IV. DTPW furnished equipment
 - V. Safety
 - VI. Electromagnetic interference characteristics
 - VII. Delivered product (retrofit)
 - VIII. Delivered training, operation, or maintenance manuals (where additional contract funds are required to revise manuals)
 - IX. Sources of repairable items (source control drawings)
 - X. Schedules or deliverables
 - XI. Initial provisioning
 - XII. Performance of equipment
 - XIII. Training
2. A proposed change to system software shall be designated as a Class I change when one or more of the following factors are affected:
 1. Function, performance (including reliability), maintainability, correctness, efficiency, flexibility, testability, usability, and outside tolerance
 2. Interface characteristics
 3. Cost
 4. Schedules
 5. DTPW furnished equipment
 6. Safety
 7. Skill levels, training or engineering design
3. Any engineering change not affecting form, fit, function, or interchangeability, nor falling within the preceding definition of a Class I change, shall be designated as a Class II change. Some examples of Class II changes are corrections and clarifications of documents and drawings, substituting alternative materials or hardware, and those changes that do not affect the preceding listed Class I factors.

- G. Accountability: Maintain records such that the configuration of any item being delivered shall be definable in terms of its component part numbers. Account for differences between the as-built configuration and engineering released

documentation. Record status of change approvals and incorporation at each point in product development, test, production, or operational usage. Maintain a serialization and configuration record. Maintain the status of interface specifications, control documents, and plans. Maintain status of software once a baseline has been defined.

H. Engineering Change Proposal (ECP)

- I . Process each Class I change as an ECP and submit to DTPW for approval prior to initiating any implementation action. Any action or cost necessary to correct problems in the product or documentation arising from Contractor's misclassification shall be borne by the Contractor. Contractor shall also classify and control changes originating from subcontractors. Submit six copies of the ECP to DTPW, accompanied by technical documentation and the cost information necessary to fully evaluate the change.
2. **Report** all Class I changes that affect safety immediately. Identify the change by ECP number if reported verbally, and confirm the change in writing to DTPW within 24 hours. Class II ECPs shall be submitted to DTPW for information.

I. Design/Submittal Reviews and Audits

- I . Design reviews and audits shall be conducted jointly by DTPW and the Contractor. In all cases, approval by DTPW shall not constitute relief from contractual obligations. Submit all documentation, plans, and design data for the reviews and audits at least 5 working days prior to the date of the review. The individual subsystems' software design, programs, and hardware will not necessarily progress at the same rate. The likelihood of multiple PDRs and FDRs must be considered in planning for reviews and audit. Software reviews as applicable and audit shall be in accordance with ANSI/IEEE Standard 730 (latest revision).
2. Preliminary Submittal Review (PSR): Evaluate the design progress and technical adequacy of the selected design and hardware approach, and determine their compatibility with the performance requirements and interfaces of the contract and the schedule to complete all tasks. The review shall be held on a mutually agreeable date consistent with the Contractor's design schedule at DTPW's facility.
3. Final Submittal Review (FSR): Conduct the review(s) when detail design of an item is essentially complete, and the production drawings are ready for release. Determine that detail design of the system element under review will satisfy the design requirements established in the contract specifications, and establish the exact interface relationships between the item and other items of equipment and facilities. The reviews shall be held on mutually agreeable dates consistent with the Contractor's design schedule at DTPW's facility unless another

location is approved by.

4. First Article Inspection (FAI)

- I. Evaluate the assembled, in-place system by formal examination against the production drawings, specifications, and factory testing. Verify the system meets all requirements, and that documentation is internally consistent. This will occur at the Contractor's facility prior to installation at DTPW facilities.
- II. Prior to FAI, provide DTPW with factory test procedures and a list of all drawings to the lowest levels of repair and replacement, identified by revision or issue. The list shall be as complete as necessary to identify the baseline. Upon satisfactory completion of the audit, the data package shall be corrected within two weeks to incorporate any changes found during the audit.
- III. Schedule FAIs for all subsystems as applicable prior to first shipment from the subsystem supplier's plant.

PART2: SUBMITTALS

Unless otherwise specified, all submittals shall be in accordance with APPENDIX B, SECTION 01 33 00 and article 2.3 herein:

- A. Configuration Management Plan (CDRL)
- B. Complete set of final (as-built) drawings, as specified in other sections specifying the various equipment, with all changes incorporated thereon (CDRL)
- C. FAI audit results (CDRL)
- D. Design review and audit documentation (CDRL)
- E. Contract data requirements list (CDRL)
- F. Shipping Plan (CDRL)
- G. Staging Plan (CDRL)

2.01 CONFIGURATION MANAGEMENT PLAN (CDRL)

Prepare and submit to OTPW a Configuration Management Plan that covers hardware and software. Contractor's standard plan may be submitted for approval if it meets the stated criteria.

2.02 DRAWINGS AND DESIGN EVALUATION DATA

- A. Subsystem Plans: Plans including all subsystems such as PLC, WAN/LAN, etc., are required in order to track drawings and design evaluation data for the entire system within the contract limits.

1. Subsystem plans: All subsystems plans shall include all subsystem components details. All equipment shall be shown using standard OTPW symbols and nomenclatures.
 2. System cable plans: Showing all cable routings (local, power, express, and fiber) between communications locations, including subsystems covered under this contract. All cables shall be identified with numbers of conductors and size and nomenclature of the equipment to which the cable is connected.
- B. The above plans shall be used to replace the current plans due to changes under this contract. Existing plans (if any) shall be available upon request from OTPW for Contractor's reference. Submit five half-size prints and two half-size reproducible of each plan at least 5 working days prior to the scheduled start of the review.
- C. To support the design reviews for the project, provide five half-size prints and two half-size reproducible drawings of sufficient quality to make legible prints of those engineering drawings and documents that provide all essential data necessary to permit a meaningful evaluation and feasibility study of the proposed design. All engineering drawings and documents required to support design reviews shall be delivered to DTPW at least 1 working days prior to the scheduled start of the review. All drawings shall be dimensioned in English units.
- D. In addition to the other drawing requirements of these specifications, five full-size prints and two full-size reproducible drawings of sufficient quality to make legible prints of the following shall be submitted:
1. Installation drawings for all equipment provided under this contract.
 2. Single line, control schematic, functional block diagrams, and wiring diagrams.
 3. System block drawings for all equipment components showing the following:
 - I. Overall dimensions, orientation, points of normal support, and method of mounting and removal
 - II. Location of access doors and covers showing the relation to equipment inside the enclosure
 - III. Required draw out space and space for opening of access doors
- E. Manufacturing Drawings:
1. Throughout the design and manufacturing process, submit a continually updated list of manufacturing interconnect and assembly drawings and engineering change orders. Detail drawings shall be submitted at DTPW's request. Five full-size prints and two full-size reproducible versions of sufficient quality to make legible prints of manufacturing drawings shall be submitted to DTPW within 5 calendar days of their release or revision.
 2. Prior to completion of the contract, Contractor shall submit to DTPW a

complete set of the final (as-built) manufacturing drawings with all changes incorporated thereon. Two reproducible versions and eight copies of the above drawings shall be submitted.

- F. Drawing Quality and Updating: Drawings shall be of a quality where every line, number, letter, and symbol is clearly legible. Reproducible drawings shall be capable of reproducing drawings to this level of quality. Contractor shall update each drawing, incorporating all outstanding approved changes, at least once every 30 days. In no event shall more than five approved changes be accumulated against a drawing without incorporation, irrespective of its scheduled update. Changes to drawings shall be incorporated sequentially. Copies of all updated drawings that were submitted to DTPW in earlier revision shall be resubmitted in the original quantity and format.
- G. Calculations: Furnish calculations and other required data on standard 8.5 by 11-inch sheets, printed on one side only. Each sheet shall bear the following:
Contract name and number; title and number of pages; and data and revision status.
- H. Drawing Approvals: If approved by DTPW, a reproducible copy of each drawing will be identified as having received such approval by being so stamped and dated. Drawings stamped "not approved" or "approved subject to . . .," and with required corrections shown, will be returned to Contractor for correction and re-submittal. Re-submittals shall be handled in the same manner as first submittals.
- I. Electronic Drawing Files: Prior to completion of the contract, the Contractor shall submit electronic files for all the subsystem plans, installation drawings, manufacturing/shop drawings, and as-built drawings. All drawings shall conform to DTPW's drawings and CADD standards.

2.03 SHIPPING PLAN

Prepare and submit a Shipping Plan at least 3 days prior to the first shipment of equipment. The Shipping Plan shall include details on how Contractor plans to ship equipment from the factories to the site for installation.

2.04 STAGING PLAN

Prepare and submit a Staging Plan at least 3 days prior to the first shipment of equipment. The Staging Plan shall include details on how Contractor plans to ship equipment from the factories to the site for installation.

2.05 PROGRAM PLANS

Implement and maintain the plans during all phases of the contract.

2.06 CONTRACT DATA REQUIREMENTS LIST

Implement and maintain the list to plan, schedule and track status of all submittals

required by the Contract.

2.07 REVIEW AND AUDITS

Conduct reviews and audits in accordance with specified requirements and procedures.

3.01 MEASUREMENT:

B. Work under this section will not be separately measured for payment.

3.02 PAYMENT:

B. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 01 21

SYSTEM INTEGRATION

PART I: GENERAL

1.01 DESCRIPTION:

This section describes system integration services and work requirements necessary to successfully integrate all systems, subsystems, and devices contained within the scope of this contract into a fully unified, operational, tested, and certified system. A description of the various interfaces between all subsystems is also provided herein. They include but not limited to the following **AS APPLICABLE**:

Phase	PLC	TCC Communications	Interface	ATO Cabinet Communications method
Phase I	Numa-Logic PC700B	Serial connection	RS-232	Hard wired
Phase 2	Westinghouse HPPC-1700	Serial connection	RS-232	Serial cable

1.02 SUBSYSTEM INTERFACES – AS APPLICABLE

- A. The Contractor shall provide integration services for all the subsystems defined in this solicitation.
- B. A brief description of the inter-subsystem interfaces as specified in this volume is provided below for reference.
 - I. Programmable Logic Controllers: The PLCs shall use Optical connectivity, or the Ethernet Protocol as defined in **APPENDIX A**, SECTION 5.3 between the distributed nodes. The PLC shall use the required protocols necessary to interface and communicate with existing systems, with which the PLCs shall be integrated,
 2. LAN: This subsystem shall support all Ethernet Capable devices and subsystems at all Metro Mover locations.
 3. VoIP Telephony Voice Appliances shall use the Ethernet protocol and the LAN for all 3. communications with a VoIP System to be installed by others as a part of the MIC-Earlington Heights expansion project.
 4. The CCTV system shall use the Ethernet Network for communications with the existing CCTV Network.
- C. In addition to these interfaces and subsystems, the Contractor shall provide integration services for other subsystems not mentioned in the contract documents, but required to interface to, or to be integrated with, the subsystems supplied under this contract to achieve successful system integration.

1.03 SYSTEM INTEGRATION:

The Contractor shall designate a person or group of people as the system integrator(s). This individual or group shall be the responsible party for ensuring successful system integration.

- A. The system integrator shall attend and participate in all meetings, along with the Engineer.
- B. Reserved
- C. Locations and Facilities: The Contractor shall provide system integration work, services, and support for all locations, rooms, and facilities. Other locations and facilities not listed herein, but required to interface to or to be integrated with the system supplied under this contract to achieve a successful integration.
- D. Required System Integration Services: The Contractor shall provide the following services:
 - E. Inter-subsystem interface control
 - F. Staging, Migration Planning, cut-over planning and support
 - G. Project management/coordination of subcontractors
 - H. Coordination of training
 - I. Test planning and execution
 - J. Test auditing
 - K. System and subsystem commissioning
 - L. Discrepancy resolution
 - M. Executive-level presentations
 - N. Internal arbitration
- O. All other services not mentioned here, but necessary to achieve a successful integration.

1.04 INTER-SUBSYSTEM INTERFACE CONTROL:

- A. The Contractor shall identify and manage all physical and logical interfacing among all the subsystems and subsystem devices provided under this contract to ensure that all communications, processes, and interactions among devices, subsystems, and that the system design provides optimum performance.
- B. Any existing device, subsystem, or system that interfaces with any of the equipment provided under this contract shall be identified prior to performing any integration work.
- C. Interfacing with old, fragile, or obsolete equipment shall require written approval from DTPW.

- D. All device, subsystem, and system interfaces shall adhere to the approved interface requirements. Changes and deviations from the interface requirements shall require the interface matrix to be submitted for review and approval at least 3 days prior to implementation.

1.05 STAGING, MIGRATION PLANNING, CUTOVERS, AND SUPPORT

- A. The Contractor shall provide staging and migration process for all devices, subsystems, and systems in a coordinated and phased manner so as to ensure a smooth transition from the existing devices, subsystems, and system to the new devices, subsystems, and system.
- B. The migration process shall be executed in accordance with the conformed and approved Migration Plan.
- C. The Migration Plan shall ensure continuity of revenue service for the Metro system. Under no circumstances shall the work of this project impede ability of DTPW to operate its regular revenue service. Work restrictions and availability of DTPW resources shall be considered in the Migration Plan.
- D. The Contractor shall provide system integration services for all cutover stages throughout the life of this contract.
- E. Planning for all cutovers shall be responsibility of the system integrator.
- F. F. The Contractor (system integrator) shall be present at all cutovers, and shall provide support during the migrating period.
- G. At any time, simultaneous work on the stations shall be limited to a maximum of two stations (including corresponding ancillary facilities). This is intended to constrain the use of DTPW personnel at any given time.
- H. The cutover and Migration Plan shall be presented and finalized during the design phase. However, cutover plans for individual subsystems/stations shall be available at least JO days prior to the actual cutover.
- I. The Contractor shall provide on-site technical support for the peak operational hours during migration and cutover for all systems. On-call support shall be provided on off- peak hours, 7 days a week, while all systems are being migrated. Such a support period shall at a minimum extend from the two weeks prior to the deployment of the CSCS hardware until the final acceptance test is completed, plus two weeks of on-call service post-acceptance.
- J. Migration restrictions:
 - 1. No downtime to revenue operations shall be allowed.
 - 2. Temporary facilities and configurations shall be removed after they are no longer needed.
 - 3. Restricted downtime will be allowed for safety or critical equipment.
 - 4. Construction and installation of the new subsystems shall be done in parallel to avoid interfacing to old, fragile equipment. The submitted Migration Plan shall

comply with the requirements and restrictions listed herein and elsewhere in the contract specifications, and with any requirements produced by DTPW during the design phase.

K. Cutover requirements:

1. Before a cutover can occur, the subsystem, station, or device shall be fully tested and approved in accordance with its system acceptance Test Plan.
2. Subsystems/stations containing more than an individual subsystem (as defined in this section) shall require that every individual component subsystem be fully tested and approved before testing the (larger) composed subsystem/station.
3. Cutover plans shall be provided at least 10 days in advance of the corresponding cutover.
4. All plans submitted shall conform to the requirements listed herein, elsewhere in the specifications and those requirements generated by DTPW during the design phase.

1.06 COORDINATION OF TRAINING

- A. The Contractor shall propose appropriate times for offering the training courses, as required.
- B. DTPW will review and approve (as appropriate) the final Training Plan and schedule. After DTPW approval, any changes to the schedule shall be negotiated with DTPW.
- C. Requirements for training
 1. Training shall be provided at different hours of the day (as appropriate) so that all DTPW shifts will be able to participate.
 2. For every system configuration change, temporary or permanent, the Contractor shall provide training prior to implementation. For temporary changes the Contractor may use informal on-site training.
 3. Training courses and material shall cover the operational concept, maintenance, troubleshooting, and operations of all subsystems provided under this contract.
 4. All training examples, exercises, and examples shall be based on the actual DTPW Metrorail system. Generic examples and exercises shall not be allowed.

1.07 TESTING PLANNING AND EXECUTION

- A. The Contractor is responsible for all Test Planning and procedures. Refer to section 01 45 23 for detailed Test Planning and execution requirements.

- B. The Contractor designated system integrator shall plan and execute planning for the following tests:
 - I. First Article Inspection Tests (FAITs) as may be required.
 - 2. Subsystem FATs
 - 3. Integrated FAT.
 - 4. Subsystem availability tests
 - 5. System acceptance test
 - 6. Integrated System Availability Test
 - 7. Final acceptance test

1.08 TEST AUDITING

- A. The Contractor shall provide a test auditor for all tests conducted by the system integrator to certify that all tests performed on all the devices, subsystems, and system are accurate, and that testing complied with the procedures.
- 8. DTPW will provide a representative to witness all tests. However, the witness signature shall not relieve the Contractor (test auditor) of its responsibilities and liability.

1.09 SYSTEM AND SUBSYSTEM COMMISSIONING

- 1. The Contractor shall plan and coordinate all subsystem and the system commissioning.
- 2. Commissioning of any subsystem and the system shall be coordinated with DTPW, and shall adhere to the respective Test Plan presented by the Contractor and approved by DTPW.
- 3. Requirements for Commissioning
 - I. No discrepancies in classification Priority 1 (as referenced in section, DISCREPANCY RESOLUTION, below) shall be left open.
 - II. Availability test completed and approved.
- 4. All work under this contract requires all new subsystems to be constructed in parallel to the existing system components. Commissioning of devices or subsystems to work under the existing system shall only be implemented per DTPW request. For such occasions, the Contractor shall provide all training and manuals, perform a complete set of tests (including subsystem availability test as applicable), and resolve all discrepancies prior to commissioning.
- 5. All commissioned devices or subsystems become property and responsibility of DTPW upon commissioning. Warranty shall still be applicable.
- 6. The Contractor shall provide cutover services for commissioned devices or subsystem. Cutover plans shall be submitted prior to cutover, as normally specified.

7. System availability test: A test to confirm the overall system availability shall be performed after all cutovers have been performed.

1.10 DISCREPANCY RESOLUTION

The Contractor's system integrator shall keep track and pursue resolution of all discrepancies, including software bugs, in a timely manner, as required below:

- I. Discrepancies/bugs shall be classified in three categories and assigned a priority for resolution. The priority shall be assigned by DTPW-designated test engineer to all discrepancies after testing any subsystem, station, device, or system. The list below relates the discrepancy categories to the appropriate resolution priority and time for resolution:
 - I. Critical, Priority 1 - One natural month after initial testing will be allowed for resolution: These discrepancies may cause instability, improper operation, or may provide insufficient or confusing information that could cause an accident or damage to a device, subsystem, or system.
 - II. Major, Priority 2 - Two natural months will be allowed for resolution: These discrepancies do not cause instability or incorrect operation; however, they may provide erroneous non-critical information or annoyance.
 - III. Minor, Priority 3 - Three natural months allowed for resolution: These discrepancies are of a cosmetic nature, and do not interfere with operations.
2. Time for discrepancy resolution shall start counting from the date the discrepancy was noted in the discrepancy log.
3. Closing of discrepancies on the discrepancy log, regardless of whether the bug was generated internally by the Contractor or by DTPW, shall be witnessed by DTPW.
4. Discrepancy log reports shall be periodically submitted at least once monthly. However the Contractor shall submit discrepancy logs within two business days upon request at any time during construction.
5. Testing for problem resolution shall be conducted monthly, after the initial FAT for the first subsystem for which discrepancies are generated.
6. During construction, hardware/interface incompatibilities among devices, subsystems, and systems shall be tracked and resolved by the system integrator.
7. Unless otherwise specified, no device, subsystem, software build, or system can enter live operation with unresolved Priority I discrepancies.
8. Reserved.

1.11 EXECUTIVE PRESENTATIONS

- A. The system integrator shall provide, at a minimum, one presentation to DTPW to report on integration issues and progress.

8. These presentations shall be detailed and technical enough as to provide a good

understanding of the issues being discussed to a technically informed person (not an expert in the subject matter).

1.12 INTERNAL ARBITRATION

The system integrator shall resolve any and all technical disputes among subcontractors.

DEFINITIONS:

The list of definitions hereunder shall only apply within the context of this section. The purpose of this list is to define the work, systems, services, and goals requested from the Contractor under this section, as viewed from the point of view of the overall integrated system.

- A. Device: Shall refer to the individual components of a subsystem. Physically a device may be composed of smaller components or modules.
- B. Subsystem: Shall refer to a particular conglomerate of devices operating to achieve a particular functional goal provided or interfaced with under this contract. Some examples of subsystems are as follows:
 - 1. Central Control System (Sub) System: Specified elsewhere in these specifications.
 - 2. Fire Management (Sub) System: Specified elsewhere in this contract.
- C. System: Shall refer to the integrated conglomeration of subsystems and devices provided or interfaced with under this contract, working in harmony and cooperating to achieve successful operation as specified by the contract documents. The system shall include every component, process, and hierarchy between the discrete field instrumentation devices throughout Metro and the Central Control MMI interface.
- D. Successful Integration: Shall refer to achieving the overall system integrated functionality required by the contract documents and by any negotiations between the Contractor and DTPW.
- E. System Integration: Shall refer to the work of harmonizing and fine-tuning (by coordinating, testing, etc.) the physical and logical interfaces among devices and subsystems, as specified in the contract documentation, to achieve a fully operational unified system as required by the contract documents.
- F. Physical Interface: Shall refer to those interfaces where a direct interaction or connection is present.
- G. Logical Interface: Shall refer to the communications of two or more devices on the highest communication layer (**e.g.**, application layer for the OSI model). In other words, it refers to the data exchange interface among data terminating equipment (as opposed to data communications equipment).
- H. Commissioning: Bringing a device or subsystem into operations using the existing subsystems or the system. This definition excludes bridging the new Central Control System with the existing subsystems/systems.

1.13 QUALITY ASSURANCE

- A. Testing of devices and subsystems, and calibration of testing equipment, shall be performed per the requirements in this section, applicable codes and standards, and industry best practices (as specified elsewhere).
- B. Installation of new equipment shall be done as required herein, following the manufacturer's instructions and recommendations, industry best practices, and applicable codes and standards as specified elsewhere.

PART 2: SUBMITTALS

2.01

- A. All submittals listed under Part 2 of this section shall be done in accordance with SECTION OJ 33 00 and the requirements listed hereunder.
- B. DTPW reserves the right to review and approve/disapprove all submittals required under this section.

2.02 GUIDANCE TO CONTRACTOR

Except where noted, equipment meeting the requirements of this specification may be considered for use. The specific models of equipment and accessories to be submitted under this specification must be approved by the Engineer, based on their degree of compliance with these requirements and their suitability for the needs of DTPW.

PART3: PRODUCTS

3.01 SUBMITTALS: CONTRACT DATA REQUIREMENTS LISTS (CDRLs)

- A. The Contractor, at a minimum, shall submit each one of the documents listed below. These shall be submitted on the time frame specified for each submittal.

8. Design Phase Submittals

- I . Migration Plan: This document shall describe in detail the strategies involved in migrating from the old subsystems and system to the new. It shall meet the contract requirements for both hardware and software, after analyzing the system survey findings and the information provided at DTPW input phase.

The Contractor, at a minimum, shall identify and describe the following items and processes necessary in the conversion process:

- I. Technologies to be implemented

- II. Phases for all work

- III. Risks involved in every alternative proposed
 - IV. Tasks required to achieve successful migration and integration
 - V. Training for every phase, every group of users, and for every subsystem to be deployed
 - VI. Human resources involved in the Migration and Cutover plan
 - VII. Equipment needed to accomplish migration
 - VIII. Processes that will help attain a successful migration
 - IX. Real estate involved for storing, installing, testing, and operating while migrating
 - X. Temporary facilities and temporary fixes performed to both new and existing equipment during the migration process
 - XI. Temporary configuration implemented during the migration process
 - a. The preliminary Migration Plan shall be submitted at least 5 days prior to the final design review (FSR) and presentation.
 - b. The conformed Migration Plan shall be submitted for review at least 10 days after the FSR presentation.
2. Test Plan: It shall contain all tests based on the requirements specified elsewhere in the contract documents. The Test Plan shall be submitted 5 days after NTP.
 3. Master Training Plan
 - I. The master Training Plan shall be based on the requirements described on the individual sections, DTPW input, and those approved during the design phase.
 - II. The Training Plan shall be submitted one week (five business days) after the Migration Plan has been reviewed and approved by DTPW.
 4. Development and Factory Acceptance Phase Submittals
 - I. Master Interface Control Document (ICD): This CDRL shall clearly identify in both text and chart (matrix) format all the interfaces among devices, subsystems, and system, both old and new.
 - I. It shall clearly identify all logical interfaces for all devices and between subsystems.
 - II. All physical interfaces shall be identified and described.
 - III. All layers interfaces shall be defined and compared in relation with the OSI 7 layer model.
 - IV. Frames, packets, overhead, message format, expected inputs, expected outputs, and any relevant protocol information shall be included in the description of all interfaces.
 - V. All possible (data) messages needed for all interfaces shall also be provided in the ICD. The interface matrix shall be submitted for DTPW review no more than 5 days after the Design/submittal phase is completed.
 2. Discrepancy Log and Reports for FAT
 - A. The log and reports are to be submitted monthly after the first FAT test with

discrepancies.

- B. Discrepancy Resolution Report: These reports shall contain the name of the person who identified the discrepancy, the date when the bug was noticed, a description of the problem in plain (nontechnical) English, the name of the person who identified the cause of the problem, a plain English explanation of the rationale for the problem, and the name and the signature of the person stating that the discrepancy has been fixed.
- C. The discrepancy log shall be submitted no later than five days after a test is conducted. The log shall contain all the signatures of the tester, the auditor, and DTPW-designated test engineer.
- D. Deployment Phase Submittals
 - 1. Integrated System Availability Test Plan: It shall contain the test procedure to exercise the fully integrated system for a period of 60 natural days.
 - I. The Test Plan shall identify all subsystems to be tested, with testing procedures and testing forms for each subsystem. It shall also provide a schedule for testing, identify the testers, and provide any other information relevant to the test.
 - II. The detailed Test Plan shall be submitted at least 3 days prior to the actual testing.
 - 2. Commissioning Plan: The Commissioning Plan (if applicable) shall be submitted at least 3 days prior to commissioning. The Commissioning Plan shall provide the following information:
 - I. A list of all tests to be performed on the device or subsystem to be commissioned (operating with the existing system)
 - II. Detailed installation steps and diagrams
- 3. Discrepancy Log and Reports
 - I. The log and reports are to be submitted monthly after FAT.
 - II. Discrepancy Resolution Report: These reports shall contain the name of the person who identified the discrepancy, the date when the bug was noticed, a description of the problem in plain (nontechnical) English, the name of the person who identified the cause of the problem, a plain English explanation of the rationale for the problem, and the name and the signature of the person stating that the discrepancy has been fixed.
- 4. System overview diagrams and system conceptual diagrams
 - I. These shall be provided at least 5 days prior any subsystem test.
 - II. Final submission shall be done after the system availability test has been completed.

PART 4: EXECUTION

All system integration work shall be performed in accordance with the individual subsystem's section requirements and those requirements provided by DTPW during DTPW input and the design phase.

4.01 SYSTEM INTEGRATION

- A. The integration process for the station subsystems shall flow from the bottom up. That is, simpler and single systems shall be fully tested and integrated prior to integrating a higher, larger, or more complex system.
- 8. The Contractor shall install the new system independently and in parallel with the existing system.

4.02 INTEGRATED SYSTEM AVAILABILITY TEST

- A. The purpose of the test is to determine system stability and to identify any discrepancy that may arise from conflicts that could be created by having a fully integrated system. The duration of the test shall not be less than 6 consecutive natural days.
- 8. The test shall address all functional areas and shall execute more than one function at a time to identify any conflicts.
- C. During this test, unlikely but possible scenarios shall be produced.
- D. A Central System catastrophic system failure shall require restarting the test. If the cause for the failure cannot be identified, the Contractor may choose to restart testing right away. On the other hand, if the cause for failure is recreated, a critical discrepancy shall be generated, and no further testing shall be performed until fixed.

4.03 MEASUREMENT:

- C. Work under this section will not be separately measured for payment.

4.04 PAYMENT:

- C. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 05 00

COMMON WORK RESULTS FOR

ELECTRICAL PART I: GENERAL

1.01 DESCRIPTION:

This section applies to electrical equipment coordination, sleeves and sleeve seals for raceways and cables, and common electrical installation requirements.

PART I: PRODUCTS

2.01 MATERIALS:

A. Sleeves for raceways and cables:

1. Steel pipe sleeves
2. Cast-iron pipe sleeves
3. Sleeves for rectangular openings

B. Sleeve seals: Modular sealing devices with sealing elements, plastic carbon-steel stainless-steel pressure plates, and carbon stainless-steel connecting bolts and nuts.

3.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

3.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 05

19 WIRE AND

CABLE

PART 1: GENERAL

1.01 DESCRIPTION:

This section addresses the furnishing and installation of non-Fiber Optic wire and cable for the Metro Mover Fiber Replacement Project. All requirements of this section apply to this work.

1.02 SUBMITTALS - Refer to Section 01 33 00. SUBMITTALS, for submittal procedures.

A. Contractor shall submit the following drawings:

- I. Shop drawings and manufacturer's literature showing details of fabrication and technical data for each type of cable to be furnished
- II. Working drawings showing specialized requirements for installation and termination
- III. Cable plan showing the locations and functions of all cables to be installed
- IV. Detailed installation wiring diagram and cabling diagram: Any special precautions associated with cabling shall be clearly identified. All the cable and wiring terminations shall be shown on drawings, and all terminal markings, cable connector markings, and cable lengths shall be clearly indicated. Submit test reports for all tests.

B. Contractor shall document manufacturer's qualifications and certifications.

PART 2: PRODUCTS

2.01 WIRE AND CABLE

A. General

1. Identify cables as to manufacturer, year of manufacture, insulation type, conductor size, and voltage rating in accordance with manufacturer's standard method, and subject to review by DTPW.
2. Use only flame-retardant and low-smoke-emission cables with insulating and jacketing materials capable of a 40-year average service life.

3. Use cables suitable for installation at minus 15 degrees C.
4. Use only cable with characteristics that meet or exceed the limits prescribed by the manufacturer of connected equipment.
5. When RJ-21 connectorized cables are used, they should be constructed of 25 twisted pairs, with an overall shield.

Main Distribution Frame (MDF) cross-connections:

- I. Non-data (non-binary) signal cross-connections should have the following characteristics:
 - a CAT6 Plenum rated cable
 - b Construction: Twisted-pair construction
 - c Conductors: Tinned, 24 AWG, solid copper
- II. Data (binary) signal cross-connections:
 - a CAT6 Plenum rated cable
 - b Construction: Twisted-pair construction, with individual shields
 - c Conductors: Tinned, 24 AWG, solid copper
- B. Minimum voltage ratings for both AC and DC:
 1. External wiring for module, equipment, signal, and instrumentation circuitry: 300 volts
 2. Power circuitry: 600 volts
- C. Conductors

Conductors should be sized to ensure operation of the equipment based on the anticipated equipment loads and operating parameters for the systems, in accordance with NFPA 70, chapter 3, article 310, and as specified herein. Use coated conductors of annealed copper wire in accordance with ASTM B 33; Class B and Class C stranded conductors conforming to ASTM B 8, Table 2; and Class G stranded conductors conforming to ASTM B 173, as follows:

 1. Equipment module, signal, and instrumentation external wiring: No. 20 AWG minimum, Class B
 2. Rack-to-rack and wiring: 20 AWG minimum, Class B
 3. All other circuits: No. 14 AWG minimum, Class B
- D. Cable Assembly
 1. Use single-conductor and multiple-conductor cables with tight-fitting, free-stripping, very flame resistant and low smoke type modified ethylene tetrafluoroethylene (ETFE) material for insulation and jackets. Cables should be certified for continuous operation at 150 degrees C in dry locations.
 2. Insulation thickness
 - I Multi-Conductor Cables: Minimum average of 0.01575 inches (0.4 mm) and

absolute minimum of 0.01378 inches (0.35 mm). Test at 3,000 volts AC for 5 minutes.

- n Single-Conductor Cables: Minimum average of 0.009843 inches (0.25 mm) for No. 20 AWG. Minimum average of 0.01181 inches (0.3 mm) No. 14 AWG. Minimum average of 0.01575 inches (0.4 mm) and absolute minimum of 0.01378 inches (0.35 mm) for No. 12 AWG or larger. Each shall be tested at 3,000 volts AC for 5 minutes.

III Jacket thickness

- a. For single-conductor cables, as specified for insulation
- b. Overall thickness on multiple-conductor cables shall be per industry standards for similar use
- c. Conductor Identification
 - i. Identify the conductors of twisted-pair cables in accordance with IPCEA S-19-81, paragraph 5.6.3.4, except where otherwise provided by referenced REA specifications.
 - ii. Except as otherwise specified, each insulated conductor in multiple conductor cables shall be identified with a specific number, or shall have a different color or tracer color combination.
 - iii. Power cable colors shall be coded as follows:
 - A01. Conductor 208/120 Volts
 - A02. A Black
 - A03. B Red
 - A04. C Blue
 - A05. Neutral White
 - A06. Ground Green

2.02 MASTER CLOCK SYSTEM CABLES:

NOT APPLICABLE

2.03 WIRE DISTRIBUTION SYSTEM:

The following criteria apply to distribution system cable.

- A. Cable Construction: Twisted-pair construction, individual shield on each pair
- 8. Conductors: Tinned, 24 AWG minimum, solid copper

2.04 WIRE FOR CROSS-CONNECTIONS: Cable distribution system cable used for cross-connections at MDF locations shall use shielded cross-connections on data signals to destination at MDF.

2.05 WIRE DISTRIBUTION SYSTEM CABLES

- A. Construction: Twisted-pair construction, individual shield on each pair

8. Conductors: Tinned, 24 AWG minimum, solid copper

PART 3: EXECUTION

3.01 INSTALLATION

- A. Install wire and cable in accordance with manufacturer's recommendations and applicable codes and standards.
- B. Do not exceed minimum bending radius as permitted by ICEA S-19081, and cable manufacturer.
- C. Install cables in the equipment rooms in overhead cable trays and in the Interior location within SPCC, beneath the raised computer floor.
- D. Verify that the raceway conduit system is free of obstructions by pulling a suitable wire brush, swab, and mandrel through the raceway conduit to remove extraneous matter.
- E. Ensure that the raceway conduit system is dry before installation of cable, and use lubricant approved by the cable manufacturer to facilitate pulling cable.
- F. Determine maximum cable lengths and pulling tensions to avoid excessive pulling tensions or more bands than the manufacturer recommends.
- G. Provide at least 20 percent spare conductors (but not less than four such conductors) in all multiple-conductor cables (other than individual twisted-pair cables). Provide sufficient wire length to reach the farthest terminal point within equipment where spare wiring is not to be terminated. Spare wiring shall be readily accessible.
- H. Do not allow wires to cross one another when pulled into a conduit. Prevent kinking in conduit fittings or boxes. All cables and wires to be installed in a conduit shall be installed at the same time.
- I. Do not pull into trays or troughs. Cables shall be laid, with a minimum amount of crossover, in the trays and troughs and secured at least every 3 feet; cables shall not be pulled tightly around bends. Conduits for cables entering or leaving trays shall be rigidly attached and supported at their ends by suitable brackets and conduit straps on the sides of the trays.
- J. Wire and cable shall be permanently tagged as specified in APPENDIX B, SECTION 16120.
- K. All exposed wires and cables entering or leaving equipment housings, junction boxes, etc., shall be protected from abrasion. Openings in equipment enclosures and junction boxes shall have split ring plastic grommets.
- L. Seal all fire-rated openings.

- M. Open wiring on individual equipment racks shall be neatly arranged, bundled, and tied approximately every 3 inches with nylon straps.
- N. All wiring within cabinets and enclosures shall be neatly arranged, bundled, and tie- wrapped every 6 inches with nylon straps.
- O. All communications wiring shall be separated from power cables.
- P. The ANSI/TIA/EIA 606-A Standard for Telecommunications cabling system shall be used in all labeling methodologies. Classes of Administration 1 through 4 inclusive shall be used as applicable. All new wiring shall be labeled with a designation and labeling structure that is compliant with ANSI/TIA/EIA 606-A, and shall be submitted for approval by the Engineer. Labeling shall be on all origination and destination ends of all installed cables.

3.02 SPLICES AND TERMINATIONS

Wires and cables shall be continuous between equipment rooms and intended termination points at the equipment. Splices will not be permitted except as specifically authorized in writing by DTPW. All terminations shall be made in accordance with the cable manufacturer's recommendations. Termination hardware shall require DTPW's review.

3.03 TESTING

Test all cables for continuity, shorts, opens, crossed pairs, and grounded conductors. Each cable connector and MDF terminal shall be verified and recorded by connector pin number or terminal number and the wire color that is to be connected, per DTPW reviewed drawings. All testing shall conform to section O I 45 23 except where more stringent testing is specified in this section.

3.04 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

3.05 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 05 24

CONTROL SYSTEM - EQUIPMENT

PART 1: GENERAL

1.01 DESCRIPTION

This section describes the required characteristics of the equipment to be supplied to meet the functional requirements in these Technical Provisions. Characteristics within this section shall comply with the requirements specified in the Quality Assurance - System Assurance section. Provide hardware that has sufficient capability and flexibility to meet the requirements of this section, as well as the present and future functional requirements specified.

1.02 GENERAL EQUIPMENT REQUIREMENTS

All hardware delivered as part of the control system shall include all engineering and field changes since the time it was manufactured. All engineering and field changes shall be implemented prior to the factory functional performance test. All equipment shall be new and of the finest production quality. Do not provide major equipment requiring a substantial amount of new design and development. No modified (physically altered) modules or printed circuit boards shall be supplied as part of the control system, as spare parts, or as replacement parts under warranty.

1.03 EQUIPMENT PERFORMANCE AND CAPACITY

All performance and capacity data (such as processor loading and main memory sizing) supplied for the control system shall be based on the following conditions:

- A. The control system configuration as described in SECTIONS 01 11 00 and 01 43 00.
- B. The total database size and total number of LNPs for the DTS system as applied to the line
- C. The peak level of system activity
- D. The amount of online/historical data as required by agency, federal and local regulations.

1.04 PEAK LOAD CONDITIONS

- A. The peak load conditions listed herein shall delineate the loading parameters for sizing the equipment and are to be used in the factory and field tests. Simulation methodology to determine the effect of equipment not connected during the tests shall be submitted for DTPW's review. During the peak load test, the processor utilization may increase to a maximum of 40 percent, provided there are no program stalls or abort results and no processor restarts or failovers occur due to the control system

- performance and capacity problems.
- B. During the peak load condition, a train service equal to the ultimate design capacity of the train control system shall be operating.

1.05 SUBMITTALS (CDRL)

- A. System functional block diagrams showing the functions of each system element and the types of connections between elements
- B. Detailed equipment specifications, descriptions, and drawings for the following items **AS APPLICABLE**:
1. Optical Fiber
 2. MAIN/Central Control PLC System Hardware and Software
 3. Station PLC System Hardware and Software
 4. Network equipment
 5. Wireless Network equipment
 6. Communications interface equipment
 7. VoIP Telephony equipment
 8. Digital Paging equipment
 - I. Detailed interconnection diagrams shall be submitted showing individual connections to all items of equipment, including interface connections to other systems or equipment.
 - II. Installation drawings shall be submitted as necessary for detailing equipment mounting, securing and grounding, cable diagrams, and connection diagrams.

PART 2: PRODUCTS

2.01 PROCESSORS

The main groups of processors for the control system shall be the Front-End Processors, Application and Database Servers and the workstation/overview diagram processors. The following articles apply to all groups of processors.

A. Processor Features

The following features shall be provided for each type of processor, as appropriate to the particular functions of each:

1. In addition to the security of supply provided by the UPS, power failure facilities providing the means for an orderly shutdown of the processor upon loss of input power, and automatic restoration of operation when power is restored.

2. Facilities to monitor and detect anomalous operation of processor and I/O instructions, and a watch-dog timer.
3. Detection and reporting to the processor of memory errors, I/O errors, attempts to access nonexistent main memory, and attempts to execute non-implemented or illegal commands, the processor shall then cease indicating that it is available and, whenever possible, the error shall be reported as an alarm.
4. A real-time clock with at least 1.0 micro-second resolution and an interval timer with at least 8.0 micro-second resolution, this clock shall be maintained in synchronization with the master clock described in Section 26 05 25.
5. The LNPs shall be capable of having a reload initiated from any authorized management computer that is a client on the same network as the processors, whatever the state of the software in the processor.

B. Processor Loading

1. The control system shall have the ability to support all functions described in this Technical Provisions - Systems section, utilizing no more than 40 percent of the processing capability of the processor required for peak service conditions, and without utilizing any memory designated as spare while executing under the conditions listed in articles 1-3 and 1-4 above.
2. Demonstrate the control system's processing capability and spare capacity during factory and field acceptance tests. The performance monitoring function (Section 26 OS 25) shall be available to verify system performance during these tests.

C. Main Memory-Motherboard Memory

1. When the systems are delivered, main memory shall have sufficient capacity to satisfy the requirements of all system functions specified herein. Seventy-five percent of each delivered memory shall be spare capacity that is completely free, contiguous, and available for future use. Where memory is shared by two or more processors, this memory shall be required to conform to all the requirements of main memory, both separately and in combination with private memory.
2. Processor and any auxiliary memory shall be maximum that can be supported by the current hardware at the time of installation.
3. Parity-checking or error-correcting hardware shall be provided for all memory, including any cache memory provided. Memory errors shall be reported to the processor. Violations of write-protected areas shall likewise

be prevented. Meaningful error codes shall be displayed where appropriate to complement diagnostic software and lead to isolation of faults at a board level.

2.02 DEVICE ACCESS

Except for the CPU I/O devices that shall be dedicated to each CPU, the control system shall be constructed so that any device or any group of devices communicating with the processors can be connected to and access, or be accessed by, either of the on-line or hot-standby processors without adversely affecting any other devices' access to, or access by, the other processor. All shared devices shall have redundant access. Failure of the redundant access logic shall not disable the control system. The failure of a single processor shall not prevent the proper transfer of any shared device from the failed processor to the functioning processor and shall not prevent proper operation of the device when connected to the functioning processor.

2.03 PROCESSOR INTERCONNECTIONS

An interconnection shall be provided between the on-line and hot-standby processors to support the communication necessary for mutual monitoring of the states of the processors, performing message exchanges and performing database upgrades.

2.04 REMOVABLE MEDIA UNITS

Each central processor shall be provided with removable media, each with a minimum capacity to hold two versions of the entire system, including data, plus 25 percent residual capacity. A minimum of two versions are required to be held during system upgrades. Reloading the central processors shall be achievable from the drive. Until a specific version is deleted, it shall be possible to restore that version as the active version at any time, and reboot the processor. If the processor automatically reboots because of a handling failure, it shall reboot the most recent version activated.

2.05 LOCAL AREA NETWORK – AS APPLICABLE

- 1) Fiber shall be provided for the LAN network for all connectivity between the WAN equipment installed in the Train Control rooms and the Wireless Access point installed at the platform levels in the stations.
- 2) The LAN shall generate failure alarm messages or signals to allow alarm messages to be displayed via the SMTP protocol.

PART 3: EXECUTION

3.01 ENVIRONMENTAL REQUIREMENTS

A. The equipment shall function normally under the environmental requirements contained in DTPW's environmental design criteria unless otherwise modified by DTPW.

B. Temperature/Humidity/Heat Load

1. Under normal conditions, a controlled environment will exist in Train Control rooms and equipment rooms for computing, communication, and man/machine interface equipment.
2. Provide details of the individual and total heat load of the equipment at each location, and the maximum operating temperature for all equipment, no later than with the preliminary design submittal.

3.02 GENERAL NOTES

All control equipment shall conform with the following requirements:

A. Assembly Identification: Each assembly in the DTS and ancillary systems, to the level of printed circuit cards and EPROMs, shall be clearly marked with the manufacturer's part number, serial number, and the revision level of the assembly. Changes to assemblies shall be indicated by an unambiguous change to the marked revision level. All slots within printed circuit card cages shall be clearly labeled.

B. Interconnections

1. All cabling between component units of the systems shall be supplied and shown on system drawings. Plug-type connectors with captive fasteners shall be used for all interconnections. The connectors shall be polarized to prevent improper assembly. Terminations shall be entirely within the enclosures.
3. Wiring of components within enclosures shall be neatly arranged and fastened securely to the enclosure with flame-retardant fasteners. Metal clamps shall have insulating inserts between the clamps and the wiring. Wiring between all stationary and moveable components, such as wiring across door hinges or to components mounted on extension slides, shall allow for full movement of the component without binding or chafing of the wire.

04.04 CONTRACTOR'S FUTURE HARDWARE CHANGES

DTPW shall be informed of all future alterations or improvements to the hardware

and the associated software supplied. DTPW shall be placed on the suppliers• mailing lists to receive announcements of the discovery, documentation. and solution of hardware and software problems, and other improvements that could be made to hardware that is provided with the systems. This service shall be initiated at the time of system acceptance and shall continue for as long as the equipment is being supported by the Contractor.

05.05 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

06.06 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.01 SUMMARY

A. Methods and materials for grounding electrical systems and equipment

1.02 QUALITY ASSURANCE

A. Quality standard for grounding materials and equipment: UL 467

PART2: PRODUCTS

2.01

A. Insulated conductors: Copper wire and cable

8. Bare copper conductors:

1. Solid conductors
2. Stranded conductors
3. Tinned conductors
4. Stranded bonding conductors
5. Copper tape braided bonding jumpers
6. Tinned-copper braided bonding jumpers

C. Connectors: Bolted and exothermic-welded type

D. Grounding electrodes: Ground rods: Copper-clad, steel, sectional type

2.02 GROUNDING APPLICATIONS

- Conductors: Solid for No. 8 AWG and smaller; stranded for No. 6 AWG and larger
- Underground grounding conductors: Bare copper conductor, No. 2/0 AWO minimum
- Isolated grounding conductors
- Grounding bus
- Conductor terminations and connections: Bolted and welded

Insulated equipment grounding conductors with circuit conductors for the following:

1. Feeders and branch circuits
2. Lighting circuits

3. Receptacle circuits
4. Single-phase motor and appliance branch circuits
5. Three-phase motor and appliance branch circuits
6. Flexible raceway runs
7. Armored and metal-clad cable runs
8. Busway supply circuits
9. Computer- and rack-mounted electronic equipment circuits
10. Air-duct equipment circuits
11. Water heater, heat-tracing, and antifrost heating cables
12. Isolated grounding receptacle circuits
13. Isolated equipment enclosure circuits
14. Signal and communication equipment
15. Service and central equipment locations and wiring closets
16. Terminal cabinets

PART 3: EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Ground resistance testing: By Contractor (engaged testing agency)

3.02 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

3.03 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.01 PERFORMANCE REQUIREMENTS

Rated strength: Minimum structural safety factor of five times the applied force

PART 2: PRODUCTS

- A. Support, anchorage, and attachment components
 - 1. Steel slotted support systems with metallic coatings
 - 2. Nonmetallic slotted support systems
 - 3. Raceway and cable supports
 - 4. Steel conduit and cable hangers, clamps, and associated accessories
 - 5. Support for non-armored conductors and cables in vertical conduit risers
 - 6. Structural steel for fabricated supports and restraints
 - 7. Mounting, anchoring, and attachment components:
 - I. Powder-actuated fasteners
 - II. Mechanical-expansion anchors
 - III. Concrete inserts
 - IV. Clamps for attachment to steel structural elements
 - V. All steel, springhead toggle bolts
 - VI. Threaded hanger rods
- B. Fabricated metal equipment support assemblies: Welded or bolted steel shapes
- C. Concrete bases: 3,000-psi (20.7-MPa), 28-day compressive-strength concrete.

3.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

3.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 05 36

CABLE TRAYS FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.01 QUALITY ASSURANCE

Quality standard: NEMA VE I

1.02 MATERIALS

- I . Cable trays, fittings, and accessories: Aluminum hardware
2. Cable tray accessories
 1. Cable tray supports and connectors
3. Warning signs

PART 2: SOURCE QUALITY CONTROL

Tested according to NEMA FG I and NEMA VE I

3.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

3.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 13 00
SECONDARY UNIT SUBSTATIONS
REPLACEMENT

PART 1: GENERAL

1.01 DESCRIPTION:

This section addresses the technical requirements for the equipment and installation to be provided under this contract. All requirements of this section apply to this work.

1.02 SUBMITTALS - Refer to Section 01 33 00. SUBMITTALS, for submittal procedures.

A. Contractor shall submit the following:

- I. Shop drawings and manufacturer's literature showing details of fabrication and technical **data** for each equipment furnished
- II. Working drawings showing specialized requirements for installation and termination.
- III. Construction plans showing the locations and functions of all equipment to be installed

B. Contractor shall document manufacturer's qualifications and certifications.

PART 2: PRODUCTS

2.01 SYSTEM REQUIREMENTS/OVERVIEW

A. General

The New Secondary Unit Substations will replace the existing outdated Ohio Brass Secondary Unit Substations and the Automatic Transfer Switches at the listed locations in the Metrorail System. The protection, control, metering devices and functions of the new equipment shall be fully manufactured, factory tested and accepted by DTPW before delivery, meeting the following requirements. **SEE SCOPE OF WORK FOR DETAILED INFORMATION**

END OF SECTION

PART3: EXECUTION

3.01 INSTALLATION

3.01.1 The contractor shall furnish all components and subcomponents listed above shall be responsible for all shipping to site and unloading onsite.

3.01.2 The contractor shall be responsible for removing the existing Unit Substations and Automatic Transfer Switches. The equipment removed shall be turn over to DTPW for reuse or disposal.

3.01.3 The contractor shall install the new Unit Substations and Automatic Transfer Switches and connect to the existing feeder cables, conduits and equipment as necessary to complete the installation process. **CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEASUREMENTS**

3.01.4 The contractor shall provide the services of a manufacturer's representative to prepare a test procedure to put the new equipment in service and perform the Post Installation Checkout and commissioning of the new equipment.

3.01.4 The contractor shall remove all existing control, protection alarms and indication wiring up to the nearest interface terminal block and connect new wiring for control, protection, and Alarms and indications.

3.01.5 The contractor shall clean the **area** where the new Unit Substations and Automatic Transfer Switches shall be placed and shall verify the integrity of the floors and Switchgear Pads.

3.01.6 The contractor shall repair any deficiencies or defect found within the floors and/or switchgear pads before installing the new equipment.

3.01.7 The Contractor shall provide the services of a manufacturer's representative on site to oversee all aspects of the installation of the equipment.

3.01.8 The Contractor shall be responsible to connect all dry contacts received from Central Control Facility to the new equipment.

3.01.10 The Contractor shall ensure that the hardwired interface is reconnected to existing Equipment inside the Unit Substation room.

3.01.11 Includes but shall not be limited to all Wiring to the Central Control Facility. As well all wiring to and from existing equipment inside the Unit Substation room.

3.02 REQUIRED TESTING

3.02.01 The Contractor shall provide Test Procedures for DTPW's Review 30 Days before the scheduled Test for DTPW's Review. The Tests shall be carried based upon the approved procedure.

3.02.1 The Contractor shall provide the services of a manufacturer's representative to perform the following test:

3.02.2 Factory Acceptance Test (FAT) Testing

3.02.3 Post Installation Testing.

3.02.4 Automatic Throwover Test.

3.02.5 Final Acceptance Test.

3.02.6 SCADA Test (Alarms and Indications) as applicable

3.02.7 The Contractor shall provide to DTPW the Test Reports for the test listed above no later than 10 business days after the completion of each test.

All testing shall conform to section 01 45 23 except where more stringent testing is specified in this section.

4.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

4.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 27 16

INDOOR CABINETS, RACKS, FRAMES AND CLOSURES

PART 1: GENERAL

1.01 DESCRIPTION:

Provide all labor, materials, tools and equipment required for the complete installation of work called for in the Contract Documents.

1.02 SCOPE OF WORK

- A. This document describes the products and execution requirements relating to furnishing and installing Telecommunications Cabling. Communication Equipment Room Fittings of cabinets, racks, frames and enclosures which are covered under this document.
- B. This section includes minimum requirements for the following:
 - 1. Cabinets
 - 2. Racks and Rack Cable Management
 - 3. Frames
 - 4. Enclosures
- A. All cables and related terminations, support and grounding hardware shall be furnished, installed, wired, tested, labeled, and documented by the Contractor as detailed in this document.

1.03: SECTION INCLUDES

- A. Equipment cabinets
- B. Cable entrance cabinets
- C. Cabinet identification

1.04: REFERENCES (The most recent revisions shall be used in this project)

- A. American National Standards Institute (ANSI): 1 .ANSI/EIA-310
- B. American Railway Engineering and Maintenance-of-Way Association (AREMA) I. Signal Manual, Part 1.5.10
- C. TIA/EIA structured cabling system TIA/EIA-568-B Commercial Building Telecommunications Cabling Standard

1. TIA/EIA-569-A Commercial Building Standard for Telecom Pathways and Spaces
2. TIA/EIA-606 Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
3. TIA/EIA-607 Commercial Building Grounding/Bonding Requirements
4. EIA-310-D Rack systems
5. NFPA-70 National Electric Code (NEC)-2008
6. ISO/IEC 1180I Generic Cabling for Customer Premises

PART2: SUBMITTALS

- A. General: Refer to SECTION 013300 - Submittal Procedures for submittal requirements and procedures.
- B. Submit the following:
 1. Product data for equipment cabinets.
 2. Shop drawings.
 3. Cabinet mounting details.
 4. Cabinet paint types and colors.

PART3: PRODUCTS

3.01 MANUFACTURING REQUIREMENTS

- A. Equipment Cabinets. Equipment in communication rooms and train control rooms shall be housed in free standing cabinets conforming to the following requirements:
 1. General. Cabinet frame shall be constructed of I4-gauge cold rolled steel. Cabinet construction shall be as shown in the Contract Drawings.
 2. Cabinet structures shall have uniform dimensions. Equipment cabinets shall not exceed 48 inches in width and 24 inches in depth. A cabinet complex shall not exceed 72 inches in width.
 3. Enclosures: Cabinet enclosures shall be furnished complete. The front and rear of the cabinets shall be enclosed with captive full-length doors opening at least 120 degrees, closed with hand-operated key-locked catches, and with louvered openings, if required. Doors shall be removable without unscrewing.
 - I. Cabinets shall be designed for side-by-side mounting with provisions for running interconnection wiring within a complex in closed wire way between cabinets.
 - II. All non-used front spaces of cabinets shall be covered with blank panels.
 - III. Self-ventilation of cabinet enclosures shall be used. If fans or filters are required shop drawings shall be submitted for approval before procurement.

4. Cabinet Hardware: Cabinets and appurtenances shall be designed and constructed to comply with ANSI/EIA-310. The frame element shall be designed to accept universally adjustable panel-mounting hardware. The panel-mounting angles shall be constructed of 12-gauge cold rolled steel with standard EIA hole spacing and structured to comply with ANSI/EIA-310.
 5. Cable Entry: Cable entry shall be through the top of the cabinet. Cable entry shall have provisions for protecting the cable. All cables shall be routed so as to protect them from damage during and after installation.
 6. Terminal Block Mounting Board: Mounting boards for terminal blocks and other items as required shall be made from flame retardant non-metallic, non-wood, insulating sheet material approved by DTPW.
 7. Supports: Chassis supports, or guides shall be provided as required for auxiliary support of heavy equipment.
 8. Height: Overall cabinet height shall be uniform and shall not exceed 7 feet-2 inches, including mounting sill.
8. Cable Entrance Cabinets. Cable entrance cabinets shall be equipped with front full-length removable doors with key-locked catches opening at least 120 degrees. The rear of the cabinet shall be accessible by a bolted removable panel or full-length removable door. The structure shall not exceed 60 inches in width or 24 inches in depth. Cable entrance cabinets shall meet the requirements specified for equipment cabinets, with the exception of cabinet dimensions and door construction. Cable entrance cabinets shall be installed as indicated on the Contract Drawings.
- C. Painting: Cabinets shall be painted in accordance with the following requirements:
1. Communications equipment cabinets and racks shall be painted Dark Blue/Black with color number 5B/1N as selected from the Munsel Color Chart. Exterior rack surfaces shall have a textured finish.
 2. Quality: Painting shall conform to the requirements specified in AREMA Signal Manual, Part 1.5. 10, or equivalent. Paint types and colors shall be submitted for approval.
- D. Cabinet Identification: Each equipment cabinet/enclosure shall be provided with I.D. Nameplates. Free standing cabinets/enclosures shall be provided with two nameplates, one for the front and one for the rear. Wall mounted cabinets/enclosures shall be provided with one nameplate on the front. Nameplates shall be of 1/16-inch-thick lamicoid, with beveled edges, black background and white letters. Mounting hardware shall be stainless steel.
1. Nameplate sizes:
 - I. Nameplates 1-9/16 inches high by 18 or 12 inches wide shall have lettering in block letters 1/2 inch high.
 - II. Nameplates 3/4-inch-high by 12 inches wide shall have lettering in block

letters 3/16 inch high

2. Nameplate text shall consist of two lines, unless otherwise approved by DTPW. The first line shall denote the cabinet/enclosure number, and the second line shall denote the name of the cabinet/enclosure.
3. Cabinet numbering format shall be submitted to DTPW for approval.
4. Communications cabinet name and number shall correspond with the designations indicated on the Contract Drawings.

PART 4: EXECUTION

4.01 INSTALLATION

- A. Cabinet Mounting: Cabinets shall be mounted in accordance the following requirements. Each sill structure shall be leveled to a maximum deviation not exceeding 1/8 inch over its total length and width.
 1. The equipment cabinets shall be mounted rigidly such that a 100-pound horizontal force applied to either side 6 feet from the floor shall cause less than 1/8-inch deflection of any part of the equipment cabinet. Cabinets shall be mounted plumb and level using captive shims as required.
 2. In addition to the cabinet deflection, a 1/16-inch deflection shall be allowed by the mounting channels after being rigidly mounted to the floor. Equipment cabinets shall be attached together but isolated one from the other and from the floor with insulating material. The equipment cabinet mounting details shall be submitted for approval.
 3. Cabinet fronts in adjacent rows shall face each other.
- B. Cabinet Grounding: Cabinet-grounding requirements including sill insulation and isolation between cabinets shall be as shown on the Contract Drawings.
- C. Racks: The Cable Management System shall be used to provide a neat and efficient means for routing and protecting fiber and copper cables and patch cords on telecommunication racks and enclosures. The system shall be a complete cable management system comprised of vertical cable managers, horizontal cable manager, and cable management accessories used throughout the cabling system. The system shall protect network investment by maintaining system performance, controlling cable bend radius and providing cable strain relief.
- D. Each rack shall be UL listed for a load-carrying capacity of 1000 lbs. (454 kg.).
- E. Provide patch management ring runs in each rack. Provide (1) 2U high horizontal patch management between each panel of each rack.
- F. Provide side-mounted vertical cable management with covers on both sides of each rack. The cable management shall be with cover plates and bracket kits as needed to attach to adjacent racks.
- G. Provide strain relief and cable management at the rear of each rack to ensure uniform routing of all feeder and distribution cables.

- H. Each rack to have a minimum of eight power sockets mounted on a strip at the rear of the rack. The power outlets on the connector strip shall be NEMA 5-20R compatible. The plug shall be NEMA 5-20P compatible.

4.2 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

4.3 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION

SECTION 26 27

26 WIRING

DEVICES

PART 1: PRODUCTS

1.01

- A. Receptacles: Duplex, 125 V, 20 A
 - 1. Straight blade
 - 2. GFCI: Non-feed through
- B. Pendant cord-connector devices with external cable grip
- C. Cord and plug sets
- D. Snap switches: 120/277 V, 20 A
 - 1. Key-operated switches
- E. Occupancy sensors
 - 1. Wall-switch sensors: Adaptive-technology type with adjustable time delay
 - 2. Long-range wall-switch sensors: Dual-technology type with adjustable time delay
 - 3. Wide-range wall-switch sensors: Passive-infrared type with adjustable time delay
- F. Communications outlets
 - 1. Telephone outlet: Single RJ-45
 - 2. Combination TV and telephone outlet: Single RJ-45 and coaxial cable connectors
- G. Wall plates
 - 1. Material for finished spaces: Thermoplastic
 - 2. Material for unfinished spaces: Thermoplastic
 - 3. Material for damp and wet locations: Thermoplastic
- H. Floor service fittings: Modular, dual service, with power receptacle and voice and data communication outlet
 - 1. Type: Flush
 - 2. Service plate: Round, brass
 - 3. Voice and data communication outlet: Blank cover with bushed cable opening or two modular, keyed, RJ-45
- I. Poke-through **assemblies**: Below-floor junction box with multi-channeled, through-floor raceway/firestop and detachable floor service outlet assembly
 - 1. Service outlet assembly: Flush type
 - 2. Size: 4 inches
- J. Multi-outlet assemblies: Metal raceways
- K. Finishes
 - 1. Connected to normal power system: As selected by DTPW

2. Connected to emergency power system: Red
3. TVSS devices: Blue
4. Isolated-ground receptacles: Orange

PART 2: EXECUTION

2.01 MEASUREMENT:

- A. Work under this section will not be separately measured for payment.

2.02 PAYMENT:

- A. Work under this section will be paid for as part of the lump sum bid item unit prices in the bid form under this contract.

END OF SECTION