NORTH BAY VILLAGE
COMPLETE STREETS
SHORT TERM IMPROVEMENTS

TECHNICAL SPECIFICATIONS (100%)

OCTOBER 2024

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NORTH BAY VILLAGE
COMPLETE STREETS- SHORT TERM IMPROVEMENTS
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All work performed as part of this project that is not presented in detail or specification shall conform to FDOT standards and specifications. Inquiries regarding details and specifications shall be submitted to the Engineer of Record with the shop drawing submittal.

Drawings (Bound Separately):

NORTH BAY ISLAND CAUSEWAY COMPLETE STREET PROJECT
SHORT TERM IMPROVEMENTS

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SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY OF WORK

A. The project consists of furnishing all materials, labor, and equipment necessary to complete the proposed bus shelter, and pedestrian safety improvements along John F. Kennedy Causeway in North Bay Village (Village). This project includes the removal, disposal and replacement of existing bus shelters, installation of a new bus shelter, refurbishment of crosswalk pavement markings, installation of proposed signs, preparation and submittal of shop drawings for bus shelters; site restoration; and other appurtenant and miscellaneous items and work for a complete, satisfactory and functional installation.

B. All Work requiring lane closures shall be performed at night and/or during the weekend. If Work is performed at night, it shall be performed from 9:00 PM to 5:00 AM. The remaining portion of the Work can be performed during the day, from 7:00 AM to 5:00 PM.

C. The Contractor shall provide all labor, material, equipment, supervision, and all other items necessary to complete the Complete Streets Short Term Improvements Project, located at the Village.

D. All work shall be performed in accordance with the Contract Documents.

1.2 CONTRACTOR QUALIFICATIONS:

A. The prime contractor and/or its subcontractors performing the work must have a combined minimum experience of at least three (3) similar projects in the past ten (10) years, where one (1) of these three (3) projects was completed within the past five (5) years under the firm's current business name. Subcontractor(s) must be identified with the bid.

B. Such proof must consist of a list of projects, to be completed prior to the bid date, with the names and contact information of the owners or representatives so that the Village can contact to confirm the experience listed.

1.3 CONTRACTOR'S USE OF PREMISES

A. Contractor shall limit his/her use of the premises for Work and for storage, to allow for:

1. Work by other Contractors.

2. Owner occupancy.

3. Tenant use.

B. Coordinate use of premises under direction of the Village.

C. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on-site.

D. Move any stored Products, and Equipment under Contractor's control, which interfere with operations of the Owner or separate Contractor.

E. Obtain and pay for the use if additional storage or work areas needed for operations.

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

1.4 PROTECTION OF PROJECT SITE

A. Provide protection to existing Facilities on & around the Project Site.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUATION

NOT USED

END OF SECTION

SECTION 01011 - SITE CONDITIONS

PART 1 - GENERAL

1.1 SITE INVESTIGATION AND REPRESENTATION

A. The Contractor acknowledges complete satisfaction as to the nature and location of the work, the general and local conditions, particularly those bearing upon availability of transportation; disposal, handling and storage of materials; availability of labor, water, electric power, roads; disposal of water from construction; uncertainties of weather; the conformation and conditions at the ground; the type of equipment and facilities needed preliminary to and during the prosecution of the work and all other matters which can in any way affect the work or the cost thereof under this Contract.

B. The Contractor further acknowledges complete satisfaction as to the character, quality, and quantity of surface and subsurface materials to be encountered from inspecting the site and from evaluating information derived from exploratory work that may have been done by the Village or included with these Contract Documents. Any failure by the Contractor to acquaint himself or herself with all the available information will not relieve him or her from responsibility for properly estimating the difficulty or cost thereof under this Contract.

C. The Contractor acknowledges that by personal field observation or other means satisfactory to himself or herself, performed prior to the bid, he or she has included in the prices bid all costs for dealing with all construction problems created by observable above or on grade features on or adjacent to the site of the work whether these features are shown on the Plans or described in the Specifications. In instances where the observable features indicate subsurface conditions which may affect the Project work, as for example, a pavement patch or catch basin gratings indicating respectively a utility or storm sewer not shown on the Plans, the Contractor acknowledges that he or she has made timely, diligent, inquiry of the Engineer of Record (EOR) or the Village or by other means fully satisfied himself or herself prior to the bid as to the nature of, and costs created by, the subsurface condition and included all costs therefore in the prices bid.

1.2 INFORMATION ON SITE CONDITIONS

A. All information obtained by the Village regarding the site conditions, topography, subsurface information, ground water elevations, existing construction of site facilities as applicable, and similar data will be made available to the Contractor in the Contract Documents. Such information is offered as supplementary information only. Neither the Engineer nor the Village assumes any responsibility for the completeness or for the Contractor's interpretation of such supplementary information. Prior to bidding, bidder / contractor may make his or her own survey investigations to satisfy himself or herself with site conditions at his or her own cost.

B. Prospective bidders/contractors who at their own expense, desire to make such investigations, as may be desirable shall provide notification to the Village and ensure that they are properly permitted and authorized to undertake such work.

1.3 DIFFERING SUBSURFACE CONDITIONS

A. In the event subsurface or latent physical conditions are found materially different from those

indicated in the Bid or Contract Documents, and differing materially from those ordinarily encountered and generally recognized as inherent in the character of work covered in these Bid or Contract Documents, contractor shall promptly, and before such conditions are disturbed, notify the EOR and the Village in writing of such changed conditions.

B. EOR and the Village will investigate such conditions promptly and following this investigation, the Contractor shall proceed with the work, unless otherwise instructed. If EOR and the Village find that such conditions do so materially differ as to cause an increase or decrease in cost and time considered reasonable by the Village, the Village upon advisement of EOR shall make the final decision regarding any adjustment in cost or time for completion.

C. In the event that site conditions differ from those expected by the Contractor, the Contractor shall proceed to complete the work as contemplated by the Plans and Specifications at his or her or their own cost and expense. If in the discretion of the EOR and the Village, the difference in site conditions renders completion of the work as described by the Plans and Specifications impossible, the Village may alter the work, whereupon the Contractor shall be compensated for any extra work; the Village shall not alter the work where the site conditions render the work more difficult or costly to perform, if such work is otherwise still possible as described in the Contract Documents.

1.4 EXISTING UTILITIES AND LOCATION SERVICES

A. Known utilities and structures adjacent to or encountered in the work are shown on the Plans. The locations shown are taken from existing records and the best information available from existing plans. However, it is expected that there may be some discrepancies and omissions in the locations and quantities of utilities and structures shown. Those shown are for the convenience of the Contractor only, and no responsibility is assumed by either the Village or the Engineer for their accuracy or completeness. No request for additional compensation or Contract time (except for a non-compensable time extension at the sole discretion of the Engineer, whose decision shall be final) resulting from encountering utilities or structures not shown, or differing in location or elevation from that shown, will be considered. The Contractor shall explore sufficiently ahead of the work to allow time for any necessary adjustments without delay to the progress of the installation. Costs due to delays occasioned by encountering underground utilities or structures which could have or should have been discovered by timely exploration ahead of the Work shall rest solely with the Contractor.

B. Prior to proceeding with excavation, the Contractor shall contact all utility companies and all other users of the right-of-way in the area to aid in locating their underground services. It shall be the Contractor’s responsibility to contact utility companies at least three Normal Working Days before starting construction. The Contractor shall proceed with caution in the excavation and preparation so that the exact location of underground utilities may be determined. The Contractor shall comply with Chapter 556, F.S. “Underground Facility Damage Prevention and Safety Act”, Chapter 553, F.S. “Florida Trench Safety Act, Part IV”, Chapter 368, F.S., “Florida Gas Safety Law, Part 1, and OSHA Standard 1926.651.

C. It is the responsibility of the Contractor to ensure that all utility or other existing facilities, the stability of which may be endangered by the close proximity of excavation, are temporarily held in position while work proceeds in the vicinity of the facilities and that the utility or other companies concerned be given reasonable advance notice of any such excavation by the Contractor.

D. The Contractor shall take all reasonable precautions against damage to existing utilities. However, in the event of a break in an existing water main, gas main, sewer or underground cable, the Contractor shall immediately notify the responsible official of the organization operating the interrupted utility and the Village. The Contractor shall lend all possible assistance in restoring services and shall assume all cost, charges, or claims connected with the interruption and repair of such services, as determined by the Village.

1.5 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

A. Where the Contractor's operation could cause damage or inconvenience to railway, telephone, fiber optic, television, electrical power, oil, gas, water, sewer, irrigation system, or any other utility, the Contractor shall make all arrangements necessary for the protection of these utilities and services.

B. Notify all utility companies, utility providers, utility owners and utility users that are affected by the construction operation at least 48 hours in advance. Under no circumstance expose any utility without first obtaining permission from the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for all existing underground utilities and utility poles where necessary. Absolutely no extra compensation will be allowed for construction problems created by utility poles of whatever size, overhead electric, telephone or other lines, whether shown on the Plans or not. The Contractor is solely responsible for discerning such items in the field prior to bidding and including all costs for such work in the prices bid.

C. The Contractor and his or her subcontractors shall be solely and directly responsible to the owners and operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage which may result from the construction operations under this Contract.

D. Neither the Village, EOR nor its officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the work.

E. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction and installation operations, promptly notify the proper authority. Cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no event shall interruption of any utility service be allowed unless granted by the owner of the utility. In the event water service lines that interfere with trenching are encountered, the Contractor may, by obtaining prior approval of the WASD, cut the service, dig through, and restore the service with similar and equal materials at the Contractor's expense and as approved by the Engineer. All service disruptions shall be prior coordinated and approved by the Village and WASD.

F. Replace, with material approved by the Village and WASD, at Contractor's expense, any and all other laterals, existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract or Bid Documents and as approved by the Village and WASD.

1.6 INTERFERING STRUCTURES

A. Take necessary precautions to prevent damage to existing structures whether on the surface, above ground, or underground. An attempt has been made to show major structures on the

Plans. While the information has been compiled from the best available sources, its completeness and accuracy cannot be guaranteed, and is presented as a guide. The Contractor is solely responsible for field verification of all locations.

1.7 FIELD RELOCATION

A. During the process of construction, it is expected that minor adjustments to the work may be necessary. Such adjustments shall be made only by the direction of the Village at the Contractor's expense. If existing structures are encountered that will prevent construction as shown, notify the Village project representatives before continuing with the work in order that field revisions be approved as necessary to avoid conflict with the existing structures. If the Contractor fails to notify the Village when an existing structure is encountered, and shall proceed with the work despite this interference, the Contractor does so at his or her own risk.

B. Representatives of utility companies, stakeholders, the traffic and transportation authorities, etc., shall be notified in accordance with the provisions set forth in the relevant sections of the Specifications and the permitting documents.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01016 - SAFETY REQUIREMENTS AND PROTECTION OF PROPERTY

PART 1 - GENERAL

1.01 CONTRACTOR'S RESPONSIBILITY FOR SAFETY

A. Conduct whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during the Contract period. This requirement shall apply continuously and not be limited to normal working hours.

B. Neither the Professional activities of the Design Professional, nor the presence of the Design Professional nor his or her employees and subconsultants at a construction site, shall relieve the Contractor and any other entity of their obligations, duties and responsibilities including but not limited to, construction means, methods, sequence techniques or procedures necessary for performing, superintending, or coordinating all portions of the Work of construction in accordance with the Contract Documents and any health and safety precautions required by any regulatory agencies.

1.02 FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS

A. Safety provisions shall conform to the Federal and State Departments of Labor Occupational Safety and Health Act (OSHA), and all other applicable Federal, State, County, and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirements shall be followed. Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth therein.

B. The Contractor shall be in compliance with all applicable provisions of the Occupational Safety and Health Act of 1970.

C. For trench excavations in excess of five (5) feet in depth, the Contractor shall comply with the provisions of the State of Florida "Trench Safety Act", See the Section titled, "Trench Safety Act" of the "Instruction to Bidders".

D. All open excavations made in the earth shall be performed in compliance with the State of Florida Trench Safety Act, OSHA 29 CFR 1926.650, Subpart P (Chapter 90-96, Laws of Florida). The Contractor shall appoint a "competent person", in accordance with Subpart P, who shall be present at the job site. A "competent person" shall mean one who is capable of identifying existing and predictable 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.

E. The Contractor shall familiarize himself with the "Underground Facility Damage Prevention and Safety Act, Florida Statute 556. The Contractor shall contact the Sunshine State One Call Center at, 1-800-432-4770, forty-eight (48) hours prior to any excavation. Failure to familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.

F. In some projects, the Contractor's personnel will be in the vicinity of raw sewage. In such projects, for his own protection, as well as for his employees, he shall check with the Miami-Dade County Health Department and, based on their recommendation, shall have his personnel properly immunized against disease, if required.

G. Under some Projects, personnel will be required to enter existing manholes/sewers to perform certain items of work. Before entering, the Contractor shall be in compliance with Miami-Dade County Manhole Ordinance No. 83-3, which mandates, in part, that above-ground safety personnel shall be on duty at all times when someone enters, or works in, a manhole/sewer and the air within a manhole/sewer shall be tested with a combination oxygen deficiency meter-explosion meter to determine oxygen content and explosion potential. A test for the presence of hydrogen sulfide shall also be performed. When unsafe air conditions are detected, the manhole covers of upstream and downstream manholes shall be removed to vent the sewer. The work area shall be ventilated mechanically by the use of an air blower, before entry and during occupancy, to insure that an adequate quantity of oxygen is supplied to the work area.

H. The Contractor shall comply with, but not limited to, the following OSHA Regulations that are found applicable to this project:

Process Safety Management (29 CFR 1910.119), Confined Space Entry Procedures (29 CFR 1910.146), Respiratory Protection (29 CFR 1910.134), Fall Prevention Protection (29 CFR 1926.104), Excavation Protection (29 CFR 1926.650), Personal Protective Equipment (29 CFR 1910.132), Electrical Safety (29 CFR 1910.301), Lockout/Tagout (29 CFR 1910.147), Air Monitoring (29 CFR 1910.1000), Asbestos & Lead Abatement (29 CFR 1910.1001, 1025), Commercial Diving (29 CFR 1910.401), Welding and Cutting (29 CFR 1926.350), Blood Borne Pathogens (29 CFR 1910.1030), Scaffolding (29 CFR 1926.451), Movement of Traffic (DOT Index), Industrial Truck / Forklift (29 CFR 1910.178), Crane Operations (29 CFR 1926 & ANSI).

1.03 SAFE ACCESS BY FEDERAL, STATE, AND LOCAL GOVERNMENT OFFICIALS

A. The Contractor shall at all times provide proper facilities for safe access to the Work by authorized government officials.

1.04 CONSTRUCTION SAFETY PROGRAM

A. Develop and maintain for the duration of this Contract, a safety program that will effectively incorporate and implement all required safety provisions. The Contractor's Manual of Safety Practices outlining the firm's policies on field safety procedures for employees shall be submitted to the Village for review before "Notice to Proceed" will be issued. The Contractor shall appoint an employee who is qualified and authorized to supervise and enforce compliance with the safety program.

B. Certain products specified in these specifications contain warnings by the manufacturers that under certain conditions, if instructions for use are not followed, a hazardous condition may exist. It is the Contractor's responsibility to instruct his workmen in the safe use of the product, or any product substitution.

C. The duty of the Village to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's Safety Supervisor, the safety program, or any safety measures taken in, on, or near the

construction site.

1.05 SAFETY EQUIPMENT

A. As part of the safety program, maintain at an office or other well-known place at the job site, safety equipment applicable to the Work as prescribed by the governing safety authorities, all articles necessary for giving first-aid to the injured, and establish the procedure for the immediate relocation to a hospital or a doctor's care of any person who may be injured on the job site.

B. Perform all necessary work to protect all personnel and the general public from hazards, including, but not limited to, surface irregularities or unramped grade changes, and trenches or excavations. Furnish barricades, warning lights, traffic cones, temporary fencing, lanterns, proper signs, and personnel, such as flagmen and uniformed police officers, to safeguard all persons and work.

C. The performance of all work and all completed construction, particularly with respect to ladders, platforms, structure openings, scaffolding, shoring, logging, machinery guards and the like, shall be in accordance with the applicable governing safety authorities.

D. During construction, construct and at all times maintain satisfactory and substantial temporary chain link fencing, solid fencing, railings, barricades or steel plates, as applicable, at all openings, obstructions, or other hazards. All such barriers shall have adequate warning lights as necessary, or required, for safety.

E. There shall be no oil dripping from equipment or oil spills.

1.06 STORAGE OF HAZARDOUS MATERIALS

A. The Contractor is hereby cautioned that he cannot store any environmentally hazardous materials such as solvents, greases, lubricants or any other type of chemical substances at the Project site. The Contractor shall be allowed to keep only such materials at the site as are for immediate use.

B. The materials shall be stored and handled in a proper and safe manner and upon its use, immediately dispose of the containers, cans, rags and remnants of the materials in a manner approved by the Department of Environmental Resources Management (DERM) at the Contractor's sole cost. The Contractor is not allowed to store empty containers at the site. In case of any violation, the Department will report such violation to DERM and the Contractor shall be subject to all penalties and fines as required by State and County regulations.

1.07 ACCIDENT REPORTS

A. If death, serious injuries, or serious damages are caused, report the accident immediately by telephone or messenger to the Department. In addition, the Contractor must promptly report in writing to the Department all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.

B. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, promptly report the facts in writing to the Department, giving full details of

the claim.

1.08 TRAFFIC SAFETY AND ACCESS TO PROPERTY

A. Comply with all rules and regulations of the city, state, and county authorities regarding closing or restricting the use of public streets or highways. No public or private road shall be closed, except by express permission of the Department. Conduct the work so as to assure the least possible obstruction to traffic and normal commercial pursuits. Protect all obstructions within traveled roadways by installing approved barricades, signs, and lights where necessary for the safety of the public. The convenience of the general public and residents and the protection of persons and property are of prime importance and shall be provided for in an adequate and satisfactory manner.

B. Where traffic will pass over backfilled trenches before they are paved, the top of the trench shall be maintained with temporary asphalt that will allow normal vehicular traffic to pass over. Temporary access driveways must be provided where required. Cleanup operations shall follow immediately behind backfilling and the work site shall be kept in an orderly condition at all times.

C. Supply flagmen and guards or Police when they are required by regulation or when deemed necessary for safety. Flagmen and Guards shall be furnished with approved orange wearing apparel and other regulation traffic control devices.

1.09 FIRE PREVENTION AND PROTECTION

A. Perform all work in fire-safe manner. Furnish and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. Comply with applicable federal, local, and state fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No.241) shall be followed.

1.10 HURRICANE PREPAREDNESS

A. The Contractor shall submit to the Engineer and the Village a Hurricane Preparedness Plan at the Pre-construction Conference. The Plan shall outline the necessary measures that the Contractor proposes to perform at no additional cost to the Village in case of a hurricane watch and a hurricane warning.

B. During such periods of time as are designated by the United States Weather Bureau as being a hurricane alert, the Contractor shall perform all precautions as necessary to safeguard the work and property, including the removal of all small equipment and materials from the site, lashing all other equipment and materials to each other and to rigid construction, and any other safety measures as may be directed by the Department.

C. Upon Notification of a Hurricane Watch

1. Formal notification to all Contractors to prepare and submit for approval a Plan of Action for the specific actions to be taken on their particular projects.

D. Upon Notification of a Hurricane Warning

1. Formal notification to the Contractors to implement their approved Plan of

Action to protect the project and the public.

2. For Construction contracts at a Water Treatment Plant, a copy of the notifications will be provided to the Plant Superintendent. The Plant Superintendent is also requested to notify the Construction Manager of any assistance he may need from the Contractor in order to secure Plant entities.

3. For pipeline construction projects within the public right-of-ways, Pump Station sites, or other non-plant sites, the Contractor will be notified by the Construction Manager Office to suspend his construction operations. The Contractor shall backfill all open trenches, remove all construction equipment and materials from the right-of-way, remove unnecessary traffic barricades and signs, secure remaining barricades by "half burial" or "double sandbags." He shall also provide such assistance as is required by the Construction Manager to secure the Pump Station or non-plant site.

1.11 JOINT SURVEY TO ESTABLISH AUTHENTICITY OF POSSIBLE DAMAGE CLAIMS

A. The Contractor shall maintain vertical and horizontal survey control points on all structures and improvements, located in the vicinity of the work prior to beginning work, and shall periodically check the points for movements with copies provided to the Department, of the survey notes for each survey and a copy of the layout of the survey control points.

B. After the contract is awarded and before commencement of work, perform a thorough examination of existing buildings, structures, and other improvements in the vicinity of the work, as applicable, which might be damaged by his operations.

C. Examinations of existing structures, buildings, and other improvements in the vicinity of the work shall be done by the Contractor. The scope of the examination shall include cracks in the structures, settlement, leakage, and similar conditions. The Department assumes no responsibility for pre-existing conditions of the structure.

D. Records in triplicate of all observations shall be prepared by the Contractor, photographs shall be taken by the Contractor signed and dated, with descriptive information and in the manner specified above. One signed copy of every document and photograph will kept on file in the office of the Department.

E. The above records are intended to be used as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of the Contractor and the Department, and will be a means of determining whether and to what extent damage, resulting from the Contractor's operations, occurred during the Contract work.

PART 2 **PRODUCTS** NOT USED

PART 3 **EXECUTION** NOT USED

END OF SECTION

SECTION 01045 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED:

A. It shall be the Contractor's responsibility for any and all cutting, fitting and patching required to complete the work. Such activities may include, but not be limited to the following:

1. Make all 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 immediately.
4. Remove and replace work not conforming to requirements of Contract Documents immediately.
5. Remove samples of installed work as specified for testing.

1.2 SUBMITALS

A. Submit a written request to the EOR well in advance of executing any cutting or alteration which affects:

1. Work of the Owner 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.

6. Include with each request:

a. Identification of the Project.
b. Description of affected work.
c. The necessity for cutting alteration.
d. Effect on work of Owner or any separate Contractor, or on structural or weatherproof integrity of Project.
e. Description of proposed work:

(i) Scope of cutting, patching, or alteration.
(ii) Trades who will execute the work.
(iii) Products proposed to be used
(iv) Extent of refinishing to be done.

f. Alternatives to cutting and patching.
g. Cost proposal, when applicable.
h. Written permission of any separate Contractor whose work will be affected.

B. Should conditions of Work or the schedule indicate a change of products from original installation, submit request for substitution.

C. Submit written notice to the Village's Representative designating the date and the time the work will be uncovered.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Comply with specifications and standards for each specific product involved.

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspect 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 the EOR in writing; do not proceed with work until the EOR have provided further instruction.

3.2 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.

3.3 PERFORMANCE

A. Execute cutting and demolition by methods which will prevent damage to other work, and which will provide proper surfaces to receive installation of repairs.

B. Employ original Installer or Fabricator to perform cutting and patching for:

1. Weather-exposed or moisture-resistant elements.
2. Sight-exposed finished surfaces.

C. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.

D. Restore work which has been cut or removed, install new products to provide complete work in accord with requirements of Contract Documents.

E. Fit work airtight to pipes, sleeves, ducts, conduit and other penetration through surfaces.

F. 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.

END OF SECTION

SECTION 01090 – REFERENCE STANDARDS

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

A. Comply with the requirements of standard with date as specified herein. Standards without dates shall be understood as the Standard current at the time of bid. In case of conflict between the referenced standards, the one having the more stringent requirements shall govern.

B. In case of conflict between the referenced standards and the Project Documents, the Project Documents shall govern.

C. When no reference is made to a code, standard, or specification, the standard specifications of the ASTM, the ANSI, the ASME, the IEEE, or the NEMA shall govern.

1.2 QUALITY ASSURANCE

A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents or applicable codes establish stricter standards.

B. Publication Date: Whenever in these specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the Work is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or within the Contract Documents shall be waived because of any provision or of omission from said standards or requirements.

1.3 ABBREVIATIONS AND ACRONYMS

Abbreviated titles for other governing standards are used throughout these specifications and although most of them are widely known, their complete titles are given below to avoid misunderstanding.

AAMA	Architectural Aluminum Manufacturer's Association
AASHTO	American Association of the State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ADA	American with Disabilities Act
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGMA	American Gear Manufacturer's Association
AHGDA	American Hot Dip Galvanizers Association
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute

AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APHA	American Public Health Association
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASMM	Architectural Sheet Metal Manual
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturer's Association
CLFMI	Chain Link Fence Manufacturers Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DERM	Department of Environmental Resources Management
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
ETL	Environmental Test Laboratories
FBC	Florida Building Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FS	Federal Specifications
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	International Organization for Standardization
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturer's Association
MDCPW	Miami-Dade County Public Works Department
MDWASD	Miami-Dade County Water and Sewer Department
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association NRCA National Roofing Contractors Association

NRMCA	National Ready Mixed Concrete Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PS	Product Standard
SFBC	South Florida Building Code
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
SFWMD	South Florida Water Management District
UL	Underwriters Laboratories, Inc.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTED

NOT USED

END OF SECTION

SECTION 01 22 13 - MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 REQUIREMENTS

A. Payment for the various items in the Bid Form, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, taxes, materials, commissions, transportation and handling, bonds, permit fees, insurance, overhead and profit, and incidentals appurtenant to the items of Work being described, as necessary to complete the various items of the Work all by the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). Such compensation shall also include payment for any loss or damages arising directly or indirectly from the Work.

B. The CONTRACTOR'S attention is called to the fact that the quotations for the various items of Work are intended to establish a total price for completing the Work in its entirety. Should the CONTRACTOR feel that the cost for any item of Work has not been established by the Schedule of Payment items or this Section, it shall include the cost for that Work in some other applicable bid item, so that its proposal for the project does reflect its total price for completing the Work in its entirety.

C. The CONTRACTOR is advised that the OWNER reserves the right to adjust the lump sum amount based upon the quantity of material installed according to the work outlined within the plans and as described within the approved Schedules of Values.

D. If there are changes in the work, the OWNER reserves the right to use the unit price values established within the approved Schedule of Values to determine the cost of the work.

1.2 CONTRACT – GENERAL CONSTRUCTION

A. UNIT PRICE ITEMS

Item 1 – Bus Shelter Replacement (Remove & Install)

1. Measurement and Payment: Includes the complete removal and disposal of existing bus shelters and the installation of new bus shelters at locations specified on plans. Includes all work necessary for a full installation as shown on the plans and specifications including but not limited to the demolition of the old shelter structure, excavation, foundation work, installation of the proposed bus shelter, and restoration of the surrounding area.

Item 2 – Bus Shelter Installation

1. Measurement and Payment: Proposed bus shelter measurement shall be based upon the preparation and installation of the unit as specified on plans. Includes all work necessary for the installation by the plans and specifications, including but not limited to excavation, foundation work, installation, handling, restoration of the surrounding area, and CONTRACTOR to provide final bus shelter design.

Item 4 – Sign Installation

1. Measurement and Payment: Proposed signage measurement shall be based upon the preparation and installation of each unit; R10-15A. Includes all work necessary for the installation and backfill as shown by the plans and specifications, including but not limited to excavation, foundation work, installation, and handling.

B. LUMP-SUM ITEMS

Item 3 – Pavement Markings

1. Measurement and Payment: A lump sum amount for the placement of all required thermoplastic markings as noted on the plans. The temporary placement of markings required is included in this lump sum. This lump sum includes removing existing markings and installation of proposed markings as shown on plans. Such amounts represent the amount the CONTRACTOR feels are necessary to comply with all governing agency requirements. Any portion of this fund, remaining after the work has been paid for will remain with the CONTRACTOR. Conversely, no requests for additional reimbursement will be approved. Reflective Pavement Markers (RPM) shall also be furnished and installed under this item and there will be no additional compensation paid for this work. Since this item is bid as an aggregate sum, no other special provisions for measurement will be necessary.

Item 5 – For Replacing Impacted Landscaping

1. Measurement and Payment: A lump sum amount for replacing damaged landscape, tree removal, and relocation by CONTRACTOR’s operation, will be paid for from the aggregate sum amount bid by the CONTRACTOR for this purpose. Such amounts represent the amount the CONTRACTOR feels is necessary to comply with the governing agency's requirements. Any portion of this fund, remaining after the work has been paid for will remain with the CONTRACTOR. Conversely, no requests for additional reimbursement will be approved. Since this item is bid as an aggregate sum, no other special provisions for measurement will be necessary.

Item 6 – Mobilization and Demobilization

1. Measurement and Payment: A lump sum amount to include, but not be limited to videos/photos, site cleanup, project setup, sanitary facilities, construction staging area preparation and closure, project signage and project coordination/management. The price extended for this line items must also include all general conditions required for this project not specifically covered in all other items listed in the measurement and payment section. The lump-sum

amount shall be equally divided among the group areas of work, with partial payments made as follows:

Construction % Complete for each Sequence Area	**Allowable % of Lump Sum for Mobilization/Demobilization**
5%	25%
10%	50%
25%	75%
100%	100%

Item 7 – Maintenance of Traffic (MOT)

1. Measurement and Payment: A lump sum amount to include, but not be limited to all signage, temporary striping, flagmen, barricades, temporary asphalt, temporarily stabilized access around the construction equipment, notifications to residents, assistance to provide garbage collection, mail/package delivery and daily access of other utility support vehicles.
2. A lump sum amount to include, but not limited to CONTRACTOR to coordinate MOT plan and submission to ENGINEER.

Item 8 – Bonds and Insurance

1. Measurement and Payment: A lump sum amount specified by OWNER. Refer to North Bay Village contractor documents for amount.

Item 9 – Dedicated Owner Allowance

1. Measurement and Payment: A lump sum amount for additional work, as identified within the Bid Form and approved in writing for its use by the OWNER. The allowances shall be used only at the discretion of and as ordered by the OWNER for such items as unforeseen conditions, unforeseeable conflicts between existing elements of work and the proposed work, unit price items exceeding estimated quantities, and any associated work requested by the OWNER including all labor, materials, and services for modifications of extra work to complete the Project that was anticipated but not specifically included in this Contract.
2. Any portion of these allowances that remain after all authorized payments have been made will be withheld from contract payments and will remain with the OWNER. A deductive change order will be executed at the end of the contract before Final Payment to credit the OWNER with the remaining portion of the allowances.

Item 10 – Permit Fees

1. Measurement and Payment: The measurement for this dedicated allowance shall be based on the actual cost of the required permits, fees, inspections, and impact fees, as authorized by the OWNER. The CONTRACTOR shall submit documentation, including receipts and invoices, verifying the payment of these fees complies with the governing agency's requirements. Any portion of this fund remaining after the work has been paid for will remain with the CONTRACTOR. Conversely, no requests for additional reimbursement will be approved. Since this

item is bid as a dedicated sum, no other special provisions including, but not limited to, labor for measurement will be necessary.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

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SECTION 01300 – PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General project coordination procedures.
2. Conservation.
3. Coordination Drawings.
4. Administrative and supervisory personnel.
5. Project meetings.
6. Project schedule and two (2) week look ahead.

B. Each Contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to specific Contractor, as applicable.

1.2 COORDINATION

A. Coordinate operations with the Village representative at least 7 days in advance of any activity that may interfere with the Village's Operations.

B. Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

C. Contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with the facility operations staff, included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other Contractors on site and in close proximity, to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

D. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for the Village and separate Contractors if coordination of their Work is required.

E. Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other Contractors to avoid conflicts and to ensure

orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.

F. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

G. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work.

1.3 SUBMITTALS

A. Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.

1. Indicate relationship of components shown on separate Shop Drawings.
2. Indicate required installation sequences.

B. Within 15 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone.

1.4 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

1. Include special personnel required for coordination of operations with other Contractors.

1.5 PROJECT MEETINGS

A. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to the Village and EOR, but no later than 30 calendar days after execution of the Agreement. Hold the conference at Project site or another convenient location as arranged with the Village. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized Village personal, EOR, Contractor, manufacturers, supplier

representatives and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to discuss matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Project construction schedule with two (2) week look ahead.
    b. Phasing.
    c. Critical work sequencing.
    d. Designation of responsible personnel.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for processing Applications for Payment.
    g. Distribution of the Contract Documents.
    h. Submittal procedures.
    i. Preparation of Record Documents.
    j. Use of the premises.
    k. Responsibility for temporary facilities and controls.
    l. Parking availability.
    m. Office, work, and storage areas.
    n. Equipment deliveries and priorities.
    o. First aid.
    p. Security.
    q. Progress cleaning.
    r. Working hours.
    s. Safety.
    t. Maintenance of Traffic.

B. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Village Representative of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. Contract Documents.
    b. Options.
    c. Related Change Orders.
    d. Purchases.
    e. Deliveries.
    f. Submittals.
    g. Review of mockups.
    h. Possible conflicts.
    i. Compatibility problems.
    j. Time schedules.
    k. Weather limitations.
    l. Manufacturer's written recommendations.
    m. Warranty requirements.

n. Compatibility of materials.
o. Acceptability of substrates.
p. Temporary facilities and controls.
q. Space and access limitations.
r. Regulations of authorities having jurisdiction.
s. Testing and inspecting requirements.
t. Required performance results.
u. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements.

4. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

C. Progress Meetings: Conduct progress meetings at weekly intervals or as required by Owner. Coordinate dates of meetings with preparation of payment requests.

1. Attendees: In addition to representatives of the Village and EOR, each Contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of the Project.

a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to the Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
b. Review present and future needs of each entity present, including the following:

(i) Interface requirements.
(ii) Sequence of operations.
(iii) Status of submittals.
(iv) Deliveries.
(v) Off-site fabrication.
(vi) Access.
(vii) Site utilization.
(viii) Temporary facilities and controls.
(ix) Work hours.
(x) Hazards and risks.
(xi) Progress cleaning.
(xii) Quality and work standards.
(xiii) Change Orders.
(xiv) Documentation of information for payment requests.

3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

    a. Schedule Updating: Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

D. Coordination Meetings: If necessary, special coordination meetings shall be convened when site conditions warrant them.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01310 - PROJECT SCHEDULES, MEETINGS AND REPORTS

PART 1 - GENERAL

1.01 RELATED WORK

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

1.02 PROJECT SCHEDULES

A. General: The Contractor shall develop and submit, for approval by the Engineer a construction progress schedule and phasing plan demonstrating complete fulfillment of all contract requirements including all activities of subcontractors, equipment vendors and suppliers. Unless otherwise directed by the Engineer, the construction progress schedule shall be computer developed and maintained using Primavera, Microsoft Project or approved equal. The Contractor shall prepare a network plan utilizing CPM (Critical Path Method). The Village reserves the right to require submission of the schedule in electronic format as called for by the Engineer.

B. Submittal: The progress schedule shall be plotted on 11 inch by 17 inch paper, shall be revised and updated each month, depicting progress through the cutoff date of the current month. This cutoff date will be determined by the Engineer prior to the Contractor submitting the first schedule update and will remain constant throughout the duration of the Contract. As a prerequisite for receiving monthly payments, the Contractor shall submit (1) complete electronic copies of the current updated schedule with their application for monthly progress payments for the same period. The Village desires to obtain a detailed cost-loaded schedule at the beginning of the Project.

C. Base Line Construction Progress Schedule

1. Within no more than seven calendar days after the date of the official Contract Notice to Proceed the Contractor must submit for review the proposed project Baseline Construction Progress Schedule to the Engineer describing the activities to be accomplished and their dependency relationships, showing starting and completion calendar dates for each activity and activity duration in number of work days. The Baseline Construction Progress Schedule shall contain the Notice to Proceed Date, Contract Completion Date and all Contract Milestone Dates. All completion dates shown shall be within the periods specified for the various milestone dates and the specified Contract Completion date as provided on page two of the Proposal. The original Baseline Construction Progress Schedule submittal shall also contain the software generated logic printout to support the schedule. The schedule shall depict the sequence that the Contractor plans to utilize to complete all aspects of the work, broken down to activities for each craft discipline, including the duration (work days) to complete each activity.

2. After receipt by the Engineer and initial review, and within seven calendar days the Engineer will meet with the Contractor for joint review, correction or adjustment of the proposed plan and schedule.

3. The Contractor shall, within five calendar days, after meeting with the Engineer revise the schedule in accordance with agreements reached during the joint review, resubmit the revised schedule for second review. The Engineer will review the schedule a second time within five calendar days and at the end of that period again confer with the Contractor to eliminate any remaining problems.

4. The Contractor shall within seven calendar days of the second conference with the Engineer, produce the final non-cost loaded schedule with all corrections included and make a final schedule submission to the Engineer. The Engineer will, within seven calendar days make final review of the non-cost loaded schedule.

5. At this point the Contractor shall correct all remaining schedule problems and apply the cost loading (approved schedule of values) to cost load the corrected base line construction progress schedule. Within five calendar days the Contractor shall submit the completed cost loaded schedule to the Engineer for final review. The total of the items of the cost loaded schedule shall be equal to the total contract cost without use of the Authorized Reimbursable Cost Account (dedicated allowance account for permit cost), the unforeseen conditions contingency account or any other dedicated allowance accounts. The Engineer will review the cost loaded schedule within five calendar days and thereafter the Contractor shall meet with the Engineer for three calendar days to resolve any final outstanding items of the cost loaded schedule.

6. Within five (5) calendar days after the meeting with the Engineer, the Contractor will then submit the Final Baseline Schedule to the Engineer for approval. The submittal shall include two electronic copies of the schedule and supporting logic. The Engineer will review the Final Cost Loaded Construction Progress Schedule. Two approved electronic copies of the data will be returned to the Contractor within four calendar days.

7. If at the 60-calendar day after the Notice to Proceed date, there still remain what the Engineer determines to be significant omissions, conflicts or other problems with the schedule as submitted, the Contractor will have missed his first schedule milestone and be subject to liquidated damages in the amounts provided in the General Covenants and Conditions. The Contractor and his surety will be considered in default and will be given notice of such delay, neglect and default specifying the conditions pertaining thereto and directing the Contractor to correct same. This notification shall be a formal Notice to Cure provided to the Contractor and his surety by Certified Mail.

D. Schedule Requirements

1. Show the sequence and interdependence of activities required for complete performance. In preparing the schedule, break up the work into activities of a duration of no longer than fifteen working days each, except as to non-construction activities (such as procurement of materials, delivery of equipment and concrete curing) and any other activities for which the Engineer may approve the showing of longer duration. The schedule shall show the activities for actual construction work for each trade category of the project. The Contractor is to include in the schedule a schedule of submittals of Shop Drawings, equipment schedules, coordination drawings, curing times, stabilization of process, individual unit testing, templates, fabrication, delivery and the like, and review and approval of Shop Drawings by the Engineer. The normal time for the Engineer's review to be utilized in the schedule for most Shop Drawings and Submittal Data is twenty-one calendar days after submittal to the Construction Manager. Additional time may be utilized for shop drawing review of elements not on the critical path which will yield precedence to items on the path. Some large, detailed and complicated submittals will require thirty calendar days for review. It will be advantageous to both the Contractor and the Village if prior notice of such large submittals is given and coordinated. Activities related to a specific physical area of the project shall be grouped on the schedule for ease of understanding and simplification. Activity duration (i.e. the single best estimate, considering the scope of the activity, and the resources planned for the activity) shall be shown on each activity on the diagram. To the extent that the schedule or any revised schedule shows anything not jointly agreed upon or fails to show anything jointly agreed upon, or does not conform to the Baseline Schedule, it shall not be deemed to have been approved by the Engineer. Failure to include any element of work required for the performance of this Contract shall not excuse the Contractor from completing all Work required within any applicable completion date, notwithstanding the Village's approval of the schedule.

2. The Contractors' home office expense, overhead and profit shall be prorated throughout all activities. The partial payments as defined under the General Conditions will be based on these approved activity costs.

3. With each request for a partial payment, beginning with the first request submit a copy of the schedule marked to show the activities completed and partially completed, for which payment is requested, in order to receive monthly draws.

4. **The Contractor is advised that may be other Contracts (Contractors) on the jobsite working simultaneously with this Contract. Some of this Contractor's activities may have to be re-scheduled to maintain a workable compromise or solution for the betterment of the overall project. This same stipulation will also be included in all other Contracts with work that parallels or could impact the work in this Contract. The Engineer's decision regarding changes to the schedule shall be final. If, in the opinion of the Engineer, the schedule's critical path is impacted by changes to the**

schedule initiated by the Engineer, a non-compensable time extension for the time of the impact will be granted.

1.03 PRE-CONSTRUCTION MEETING

A. The Village will schedule a preconstruction meeting after date of Notice to Proceed.

B. Location: Nort Bay Village Offices at 1666 John F Kennedy Causeway 3rd Floor, North Bay Village, Florida 33141, unless otherwise decided by the Engineer or Owner.

C. Suggested Agenda:

1. Distribution and discussion of:

   a. List of major subcontractor and suppliers.
   b. Projected Construction Schedules.

2. Critical Work Sequencing:

   a. Development of cost-loaded schedule.

3. Major equipment deliveries and priorities.

4. Project Coordination:

   a. Designation of responsible personnel.

5. Procedures and processing of:

   a. Field decisions.
   b. Proposal requests.
   c. Submittals.
   d. Change orders.
   e. Applications for payment.
   f. Security and Parking.

6. Adequacy of distribution of Contract Documents.
7. Procedures for maintaining Record Documents.

8. Use of premises:

   a. Office, work, staging, and storage areas.
   b. Department requirements including security and parking.
   c. Construction facilities, controls and construction aids.
   d. Temporary utilities.
   e. Housekeeping procedures.
   f. Maintenance of traffic (MOT).

g. Safety.

1.04 WEEKLY PROGRESS MEETINGS

A. General progress meetings will be held once each week at which every entity then involved in the planning, coordination and performance of work shall be present. The progress of each element of current work shall be discussed as to whether it is ahead of schedule, on time or behind time in relation to the updated progress schedule. In addition to discussing the two week “look ahead” schedule of the previous week, the Contractor shall present a two week detailed "look ahead" schedule for the upcoming two weeks. Methods to expedite behind time work shall be determined and commitments secured from the entities involved for bringing the lagging activities back to the scheduled date. Everything of significance which could affect the progress of the work activities, including schedule revisions, shall be discussed to ensure that current and subsequent work will be completed within the scheduled durations, milestone dates and total Contract time. The Engineer shall record and maintain the minutes of all meetings, including Progress meetings. Within three days after each meeting, copies of the minutes of the meeting, including a brief summary of progress of the work since the previous meeting, shall be distributed by the Contractor to each of those present or who should have been present The details of any and all changes to the progress schedule shall be included in the progress meeting minutes and the changes, if approved by the Engineer, shall be added to the Cost Loaded Progress Schedule with the next update.

1.05 CONSTRUCTION PROGRESS SCHEDULE

A. The construction progress schedules are to be updates of the approved base line, cost loaded construction progress schedule. The updates shall include all Engineer approved changes and depict the Contractor’s position with regards to the amount of work completed of the various activities at the data date of the schedule update.

B. Each computer generated construction progress schedule, and associated report shall include the following tabulations: a list of activities in numerical order, a list of activity precedence, schedules sequenced by Early Start Date, Total Float, and Late Start Date. Each schedule and report shall include the following minimum items:

1. Activity Numbers.
2. Estimated Duration (Work Days).
3. Activity Description.
4. Early Start Date (Calendar Dated).
5. Early Finish Date (Calendar Dated).
6. Latest Allowable Start Date (Calendar Dated).
7. Latest Allowable Finish Date (Calendar Dated).
8. Status (Whether Critical).
9. Total Float and Free Float.
10. Cost for Activity.
11. Notice to Proceed Date (Calendar Days).
12. Contract Milestone Completion Dates (Calendar Days).

13. Contract Completion Date (Calendar Days).
14. Activity Percentage Complete.

C. In addition, each construction progress schedule, network analysis and report shall be prefaced with the following summary data:

1. Contract Name and Number.
2. Contractor's Name.
3. Project Duration (Calendar Days).
4. Schedule Identification i.e. Base Line, Update No. XXX etc.
5. The Effective or Starting Date of the Schedule (the Date Indicated in the Notice to Proceed).
6. Date.

D. The work day to calendar date correlation shall be based on an 8 hour day and 40 hour work week with adequate allowance for holidays, adverse weather and all other special requirements of the work. Note that weather shall only be considered as “adverse” when conditions are severe enough, in the opinion of the Engineer, to actively prevent or make impractical construction activity(s) scheduled for that day. Normal work days are Monday thru Friday, 7:30 am to 4:30 pm. Any deviation from this work schedule must be approved by the Engineer.

E. If the Contractor desires to make changes in his method of operating which affect the approved base line construction progress schedule and related items, he shall notify the Engineer in writing stating what changes are proposed and the reason for the change while maintaining all construction activities within the scope of the approved Base Line Schedule, Contract milestones and contract duration. If the Engineer accepts these changes, in writing, the Contractor shall revise and submit, without additional cost to the Village, all affected portions of the construction progress schedule, and associated reports. The construction progress schedule and related items shall be adjusted by the Contractor only after prior acceptance, in writing by the Engineer. Adjustments may consist of changing portions of the activity sequence, activity durations, division of activities, or other adjustments as may be required. The addition of extraneous, nonworking activities and activities which add restraints to the construction progress schedule will not be accepted.

F. Except where earlier completions are specified, schedule dates which show completion of all work prior to the contract completion date shall, in no event, be the basis for claim for delay against the Village by the Contractor.

G. Construction progress schedules and related items which contain activities showing negative float or which extend beyond the various milestone completion dates or contract completion date will not be accepted by the Engineer. Whenever it becomes apparent from the current construction progress schedule and associated reports that delays to the critical path have resulted and the contract completion or milestone date will not be met, or if the completion of any activity, whether or not critical, falls more

than 50 percent behind its previously scheduled and accepted duration, or completion date as indicated on the approved Base Line Schedule, or when so directed by the Engineer, the Contractor shall take some or all of the following actions at no additional cost to the Village. He shall submit to the Engineer for approval, a written statement of the steps he intends to take to remove or arrest the delay in the current construction progress schedule.

1. Increase construction manpower in such quantities and crafts as will substantially eliminate the backlog of work.
2. Increase the number of working hours per shift, shifts per day, working days per week, the amount of construction equipment, or any combination of the foregoing, sufficiently to substantially eliminate the backlog of work.
3. Reschedule activities to achieve maximum practical concurrence of accomplishment of activities, and comply with the revised schedule update.

H. If the Contractor fails to submit a written statement of the intended steps or fails to take such steps, as are reviewed and accepted in writing by the Engineer, the Engineer may direct the Contractor to increase the level of effort in manpower (trades), equipment and work schedule (overtime, weekend and holiday work, etc.) in order to remove or arrest the delay to the critical path in the current construction progress schedule. The Contractor shall promptly provide such increased level of effort at no additional cost to the Village.

I. Shop Drawings which are not approved on the first submittal or within the time scheduled, and equipment which does not pass the specified tests and certifications, shall be immediately rescheduled.

J. The Contract time will be adjusted only in accordance with the General Covenants and Conditions and other portions of the Contract Documents as may be applicable. If the Engineer finds that the Contractor is entitled to any extension of the Contract completion date, or Contract Milestone dates, the Engineer's determination as to the total number of days extension will be based upon the current construction progress schedule and on all data relevant to the extension. Such approved data shall be included in the next updating of the schedule and related items. Actual delays in activities which, according to the construction progress schedule, do not affect any contract completion date will not be the basis for a change therein.

K. From time to time it may be necessary for the Contract schedule of completion time to be adjusted by the Village in accordance with the General Covenants and Conditions and other portions of the Contract Documents as may be applicable. Under such conditions, the Engineer will direct the Contractor to reschedule the work or Contract completion time to reflect the approved changed conditions, and the Contractor shall revise the construction progress schedule and related items accordingly, at no additional cost to the Village.

L. All available float time belongs to the Owner and may be used by the Village, without penalty, by and through, the Engineer.

M. The Village controls the float time and, therefore, is without obligation to extend either the overall completion date or any intermediate completion dates, only the Village may initiate changes that absorb float time. Village initiated changes that affect the critical path on the network diagram shall be the sole grounds for extending the completion dates. Contractor initiated changes that encroach on the float time may be accomplished only with the Engineer's concurrence. Such changes, however, shall give way to the Village initiated changes competing for the same float time.

N. Review and approval of the construction progress schedule, and related reports, by the Engineer is advisory only and shall not relieve the Contractor of the responsibility for accomplishing the work within the various milestone dates and contract completion date. Omissions and errors in the construction progress schedule, and related reports shall not excuse performance less than that required by the Contract Documents and in no way make the Engineer an insurer of the Contractor's success or liable for time or cost overruns flowing from any shortcomings in the construction progress schedule, and related reports.

O. The Contractor shall present and discuss the proposed schedule at the preconstruction conference. This schedule shall have been previously reviewed and agreed to by the Engineer. See Section 01310, 1.02, B.

P. The construction progress schedule shall be based upon the precedence diagramming method of scheduling and shall be prepared in the form of a horizontal bar chart showing in detail the proposed sequence of the work and identifying all construction activities. The schedule shall be time scaled, identifying the first day of each week, with the estimated date of starting and completion of each stage of the Work in order to complete the project within the Contract time. The project critical path shall be clearly identified and the schedule logic shall be provided when specified above or requested by the Engineer.

1.06 CONTRACTOR'S DAILY REPORTS

A. The Contractor shall prepare and submit to the Engineer, before noon of the following work day, the daily report for the previous work day. The Contractor's daily report shall contain all information concerning events at the site on that day. The daily reports shall contain the following and any other significant information:

1. General weather conditions, rain, high/low temperatures.
2. List of subcontractors on site.
3. Number of Contractors and Sub-contractors workers on site segregated by craft.
4. Meetings and significant decisions.
5. Stoppages, delays, shortages, losses.
6. Emergency procedures, field orders.
7. Orders/Requests by governing authorities.
8. Other significant events or activities.
9. Partial completions.

10. List of Contractors and Sub-contractors equipment on site.
11. All accidents.
12. Interference from other onsite contracts (Contractors).
13. Deliveries of equipment, both Contractor and Owner furnished.

B. All daily reports shall be dated and signed by the Contractors' Project Manager and Superintendent. Incomplete daily reports or reports that say "Same as Yesterday", or some similar wording, will not be accepted.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01330 – REQUEST FOR INFORMATION (RFI)

PART 1 - GENERAL

1.1 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.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 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. This review shall be planned to allow sufficient time to obtain resolution of any required RFI, as defined in this section.

B. RFI Requirements:

1. All RFIs shall be submitted to the Village Representative in the format with this section or in a pre-approved format equivalent to this section.

2. All RFIs shall be signed by the Contractor's Project Manager or by a designated alternate (i.e., the Quality Assurance Representative). RFIs shall include the following information:

    a. Date submitted.
    b. Contract number and title.
    c. Contractor's name.
    d. Description of the request, including any supportive drawings, sketches or additional information.
    e. 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.
    f. Clear description of what response the Contractor is expecting.
    g. All RFIs shall be signed by the Contractor's project manager.

C. RFI Processing Procedure:

1. Upon receipt of the RFI, the Village Representative shall promptly date stamp the request. The Village Representative is required to keep a log of all RFIs including receipt date and date returned to the Contractor.

2. 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 restamped. The EOR will coordinate a response and transmit the answer to the RFI via the Village Representative to the Contractor.

D. Time allowed for processing RFIs:

1. Although every attempt will be made to expeditiously resolve all RFIs, Village shall have (7) working days to respond to an RFI, from the date the RFI is received by the Village Representative, including all necessary information needed to formulate a response. Failure by the Contractor to allow sufficient time for Village to formulate a response to an RFI, as specified in this section, shall not constitute grounds for a delay claim from the Contractor.

END OF SECTION

SECTION 01340 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies preparing and submitting shop drawings, product data, and samples required under the contract.

B. Dates for submission, and dates on which approved shop drawings, product data, and samples for each product will be needed, shall be designated in the Contractor's Schedule.

1.2 SHOP DRAWINGS

A. Furnish all shop drawings that are necessary to complete the scope of work in compliance with the design shown on the plans. Prepare all shop drawings using the same units of measure as those used in the Contract drawings.

B. Changes in products, for which shop drawings have been accepted, will not be permitted unless those changes have been accepted, in writing by the EOR.

C. Prior to their fabrication or installation, shop drawings shall be submitted to and reviewed by the EOR for items including but not limited to the following: sewer main fittings, valves, pipes, manholes, and any other sewer related component. In addition, some cities, counties, state and/or national regulatory agencies require their own individual review and approval. It is the responsibility of the Contractor to obtain all other agency shop drawing approvals if required.

1.3 QUALITY ASSURANCE:

A. Shop drawings shall be prepared to a high standard of quality, and to the satisfaction of the EOR. Drawing level control shall be established and implemented to ensure documentation is controlled for specified applications on contract.

1.4 PRODUCT DATA:

A. Provide electronic copies of documents, in addition to drawings, such as trade literature, catalogue information, calculations, manuals, etc. Clearly label and number each sheet in the submittal to indicate the total number of sheets in the series (i.e., 1 of 12, 2 of 12, ….12 of 12).

B. Prepare all documents using the same units of measure as those used in the contract drawings. Combine and submit all documents with a cover sheet. List on the cover sheet the complete Contract number, a title referencing the submittal item(s), the name of the firm and person(s) responsible for the preparation of the document, the Contractor’s approval stamp with the data and initials, and, when applicable, the signature and embossed seal of the Specialty Engineer.

C. Manufacturers' standard schematic drawings shall be modified to delete information, which is not applicable to the project. Standard information shall be supplemented to include additional information applicable to the project.

D. Manufacturers' standard catalog cuts, brochures, diagram, schedules, performance charts,

illustrations, calculations, and other descriptive data shall be modified to delete information which is not applicable to the project. Dimensions, clearances, performance characteristics and capacities, and wiring diagrams and controls shall be shown.

E. Certificates of Compliance shall be submitted for those products for which no samples and test results are specified. Certificates shall state that the product complies with the requirements of the respective specification section and shall be signed by a representative of the product manufacturer. A copy of the certificate shall accompany the product for which the certificate is prepared.

1.5 SAMPLES

A. Samples shall be of sizes and quantities to clearly illustrate full color range and functional characteristics of products and materials, and shall clearly show attachment devices. Changes in products for which samples have been accepted will not be permitted unless those changes have been approved, in writing, by the EOR.

B. Samples and sample installation shall be erected at the job site at locations acceptable to the EOR and shall remain in place or available until completion of the project.

1.6 MIAMI-DADE COUNTY PRODUCT CONTROL APPROVAL

A. The Contractor shall submit all required Miami-Dade County Product Approvals, as applicable, in accordance with this section and the Florida Building Code.

1.7 CONTRACTOR RESPONSIBILITIES

A. Shop drawings, product data, and samples shall be reviewed, stamped and signed as approved, by the Contractor's designated authority prior to submission to the EOR. Each submittal shall be coordinated with the requirements of the work. Returned marked-up submittals shall be reviewed and those requiring changes shall be changed and shall be resubmitted.

1. Field measurements, catalog numbers, and similar data shall be verified.
2. Work, for which submittals are required, shall not be started until submittals bearing the EOR stamp and signature indicating review has been received.
3. Before submitting samples, assure that products of which samples will be submitted will be available in the quantities required by the Project.
4. The responsibility for errors and omissions in submittals shall not be relieved by the EOR review of submittals.
5. Responsibility for deviations in submittals from requirements of the Contract Documents shall not be relieved by the EOR’s of those submittals.
6. The Contractor shall verify that the product or system submitted for review has been approved by Miami Dade County WASD and Miami-Dade County Product Control, if applicable, prior to making the initial submittal. Products which require Miami-Dade County Product Control approval and are not so approved shall be rejected by the EOR. Product approval shall not be requested or initiated during the shop drawing review process but shall be requested and obtained prior to the Contractor’s bid submittal.

1.8 SUBMISSION REQUIREMENTS:

A. Submittals, excepting test results, shall be made in not less than 10 working days before work

covered by the submittals is scheduled to be performed. Allow 10 working days for review of shop drawing submittal to the EOR. Test results shall be submitted within five days after each test has been completed. Office samples shall be shipped prepaid. Submittals require approval the EOR prior to work covered by the submittals being scheduled to be performed.

B. Submittals shall be sent to EOR electronically for review and approval. The Contractor is advised that the review period starts when the submittal is received by the reviewer. Submittals shall include such items as manufacturers' standard schematic drawings, manufacturers' calculations and standard data, test result (s), Certificate (s) of Compliance, and Miami-Dade County Product Control Notice of Acceptance, if applicable.

C. Coordinate preparation and processing of Submittals with performance of the work so that work will not be delayed by and/or re-submittal process. Coordinate and sequence different categories of submittals for same work, and for interfacing units of work, so that one will not be delayed for coordination of A/E's review with another. Submittals transmitted out of sequence will be returned un-reviewed. Related submittals should be submitted together to allow the EOR to be able to review a complete systems package.

D. Each submittal shall be accompanied by a transmittal form coordinated as indicated below and containing the following information:

1. Date submitted to the EOR.
2. Project title and Contract Number.
3. Provide permanent marking on each submittal to identify project title, Contract number, date, Contractor, subcontractor, submittal name to distinguish it from other submittals.
4. Number each submittal using specification section numbers listed in the Project Manual. When multiple submittals are required for an individual section, number using the example as follows; 13130-1, 13130-2 etc. For re-submittals use the same suffix number and add an R, i.e. 13130-1R00, 13130-2R01, 13130-1R02, etc. Identify by "clouding" revisions on re-submittals to readily distinguish revision from previous submittals.
5. Provide supplier's, manufacturer's and subcontractor's name, address and
6. telephone number.
7. Provide notification of any known deviations from the drawings and the specification sections.
8. Provide all Miami-Dade County Product Approval number, if applicable.
9. Other pertinent data.

E. Submittals shall include a white space, three by four inches, in the lower right corner just above the title block, in which the EOR may indicate the action taken. Submittals, as applicable, shall show as a minimum the following information:

1. Date and revision dates.
2. Project title, drawing title and Project Number.
3. The names of the Contractor's Engineer, Subcontractor, lower tier Subcontractor, supplier, manufacturer and the name of the detailer or person(s) responsible for the drawing.
4. Consecutively number each sheet in the submittal series and indicate the total number in the series (i.e., 1 of 12, 2 of 12, …12 of 12).
5. Identification of product by description, model number, style number, serial number, or lot number.
6. Location of the item(s) within the project.
7. Relation to adjacent structure or materials.

8. Field dimensions clearly identified as such.
9. Applicable specification section numbers.
10. Applicable standards, such as ASTM number and Federal Specification number.
11. Identification of known deviations from the drawings and specification sections.
12. Contractor's stamp, signed, and dated certifying review of submittal, verification of field measurements, and approval for compliance with the drawings and specification sections, and, when applicable, the signature and embossed seal of the Specialty Engineer.
13. Include in submittals a reference to supporting Subcontract drawing.
14. The EOR will request a re-submittal when any of this minimum information is not included.

1.9 RESUBMISSION REQUIREMENTS:

A. Resubmittals shall be submitted by the Contractor so as to avoid delays to the project.

1. Initial Shop Drawings: Shall be revised as required and resubmitted as specified for initial submittal. Changes which are made, other than those requested by the EOR, shall be so indicated.
2. New Product Data and Samples: Shall be resubmitted as specified for initial submittal.

1.10 DISTRIBUTION OF SUBMITTALS AFTER REVIEW:

A. Reviewed shop drawings and product data bearing the EOR's stamp shall be submitted to the Contractor electronically. The Contractor shall distribute copies to concerned lower tier subcontractors, suppliers, and fabricators; and to concerned members of the Contractor's work force.

1.11 ENGINEER OF RECORD DUTIES:

A. Submittals will be reviewed and marked.

B. Submittals will be reviewed for conformance to the requirements of the Drawings and Specification sections. Review will not relieve the contractor from his responsibility for the accuracy of the submittals or for the conformity of the submittals to the requirements of the drawings and specification sections.

C. Review of a separate item will not constitute review of an assembly in which the item functions.

D. Stamp, date and signature will be affixed, and will certify that the submittal has been reviewed.

E. The EOR will return to the Contractor a copy of the reviewed submittal electronically, and following the Village approval as necessary, within the time frames specified in Article 1.8, SUBMISSION REQUIREMENTS.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01360 – WORKING DRAWINGS

PART 1 - GENERAL

1.1 DESCRIPTION:

A. This Section specifies the preparation and submission of working drawings and associated calculations required by the specifications sections or to erect temporary structures to facilitate construction.

1.2 WORKING DRAWINGS:

A. Working drawings shall be identified by reference to drawing page numbers and specification section numbers. Working drawings shall be prepared, seal-stamped, dated and signed by the Contractor's engineer, of the involved discipline, registered as a professional engineer in the State of Florida.

1.3 QUALITY ASSURANCE:

A. All working drawings shall be prepared to a high standard of quality, and to the satisfaction of the Village and the EOR. Drawing level control shall be established and implemented to ensure documentation is controlled for specified applications on contract.

1.4 ASSOCIATED CALCULATIONS:

A. Calculations shall be prepared, seal-stamped, dated and signed by the Contractor's engineer, of the involved discipline, registered as a professional engineer in the State of Florida. Calculations shall be identified by reference to Contract Drawing page numbers and specification section numbers.

1.5 CONTRACTOR RESPONSIBILITIES:

A. Working drawings and associated calculations prepared by any subcontractor shall be reviewed, signed and dated as approved by the Contractor, prior to submission. Each submittal shall be coordinated with the requirements of the work.

1. Field measurements and field construction criteria shall be verified by the Contractor.
2. Work, for which working drawings and associated calculations are required, shall not begin until those drawings and calculations bearing the stamp and signature, indicating Contractor Engineer's review, have been received.
3. Submittals shall not relieve the Contractor of the responsibility for safe and effective design of structures for which the working drawings and associated calculations are submitted. The Village and EOR shall in no way be liable to the Contractor and others for any consequences arising from work described in this section and shall not review and or approve the working drawings.

1.6 SUBMISSION REQUIREMENTS:

A. Working drawings and associated calculations shall be submitted in sufficient time and not less than 30 days before work represented by those drawings and calculations is scheduled to

be performed.

B. Submittals shall be in electronic format.

C. Each submittals shall be accompanied by a Transmittal Form containing the following information:

1. Submittal date.
2. Project title and number.
3. Contractor's name and address.
4. Number of each working drawing and associated calculation submitted.
5. Notification of known deviations from Construction Documents.
6. Other pertinent data.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01570 – MAINTENANCE OF TRAFFIC

PART 1 - GENERAL

1.1 TRAFFIC CONTROL

A. Contractor shall obey all traffic laws and comply with all the requirements, rules and regulations of the State of Florida Department of Transportation (FDOT), Miami-Dade County and other local authorities having jurisdiction, to maintain adequate warning signs, lights, barriers, flagmen, police, etc., for the protection of vehicular traffic and pedestrian traffic on public roadways and within the project corridor.

B. Access shall be maintained at all times as required by the Village and/or its Tenants with approved MOT devices; including but not limited to, all necessary signage, plates, ramps and other measures to adequately inform and convey traffic and pedestrians safely through the work limits.

C. The Contractor shall maintain traffic and protect the public from all damage to persons and property within the Project Limits, in accordance with the Contract Documents and all applicable state, and local regulations. The Contractor shall conduct its construction operations so as to maintain and protect access, for vehicular and pedestrian traffic, to and from all properties and business establishments adjoining or adjacent to those streets affected by his operations, and to subject the public to a minimum of delay and inconvenience. Suitable signs, barricades, barrier walls, police, etc. shall be erected and in place and the work outlined by adequate lighting at night. Danger lights shall be provided as required. Watchmen, flagmen, and crossing guards shall be provided as may be necessary for the protection of traffic.

D. For the protection of vehicular and pedestrian traffic, the Contractor shall provide, place, and maintain all necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the requirements of the “Manual of Uniform Traffic Control Devices (MUTCD), published by U.S. Department of Transportation, Federal Highway Administration (ANSI D6.1).

E. The Contractor shall submit a Maintenance of Traffic (MOT) plan to the Village Representative for review and approval at least 30 days prior to construction work. The plan shall be signed and sealed by a registered PE in the state of Florida and be approved by all jurisdictional agencies having authority over the right-of-way limits.

F. The Contractor will be required to coordinate with other work, other Contractors, and other MOT plans throughout the project construction for which other projects work is being completed in the project area or adjacent limits. Work may require night or evening and non-peak hour efforts by the Contractor as well as additional coordination and adjustments to MOT plans, phasing of MOT and other considerations. All MOT adjustments will be at no additional cost to the Owner.

G. All signs, signals, and barricades shall conform to the requirements of FDOT.

H. All dirt spilled from the Contractor’s trucks on existing pavements shall be removed by the Contractor immediately and whenever in the opinion of the Department the accumulation is sufficient to cause the formation of mud, dust, interference with traffic or create a traffic hazard.

I. The Contractor will be required to move the accumulation immediately, else the Contractor will be charged the cost for the Owner to remove the accumulation.

1.2 TEMPORARY CROSSINGS

A. General: Wherever necessary or required for the convenience of the public or tenants at roadway crossings, driveways, or elsewhere, the Contractor shall provide suitable temporary bridges or stabilized paths over unfilled excavations for which written consent shall be delivered to the Village prior to excavation. All such bridges or stabilized paths shall be maintained in service until access is provided across the backfilled excavation.

B. Road Use: Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, alleyway, or parking area during the performance of work hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas. No street shall be closed to the public without first obtaining permission of the Village and/or proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise provided or shown and as approved by jurisdictional authorities. Toe boards shall be provided to retain excavated material if required by the Department or the agency having jurisdiction over the roadway. Fire hydrants on or adjacent to the Work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to assure the proper functioning of all gutters, sewer inlets, and other drainage facilities.

C. The Contractor shall take all necessary precautions for the protection of the work and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The Contractor shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the requirements of FDOT.

D. The Contractor shall remove traffic control devices when no longer needed, repair all damage caused by installation of the devices, and shall remove post settings and backfill the resulting holes to match grade.

E. Temporary Road Closure: If closure of any road is required during construction, a formal application for a road closure shall be made to the authority having jurisdiction at least 30 days prior to the required road closure in order to determine necessary sign and detour requirements. Detour signs shall be provided, installed prior to street closure, and removed after construction by the Contractor. MOT plans shall address all temporary street closures.

F. Temporary Driveway Closure: The Contractor shall notify the Department of closure of driveways to be closed a minimum 72 hours prior to the closure. The Contractor shall minimize the inconvenience and minimize the time period that the driveways will be closed. The Contractor shall fully explain to the Owner how long the work will take and when closure is to start.

G. Temporary Bridges: Whenever necessary, the Contractor shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the Contractor shall secure the written consent of the individuals or authorities concerned to omit such temporary

bridges or steel plates, which written consent shall be delivered to the Engineer prior to excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges or steel plates for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the Contractor shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required. Steel plates must have approval prior to being placed over all open excavations. The Contractor assumes all risks for any shifting of the plates, if approved for use.

1.3 CONTRACTOR PARKING

A. The Contractor shall obtain parking for all personnel vehicles as required.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01640 - SUBSTITUTIONS AND PRODUCT OPTIONS

PART 1 - GENEAL

1.1 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.

1.2 SELECTED PRODUCTS:

A. Within 15 days after the effective date of Notice to Proceed, submit list of selected products, electronically via PDF. 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 the Village and the EOR, may be furnished. A request must be submitted to the Engineer as required for substitutions, for acceptance of products not specifically named.

3. Amend and update list as changes concerning the information become known.

1.3 LIST OF SUBSTITUTE PRODUCTS AND METHODS:

A. Formal requests from the Contractor will be considered by the Village and the EOR for substitution of products and methods in place of those specified, but only if these requests are submitted within 7 working days after effective date of Notice to Proceed. No substitution request will be considered after 7 working 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 project. The Village 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.

1. Submit list of substitute products and methods, including the following information:

a. Complete data substantiating compliance of the proposed substitution with the requirements of the Specifications and Drawings.

b. For products:

(i) Product identification, including manufacturer’s name and address.
(ii) Manufacturer's literature, including product description, performance and test data

and pertinent reference standards.

c. For construction methods:

(i) Detailed description of proposed method.
(ii) Working drawings illustrating methods.

d. 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, salvageability, manufacturer's warranties and other material differences.

e. Data relating to changes in construction schedule.

f. 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 Subcontract.

g. Equitable adjustment and credit that the Contractor proposes to offer the Village if the substitutions are not equal, equivalent or superior to specified brand names.

B. 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 becomes apparent.

C. Amend and update list as changes concerning information on the list become known to him.

D. 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.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01700 - CONTRACT CLOSE-OUT

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section outlines the procedure to be followed in closing all contracts.

1.2 RELATED SECTIONS

A. Section 01340 - Shop Drawings
B. Section 01720 - Project Record Documents
C. Section 01740 – Warranties and Bonds
D. General Conditions of the Project Contract

1.3 FINAL INSPECTION

A. The Village will not issue a preliminary punchlist. After final cleaning and upon written notice from the Contractor that he has inspected the work and it is substantially completed, the Engineer will conduct a preliminary inspection in the presence of the Village and the Contractor. Upon completion of this preliminary inspection, the Engineer/ the Village will submit to the Contractor a written final punchlist of any particulars which this inspection reveals as defective or incomplete work.

B. Upon receiving written notice from the Engineer/ The Village Representative, the Contractor shall immediately undertake the work required to remedy the defects and complete the work to the satisfaction of the Village representative.

C. The items identified to be completed shall constitute the Punch List. The Contractor shall have seven calendar days from the date of substantial completion to create the punchlist. When the Contractor successfully completes all identified items to the satisfaction of the Engineer/ the Village Representative in accordance with the Contract Documents, the Contractor may submit a payment request for all remaining retainage withheld for the Project. Each item in the punchlist shall have a time duration agreed upon by both parties. Punchlist items may be eliminated individually from the list when approved by the Engineer/ the Village.

D. When the Contractor has corrected or completed the items as listed in the Engineer's/ the Village’s written notice, inform the Engineer/ the Village Representative, in writing, that the required work has been completed. Upon receipt of this notice, the Engineer/ the Village, in the presence of the Contractor, shall make the final inspection of the Project.

E. Should the Engineer/ the Village find all work satisfactory at the time of the inspection, the Contractor will be allowed to make an application for final payment in accordance with the provisions of the General Conditions.

F. If the Contractor fails to complete any item of work within a time period equal to 100% of the agreed upon duration of time for all individual items, the Engineer/ the Village will notify the Contractor in writing specifying the conditions pertaining thereto and directing the Contractor to comply with his directive. If the Contractor has not corrected such condition within 5 days of such notice, it shall be enough grounds for the Engineer/ the Village to order the subject

items discontinued and have them completely remedied in a timely manner at the expense of the Contractor.

G. No final estimate shall be issued by the Engineer/ the Village until the Engineer/ the Village has assured himself that the punchlist has been completed in its entirety and all other related documents are submitted.

H. Failure of the Village and EOR to Reject Work During Construction:

1. If, during construction operations or during inspections for substantial or final completion, the Village and 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 the Village to final acceptance, and the Contractor shall make no claim for losses suffered due to any necessary removals or repairs of such defects.

1.4 CONTRACTOR'S CLOSE-OUT SUBMITTALS

A. Upon receipt of notice of acceptability from the Village/ EOR, the Contractor shall furnish evidence of compliance with requirements of governing authorities and Contract Documents to the Village/ EOR, as follows:

1. Close-Out documents

a. Submit three hard copy sets and one electronic set.
b. Bind Close-Out documents in heavy-duty, commercial quality 3-ring vinyl covered loose-leaf binders. Include either CD or USB with all close-out documents included in each of the three binder sets.
c. Include a table of contents and heavy paper divers, tabbed and coordinated with table of contents, identifying each submitted item.

2. Final shop drawings as specified in Section 01340.
3. As-built drawings and other project record Documents as specified in Section 01720.
4. All test results.
5. Operating and Maintenance Data, Instructions to Owners Personnel as specified and in accordance with the requirements of the individual Sections of the Specifications.
6. Warranties and Bonds as specified in Section 01740 and in accordance with the requirements of the individual Sections of the Specifications.
7. Spare parts and Maintenance Materials: To requirements of various Sections.
8. Evidence of Payment to subcontractors, material men and equipment suppliers and releases of liens.
9. Close all Permits associated with this Contract work.

1.5 GUARANTEES, BONDS, AND AFFIDAVITS

A. No Contract will be finalized until all guarantees, bonds, certificates, licenses, warranties, close out (C.O.) and affidavits required for work or equipment as specified are satisfactorily filed with the Engineer/ the Village Representative.

B. The Contractor shall comply with the Public Records Laws of the State of Florida.

1.6 ACCESSORY ITEMS

A. All contractors furnishing and/or installing equipment and spare parts on this Project shall provide to the Village, upon acceptance of the equipment, all special accessories required to place each item of equipment in full operation.

1.7 SUBSTANTIAL COMPLETION

A. "Substantial Completion" shall occur when the work is in a state of final completion as regards all aspects of occupancy, ingress, egress, habitability, functionality and efficiency thereof, safety, durability and interaction with other existing or contemplated systems, and is otherwise substantially fit for use or operation. Any work remaining after substantial completion shall be of a minor nature such that should the Village elect to occupy and put into full service the facility constructed under the Project, or any portion thereof, said work may be accomplished without interference to an extent causing loss of efficiency to any of the above required aspects. The date of substantial completion is the date certified by the Engineer/ the Village when construction is sufficiently complete to satisfactorily fulfill all the above requirements. If any portion of the Contract Documents specifies a measure of substantial completion for the work, in whole or in part, that definition shall take precedence of this section.

1.8 FINAL COMPLETION

A. "Final Completion" shall occur when the work is in a state such that no further work is required in accordance with the Contract Documents to render complete, satisfactory and acceptable to the Village all construction services purchased, including those for any pending items whether or not they were listed after substantial completion, and provide all manuals, certifications, warrantees, as-built Plans, release of liens, certified payrolls, and any other documentation required by the Village or other governing authority. If any portion of the Contract Documents specifies a measure of final completion.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01710 - CLEANING

PART 1 - GENERAL

1.1 DESCRIPTION

A. This Section specifies the maintenance of the work site in a clean, orderly, hazard-free condition. All work shall be performed in accordance with the Contract Documents.

1.2 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 by workmen experienced in cleaning operations or by professional cleaners.

1.3 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with local codes, ordinances, regulations, and anti-pollution laws. Do not burn or bury rubbish or waste materials on Project site. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains, Volatile wastes shall be disposed in accordance with proper laws and be approved by the Village. Do not dispose of waste into streams or waterways.

PART 2 - PRODUCTS

2.1 ON-SITE WASTE CONTAINERS

A. Provide on-site waste containers for collection of waste materials, debris and rubbish. Enquire from the Village and Miami Dade Regulatory and Economic Resources Department regarding Safety Requirements for environmentally hazardous materials.

2.2 CLEANING MATERIALS

A. Cleaning materials shall be as recommended by the manufacturer of the surface to be cleaned.

PART 3 - EXECUTION

3.1 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. Store volatile wastes including rags in covered metal containers and remove from work site daily.

C. Prevent accumulations of waste which create hazardous conditions.

D. Artificially ventilate spaces which are not naturally ventilated when volatile or noxious substances are present in those spaces.

3.2 CLEANING DURING CONSTRUCTION

A. Perform cleaning every workday for duration of the Work. Structures, grounds, and areas of the work site, access roads and adjacent public and private properties shall be maintained free from accumulations of waste materials and rubbish caused by construction operations on the work site. Place waste materials and rubbish in on site containers or as otherwise approved. Unneeded construction equipment shall be removed and all damaged repaired so that the public and property owners will be inconvenienced as little as possible.

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.

C. Prevent dislodgement of materials due to wind and other forces. Wet down dry materials and rubbish to lay dust and prevent blowing dust. Cover or wet excavated material leaving and arriving at the site to prevent blowing dust. Clean the public access roads to the site of any material falling from the haul trucks.

D. 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.

E. Control the handling of materials, debris and rubbish; do not drop or throw from heights.

F. Immediately remove spillages of construction-related materials from hauling routes or the site.

G. Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes, structures, or elsewhere during the course of the Contractor’s operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, channels, drains, pipes, structures, and work, etc., shall, upon completion of the work, be left in a clean and neat condition.

3.3 FINAL CLEANING

A. In addition to the cleaning performed above, in preparation for final inspection, remove grease, dust, dirt, rust stain from surfaces. Remove labels, fingerprints and other foreign materials from exposed exterior finished surfaces. Flush down all manhole covers and frames, valve boxes, and areas leaving such surfaces clean of all sand, laitance, etc.

B. In preparation for final acceptance or occupancy, conduct final inspection and cleaning of exposed exterior surfaces, and of concealed spaces.

C. Maintain cleaning operations until project has been finally accepted.

END OF SECTION

SECTION 01720 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section shall serve to set out guidelines for submission of record drawings.

1.2 REQUIREMENTS

A. The Contractor shall keep and maintain, at the job site, one record copy of all drawings, specifications, addenda, change orders, and other modifications to the Contract, approved shop drawings, and field test records.

B. The Contractor shall provide record drawings to indicate all project conditions, locations, configurations, and any other changes or deviations which may vary from the details represented in the plans, including buried or concealed construction and utility features which are revealed during construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. Said record drawings shall be supplemented by any detailed sketches as necessary or directed to indicate, fully, the work as actually constructed. These master record drawings of the Contractor’s representation of as-built conditions, including all revisions made necessary by addenda and change orders shall be maintained up-to-date during the progress of the work.

C. Record drawings shall always be accessible to the Village during the construction period.

D. Final payment will not be processed until the Contractor has prepared and delivered record as-built drawings to the Village. Said up-to-date record drawings shall be in the form of *.PDF and Autocad in version acceptable to the Village - (*.DWG or *.DXF) files.

1.3 CRITERIA FOR RECORD DRAWINGS

A. These facilities shall have as-built drawings showing all applicable data listed in Sub-section 1.05 and 1.06, herein, as located by a surveyor and prepared in accordance with these guidelines as part of the construction and inspection process.

B. The Surveyor shall show on the record drawings the Florida State Plane Coordinate (current readjustment) of at least two horizontal control points. This requirement may be waived by the Village if the location of the project is more than one mile from the nearest GPS station listed on file with the Miami-Dade County Public Works Department's Survey Office, as updated, or if all GPS stations within one mile of the project have been lost.

1.4 QUALITY ASSURANCE

A. Contractor Requirements

1. Record Drawings preparation and submittal shall ultimately be the responsibility of the Contractor.

2. Record Drawings shall be checked by the Contractor for errors and omissions prior to submittal to the Villag.

3. A Bill of Materials shall also be certified as correct by signature and presented at the time of record drawing submission. Quantities shown on the Bill of Materials shall match installed and record drawing quantities, not quantities proposed, bid or bought nor scaled distances or quantities.

4. Record Drawings shall include all water and sanitary sewer pipeline and storm sewer profiles views on acceptable scale in accordance with local jurisdictions.

B. Surveyor Requirements

1. Facilities being shown on record drawings shall have been located under the direction of a Florida Registered Land Surveyor and Mapper, regardless of whether the finished drawings will be signed and sealed by the surveyor.

C. Compliance with technical requirements

1. Record Drawings prepared under these guidelines are to meet Chapter 61G17-6, Minimum Technical Standards of the Florida Administrative Code. As noted in Section 61G17-6.003, the public must be able to rely on the accuracy as noted in Section 61G17-6.005.

2. Record Drawings shall meet the minimum requirements established in these specifications.

D. CERTIFICATION

1. Record drawings shall include a signed, sealed and dated certification statement by the responsible surveyor stating the information was obtained under his direction and is true and correct as shown.

1.5 RECORD DRAWING REVIEW PROCESS

A. The following shall be used as a guide for submittal of record drawings to the Village:

1. One (1) set of prints shall be submitted by the Contractor to the Village for review prior to scheduling inspections such as, but not limited to, pressure test, sanitary sewer lamping or any other element of the system which is determined necessary by the Village. The drawings shall have been reviewed by the EOR for deficiencies.

2. The drawings will be reviewed by the Village for deficiencies. Deficiencies will be indicated on one (1) set of prints which will be returned to the Contractor for necessary corrective action.

3. Elevations shall be provided in NGVD 29 Datum.

4. After final inspection and upon acceptance of Record drawing data, a PDF file and a CADD file (DWG or DXF) of the record drawing rotated and translated to state plane coordinates NAD 83, Florida East Zone.

5. No disclaimers on drawings will be accepted.

B. The attached list of required information is to be used as guide for submittal of Record Drawings to the Village. Additional information may be required by the Village if it is determined by the Village that the information supplied would be insufficient for a utility worker, with no surveying experience, to be able to locate piping, fittings, etc. Record drawings shall comply with Chapter 61 G17-6 Minimum Technical Standards. As noted in Section 61 G17-6.003, the public must be able to rely on the accuracy as noted in Section 61 G17-6.005.

1. When performing record surveys, the surveyor and mapper shall obtain field measurements of vertical or horizontal dimensions of constructed improvements so that the constructed facility can be delineated in such a way that the location of the construction may be compared with the construction plans, and when the surveyor and mapper prepares as- built maps they will clearly show by symbols, notations, or delineations, those constructed improvements located by the survey. All maps prepared shall meet applicable minimum technical standards.

2. The vertical and horizontal accuracy shall be such that it may be determined whether the improvements were constructed consistent with planned locations.

3. Northerly and easterly coordinates on all field obtained measurements and provided on all record drawing submittals.

1.6 REQUIRED INFORMATION ON RECORD DRAWINGS

A. GENERAL

1. Label drawings (in file) "Record Drawings" with date.
2. Complete title block with current file name.
3. Location sketch.
4. Correct Street/Road names.
5. Surveyor's Certification.
6. GPS collected as-built information to be in DFX file format.
7. All record information shall be denoted by either a cloud or bold print. Design information shall be crossed out.
8. Profile record information required on projects where profiles were part of approved construction plans and projects where directional drilling was performed.
9. Utility Easements – with ties of facilities to easement lines.

B. Sanitary Sewer System

1. As-built vertical information of all drainage structures including but not limited to elevation of rim and bottom of structure, invert of pipes, etc., using the same datum utilized for the construction documents.
2. As-built horizontal information of all structures, Northing and Easting, using the same datum utilized for the construction documents.
3. As-built all crossing information between utilities including bottom of pipe, top of pipe, size and type.
4. As-built blow up detail may be required of congested areas to ensure readability.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01739 - PERMITS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Contractor shall be responsible for securing construction permits from all applicable regulatory jurisdictions.

B. Where the Village has obtained various permits for this Project, copies will be appended at the rear of the Specifications. Contractor is responsible for verifying whether or not the Village has previously secured any permits in connection with this project.

C. The Contractor shall be familiar with, and comply with, all requirements of these permits.

D. Unless otherwise specifically stated elsewhere in the Contract Documents, Supply Plans and Calculations for work not designed by the Village that are preponderantly of a structural nature shall be signed and sealed by a Professional Engineer registered in the State of Florida as stated in the Florida Building Code; Section 104.2.1, 104.2.2; and Section 202 which each read as follows:

1. All information, Plans, Specifications and accompanying data shall bear the name and signature of the person responsible for the design.

2. Design professional: If the design professional is an architect or engineer legally registered under the laws of this state regulating the practice of architecture or engineering, then he/she shall affix their official seal to said Plans, Specifications and accompanying data, as required by Florida Statute.

3. Engineer: A State of Florida licensed-registered engineer.

E. The Contractor's particular attention is called to any Special Conditions of the permits relating to construction procedures, excavation and backfill requirements, open trench restrictions, turbidity control and all other general and special conditions, including flowable fill and pavement details. In the event any of the conditions of the permits are in conflict with the requirements of these Specifications, the more stringent conditions shall take precedence. The Contractor is to conform to all regulations of the governmental agencies having jurisdiction over this work, whether or not included in the permit.

F. Any deviations from the Plans, Specifications or permits appended thereto, must first be approved by the Village and EOR even if approval for the change has been given by the permitting agency.

G. The Contractor shall assume throughout the life of the Contract all obligations and responsibilities imposed on the Village or other County departments as permittee of the above-mentioned permits. All expenses necessary for compliance with the regulations and requirements of each permitting agency and its permit shall be borne by the Contractor and shall be included in the overall bid price.

H. The cost of any fees such as impact fees, inspection fees, etc. and the cost of all required permits

shall be borne by the Village. The Contractor shall pay the required fees, obtain the permit(s) and then upon submission of proof of cost to the Village, be reimbursed for said cost out of the Approved Permit Fee allowance. This shall apply only to required permits and fees. Permits obtained or fees paid for the advantage of the Contractor or non-required permits obtained for whatever reason shall not be reimbursed. The necessity or non-necessity of a permit or fee shall be determined by the Village and EOR – their opinion of which shall be final. As specified in the paragraph above, all costs of compliance with the permit(s) shall be borne by the Contractor and included in the bid price.

I. All surveying required by the Project permits shall be done by the Contractor's Florida Registered Surveyors and Mapper. This includes staking out limits of construction, maintaining baselines and preparing monthly as-builts.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01740 - WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 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 on paragraphs 1.1 A., 1 through 3 below:

1. One year from final acceptance on all the work as specified in the General Conditions, or;

2. Warranty period(s) as specified by the approved material or equipment manufacturers, or;

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.

C. Reinstated warranty as applicable, see 1.4, B.

1.2 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 subcontractors required to countersign special warranties with the Contractor.

1.3 DEFINITIONS

A. Standard products warranties are reprinted written warranties published by the individual manufacturers for particular products and are specially endorsed by the manufacturer to the Village.

1.4 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 Village has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner Recourse: Written warranties made to the Village 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 can enforce such other duties, obligations, rights or remedies.

E. Rejection of Warranties: the Village 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.

F. The Village 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.

G. All warranties including standard one 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 the Village. Ensure that all warranties comply with this stipulation prior to submission of same. All other warranties specified by product manufacturer and installer exceeding these requirements remain in effect.

H. The Village will give prompt notice in writing to the Contractor of any defects noted during the warranty periods requesting him to promptly remedy such defects.

I. Prior to final acceptance, the Contractor shall formally assign to the Village all extended warranties given by subcontractors for their work on the project, and such subcontractor shall be formally advised of the assignment.

1.5 SUBMITTALS

A. Submit written warranties to the Village Representative 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 subcontractor, 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 Village Representative for approval prior to final execution.

C. Submit a list of all warranty items within 90 days after notice to proceed. Refer to individual Sections of Division 2 for specific content requirements, and particular requirements for submittal of specific warranties.

D. Prior to final acceptance compile two copies of each required warranty, and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual, and submit under Section 01720 - Project Record Documents.

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.

I. Provide an electronic copy of all warranties and bonds and related documentation on either CD or USB with each binder compiled.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 02050 - DEMOLITION OF EXISTING STRUCTURES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope of Work

1. This Section specifies the labor, materials, equipment, and incidentals required for the demolition, relocation, and/or disposal of all structures (including subsurface structures), building materials, equipment, electrical components, machines and accessories to be removed as shown on the Drawings and as specified herein.

2. There may be existing and active stormwater, wastewater, water, and other facilities on site as indicated on the Drawings. It is essential that these facilities scheduled to remain, when encountered, remain intact and in service during the proposed demolition. Consequently, the Contractor shall be responsible for the protection of these facilities scheduled to remain and shall diligently direct all his activities toward maintaining continuous operation of the existing facilities and minimizing operational inconvenience.

3. Demolition generally includes:

   a. Complete demolition and removal of all above ground structures only, as shown on the Drawings and specified herein.
   b. All material, equipment, rubble, debris, and other products of the demolition shall become the property of the Contractor for his disposal off-site in accordance with all applicable laws and ordinances at the Contractor's expense. The sale of salvageable materials by the Contractor shall only be conducted off-site. The sale of removed items on the site is prohibited by the Owner/Village Representative.

4. The Contractor shall examine the various Drawings, visit the site, determine the extent of the Work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

5. The Contractor shall fill and compact all voids left by the removal of structures, etc. with materials described herein to a grade that will provide for positive drainage of the disturbed area to drain in direction consistent with the surrounding area. The Contractor shall provide all fill materials to the site as needed. Compaction of fill shall match the compaction of adjacent undisturbed material.

1.2 QUALITY ASSURANCE

A. Permits and Licenses: Contractor shall obtain all necessary permits and licenses for performing the Work and shall furnish a copy of same to the Village Representative prior to commencing the Work. The Contractor shall comply with the requirements of the permits and shall be responsible to close permits upon completion of the work.

B. Notices: Contractor shall issue written notices of planned demolition to companies or local authorities owning utility conduit, wires, or pipes running to or through the project site. Copies

of said notices shall be submitted to the Village Representative.

C. Utility Services: Contractor shall notify utility companies or local authorities furnishing gas, water, electrical, telephone, fiber optic, or sewer service to remove any equipment in the structures to be demolished and to remove, disconnect, cap, or plug their services to facilitate demolition.

D. Contractor shall comply with Chapter 556 of the Florida Statutes during the performance of demolition operations.

1.3 SHOP DRAWINGS AND SUBMITTALS

A. Submittals shall be submitted to the Owner/ Village Representative for review and acceptance prior to construction in accordance with the General Conditions and specifications Section "Submittals."

B. Submit to the Owner/ Village Representative for their approval, an electronic copy of proposed methods and operations of demolition or relocation of the structures specified in Paragraphs 3.2 and 3.3B prior to the start of Work. Include in the schedule the coordination of shut-off, capping, and continuation of utility service as required.

C. Provide a detailed sequence of demolition and removal work to ensure the uninterrupted progress of the Village Representative's operations.

D. Before commencing demolition work, all structure relocation, bypassing, capping, or modifications necessary will be completed. Actual work will not begin until the Owner/ Village Representative has inspected and approved the prerequisite work and authorized commencement of the demolition work.

E. The above procedure must be followed for each individual demolition operation.

1.4 SITE CONDITIONS

A. Prior to demolition, the Contractor shall obtain written verification from the utility owner(s) that the existing utilities, including but not limited to communication (telephone and fiber optic), stormwater, wastewater, and/or water facilities, are not operational and are ready for demolition.

B. The Owner/ Village Representative assumes no responsibility for the actual condition of the structures to be demolished or relocated.

C. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner/ Village Representative insofar as practicable. However, variations within the site may occur prior to the start of demolition work.

D. No additional payment will be made for pumping or other difficulties encountered due to water.

E. Certain information regarding the reputed presence, size, character and location of existing underground structures, pipes and conduit has been shown on the Drawings. There is no certainty of the accuracy of this information, and the location of underground structures shown may be inaccurate and other obstructions than those shown may be encountered. The

Contractor hereby distinctly agrees that the Owner/ Village Representative is not responsible for the correctness or sufficiency of the information given; that in no event is this information to be considered as a part of the Contract; that he shall have no claim for delay or extra compensation on account of incorrectness of information regarding obstructions either revealed or not revealed by the Drawings; and that he shall have no claim for relief from any obligation or responsibility under this Contract in case the location, size, or character of any pipe or other underground structure is not as indicated on the Drawings, or in case any pipe or other underground structure is encountered that is not shown on the Drawings.

1.5 RESTRICTIONS

A. No building, tank or structure, or any part thereof, shall be demolished until an application has been filed by the Contractor with the Building Department Inspector and a permit issued if a permit is required. The fee for this permit shall be the Contractor's responsibility. All permit fees are refundable. Demolition shall be in accordance with applicable provisions of the Building Code of the State of Florida and in compliance with local requirements of Miami Dade County Department of Regulatory and Economic Resources (“DERM”).

B. No explosives shall be used at any time during the demolition. No burning of combustible material will be allowed.

C. Contractor shall notify the Owner/ Village Representative prior to beginning any demolition work.

1.6 DISPOSAL OF MATERIAL

A. All salvageable or useable material or equipment to be retained by Village shall be shown on Drawings and labeled TO BE SALVAGED and shall be moved to a location specified by the Village Representative. The Contractor shall promptly remove all other materials from the site as indicated or shown on the Drawings.

B. All materials not retained by the Village Representative shall become the Contractor's property and shall be removed off-site.

C. The on-site storage of removed items is prohibited by Village. Off-site sale of salvageable material by the Contractor is acceptable.

1.7 TRAFFIC AND ACCESS

A. Conduct work to ensure minimum interference with on-site and off-site roads, streets, sidewalks, and occupied or used facilities.

B. Special attention is directed towards maintaining safe and convenient access to the existing facilities remaining in operation by the Village personnel and the Village associated vehicles, including trucks and delivery vehicles.

C. Do not close or obstruct streets, sidewalks, or other occupied or used facilities without permission from the Village Representative. Provide alternate routes around closed or obstructed traffic in access ways.

1.8 PROTECTION

A. Conduct operations to minimize damage by falling debris or other causes to adjacent buildings, structures, roadways, other facilities, and persons. Provide interior and exterior shoring, bracing, or support to prevent movement or settlement or collapse of structures to be demolished and adjacent facilities to remain.

1.9 DAMAGE

A. Promptly repair damage caused to adjacent facilities by demolition operations as directed by the Owner/ Village Representative at no cost to the Village.

1.10 UTILITIES

A. Maintain existing utilities as directed by the Village Representative to remain in service and protect against damage during demolition operations.

B. Do not interrupt existing utilities serving occupied or operational facilities, except when authorized by the Village Representative.

C. The Contractor shall cooperate with the Village Representative to shut off utilities serving structures of the existing facilities as required by demolition operations.

D. The Contractor shall be solely responsible for making all necessary arrangements and for performing any necessary work involved in connection with the interruption of all public and private utilities or services.

E. All utilities being abandoned shall be terminated at locations in accordance with the plans.

1.11 EXTERMINATION

A. Before starting demolition, the Contractor shall employ a certified rodent and vermin exterminator and treat the facilities in accordance with governing health laws and regulations. Any rodents, insects, or other vermin appearing before or during the demolition shall be killed or otherwise prevented from leaving the immediate vicinity of the demolition work.

1.12 POLLUTION CONTROL

A. For pollution control, use water sprinkling, temporary enclosures, and other suitable methods as necessary to limit the amount of dust rising and scattering in the air to the lowest level of air pollution practical for the conditions of work. The Contractor shall comply with the governing regulations.

B. Clean adjacent structures and improvements of all dust and debris caused by demolition operations as directed by the Village Representative. Return areas to conditions existing prior to the start of Work.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 SEQUENCE OF WORK

A. The sequence of demolition and relocation of existing facilities shall be in accordance with the approved critical path schedule as specified in paragraph 1.3 above and as determined by the Contractor as indicated within these bid documents.

3.2 REMOVAL OF EXISTING PROCESS EQUIPMENT, PIPING, AND APPURTENANCES

A. Equipment to be retained by the Village Representative will be designated for retention by the Village prior to bidding as specified in Paragraph 1.6 above. Subject to the constraints of maintaining existing facilities in operation as shown on the Drawings, all other process equipment, non-buried valving and piping, and appurtenances shall be removed from the site.

3.3 DEMOLITION PROCEDURES

A. The Contractor shall adhere to the following demolition procedures as referenced on the Drawings:

1. TO BE DEMOLISHED:

a. Demolition shall include the breaking up, cutting, filling of any holes resulting, final grading of the area, performing any other operations required, and the removal from the site of all structures and equipment (including but not limited to structures, equipment, tanks, pipes, fittings, electrical systems, light poles, and wiring) and as indicated on the Drawings. All pieces of concrete, metal, and any other demolished material shall be removed to existing natural grade. Broken pieces of concrete may be size reduced by an on-site crusher, but in any event must be removed from the project site.

b. Before commencing structural demolition, remove all mechanical, electrical, piping, and miscellaneous appurtenances. Completely remove the structure by thoroughly breaking up concrete into pieces no more than 2-feet across the largest dimension.

2. TO BE REMOVED:

a. Where indicated on the Drawings, the structures and equipment shall be completely removed from the site.

3. TO REMAIN:

a. Where indicated on the Drawings, the designated facilities shall remain intact and in service during the prosecution of the demolition work.

END OF SECTION

SECTION 02435 – SEDIMENT CONTROL

PART 1 - GENERAL

1.1 SCOPE:

A. Summary of Work

1. The Contractor shall furnish all necessary equipment, labor and materials necessary to conform to State water quality standards as prescribed in Chapter 62-302, Florida Administrative Code and with permit conditions.

1.2 SUBMITTALS:

A. The Contractor shall make submittals for the sediment control and monitoring system in accordance the requirements herein.

1. Provide details of the sediment control device proposed.
2. Provide proposed layout of sediment control device.
3. Provide a Notice of Intent, as required, in accordance with NPDES requirements.

1.3 INSPECTION COORDINATION

A. The Contractor shall provide access to the Work for the Village Representative and EOR as requested for inspection. The Contractor shall provide 48 hour notice of its intention to begin new Work activities.

PART 2 - PRODUCTS

2.1 SEDIMENT CONTROL DEVICE: The Contractor shall provide fabric that is flexible and impermeable or of sufficiently fine mesh to prevent passage of suspended material through the fabric. Fabric shall be in accordance with Table 2.1.

Table 2.1
Test Methods and Requirements for

Permittivity (Sec -1) per ASTM D4491	0.05
Grab Tensile Strength (lbs) per ASTM D4632	90
Minimum UV Resistance per ASTM D4355 (% Retained Strength)	80% @500 hours
Filtration Efficiency (%) per ASTM D5141	75% and min. flow rate of 0.3 gal/sf/min

PART 3 - EXECUTION

3.1 STORMWATER POLLUTION PREVENTION MEASURES (NPDES)

A. Construction within the Village requires compliance with the National Pollution Discharge Elimination System (NPDES) including submittal of the Notice of Intent (NOI) and Notice of Termination (NOT) forms.

B. The Contractor shall install sedimentation control measures in accordance with Florida Department of Environmental Protection (FDEP) and the Village Ordinances.

C. As construction progresses, the Contractor shall periodically check the sedimentation controls and repair as necessary to keep good functioning order.

D. The Contractor shall protect inlets and other site appurtenances from sedimentation using protection as detailed in FDEP Erosion and Sedimentation.

E. The Contractor shall conduct ground stabilizing measures (paving) as soon as practicable following final completion of demolition and completed stabilization of potential erosion area, the Contractor shall remove sedimentation control measures and clean and repair any areas affected by the construction activities.

3.2 MAINTENANCE:

A. Provide routine maintenance of permanent and temporary erosion and sediment control features, at no expense to the Owner, until the project is complete and accepted. If replacement of such sediment control features is necessary due to the Contractor’s negligence or carelessness, the Contractor shall replace such sediment control features at no expense to the Owner. If reconstruction of temporary sediment control features is necessary due to factors beyond the control of the Contractor, the Village will pay for replacement under the appropriate Contract pay item or items.

B. Inspect all sediment control features at least once every seven calendar days and within 24 hours of the end of a storm of 0.50 inches or greater. Maintain all erosion control features as required in the Stormwater Pollution Prevention Plan, Contractor’s Erosion Control Plan and as specified in the State of Florida Department of Environmental Protection Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

END OF SECTION

SECTION 02870 – SITE FURNISHING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Shop Fabricated: Transit Shelters.
B. Sign Placement: Single-Column
C. Regulatory Sign: Turn Vehicles Stop for Pedestrians

1.2 REFERENCES

A. ASTM Testing Standards:
1. ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
2. ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
3. ASTM D 523 – Standard Test Method for Specular Gloss.
4. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
5. ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
6. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.
7. FDOT Section 653 – Pedestrian Signal Assemblies
8. FDOT Section 700 – Highway Signing

B. ISO Testing Standards:
1. ISO 1520 – Paints and Varnishes – Cupping Test.
2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

C. 2020 Florida Building Code:
1. 170 mph wind; exposure C

1.3 SUBMITTALS

A. Product Data: Submit manufacturer’s product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.

B. Shop Drawings: Submit manufacturer’s shop drawings, including plans and elevations, indicating overall dimensions.

C. Samples: Submit manufacturer’s samples of materials, finishes, and colors.

D. Warranty: Manufacturer’s standard warranty.

E. Structural Stamp: Structural stamp to be provided by an engineer licensed in the state of where the structure will be located.

1.4 QUALITY ASSURANCE

A. Manufacturer’s Qualifications: Manufacturer regularly engaged in manufacture of site furnishings.
1. Provide 5 similar reference projects with direct contact information.

B. Product Support: Products are supported with complete engineering drawings.

C. Base Worth: An installed base of products worth in excess of four hundred million dollars.

D. Assets: Excess of twenty million dollars in assets.

E. Insurance: Liability insurance coverage of two million dollars.

F. Manufacturing Lead Time: Manufacturing lead time will be determined at time of order.

G. Facility Operator: Welders and machine operators are certified for all AWS & ASTM standards that apply.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.

C. Handling: Protect materials and finish during handling and installation to prevent damage.

D. Process Tooling Storage: Store any and all tooling, fixtures, process plans & project files for minimum 10 years after last project phase is complete.

1.6 WARRANTY

A. Warranty Information:
1. Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice. Noted exceptions: LED lighting products are warranted for five years.
2. The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.
3. Product, at the option of manufacturer, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized service representative.
4. Purchasers should be aware that normal use of these high quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear, and are not the responsibility of the manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Shop Fabricated: Transit Shelters
1. Landscape Forms, Inc., 7800 East Michigan Avenue, Kalamazoo, Michigan 49048. Contact: Michelle Montesano – 305-975-4302 – MichelleM@landscapeforms.com
Contact: Jarred Beall – 269-276-4506 – Jarredb@landscapeforms.com

2. Or Equal – The or equal manufacturer needs to be approved by the Landscape Architect before submitting final bids. If the Landscape Architect does not approve the substituted manufacturer before bid date, then the bid will be null and void.

B. Sign Placement: Single-Column
   1. Single-Column signs and posts must be sourced from an approved manufacturer and adhere to the specifications outlined in FDOT Section 700.
C. Regulatory Sign: Turn Vehicles Stop for Pedestrians
   1. Signs must be manufactured by an approved vendor and adhere to the specifications outlined in FDOT Section 700.

2.2 PRODUCTS

A. Shop Fabricated: Transit Shelters.
   1. Style: Solid Metal Roof
   2. Mounting: Surface Mounted.
B. Sign Placement: Single-Column
   1. Style: Square or round shaped
   2. Mounting: Standard Placement.
C. Regulatory Sign: Turn Vehicles Stop for Pedestrians
   1. Style: 30”x30”; Black legends and borders. Red yield symbol (retroreflective); White background (retroreflective).
   2. Mounting: Standard High.

2.3 MATERIAL

A. Shop Fabricated: Transit Shelters.
   1. Frame: A36 Carbon Steel.
   2. Column Shroud: A36 Carbon Steel with Powder Coated Weave Decal.
   3. Roof, Soffit, and Trims: A36 Carbon Steel Sheeting.
   4. Side Panels: A36 Carbon Steel with Laminated, Tempered, Fritted Glass.
   5. Seating: TBD - Standard Bench by Landscape Forms, Inc.
   6. Hardware: 18-8 Stainless Steel.
B. Sign Placement: Single-Column
   1. Signposts must be galvanized steel or anodized aluminum.
C. Regulatory Sign: Turn Vehicles Stop for Pedestrians
   1. Utilize Type XI high-intensity prismatic retroreflective sheeting.
   2. The sign substrate must be aluminum with a minimum thickness of 0.080 inches.

2.4 RECYCLED CONTENT

A. Product:
   1. Recycled Material Content: Minimum 65 percent.
   2. Post-Consumer Material Content: Minimum 50 percent.
   3. Pre-Consumer Material Content: Minimum 15 percent.
   4. Recyclable: 100 percent.

2.5 FINISHES

A. Shop Fabricated: Transit Shelters:
   1. Finish on Metal: Landscape Forms, Inc. “Pangard II” or Equal.
      i. Primer: Rust inhibitor.
      ii. Topcoat: Thermosetting TGIC polyester powder coat. UV, chip, and flake resistant.
      iii. Test Results: “Pangard II”.

1. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.

iv. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
v. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
vi. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
vii. Erichsen Cupping, ISO 1520: 8 mm.
viii. Impression Hardness, Buchholz, ISO 2815: 95.
ix. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
x. Pencil Hardness, ASTM D 3363: 2H minimum.
xi. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
xii. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

2. Colors: ___TBD_____.

2.6 FABRICATION

A. Shop Fabricated: Transit Shelters:
   a. No welding, painting, cutting on site. This is manufactured in a controlled environment and will be assembled with bolt connections.
B. Sign Placement: Single-Column
   a. Shape and material should follow FDOT standards.
C. Regulatory Sign: Turn Vehicles Stop for Pedestrians
   a. Sustain wind speeds by county.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas to receive product.

B. Notify Architect of conditions that would adversely affect installation or subsequent use.

C. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

A. Install in accordance with manufacturer’s instructions at locations indicated on the Drawings.

B. Install level.

C. Anchor securely in place.

3.3 ADJUSTING

A. Finish Damage: Repair minor damages to finish in accordance with manufacturer’s instructions and as approved by Engineer.

B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

3.4 CLEANING

A. Clean products promptly after installation in accordance with manufacturer's instructions.

B. Do not use harsh cleaning materials or methods that could damage finish.

3.5 PROTECTION

A. Protect installed product to ensure that, except for normal weathering, racks will be without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 02880 - TRANSIT STRUCTURES

PART 1 GENERAL

1.1 SECTION INCLUDES:

A. Transit Structures.

1.2 REFERENCES

A. ASTM Testing Standards:
1. ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
2. ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
3. ASTM D 523 – Standard Test Method for Specular Gloss.
4. ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
5. ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
6. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
7. ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
8. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

B. ISO Testing Standards:
1. ISO 1520 – Paints and Varnishes – Cupping Test.
2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

C. 8’ and 12’ shelters:
1. International Building Code (IBC) 2015 Standard:
   a. 115mph wind load, Exposure B, 50psf snow load.
   b. 175mph wind load, Exposure B, 20psf snow load.
2. California Building Code (CBC) 2016 Standard:
   a. 115mph wind load, Exposure B, 20psf snow load.

D. 16’ shelter:
1. International Building Code (IBC) 2016 Standard:
   a. 115mph wind load, Exposure B, 50psf snow load.
   b. 165mph wind load, Exposure B, 20psf snow load.
2. California Building Code (CBC) 2019 Standard:
   a. 115mph wind load, Exposure B, 20psf snow load.

E. 24’ shelter:
1. International Building Code (IBC) 2016 Standard:
   a. 115mph wind load, Exposure B, 50psf snow load.
   b. 141mph wind load, Exposure B, 20psf snow load.
2. California Building Code (CBC) 2019 Standard:
   a. 115mph wind load, Exposure B, 20psf snow load.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer’s product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.

B. Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.

C. Samples: Submit manufacturer's samples of materials, finishes, and colors.

D. Warranty: Manufacturer's standard warranty.

1.4 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings since 1969.

B. Product Support: Products are supported with complete engineering drawings and design patents.

C. Base Worth: An installed base of products worth in excess of one hundred million dollars.

D. Assets: Excess of twenty million dollars in assets.

E. Production: Schedule for production is order dependant.

F. Facility Operator: Welders and machine operators are certified.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.

C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.6 WARRANTY

A. Warranty Information:
1. Landscape Forms, Inc. warrants all products (other than noted exceptions) to be free from defects in material and/or workmanship for a period of three years from date of invoice. Solar products are warranted for three years. Noted exceptions: LED lighting products are warranted for six years.
2. The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.
3. Landscape Forms, Inc. shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Landscape Forms service representative.
4. Purchasers should be aware that normal use of these high quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear, and are not the responsibility of the manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048. Phone: (800) 521-2546. Fax (269) 381-3455. Website www.landscapeforms.com E-mail: specify@landscapeforms.com

2.2 TRANSIT STRUCTURES

A. Metro 40 – “Connect 2.0” Transit Structure:

B. Size:
1. 4’ x 8’
2. 4’ x 12’
3. 4’ x 16’
4. 4’ x 24’

C. Roof option:
1. Solid metal roof (only available on 4’x8’ and 4’x12’ sizes).
2. Glass roof.
3. Louvered metal roof (only available on 4’x8’ and 4’x12’ sizes).

D. Wall glass panel configuration:
1. No back glass, no side glass, no front glass.
2. All back glass and side glass.
3. All back glass and side glass, center front glass (12ft shelter only).
2. All back glass and side glass, left front glass (8ft shelter only).
3. All back glass and side glass, right front glass (8ft shelter only).

E. Power option:
1. Hard-wired.
2. Solar (only available on 4’x8’ and 4’x12’ sizes).

2.3 MATERIALS

A. Vertical Supports: Verticals are 6061 alloy aluminum extrusions, 0.25” thick, welded to upper corner 319 or 356 aluminum castings and lower vertical 319 or 356 aluminum castings. Access hole covers are 319 or 356 aluminum castings, bolted to lower vertical castings.

B. Horizontal Supports: .250” thick wall 6061 T-6 aluminum alloy extrusions.

C. Roof Rafters: 6061 aluminum extrusions.

D. Intermediate Glass Supports: 6061 aluminum extrusions.

E. Roof Assembly:
1. Solid metal roof option: 5052 aluminum honeycomb panel, bolted to roof rafters with Magni-coated hardware. EPDM gasket material on both sides of panel at rafter locations.
2. Glass roof option: Structure consists of laminated safety glass with 1/4” gray tinted solar glass; inner laminated ply 0.060”, and 1/4” clear frosted bottom ply. EPDM gasket material on both sides of panel at rafter locations.
3. Louvered metal roof option: 6061-T6 aluminum extrusions with 6063 extruded aluminum end caps. End caps are secured to louver slats with acrylic adhesive. Louvers are attached to rafters with 319 or 356 cast aluminum brackets.

F. Wall panels: 3/8" thick, clear, tempered glass. Frosted glass safety decals included, applied by customer.

G. Anchoring hardware: Includes ½-13 x 8" length threaded rods and hex nuts, hot-dipped galvanized A36 steel, with washers.

H. Lights:

1. Up-light: 3500K; 2 up-lights on 8ft shelter, 3 up-lights on 12ft shelter, 4 up-lights on 16ft shelter, 6 up-lights on 24ft shelter, located in front horizontal beam; Installed at factory; non-serviceable, replaceable.
    a. LED board: Six Nichia 757 LEDs mounted to a RoHS compliant FR4 circuit board with integrated overvoltage protection
    b. Optic/Lens: Injection-molded PMMA
2. Down-light: IP68, LED, 3500K, 24 Vdc, 61 lumen/watt, 5W/ft. max, encapsulated in translucent polyurethane. Mounted to 6061-T6 anodized aluminum extrusion. Light Assembly attached to shelter rafter with (6) 8-32 x .313 in, socket button head cap screw with Magni-coat
    a. 3 down-lights on 8ft shelter
    b. 4 down-lights on 12ft shelter
    c. 6 down-lights on 16ft shelter
    d. 8 down-lights on 24ft shelter
3. Wayfinding light: IP68, LED, 3500K, 24 Vdc, 61 lumen/watt, 5W/ft. max, encapsulated in translucent polyurethane. 2 per shelter, located on the outside front verticals. Each light is attached to the vertical with (4) 8-32 x ½ in. hex head machine screw with external tooth lock washer, zinc plated.

I. Power option:
1. Line Voltage: wires to connect the shelter to the bottom of the rear right vertical are supplied.
    a. Driver: Class 2 output; UL recognized, CE; RoHS; IP66; Suitable for dry and damp locations; Input: 90-305 VAC, 0.3 A, 50/60 Hz; Output: 24 Vdc constant, 208 – 830mA, 20.0 watts.
    b. Power Distribution Module: Proprietary sealed unit which accepts 24Vdc (constant voltage) input and outputs appropriate voltage and current to the lighting elements in the shelter; non-serviceable, replaceable.
    c. Wiring: all wiring harnesses included in this shelter have weatherproof connectors; wiring harnesses for up and down lights installed at factory. Wayfinding light harnesses installed after shelter assembled.
    d. Surge Protector: UL recognized; input voltage 120-277V (+/- 10%); Max surge current 10kA
    e. Driver mounting plate: formed aluminum sheet; 5052-H32; Attached to front horizontal extrusion with (2) 8-32 x .375 socket button head cap screw, zinc plated steel.
2. Solar: Unit is capable of dusk-to-dawn illumination. (not available on 4’x16’ or 4’x24’ sizes)
    a. Photovoltaic Glass Panel: 265W, 38V Open-Circuit voltage, 8.93 A Short-circuit current, 32V nominal, 8.39 A nominal; (60) 6 inch mono crystalline cells sandwiched between two layers of 6 mm tempered glass, the lower surface of the bottom glass is acid etched; 0.56 in. thick. Panel is mounted to roof with aluminum extrusions.
    b. Charge Controller: 24V, 10A
    c. Batteries: (16) Recyclable 6V 7AH sealed lead acid
    d. Power Distribution Module: Proprietary sealed unit which accepts 24Vdc (constant voltage) input and outputs appropriate voltage and current to the lighting elements in the shelter; non-serviceable, replaceable.
    e. Wiring: all wiring harnesses included in this shelter have weatherproof connectors minus the wires that attach to the charge controller; wiring harnesses for up and down lights installed at factory. Wayfinding light harnesses installed after shelter assembled.
    f. Driver mounting plate: formed aluminum sheet; 5052-H32; Attached to front horizontal extrusion with (2) 8-32 x .375 socket button head cap screws, zinc plated steel.
    g. Mount extrusions: Powdercoated, extruded 6061-T6 shapes attached to shelter roof with Magni-coated hardware.

2.4 RECYCLED CONTENT

A. Metro 40 – Connect 2.0:
Contact Landscape Forms for recycled content based on configuration.

2.5 FINISHES

A. Finish on Metal: Landscape Forms, Inc. “Pangard II”.
   1. Primer: Rust inhibitor.
   2. Topcoat: Thermosetting TGIC polyester powder coat. UV, chip, and flake resistant.
   3. Test Results: “Pangard II”.
      a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
      b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
      c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
      d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
      e. Erichsen Cupping, ISO 1520: 8 mm.
      f. Impression Hardness, Buchholz, ISO 2815: 95.
      g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
      h. Pencil Hardness, ASTM D 3363: 2H minimum.
      i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
      j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

B. Color:
   1. Frame: _____
   2. Roof (if metal): _____

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas to receive transit structure.

B. Notify Architect of conditions that would adversely affect installation or subsequent use.

C. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

A. Install transit structures in accordance with manufacturer’s instructions at locations indicated on the Drawings. Refer to product drawings for max allowable slope. Included anchor rods allow for 2-3/8” of adjustability.

B. Install transit structure: Per installation instructions, level front to back, Note: this is site specific!

C. Anchor transit structures securely in place in accordance with applicable codes and anchor manufacturer's standards. Anchoring procedure is the responsibility of the installer.

3.3 ADJUSTING

A. Finish Damage: Repair minor damages to finish in accordance with manufacturer’s instructions and as approved by Architect.

B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.4 CLEANING

A. Clean transit structures promptly after installation in accordance with manufacturer’s instructions.

B. Do not use harsh cleaning materials or methods that could damage finish.

3.5 PROTECTION

A. Protect installed transit structures to ensure that, except for normal weathering, transit structures will be without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 03300 - CAST-IN-PLACE CONCRETE, REINFORCING AND FORMWORK

PART 1 GENERAL

1.01 DESCRIPTION

A. Work included: Provide all labor, materials, equipment, fabrication, incidentals, transportation, placing and supervision necessary to complete all cast-in-place concrete work, its finishing, and all related work called for by the Contract Drawings and/or Specifications, or reasonably inferable from either or both, as needed for a complete and proper installation.

B. Related work: Work affecting this section includes, but is not limited to:

1. Shop Drawings.
2. Materials and storage thereof.
3. Reinforcing-Bar and fabric.
4. Accessories of every nature, including form tie system.
5. Formwork and removal thereof, including shoring and reshoring.
6. Concrete proportions and mixes.
7. Placing of concrete.
8. Admixtures.
9. Joints, metal joint screeds and joint fillers.
10. Finishes of all types.
11. Protection and curing.
12. Patching.
13. Laboratory Testing.

1.02 QUALITY ASSURANCE

A. Unless otherwise indicated, all materials, workmanship and practices shall conform to the requirements of ACI 301 "Specifications for Concrete Construction", latest edition, except as modified by supplemental requirements hereinafter.

1.03 STANDARDS

A. ACI 301 Specifications for Concrete Construction, latest edition.

B. ACI 318 Building Code Requirements for Structural Concrete, latest edition.

C. Florida Building Code, latest edition.

D. ACI 117 Standard Specifications for Tolerances for Concrete Construction and Materials, latest edition.

PART 2 PRODUCTS

2.01 MATERIALS

A. Portland cement and reinforcing steel: Comply with ACI 301 and, with all modifications and supplements thereto listed in Part 3 of this specification.

B. Epoxy bonding agent: A two (2) component, solvent free, moisture insensitive structural epoxy adhesive conforming to ASTM C881 Type II, Sikadur 32 Hi-Mod, as manufactured by Sika Corp., or approved equal.

C. Anchor bolts, nuts and washers: Conform to ASTM F1554, hot-dip galvanized.

D. Dovetail slots: Galvanized steel, 22 gauge, 1"x 1", with 5/8" throat, fiber filled.

E. Forms:

1. Plywood Forms: PS-1, B-B Concrete Form, Class I, exterior type, mill oiled and edge sealed. Thickness shall be as required to support concrete at the rate placed, but not less than 3/4".
2. Steel Forms: Uncoated steel, 3/16"-inch minimum thickness, fabricated to close tolerances, protected only by the specified release agent, braced so as not to dent, bend or dimple under wet concrete loads, vibrator impact and tool impact. Maintain steel forms in rust free condition by use of steel wool and light grinding, followed by coats of the specified release agent. Forms should be adjustable to be brought into true alignment without steps or ridges.

F. Form release agent:

1. For plywood forms use a natural non-petroleum base, non-staining and non-retarding release agent that will effectively prevent absorption of moisture and prevent bond with concrete and leaves the concrete with a paintable surface.
2. For steel forms, use an approved material that will not stain, color or otherwise affect the finish of the concrete. Form coating shall not be detectable on finished surfaces.

G. Form Ties: Steel rod type with integral waterstops and cones, and with ends or end fasteners that can be removed without spalling the concrete and which leave a hole equal in depth to the required reinforcement clearance, but not less than 2 inches from the formed face of the concrete. Wire tie, banding wire and wood spreaders will not be permitted.

H. Form Inserts:

1. Bevel or chamfer strips: Wood or non-staining plastic, 3/4" wide on each leg at exposed edges of concrete members, unless otherwise noted on plans.
2. Tongue and Groove Joint Forms: Minimum 24 gauge with steel stakes and splice plates. Forms shall be designed for joints not to receive a poured seal.
3. Pipe hangers and other utility supports: AISI Type 316 stainless steel.

I. Non-shrink grout: Non-shrink, non-metallic conforming to Corps of Engineers Specifications CRD-C588 type (d).

J. Grout for surface repair and bond coat:

1. For repair, one part Portland cement to two parts fine sand, and a 50% of water and 50% Acryl 60 or equal (Thoroseal) to produce a stiff mortar.
2. For bond coat, one part Portland cement to one part sand, and a 50% of water and 50% Acryl 60 or equal (Thoroseal) to produce a slurry mix.

K. Moisture Barrier: Kraft paper and glass reinforcing fibers sandwiched between 2 layers of polyethylene film with a permeance rating of maximum 0.1 as per ASTM E-96, Procedure A.

L. Preformed Expansion Joint Filler: Non-extruding type, self expanding cork, 3/4" cork and 1½", or as otherwise noted on plans, conforming to the requirements of ASTM D1752, Type II, and compatible with joint sealant compound.

M. Joint Sealant Compound: Non-sag, 2 component, solvent free, moisture insensitive, flexible, epoxy resin conforming to the requirements ASTM C920 Type M, Grade NS. Additionally, the sealant must be recommended by the manufacturer to perform under continuous immersion in water.

N. Waterstops:

1. Polyvinyl chloride (PVC): Conforming to the requirements of U.S. Army Corps of Engineers Specification CRD-C-572 and of the following type:

a. Expansion Joints: 9-inches by 3/8-inch, ribbed center bulb.
b. Construction Joint: 9-inches by 3/8-inch, flat ribbed.
c. Only where specified on Plans at construction and expansion joints: 9-inches by 3/8-inch, split ribbed.

O. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work.

3.02 SUPPLEMENTAL REQUIREMENTS

A. All phases of concrete construction, including materials Form work, and all other related procedures shall comply with the most stringent allowed tolerances of ACI-301 and ACI-117 Standards (Latest Edition) - Noncompliance with these standards will cause full rejection of any work done.

B. Comply with ACI 301 and with all modifications and supplements thereto listed herein. In addition to the ACI Standards on finished concrete, the Engineer will only approve quality finished concrete which in his opinion is ready to receive a grout finish, paint or liquid membrane.

C. The following modifications and supplements to ACI 301 shall also apply to the work.

1. General

a. These specifications cover cast-in-place structural concrete for use in buildings and appurtenances, including foundations, curbs, sidewalks, concrete pavements

and utility structures.

b. Keep minimum two (2) copies of ACI 301 "Specifications for Concrete Construction" in field office at all times.

2. Materials for Concrete:

a. Cement shall conform to the following: Portland Cement ASTM C150, normal, type I or type II (as required by the Structural Notes on the Contract Drawings), domestic and all of one type and from same source.

b. The following admixtures are permitted, but require written approval from the Engineer:

1) Air Entraining Admixture: Comply with ASTM C260 "Specifications for Air-Entraining Admixtures for Concrete.
2) Water Reducing Admixture: Comply with ASTM C494 "Specifications for Chemical Admixtures for Concrete, Type A and compatible with air entraining admixture.
3) Water Reducing and Retarding Admixture: Comply with ASTM C494 "Specifications for Chemical Admixtures for Concrete, Type D and compatible with air entraining admixture.

a) High Range Water Reducing Admixture: Comply with ASTM C494 "Specifications for Chemical Admixtures for Concrete, Type F or G, and compatible with air entraining admixture.
b) Pozzolanic Admixtures: Comply with ASTM C618 "Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.

c. Pozzolanic admixtures are not permitted as cement substitute.
d. Submit, with the design mix, manufacturer's written statement that the admixture proposed complies with the requirements of this specification.
e. Use only clean potable drinking water from the Department's water supply or other approved source.
f. All aggregates shall comply with the requirements of ASTM C33 and shall be quarried/ mined in fresh water. Aggregates from salt or brackish water are not permitted.

g. Coarse aggregate size shall not exceed:

Concrete member	Size
Walls	3/4"
Beams and slabs	3/4"
Columns and all other concrete	1"
Drilling concrete pad or slab	1"

3. Proportioning:

a. Design compressive strength of the concrete for structure components shall be as indicated.

b. Where concrete of different strengths is specified for the same location, the higher strength concrete shall be used.
c. Concrete of normal weight for portions of the structure that required to be watertight the water/cement ratio shall not exceed 0.45 if exposure will be to fresh water and 0.42 if exposure is to saltwater or brackish water.
d. Concrete exposed to injurious concentrations of sulfate-containing solutions (with 1500 ppm or more of Sulfate in water) or other chemically aggressive solutions, use Type II cement with Rheobuild 1000 Superplasticizer with water/cement ratio not exceeding 0.34 by weight.

e. Proportion and design concrete mix to result in concrete slump at point of placement as follows:

1) Slabs, including slabs on grade: 4-inches maximum.
2) Foundations, walls, columns, and beams: 5-inches maximum.
3) Pumped concrete containing the high range water reducing admixture: 8-inches maximum.
4) Tremie Concrete: 8-inches maximum.
5) All other concrete: 5-inches, maximum.

f. Calcium Chloride in admixtures is not permitted.
g. When approved by the Engineer add air-entraining admixtures as a solution to the concrete mix and measure by means of an approved mechanical dispensing device. Consider the liquid admixture as part of the mixing water.
h. When approved by the Engineer add water reducing and retarding admixtures as a solution to the mixture and measure as recommended by manufacturer. Add admixture separate from air-entraining admixture. Consider the liquid admixture as part of the mixing water.
i. Concrete proportions shall be established based on previous field experience or laboratory trial batches as specified in Sections 4.2.2 & 4.2.3 of ACI 301. Submit with design mix, data on consecutive strength tests and the standard deviation.

4. Form work

a. Earth cuts are not permitted for forms for vertical surfaces. Footings, grade beams and slab edges shall be formed. Provide moisture barrier under all slabs on grade. Lap 6-inches and tape punctures.
b. The contractor is responsible for the adequacy of forms and shoring including placing, fill and equipment on roof, and for safe practice in their use and removal. Submit Form work calculations, and shop drawings including shoring and reshoring. In addition, the calculations and shop drawings for Form work, shoring, and reshoring, if required by the Engineer or Building Department, shall be signed and sealed by a Professional Engineer registered in the State of Florida.
c. Design forms for the loads and lateral pressures resulting from the placement and vibration of concrete and for design considerations, wind loads, allowable stresses, and other applicable requirements of the South Florida Building Code.
d. Provide form facing materials as required by the specified finish of the formed surface. Do not use facing material with raised grain, torn surfaces, worn edges, patches, dents or other defects. No form may be reused more than three times without the Department's approval. The maximum deflection permitted of facing materials reflected in concrete surfaces exposed to view is 1/240 of the span

between structural members.

1) Forms shall be free from surface defects, tight to prevent leakage and braced to keep their position and shape when filled with concrete. Adjacent edges and end panels and sections shall be held together to provide accurate alignment and prevent forming ridges, fins, offsets or similar type defects in finished concrete. It shall be tight to prevent loss of water, cement or fines during placing and vibrating concrete. The bottom of the forms placed in continuous straight even footings or slabs shall be watertight to prevent loss of water, cement and fines during placement and vibration of concrete, a gasket may be required by the Engineer under the forms to provide water tightness at the Contractor expense. The Contractor shall not proceed to place forms for concrete work adjacent to or on top of previous placed concrete without the Engineer's approval, if the stripped forms reveal columns, walls or beams are out of level or plumb or there are cold joints or other objectionable work in the opinion of the Engineer. Contractor shall submit to the Engineer for approval, how he intends to correct or remove the defective work promptly at his expense. Contractor shall perform such corrections prior to proceeding to place concrete in the next Section.

e. Provide positive means of adjustment (wedges or jacks) of shores and struts, and all settlement shall be taken up during concrete placing operation. Brace forms securely against lateral deflection. Do not anchor form bracing to poured concrete floors or make holes in floor.
f. Provide temporary openings in columns and wall forms to limit the free fall of concrete to five (5) feet. Place such openings at no more than eight (8) feet apart to facilitate placing and consolidation of concrete. Elephant trunks may be used to vertical heights of fifteen (15) feet for tremie and other purposes, if approved by the Engineer. Provide temporary openings at the bottom of wall and column forms and elsewhere as necessary to facilitate cleaning and observation immediately before concrete is placed. Blow Form work entirely clean of all saw dust, dirt, or other items not specifically intended to be a part of the final concrete. Any evidence of non-intended items in the forms is considered sufficient cause to stop concreting operation and/or require removal of concrete placed in such contaminated forms.
g. Provide inserts, conduits, boxes, sleeves, anchors, ties, bolts, hangers, dowels, thimbles, nailers, grounds, and other devices in coordination with other trades.
h. Set anchor bolts and other embedded items accurately and hold securely until concrete is placed and set. Anchor bolts shall be galvanized and of size and length as indicated on the Contract Drawings. Bolts not sized shall be 3/4-inch diameter.
i. Insert galvanized dovetail anchor slot in forms, as indicated on the Contract Drawings and Structural Notes contained in Drawings and specifications, for support of piping and ducting.
j. Install wall spools, wall flanges and wall anchors before placing concrete. Do not weld, tie or otherwise connect the wall spools to the reinforcing steel.
k. Do not use pinch bars, wrecking bars or other metal tools against as-cast concrete to wedge forms loose; use only wooden wedges carefully and gradually. Driving shall be accomplished by light tapping.

l. The Contractor is responsible for the removal of forms and shores. Do not

remove forms or shores before the member has attained sufficient strength to support its weight and the loads imposed, nor sooner than listed below:

1) Wall forms: 3 days.
2) Column forms: 3 days.
3) Beam and girder side forms: 3 days.
4) Beam bottoms and slab forms: 14 days.
5) Arch centers: 7 days.
6) Pan joist forms: 4 days.

5. Reinforcement

a. Prior to fabrication, submit for review shop drawings showing all fabrication dimensions, bar lists and location for placing of the reinforcing steel and accessories, including spacing of reinforcing, lap splices, grade of reinforcing and name of manufacturer. Note all deviations from the Contract Drawings and use the same designation mark as shown on the Contract Drawings where possible.
b. Reinforcing bars: ASTM A615, Grade 60, deformed bars of USA manufacturer.
c. Welded wire fabric: ASTM A185, galvanized.
d. Metal bar supports: CRSI MSP-1, Chapter 3, Class 2, Type B stainless steel protected bar supports.
e. Reinforcing steel upon which unauthorized welding has been done shall be removed and replaced at no additional cost to the Department.
f. Place reinforcing bars to the most stringent tolerances indicated in ACI 301 and ACI 117 (Latest Edition). Tolerances specified in those standards shall govern over any other reference code or standard.
g. All reinforcement at time concrete is placed shall be free of mud, oil or other materials that may affect or reduce the bond. Reinforcing with rust or mill scale will not be accepted without cleaning and/or brushing to remove scale and rust.
h. Support rebar and mesh reinforcing for slabs on grade 1½ inches from top of slab on masonry blocks not less than 4 sq.in., having a compressive strength equal to or greater than the specified strength of the concrete being placed. Space blocks at no more than 4 feet apart each way for rebars, and no more than 3 feet apart for mesh reinforcement.
i. Support reinforcing off from Form work for columns, walls and beams with stainless steel protected bar supports. Support slab reinforcing on #5 bars, or larger, spaced at no more than 48 inches on center. Space individual high chairs no more than 48 inches apart and support bars shall not exceed 24 inches past outermost chairs.
j. Overlap welded wire fabric in such a manner that the overlap measured between outermost cross wires of each fabric sheet is not less than the spacing of the cross wires plus 2 inches or 6 inches, whichever is greater. Do not extend fabric through expansion and/or contraction joints, unless otherwise noted on the Contract Drawings.
k. The minimum clear distance between parallel bars, both vertical and horizontally, shall not be less than the nominal diameter of the bars, or less than 1½ times the maximum size of the aggregate, or 1-inch in beams, or 1½ inches in columns, whichever is greater. Where reinforcement in beams is placed in two or more layers, the upper layer shall be placed directly above the bars in the bottom layer. Misplacement, misalignment or improper length of dowels shall be

sufficient cause to require removal and reconstruction of affected work.

l. Unless allowed by the Engineer, bending of reinforcing partially embedded in concrete is not permitted. When permitted, bending shall be in accordance with CRSI Manual of Standard Practice.

6. Joints and Embedded Items.

   a. Provide premolded expansion joint filler strips of proper width and length as specified in the Contract Drawings. Place expansion joint fillers every 20 feet in straight runs of walkways or sidewalks, at right angle turns and wherever concrete butts into vertical surfaces, unless otherwise noted on the Contract Drawings. Top 3/4-inch of joint filler shall be removable. Remove top 3/4-inch joint filler after concrete has set and fill with joint sealant compound in 2.01, N.
   b. Provide waterstops in all construction joints, unless otherwise indicated on the Contract Drawings.
   c. Join all waterstops at all intersections so that a continuous seal is provided. Center the waterstop in the joint. Hold water stop positively in correct position. In the event of damage to the waterstop, repair the water stop in an acceptable manner. Vibrate concrete to obtain impervious concrete in the vicinity of all joints.
   d. Install waterstop in accordance with the details shown on the Contract Drawings and the instructions of the manufacturer. Prior to use of the waterstop material in the field, submit to the Engineer for approval a sample of each size and shape to be used. Fabricate sample so that the material and workmanship represent in all respects the fittings to be furnished under this Specification.
   e. Place all sleeves, inserts, anchors, and other embedded items prior to placing concrete. Anchors and bolts cast in concrete shall be hot dip galvanized or stainless steel. Where permitted by the Engineer, concrete expansion bolts shall be stainless steel and of the wedge anchor type. Take all necessary precautions to prevent embedded items from being displaced, broken or deformed during concreting operation. Protect drains from intrusion of concrete.

7. Placing:

   a. Equipment for mixing and transporting concrete must be clean. Forms shall be thoroughly clean and damp, and reinforcing shall be secured in place. Runaways for transporting concrete shall not rest on reinforcing. When concrete is placed against earth, sprinkle sufficiently before placing.
   b. Deposit of concrete in forms no longer than ninety (90) minutes after the initial design water has been added to the cement and aggregates. Concrete which cannot be so placed shall not be used and shall be wasted. **No additional water shall be added**. No retempering with water is permitted.
   c. In addition to the requirements of ASTM C94, the concrete delivery tickets shall indicate the cement content and water/cement ratio.
   d. During hot weather, proper attention shall be given to ingredients, production methods, handling, placing, protection and curing. Comply with ACI 305R "Hot Weather Concreting" recommendations.
   e. Do not place concrete in forms unless the water level is below the concrete to be placed, even if it is necessary to maintain the dewatering, or under rain.
   f. Do not place concrete under water except for tremie concrete as called for in the Contract Drawings. Submit for approval plan and details of means and methods

for installation of seal tremie concrete prior to commencement of work. Seal concrete which subsequently fails to perform, shall be repaired or replaced at no additional cost to the Department.

g. Place seal concrete under water in the space in which it is to remain, by means of a tremie, a closed-bottom dump bucket of not less than one cubic yard capacity, or other approved method, and do not disturb after it is deposited. Deposit all seal concrete in one continuous pour. Do not place concrete in running water. Design all Formwork, to retain concrete under water, to be watertight. Submit shop drawings for the design of Formwork and excavation sheeting signed and sealed by a Florida Registered Professional Engineer.

h. The tremie shall consist of a tube having a minimum inside diameter of ten (10) inches and shall be constructed of sections having tight joints. No aluminum parts which have contact with the concrete will be permitted. The discharge end shall be entirely seated at all times and the tremie tube kept full to the bottom of the hopper. When a batch is dumped into the hopper, the tremie shall be slightly raised (but not out of the concrete at the bottom) until the batch discharges to the bottom of the hopper, after which the flow shall be stopped by lowering the tremie. The means of supporting the tremie shall be such as to permit the free movement of the discharge end over the entire top surface of the work and shall permit it being lowered rapidly when necessary to choke off or retard the flow. The flow shall preferably be continuous and in no case shall be interrupted until the work is completed. Exercise special care to maintain still water at the point of deposit.

i. When the concrete is placed by means of a bottom dump bucket, the bucket shall be lowered gradually and carefully until it rests upon the concrete already placed. The bucket shall then be raised very slowly during the discharge travel; the intent being to maintain, as nearly as possible, still water at the point of discharge and to avoid agitating the mixture. Aluminum buckets will not be permitted.

j. Do not commence pumping, to dewater a sealed cofferdam, until the seal has set sufficiently to withstand the hydrostatic pressure, and in no case earlier than 72 hours after placement of concrete.

k. Notify Engineer a minimum of 24 hours prior to concreting and request a specific time for observation of reinforcing and Form work for portions of concrete work to be placed. No observation will made by the Engineer until rebar installation for all work to be done and all Form work has been completed and approved by the Contractor's field superintendent. Do not order concrete until all correction and additions indicated by the Engineer have been made. Should the Engineer's observation reveal that work is improperly prepared and an additional observation will be required, he will so inform the Contractor and all above requirements shall also govern.

8. Repair of Surface Defects.

a. Repair all concrete surface defects, which includes, but not limited to cracks, tie holes (no plastic cones), uneven holes, honeycombs, rough framework and other objectionable conditions deemed unacceptable to the Engineer immediately after form removal. This repair work is to be done for all concrete exposed surfaces, liquid applied surface or painted surfaces in or out of the water. Repair all cracks and defects in the concrete floors, beams, joists, columns, and other structural members, roof and walls, to the satisfaction of the Engineer that may occur up to one year after acceptance of work regardless of the cause. Test unformed, surfac

es such as monolithic slabs, for smoothness and verify placement tolerances specified for each surface and finish. Test unformed surfaces sloped to drain for trueness of slope, in addition to smoothness. Repair unformed surfaces that contain surface defects which affect durability of concrete. Surface defects, as such, include cracking, cracks which penetrate to reinforcement or completely through non-reinforced sections regardless of width, spalling, pop-outs, honeycomb, rock pockets and other objectionable and rough conditions.

b. Proprietary compounds for adhesion or as patching ingredients may be used, if approved by the Engineer. All structural repairs of surface defects to be made require the approval of the Engineer, as to the method and procedure. Approval of the completed work must be obtained from the Engineer.

9. Finishing of Formed Surfaces.

a. Apply rough form finish to exterior walls below grade not exposed to water.
b. Apply smooth form finish to exterior and interior walls and columns exposed to water.
c. Apply smooth form finish to interior walls and underside of floors, stairs and slabs.
d. In addition to the smooth form finish, apply a grout cleaned finish to concrete walls and surfaces exposed to public view and underside of formed floors, stairs or slabs.
e. Apply a rubber float grout mix to properly prepared concrete surfaces, only when approved by the Engineer. Mix shall have one part Portland cement to two parts fine sand in a 50% water and 50% Acryl #60 (Thoroseal) mix. Make a 10' by 10' sample on the concrete wall for the approval of the Engineer. Finished surface shall be a non dusting hard finish, when scratched with a ¼" metal edge.

f. Finish concrete surface, interior or exterior, below or above water shall include all:

1) Exposed concrete.
2) Grout finished concrete.
3) Painted surface concrete.
4) Liquid Membrane finished concrete.
5) The entire surface of finished concrete shall have a smooth uniform surface, there shall be no offsets, visually bulges, or wavering in the finished surfaces. The joints must be accurately aligned, they can not be uneven or in or out, a higher and lower, there shall be no fins, projection or unevenness between forms.
6) If after stripping the forms the Engineer determines that the finished concrete does not comply with any or all of the above requirements, the Contractor shall submit his proposal in writing to the Engineer as to his methods of correcting the work at no added cost to the Village, which shall include, but not limited to all grinding of fins, projections, unevenness between joints, form high spots and uneven spots.
7) In addition to all other requirements, concrete surfaces exposed to public view, irrespective of size, area or location shall be completely clean and free of: (1) Stains of any nature, (2) Parts of forms or other wood of any nature, (3) laitance, (4) "Run-downs" of leaked water from secondary pours, (5) Nails, (6) Strips, (7) Ties and (8) all other extraneous, deleterious materials and/or substances which may affect the finished

appearance and condition of exposed concrete. Surfaces not meeting the above requirements are to be repaired and treated at no additional cost to the Village.

10. Slabs

a. Unless otherwise noted on the Contract Drawings, place strips alternately at maximum 20 feet center-to-center and to align with column centerline. Do not place adjacent strips until elapse of twenty four hours after first strip is placed. Place slabs on grade by the "strip-cast" method. Method to be reviewed by the Engineer. Provide saw-cut joints at maximum 20 feet center-to-center and to align with column center lines within four hours of final finishing.
b. Provide doweled construction joints where shown on the Contract Drawings.
c. Provide a hard steel troweled finish, free from trowel marks and irregularities, to slabs and floors.
d. Provide a light hair-broom finish to exterior slabs and floors exposed to public view. Leave hair-broom lines parallel to direction of the slab drainage.
e. Provide a stiff bristle broom finish to slabs and floors with slopes greater than 10 percent. Leave broom lines parallel to slope drainage.
f. Finish exposed edges of slabs, floors and tops of walls with a ¼-inch radius edge unless a chamfer is called for on the Contract Drawings.

11. Curing and Protection

a. Comply with ACI 305 "Hot Weather Concreting", Chapter 4, with the supplements and modifications to ACI 301 listed herein.
b. Only concrete water curing will be accepted. Water cure by ponding or continuous sprinkling covering complete surface with minimum runoff. The application of water to wall may be interrupted for grout cleaning only over the areas being cleaned at the time, and the concrete surfaces shall not be permitted to become dry during such interruption.
c. Recoat damaged surfaces subject to heavy rainfall within three hours of application of curing compound or surfaces damaged by construction procedures. Method of repair shall be approved by the Engineer.

12. Testing

a. Testing laboratory will be selected and paid for by the Village. Send results of all tests to the Village and to the Contractor. The Contractor shall notify the Testing laboratory at least 24 hours before each concrete placing.
b. Obtain and mold 3 specimens for each fifty (50) cu.yds. or fraction thereof, of each class of concrete placed each day or as directed by the Engineer.
c. Cure specimens from each sample in accordance with ASTM C31. Record in test report any deviations from this Standard.
d. Test specimens in accordance with ASTM C39. Test one specimen at twenty eight (28) days for acceptance and, one specimen at three (3) days and seven (7) days respectively, for information. If one specimen in a test manifests evidence of improper sampling, molding or testing, it shall be discarded and the strength of the remaining cylinders shall be considered the test result.
e. Contractor’s Superintendent shall color code on a set of structural drawings the

extent of days work and date to conform to cylinders test.

f. Perform slump test at discharge of mixer, one for each strength test in accordance with ASTM C143. In the event slump is excessive, testing laboratory will immediately notify the Contractor's superintendent and the Engineer's representative on site. The Contractor shall then reject all concrete with excessive slump and/or deposit time.

13. Evaluation and Acceptance of Concrete.

a. If tests are insufficient or inadequate, test and evaluate by core tests. Failure of any concrete cylinder to meet specified requirements shall be deemed as non-complying and costs of additional tests to determine the adequacy or inadequacy shall be borne by the Contractor. Concrete rejected for any reason is to be removed and replaced, including labor, forms and reinforcing, to meet specifications at no additional cost to the Village and no additional time extension.

14. Additional Requirements.

a. Submit shop drawings as required per General Conditions and elsewhere in these specifications. Prime Contractor shall check and approve all shop drawings prior to submission. Do not fabricate any item requiring shop drawings until approval of shop drawings has been granted by the Village. Partial shop drawings are not accepted, submit drawings for complete submittal.
b. Provide precast or cast-in-place reinforced concrete lintels at all masonry openings and sills at all windows. Reinforce to suit loads and span. Provide minimum 8" bearing at each end and pour integral with columns where opening abuts columns.
c. Sidewalks: Provide poured-in-place 4" thick concrete slab, 3000 psi concrete, with continuous 8" deep thickened slab edges. Isolate walks from vertical surfaces with ½" expansion joint material. Provide ½" expansion joint material at 20 feet on center and tooled joints at 5 feet on center. Tool all open edges to a smooth radius and all edges adjacent to the forms.

END OF SECTION

SECTION 03721 - PREPARATION OF CONCRETE SURFACES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preparation of concrete surfaces to be rehabilitated.

B. Work in this Section includes hydroblasting (Water Pressure) cleaning, sandblasting, concrete removal and testing for pH, moisture content, and soundness of concrete.

1.02 RELATED SECTIONS

A. Section 3.00 - Sequence of Construction and General Information

B. Section 03732 - Concrete Repair: Rehabilitation or Restoration of concrete after preparation for resurfacing.

1.03 SCHEDULING

A. Perform sandblasting and water pressure cleaning of structure between the hours of 7 am to 5 pm.

PART 2 PRODUCTS

2.01 MATERIALS

A. Blasting Sand: Clean sand blasting sand free of impurities passing through 200 sieve.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work.

3.02 PREPARATION

A. Prepare and protect adjacent work from damage.

3.03 REHABILITATION CLEANING

A. Prior to any rehabilitation work, the sewer shall be thoroughly cleaned to produce a clean interior surface free of all coatings, sand, rock, sludge or other damaging materials.

B. During all cleaning and preparation operations all necessary precautions shall be taken to protect the pipeline from damage.

C. All sludge, dirt, sand, rock, grease and other solid or semi-solid materials resulting from cleaning or surface preparation operations shall be removed from the immediate work site where it was removed.

D. All waste materials and debris resulting from the wet well preparation shall be removed and conveyed to the County's Class I sanitary landfill, the South Dade Solid Waste Disposal Facility, 24000 S.W. 97th Avenue, Dade County, Florida. All cost for such removal and disposal, including tipping fees, shall be included in the prices quoted under the various Bid Items and no other compensation will be provided. Under no circumstances shall sludge or other debris removed during these operations be dumped or spilled into the streets, ditched, storm drains or other sanitary sewers.

3.04 PREPARATION AND INSPECTION OF CONCRETE SURFACES

A. Preparation of Concrete Surfaces

1. Hydroblasting: The Contractor shall remove loose and deteriorated concrete and all existing coatings and contaminants in the areas that are to be lined by hydroblasting. The hydroblasting operation shall conform to:

a. Hydroblasting shall be used to provide a clean, contamination free, roughened and sound surface. It is intended that the hydroblasting will alter the profile of the concrete and clean any exposed rebar. Flush out cracks and voids with water to remove laitance and dirt. Clean concrete surfaces of dirt or other contamination; wire brush using water; rinse surface and allow to dry.

b. Acceptably cleaned and prepared surfaces shall be free of laitance, efflorescence, oil, grease, rust and other penetrating contaminants. The surface shall be free of fins, projections and loosely adhering concrete and dirt particles. Remove fins and projections by mechanical means.

c. Equipment shall sustain water pressure of at least 10,000 psi at the nozzle, be capable of delivering a minimum of five (5) gallons of water per minute which would require at least an 84 horsepower engine.

d. Use the equipment in accordance with the manufacturer's instructions. Organize the work to thoroughly cover the area specified for repair.

e. Particulate waste created by hydroblasting shall be removed and disposed. All of the waste or debris created shall be reclaimed and not allowed to move on downstream.

f. The hydroblasting operation shall conform to all local, state and federal air quality standards and regulations.

3.05 REMOVAL OF DETERIORATED CONCRETE

A. Removing Deteriorated Concrete: After hydroblasting, concrete substrates with severe hydrogen sulfide damage shall have all contaminated concrete removed by scabbling, chipping, grinding, brushing, blasting or other methods to a depth where all the white calcium sulfate is removed and only hard grey concrete with a surface pH between 7.0 and 11.0 remains.

B. Any reinforcing steel exposed by removing deteriorated concrete shall be thoroughly cleaned by sandblasting to remove all contaminated concrete and rust particles and coated

to inhibit rust.

C. Immediately after the cleaned reinforcing steel is inspected and accepted by the Engineer, the Contractor shall place a protective coating on the exposed reinforcing steel.

D. When the deteriorated concrete is removed, the Contractor shall thoroughly clean the surface to remove all fines and deleterious materials that will adversely affect the bond of the proposed liner material.

3.06 INSPECTION OF SURFACES

A. Inspection of Concrete Surfaces: All surfaces where deteriorated concrete has been removed will require inspection by the Engineer to determine sound concrete prior to commencement of the repair operation. The surfaces will be tested for acidity and moisture. If the pH of the surface is less than 7.0 additional concrete shall be removed to a depth where the surface reading is equal to or greater than a pH of 7.0.

3.07 ACCEPTANCE OF CONCRETE SURFACE

A. Acceptance: The Contractor shall measure the surface pH, moisture content and temperature of the prepared concrete surface prior to beginning the lining operation. The acceptable ranges, as recommended by the lining manufacturer, shall be used to determine whether lining application may proceed and shall determine the choice of primer to be applied. The Contractor shall also check the concrete surfaces for residual laitance by visual inspection with magnification if necessary and by primer application on suspect areas. If the primer does not penetrate the concrete surface by turning the surface dark and the laitance area can be visually detected; the Contractor shall not accept the surface and shall have the area sandblasted or waterblasted again for laitance removal.

3.08 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed per Liner manufacturer written instructions so as not to void any warranties provided.

B. Final Surface Inspection: Check surface pH and moisture content of the concrete to comply with the manufacturer requirements for pH and moisture content.

C. Test concrete for calcium chloride and moisture content during the execution of the Work.

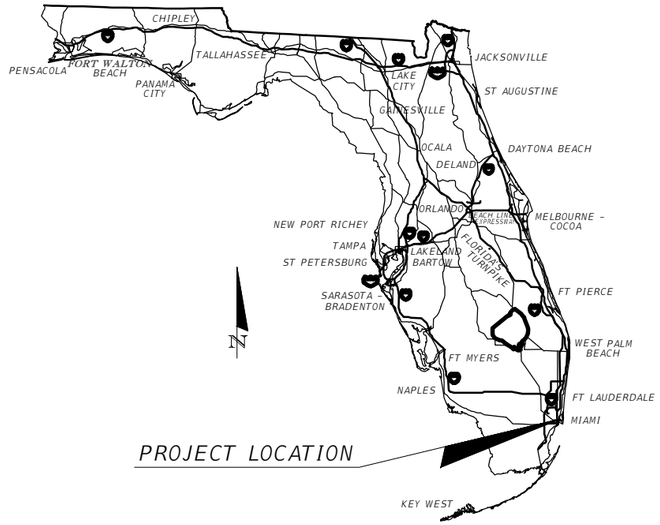
END OF SECTION

PLOT DATE: 8/12/2024 4:05 PM

NORTH BAY VILLAGE
EST. 1945

CITY OF NORTH BAY VILLAGE

NORTH BAY ISLAND
CAUSEWAY COMPLETE STREETS PROJECT
SHORT TERM IMPROVEMENTS



100% PLANS

JOHN F. KENNEDY CAUSEWAY
FROM
HARBOR ISLAND DRIVE TO
EAST TREASURE DRIVE

LOCATION MAP
N.T.S.

INDEX OF SHEETS

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2024-2025 Standard Plans for Road and Bridge Construction at the following website:
http://www.fdot.gov/design/StandardPlans/current/default.shtm

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation Standard Specifications for Road and Bridge Construction, FY 2024-25 at the following website:
http://www.fdot.gov/programmanagement/Implemented/SpecBooks

NORTH BAY VILLAGE OFFICIALS

MAYOR:	BRENT LATHAM
VICE MAYOR:	RICHARD CHERVONY
COMMISSIONERS:	GORAN CUK
	ANDY DARO
	RACHEL STREIFELD
VILLAGE MANAGER:	RALPH ROSADO
VILLAGE ATTORNEY:	HAYDEE SERA

DANIEL GIRALDO
LICENSE
No. 94566
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

9-12-2024

100% PLANS
ENGINEER OF RECORD:
DANIEL GIRALDO, P.E
FLORIDA LICENSE NO.: 94566

6401 SW 87th AVENUE, SUITE 200
MIAMI, FLORIDA 33173
TEL:305.670.2350 FAX:305.670.2351
CERTIFICATE OF AUTHORIZATION No. 7184

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
-	2024	G-1.0

FILE LOCATION: h:\Projects\0190151.10 nbv causeway complete street project - short term improvements\8 - CAD\0190151.10_01_covr.dwg

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

bcc engineering
DANIEL GIRALDO, P.E.
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6401 SW 87th Avenue, Suite 200
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www.bcceng.com
Certificate of Authorization No. 7184

CITY OF NORTH BAY VILLAGE

ROAD NO.	COUNTY	PROJECT NUMBER
SR 934	MIAMI-DADE COUNTY	0190151.10

CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

KEY MAP SHEET

SHEET NO. G-2.0

GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD) UNLESS OTHERWISE NOTED.
2. ALL PUBLIC LAND CORNERS AND PRIMARY NETWORK CONTROL SURVEY MONUMENTS ARE TO BE PROTECTED BY THE CONTRACTOR. CORNERS AND MONUMENTS WITHIN THE WORK ZONE AND IN DANGER OF BEING DAMAGED, DESTROYED OR COVERED SHALL BE PROPERLY REFERENCED BY A REGISTERED LAND SURVEYOR IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS OF THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS PRIOR TO THE BEGINNING OF WORK. UPON PROJECT COMPLETION THE CONTRACTOR SHALL RESTORE ALL SUCH CORNERS AND MONUMENTS AND SHALL FURNISH TO THE DISTRICT LOCATION SURVEYOR A SIGNED AND SEALED COPY OF THE LAND SURVEYOR'S REFERENCE DRAWING.
3. ALL EXCESS MATERIAL AS DESIGNATED BY THE ENGINEER IS TO BE DISPOSED BY THE CONTRACTOR IN AREAS PROVIDED BY HIM WITHIN 72 HOURS OF BEING DEPOSITED IN THE CONSTRUCTION AREA AND AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL USE A STREET SWEEPER (USING WATER) OR OTHER EQUIPMENT CAPABLE OF CONTROLLING AND REMOVING DUST. APPROVAL OF THE USE OF SUCH EQUIPMENT IS CONTINGENT UPON ITS DEMONSTRATED ABILITY TO DO THE WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING EXISTING INLETS CLEAN OF MILLING MATERIAL, LIMEROCK, DEBRIS, ETC. DURING THE CONSTRUCTION.
6. THE CONTRACTOR SHALL REMOVE ALL SEDIMENT BARRIERS, ROCK BAGS AND TURBIDITY BARRIERS AT THE COMPLETION OF THE PROJECT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF STORMWATER FROM THE ROADWAY WITHIN THE PROJECT LIMITS AND BE IN COMPLIANCE WITH NPDES AND OTHER PERMIT REQUIREMENTS.
8. SAW CUTTING OF THE EXISTING SIDEWALKS SHALL BE MADE ONLY AT THE NEAREST FLAG JOINTS.
9. OUTSIDE OF THE CLEARING AND GRUBBING LIMITS SHOWN ON THE PLANS THE CONTRACTOR SHALL PERFORM STANDARD CLEARING AND GRUBBING FOR THE WORK BEING DONE AS APPROVED BY THE ENGINEER.

UTILITY NOTES

1. ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES OR UNDERGROUND UTILITIES.
3. TWO FULL BUSINESS DAYS PRIOR TO DIGGING THE CONTRACTOR SHALL CALL SUNSHINE 811 AND THE UTILITY OWNER AND REQUEST UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN UTILITY COMPANIES LOCATE THEIR FACILITIES.
4. TWO FULL BUSINESS DAYS PRIOR TO DIGGING NOTIFY THE ENGINEER AND CALL FDOT MAINTENANCE DEPARTMENT, TELEPHONE NUMBER: (305) 640- 7160 AND REQUEST LIGHTING CONDUIT LOCATION.
5. THE CONTRACTOR IS ADVISED THAT PROPERTIES ADJACENT TO THE PROJECT HAVE ELECTRIC, TELEPHONE, GAS, WATER AND/OR SEWER SERVICE LATERALS WHICH MAY NOT BE SHOWN IN PLANS. THE CONTRACTOR MUST REQUEST THE LOCATION OF THESE LATERAL SERVICES FROM THE UTILITY COMPANIES.
6. THE LOCATIONS OF UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATION APPLY ONLY AT THE POINT SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

APPLICABLE CODES

1. MIAMI DADE COUNTY PUBLIC WORKS: DESIGN STANDARDS PART 1 AND 2.
2. FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2023-2024 STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION.
3. FLORIDA DEPARTMENT OF TRANSPORTATION, JULY 2022 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
5. FLORIDA GREEN BOOK (MANUAL OF UNIFORM MINIMUM STANDARDS OF DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS)

MAINTENANCE OF TRAFFIC (MOT)

1. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE MIAMI-DADE COUNTY PUBLIC WORKS MANUAL AS PERTAINS TO MAINTENANCE OF TRAFFIC, THE CURRENT EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DESIGN STANDARDS (STANDARD PLANS 102-600 SERIES), THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS MINIMUM CRITERIA.
2. CONTRACTOR SHALL PREPARE AND SUBMIT MAINTENANCE OF TRAFFIC PLAN (MOT) WHERE REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL AGENCIES HAVING JURISDICTION. CONTRACTOR SHALL OBTAIN ALL REQUIRED APPROVALS AND PERMITS ASSOCIATED WITH THE MOT'S. ALL MOT'S TO BE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.
3. TEMPORARY PAVEMENT SHALL CONSIST OF A MINIMUM OF 6 INCH LIMEROCK BASE, PRIME COAT AND 1.5 INCHES HOT MIX ASPHALT SP-12.5. THE BASE LAYER SHALL BE PLACED OVER A FIRM UNYIELDING, WELL-COMPACTED SUBGRADE. COST OF CONSTRUCTION AND REMOVAL OF TEMPORARY PAVEMENT TO BE INCLUDED IN PAY ITEM 102-1A, MAINTENANCE OF TRAFFIC.
4. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ALL POTHOLES THAT DEVELOP WITHIN THE PROJECT LIMITS AND WILL MAINTAIN A SUPPLY OF COLD MIX ON THE PROJECT SITE TO EXPEDITE THOSE REPAIRS. COST OF REPAIR TO BE INCLUDED IN PAY ITEM 102-1A, MAINTENANCE OF TRAFFIC.
5. NOTIFICATION OF LANE CLOSURES OR TEMPORARY DETOURS SHALL BE ACCOMPLISHED 14 WORKING DAYS PRIOR TO CLOSURE OR DETOUR BY COORDINATING WITH DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS HIGHWAY DIVISON, AND DADE COUNTY TRAFFIC OPERTAIONS.
6. THE CONTRACTOR SHALL NOTIFY LAW ENFORCEMENT AND FIRE PROTECTION SERVICES TWENTY-FOUR (24) HOURS IN ADVANCE OF A DETOUR IN ACCORDANCE WITH SECTION 336.07 OF FLORIDA STATUTES.
7. AT THE DISCRETION OF THE ENGINEER, IF A LANE CLOSURE CAUSES EXTENDED CONGESTION OR DELAY, THE CONTRACTOR SHALL BE DIRECTED TO REOPEN THE CLOSED LANE(S) UNTIL SUCH TIME THAT THE TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL.
8. LANE CLOSURE SHALL OCCUR ONLY DURING NON-PEAK HOURS ON NONEVENT DAYS/NIGHTS. NO INTERRUPTION TO TRAFFIC IS PERMITTED FROM MONDAY-FRIDAY 7-9 A.M. AND 4-6 P.M. OR ON WEEKENDS AND HOLIDAYS.
9. THE CONTRACTOR IS TO PLACE TEMPORARY OR REMOVABLE PAVEMENT MARKINGS BETWEEN EACH LAYER OF PAVEMENT, AND IS RESPONSIBLE FOR THE TEMPORARY RELOCATION OF STOP BARS & STOP SIGNS AS APPLICABLE. PAVEMENT MARKINGS AND BARRICADES PLACEMENT SHALL BE APPROPRIATELY COORDINATED.
10. COORDINATION WITH DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS WILL BE REQUIRED.
11. AT THE END OF EACH WORK DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE, ANY DROP OFF GRATER THAN 6 INCHES (150 MM) ADJACENT TO THE PEDESTRIAN, BICYCLE, AND WHEELCHAIR TRAVEL PATHS BE BACKFILLED FLUSH WITH SAID PATHS OR PROTECTED WITH TEMPORARY FENCE, CONCRETE BARRIER WALL OR APPROVED HANDRAIL. COST SHALL BE INCLUDED IN THE PAY ITEM 102-1A, MAINTENANCE OF TRAFFIC.

SIGNAGE AND PAVEMENT MARKINGS:

1. ALL SIGNING AND PAVEMENT MARKINGS INSTALLED AS PART OF THESE PLANS SHALL CONFORM TO THE 2009 EDITION OF THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS. THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND THE MIAMI-DADE COUNTY TRAFFIC CONTROL EQUIPMENT SPECIFICATIONS AND STANDARDS FOR ROADWAY SIGNING.
2. THE CONTRACTOR SHALL MATCH EXISTING PAVEMENT MARKINGS AT THE BEGINNING AND THE END OF THE PROJECT AND AT ALL SIDE STREETS WITHOUT JOGS AND OFFSETS.
3. SIGN ASSEMBLY LOCATIONS SHOWN ON PLANS WHICH ARE IN CONFLICT WITH LIGHTING UTILITIES. DRIVEWAYS. WHEELCHAIR RAMPS, ETC. MAY BE ADJUSTED SLIGHTLY AS DIRECTED BY THE ENGINEER. EXTREME LOCATION CHANGES MUST BE APPROVED BY MIAMI-DADE SIGNALS AND SIGNS DIVISION.
4. INCORRECTLY PLACED THERMOPLASTIC MARKINGS OVER FRICTION COURSE WILL BE REMOVED BY MILLING AND REPLACING THE FRICTION COURSE A MINIMUM WIDTH OF 18 IN AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL RELOCATE ALL EXISTING POST-MOUNTED STREET NAME AND STOP SIGNS TO A VISIBLE AREA UNDISTURBED BY THE CONSTRUCTION SO AS TO MINIMIZE DAMAGE TO THE SIGNS DURING CONSTRUCTION. COST OF RELOCATION OF STREET NAME SIGN AND STOP SIGNS SHALL BE PAID FOR UNDER MAINTENANCE OF TRAFFIC PAY ITEM.
6. EXTRUDED ALUMINUM SIGN SUPPORT CLAMPS ARE NOT ACCEPTABLE. ALL RELOCATED SIGNS MUST COMPLY WITH THE STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND ROADWAY DESIGN AND TRAFFIC STANDARDS AS IF THEY WERE NEW SIGNS. IF EXISTING CLAMPS. BRACKETS, POLES. ETC. NEED TO BE REPLACED THE COST SHALL BE INCLUDED IN THE RELOCATION PAY ITEMS.
7. THE CONTRACTOR SHALL SUBMIT A LIST OF THE EXISTING SIGNS TO THE CONSTRUCTION PROJECT MANAGER. AT THE BEGINNING OF CONSTRUCTION. ANY SIGNS LOST OR DAMAGED DURING CONSTRUCTION SIGNS SHALL BE REPLACED AT NO ADDITIONAL COST. COST OF MAINTAINING OF EXISTING SIGNS TO BE INCLUDED IN MAINTENANCE OF TRAFFIC PAY ITEM.
8. THE CONTRACTOR WILL REVIEW EXISTING SIGNS SHOWN ON THE PLANS TO BE RELOCATED OR TO REMAIN. THE CONTRACTOR WILL NOTIFY IN WRITING TO THE PROJECT ENGINEER OF ANY MISSING SIGNS BEFORE CONSTRUCTION STARTS. IF EXISTING SIGNS TO BE RELOCATED HAVE A DAMAGED POLE OR A POLE NOT MEETING HEIGHT SPECIFICATION REQUIREMENTS, THE COST OF THE NEW POLE WILL BE INCLUDED IN THE RELOCATION PAY ITEM.
9. SIGNS DAMAGED BY THE CONTRACTOR'S OPERATION WILL BE REPLACED AT NO COST TO NORTH BAY VILAGLE. ALL EXISTING SIGN WITHIN THE PROJECT LIMITS ARE TO BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS. COST TO BE INCLUDED UNDER THE CLEARING AND GRUBBING PAY ITEM.

CONCRETE SIDEWALK

1. CONSTRUCT SIDEWALKS IN ACCORDANCE WITH SPECIFICATION 522. USE 6" CONCRETE FOR SIDEWALKS AND CURB RAMPS LOCATED WITHIN CURB RETURNS (SEE PLAN VIEW). INSTALL ALL OTHER CONCRETE WITH THICKNESS AS SHOWN, UNLESS OTHERWISE DETAILED IN THE PLANS.
2. INCLUDE DETECTABLE WARNINGS ON SIDEWALK CURB RAMPS IN ACCORDANCE WITH INDEX 522-002.
3. FOR DRIVEWAYS SEE INDEX 522-003.
4. BOND BREAKER MATERIAL CAN BE ANY IMPERMEABLE COATED OR SHEET MEMBRANE OR PREFORMED MATERIAL HAVING A THICKNESS OF NOT LESS THAN 6 MILS AND NOT MORE THAN ½".

DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS NOTES

1. CROSS SLOPES AND GRADES

1.1. SIDEWALK, RAMP, AND LANDING SLOPES (I.E. 0.02, 0.05, AND 1:12) SHOWN IN THIS INDEX ARE MAXIMUMS. WITH APPROVAL OF THE ENGINEER, PROVIDE THE MINIMUM FEASIBLE SLOPE WHERE THE REQUIREMENTS CANNOT BE MET.

1.2. LANDINGS MUST HAVE CROSS-SLOPES LESS THAN OR EQUAL TO 0.02 IN ANY DIRECTION.

1.3. MAINTAIN A SINGLE LONGITUDINAL SLOPE ALONG EACH SIDE OF THE CURB RAMP. RAMP SLOPES ARE NOT REQUIRED TO EXCEED 15 FEET IN LENGTH.

1.4. JOINTS PERMITTED AT THE LOCATION OF SLOPE BREAKS. OTHERWISE LOCATE JOINTS IN ACCORDANCE WITH INDEX 522-001. NO JOINTS ARE PERMITTED WITHIN THE RAMP PORTION OF THE CURB RAMP.

2. CURB, CURB AND GUTTER AND/OR SIDEWALK:

2.1. REFER TO INDEX 522-001 FOR CONCRETE THICKNESS AND SIDEWALK DETAILS. REFER TO INDEX 522-002 FOR CURB AND CURB & GUTTER DETAILS.

2.2. REMOVE ANY EXISTING CURB, CURB AND GUTTER, OR SIDEWALK TO THE NEAREST JOINT BEYOND THE CURB TRANSITION OR TO THE EXTENT THAT NO REMAINING SECTION IS LESS THAN 5 FEET LONG.

3. CURB RAMP ALPHA-IDENTIFICATION:

3.1. SIDEWALK CURB RAMP ALPHA-IDENTIFICATIONS (E.G. CR-A) ARE PROVIDED FOR REFERENCE PURPOSES IN THE PLANS.

3.2. ALPHA-IDENTIFICATIONS CR-I AND CR-J ARE INTENTIONALLY OMITTED.

4. DETECTABLE WARNINGS:

4.1. INSTALL DETECTABLE WARNINGS IN ACCORDANCE WITH SPECIFICATION 527.

4.2. PLACE DETECTABLE WARNINGS ACROSS THE FULL WIDTH OF THE RAMP OR LANDING, TO A MINIMUM DEPTH OF 2 FEET MEASURED PERPENDICULAR TO THE CURB LINE AND NO GREATER THAN5 GF 5 FEET FROM THE BACK OF THE CURB OR EDGE OF PAVEMENT.

4.3. IF DETECTABLE WARNINGS ARE SHOWN IN THE PLANS ON SLOPES GREATER THAN 5%, ALIGN THE TRUNCATED DOMES WITH THE CENTERLINE OF THE RAMP; OTHERWISE, THE TRUNCATED DOMES ARE NOT REQUIRED TO BE ALIGNED.

5. DETECTABLE WARNINGS - ACCEPTANCE CRITERIA:

5.1. COLOR AND TEXTURE SHALL BE COMPLETE AND UNIFORM.

5.2. 90% OF INDIVIDUAL TRUNCATED DOMES SHALL BE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR TRANSPORTATION FACILITIES, SECTION 705.

5.3. THERE SHALL BE NO MORE THAN 4 NON-COMPLIANT DOMES IN ANY ONE SQUARE FOOT.

5.4. NON-COMPLIANT DOMES SHALL NOT BE ADJACENT TO OTHER NON-COMPLIANT DOMES.

5.5. SURFACES SHALL NOT DEVIATE MORE THAN 0.10" FROM A TRUE PLANE.

EXISTING LEGEND

(CALC.)	CALCULATED MEASUREMENT
CLF	CHAIN LINK FENCE
EL.	ELEVATION
F.F.	FINISHED FLOOR
INV.	INVERT
IP	IRON PIPE
IR	IRON ROD
IRC	IRON ROD WITH CAP
LB	LICENSED BUSINESS
M.D.C.R.	MIAMI-DADE COUNTY RECORDS
OHW	OVERHEAD WIRES
O.R.B.	OFFICIAL RECORDS BOOK
P.B.	PLAT BOOK
PG.	PAGE
P.S.M.	PROFESSIONAL SURVEYOR AND MAPPER
VEG	VEGETATION
W/	WITH
X OFF	CROSS-OFF

PROPOSED LEGEND

PROPOSED BUS SHELTER REPLACEMENT

PROPOSED "TURNING VEHICLES STOP FOR PEDESTRIANS" SIGN LOCATION PER FDOT R10-15A

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DANIEL GIRALDO, P.E.
FLORIDA LICENSE NO.: 94566
6401 SW 87th Avenue, Suite 200
Miami, Florida 33173
Tel: 305.670.2350 Fax: 305.670.2351
www.bcceng.com
Certificate of Authorization No. 7184

CITY OF NORTH BAY VILLAGE

ROAD NO.	COUNTY	PROJECT NUMBER
SR 934	MIAMI-DADE COUNTY	0190151.10

CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

GENERAL NOTES AND LEGEND

SHEET NO. G-3.0

PLOT DATE: 8/12/2024 4:05 PM

STORMWATER POLLUTION PREVENTION PLAN NOTES

SITE EVALUATION, ASSESSMENT, AND PLANNING:
PROJECT NAME: NORTH BAY VILLAGE COMPLETE STREETS SHORT TERM IMPROVEMENTS
PROJECT ADDRESS: KENNEDY CAUSEWAY, NORTH BAY VILLAGE, MIAMI, FLORIDA 33326
OWNER'S NAME: NORTH BAY VILLAGE PUBLIC WORKS
OWNER'S ADDRESS: 1666 KENNEDY CAUSEWAY, SUITE 300, NORTH BAY VILLAGE, FL 33141

DESCRIPTION OF THE PROJECT AND THE TYPES OF SOIL DISTURBING ACTIVITIES:
THE PROJECT INVOLVES REPLACING EXISTING BUS SHELTERS WITH A NEW DESIGN, REPLACING EXISTING ASPHALT CROSSWALKS WITH ADA COMPLIANT STAMPED CONCRETE CROSSWALKS, RE-STRIPING ALL CROSSWALKS ALONG THE CAUSEWAY, AND INSTALLING PROPOSED SIGNS TO IMPROVE PEDESTRIAN SAFETY IN NORTH BAY VILLAGE.

SOIL DISTURBING ACTIVITIES WILL INCLUDE: REMOVAL OF EXISTING ASPHALT CROSSWALKS, INSTALLATION OF PROPOSED STAMPED CONCRETE CROSSWALKS, CURBS, AND INSTALLATION OF FOUNDATIONS FOR BUS SHELTERS AND SIGNS.

SOILS CONDITIONS:

ACCORDING TO THE USDA SOIL SURVEY FOR BROWARD, THE SOIL IS DESCRIBED AS URBAN LAND.

SITE AREAS:
THE PROJECT SITE IS APPROXIMATELY 0.68± ACRES AND 0.17± ACRES WILL BE DISTURBED BY CONSTRUCTION ACTIVITIES.

SEQUENCE OF MAJOR EVENTS:
1. INSTALL SILT FENCES AROUND PERIMETER DISTURBED AREAS.
2. INSTALL INLET PROTECTION FOR ALL EXISTING GRATE INLETS AND AT THE END OF ALL EXPOSED STORM SEWER PIPES, IF PRESENT.
3. CONSTRUCT TEMPORARY CONSTRUCTION EXIT.
4. COMMENCE GRUBBING AND REMOVAL OF VEGETATION IN AREA TO RECEIVE CUT OR FILL.
5. COMMENCE GRADING OPERATION FOR BUILDING PAD PREPARATION (SEE GRADING PLAN).
6. INSTALL ALL UNDERGROUND UTILITIES.
7. FINALIZE PAVEMENT SUBGRADE PREPARATION.
8. INSTALL ALL PROPOSED STORM SEWER PIPES AND INSTALL INLET PROTECTION FILTER FABRIC AT ENDS OF EXPOSED PIPES.
9. CONSTRUCT ALL GRATE INLETS AND DRAINAGE STRUCTURES. INLET PROTECTION FILTER FABRIC MAY BE REMOVED TEMPORARILY FOR THIS CONSTRUCTION.
10. REMOVE SILT FENCES AROUND INLETS AND MANHOLES NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.
11. INSTALL BASE MATERIAL AS REQUIRED FOR PAVEMENT, CURB & GUTTER.
12. INSTALL ALL PAVING, CURB & GUTTER.
13. REMOVE TEMPORARY CONSTRUCTION EXIT, SILT FENCES, AND INLET PROTECTION DEVICES.
14. COMPLETE PLANTING AND/OR SEEDING OF VEGETATED AREAS TO ACCOMPLISH STABILIZATION, IN ACCORDANCE WITH THE LANDSCAPE PLAN.

WETLAND AREA: N/A

EROSION AND SEDIMENT CONTROLS:

STABILIZATION PRACTICES

THE CONTRACTOR SHALL DENUDE ONLY AREA WHERE IT IS EXPECTED TO BE GRADED OR ALTERED WITH A TWO (2) WEEK TIME FRAME. ALL PERVIOUS AREAS OF THE SITE INCLUDED IN GRADING THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE GRADED AND PREPARED WITH COMBINATION OF SOD AND/OR SEEDING AND MULCHED.

TEMPORARY STABILIZATION – TOP SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARY CEASES FOR AT LEAST 21 DAYS SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. GRASS SEED SHALL BE A MIXTURE OF 20 PARTS OF BERMUDA AND 80 PARTS OF PENSACOLA BAHIA. THE SEPARATE TYPES OF SEED USED SHALL BE THOROUGHLY DRY MIXED IMMEDIATELY BEFORE SOWING. SEED WHICH HAS BECOME STRAW OR HAY CONSISTING OF OAT, RYE OR WHEAT STRAW, OR OF PANOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. ONLY UN-DETERIORATED MULCH WHICH CAN BE READILY CUT INTO THE SOIL SHALL BE USED. AREAS OF THE SITE WHICH ARE TO BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING STABILIZATION AND BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.

PERMANENT STABILIZATION – DISTURBED PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITY PERMANENTLY CEASES SHALL BE STABILIZED WITH SOD NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

WIND EROSION STABILIZATION – AREAS WITHIN FUTURE UNITS WHERE EARTHWORK IS COMPLETED SHALL BE COMPLETELY SEEDED AND MULCHED. AREAS WHERE CONSTRUCTION OPERATIONS WILL BE CONTINUOUS, FUGITIVE DUST SHALL BE MANAGED BY APPLYING A WATER SPRAY TO SATURATE THE SURFACE SOILS ON A DAILY BASIS (OR AS NEEDED) TO MAINTAIN MINIMAL DUST TRANSPORT. FUGITIVE DUST SHALL BE MONITORED CONTINUOUSLY AND ADDITIONAL MEASURES MAY NEED TO BE TAKEN TO CONTROL OFF SITE TRANSPORT OF UNACCEPTABLE LEVELS OF DUST.

STRUCTURAL PRACTICES

EROSION PROTECTION – DURING THE CONSTRUCTION PHASES, APPROPRIATE PRACTICES INCLUDING, BUT NOT LIMITED TO: SILT FENCE BARRIERS, STABILIZED CONSTRUCTION ENTRANCES, ROCK CHECK DAMS, INLET PROTECTION WITH BLOCK AND GRAVEL AND FABRIC MATERIAL, AND WATERING OR OTHER METHODS NECESSARY WILL BE IMPLEMENTED TO CONTROL EROSION.

SEDIMENT TRAPS – CONTRACTOR SHALL EXCAVATE AROUND ALL ON-SITE DRAINAGE INLETS AND PROVIDE EROSION CONTROL AND OVERFLOW MEASURES WHICH SHALL SERVICE AS LOCALIZED TEMPORARY SEDIMENT TRAPS. AT THE CONTRACTOR'S DISCRETION, THE AREAS SURROUNDING THE ON-SITE INLETS CAN BE EXCAVATED AS MUCH AS TWO FEET BELOW THE EXISTING GROUND IN ORDER TO ALLOW ANY SILT TO BE COLLECTED AND REMOVED PRIOR TO COMPLETION OF THE GRADING.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY AN ON-SITE STORM DRAIN AND CATCH BASIN SYSTEM. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASINS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT AND CONTINUALLY MAINTAIN ALL STORM DRAINS AND RETENTION/DETENTION AREAS IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.

SPECIFIED OTHER CONTROLS:

WASTE DISPOSAL

WASTE MATERIALS – ALL WASTE MATERIALS SHALL BE COLLECTED AND CONTAINED IN A CONTROLLED AREA PURSUANT TO ANY STATE AND/OR LOCAL SOLID WASTE REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS GENERATED FROM CONSTRUCTION IS TO BE REMOVED FROM THE SITE AND DISPOSED OF APPROPRIATELY. NO CONSTRUCTION MATERIALS SHALL BE BURIED ON SITE. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICE STATING THESE PRACTICES SHALL BE POSTED IN THE CONSTRUCTION OFFICE TRAILER. THE JOB SITE SUPERINTENDENT (CONSTRUCTION MANAGER) RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE – IF ANY, ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY STATE AND/OR LOCAL REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE – ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS BY A LICENSE SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE AND/OR LOCAL CODES AND REGULATIONS.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREETS ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE SITE SHALL BE COVERED WITH A TARPAULIN.

TIMING OF CONTROL MEASURES:
AS INDICATED IN THE SEQUENCE OF MAJOR EVENTS, STAKED SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED PRIOR TO CLEANING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 21 DAYS SHALL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 14 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITIES CEASES PERMANENTLY IN AN AREA, THAT AREA SHALL BE STABILIZED WITH PERMANENT SEED AND MULCH. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SILT FENCE AND/OR CONTROLS SHALL BE REMOVED.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS:
THE STORM WATER POLLUTION PREVENTION PLAN REFLECTS THE JURISDICTIONAL AND WATER MANAGEMENT DISTRICT REQUIREMENTS FOR STORM WATER MANAGEMENT AND EROSION & SEDIMENT CONTROL AS ESTABLISHED BY THE JURISDICTION'S STORM WATER MANAGEMENT TECHNICAL MANUAL, THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 40E-4 AND 40E-40, AND THE WATER MANAGEMENT DISTRICT.

MAINTENANCE/INSPECTION PRACTICES:

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT SHALL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROL:
1. LESS THAN ONE HALF OF THE SITE SHALL BE DENUDED AT ONE TIME.
2. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.5-INCHES OR GREATER BY A CONTRACTOR'S REPRESENTATIVE.
3. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.
4. BUILT UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE SILT FENCE.
5. SILT FENCE SHALL BE INSPECTED REGULARLY FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
6. THE SEDIMENT BASINS, IF PRESENT, SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT REACHES 10% OF THE DESIGN CAPACITY OR AT THE END OF THE JOB.
7. TEMPORARY AND PERMANENT GRASSING AND MULCHING AND SODDING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
8. A MAINTENANCE INSPECTION REPORT SHALL BE MADE AFTER EACH INSPECTION BY THE CONTRACTOR AND SHALL BE KEPT IN AN ACTIVE LOG READILY AVAILABLE AT THE JOB SITE.
9. EITHER THE SITE SUPERINTENDENT OR HIS DESIGNEES SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE, REPAIR ACTIVITIES AND COMPLETING THE INSPECTION AND MAINTENANCE REPORT.
10. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY SHALL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ON SITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGE

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WHICH ARE ALLOWED UNDER THE NPDES GENERAL PERMIT MAY OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD. THESE TYPES OF DISCHARGES WILL BE ALLOWED UNDER THE CONDITIONS THAT NO POLLUTANTS WILL BE ALLOWED TO COME IN CONTACT WITH THE WATER PRIOR TO OR AFTER ITS DISCHARGE.
1. DISCHARGES FROM FIREFIGHTING ACTIVITIES.
2. FIRE HYDRANT FLUSHINGS (SEE NOTE BELOW).
3. WATER USED TO SPRAY OFF LOOSE SOLIDS FROM VEHICLES (WASTE WATERS FROM A MORE THOROUGH CLEANING, INCLUDING THE USE OF DETERGENTS OR OTHER CLEANERS IS NOT AUTHORIZED BY THIS PART) OR CONTROL DUST IN ACCORDANCE WITH PART V.D.2.c (2) OF THE GENERAL PERMIT.
4. POTABLE WATER SOURCES SUCH AS WATERLINE FLUSHINGS, ROUTINE EXTERNAL BUILDING WASHDOWN WHICH DOES NOT USE DETERGENTS, IRRIGATION DRAINAGE (WITHOUT DETERGENTS PRESENT) (SEE NOTE BELOW).
5. PAVEMENT WASHWATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILL MATERIALS HAS BEEN REMOVED) AND WHERE DETERGENTS HAVE NOT BEEN USED.
6. AIR CONDITIONING CONDENSATE.
7. SPRINGS.
8. FOUNDATION OR FOOTING DRAINS WHERE FLOWS WHERE NO CONTAMINATION WITH PROCESS MATERIALS SUCH AS SOLVENTS IS PRESENT.

NOTE: CONTRACTOR SHALL NEUTRALIZE ANY SUPER-CHLORINATED WATER FROM WATER DISTRIBUTION PIPES BEFORE RELEASING IT INTO THE ENVIRONMENT. NEUTRALIZATION TECHNIQUES ARE AVAILABLE FROM THE ENGINEER.

INVENTORY FOR POLLUTION PREVENTION PLAN:
THE FOLLOWING MATERIALS OR SUBSTANCES WITH KNOWN HAZARDOUS PROPERTIES ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION: CLEANING SOLVENTS, DETERGENTS, PETROLEUM BASED PRODUCTS, PAINTS, PAINT SOLVENTS, ACIDS, FERTILIZERS, PESTICIDES, CONCRETE, CONCRETE ADDITIVES, ASPHALTIC CONCRETE, TAR AND SOIL STABILIZATION ADDITIVES.

SPILL PREVENTION:

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILL OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING:
THE FOLLOWING GOOD HOUSEKEEPING PRACTICES SHALL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.
1. AN EFFORT SHALL BE MADE TO STORE ONLY PRODUCTS REQUIRED TO COMPLETE THE PROJECT.
2. ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND IF POSSIBLE, UNDER A ROOF OR OTHER CONTAINED ENCLOSURE.
3. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
4. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
5. WHEREVER POSSIBLE, ALL OF THE PRODUCT SHALL BE USED BEFORE DISPOSING OF THE CONTAINER.
6. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
7. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON SITE.

HAZARDOUS PRODUCTS:
THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.
1. PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINERS ARE NOT SEALABLE.
2. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS (MSDS) SHALL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
3. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S AND/OR STATE AND LOCAL RECOMMENDED METHODS OF PROPER DISPOSAL SHALL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICE

PETROLEUM PRODUCTS:
ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE SHALL BE APPLIED ACCORDINGLY TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS:
FERTILIZERS SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNT RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE SHALL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS:
ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND/OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS:
CONTRACTOR SHALL DESIGNATE AN AREA FOR DISCHARGE OF SURPLUS CONCRETE OR DRUM WASH WATER AND SHALL INSTALL A CONTAINMENT BERM AROUND THIS AREA TO PREVENT RUNOFF TO THE REMAINDER OF THE SITE. HARD DEBRIS SHALL BE DISPOSED OF BY CONTRACTOR UPON COMPLETION OF THE PROJECT.

SPILL CONTROL PRACTICES:
IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIALS PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

1. MANUFACTURERS RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEAN UP SUPPLIES. MATERIAL SAFETY DATA SHEET (MSDS's) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE SHALL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE SWPPP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE.
2. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEAN UP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS SHALL INCLUDE, BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER ABSORBENT, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
3. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
4. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH HAZARDOUS SUBSTANCE.
5. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.

THE SPILL PREVENTION PLAN SHALL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECURRING AND THE CLEAN UP PROCEDURES FOR FUTURE USE. A DESCRIPTION OF THE SPILL, ITS CAUSE AND THE CLEAN UP MEASURES SHALL ALSO BE NOTED. ANY OWNER OR OPERATOR OF A FACILITY WHO HAS KNOWLEDGE OF ANY RELEASE OF A HAZARDOUS SUBSTANCE FROM A FACILITY IN A QUANTITY EQUAL TO OR EXCEEDING THE REPORTABLE QUANTITY IN A 24 HOUR PERIOD SHALL NOTIFY THE STATE WARNING POINT WITHIN ONE WORKING DAY OF THE RELEASE. FDEP 24-HOUR STATE WARNING POINT HOTLINE NUMBER IS 1-800-320-0519.

NOTICE OF TERMINATION:
A NOTICE OF TERMINATION SHALL BE SUBMITTED TO THE FDEP AFTER THE CONSTRUCTION HAS BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.

POLLUTION PREVENTION PLAN CERTIFICATION:
"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME: _____ TITLE: _____

COMPANY: _____ DATE: _____

SIGNATURE: _____

CONTRACTOR'S CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23, 004 , F. A. C.

FILE LOCATION: H:\PROJECTS\0190151.10 NBV CAUSEWAY COMPLETE STREET PROJECT - SHORT TERM IMPROVEMENTS\SB - CAD\0190151.10_06_SWPP.DWG

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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Tel: 305.670.2350 Fax: 305.670.2351
www.bcceng.com
Certificate of Authorization No. 7184

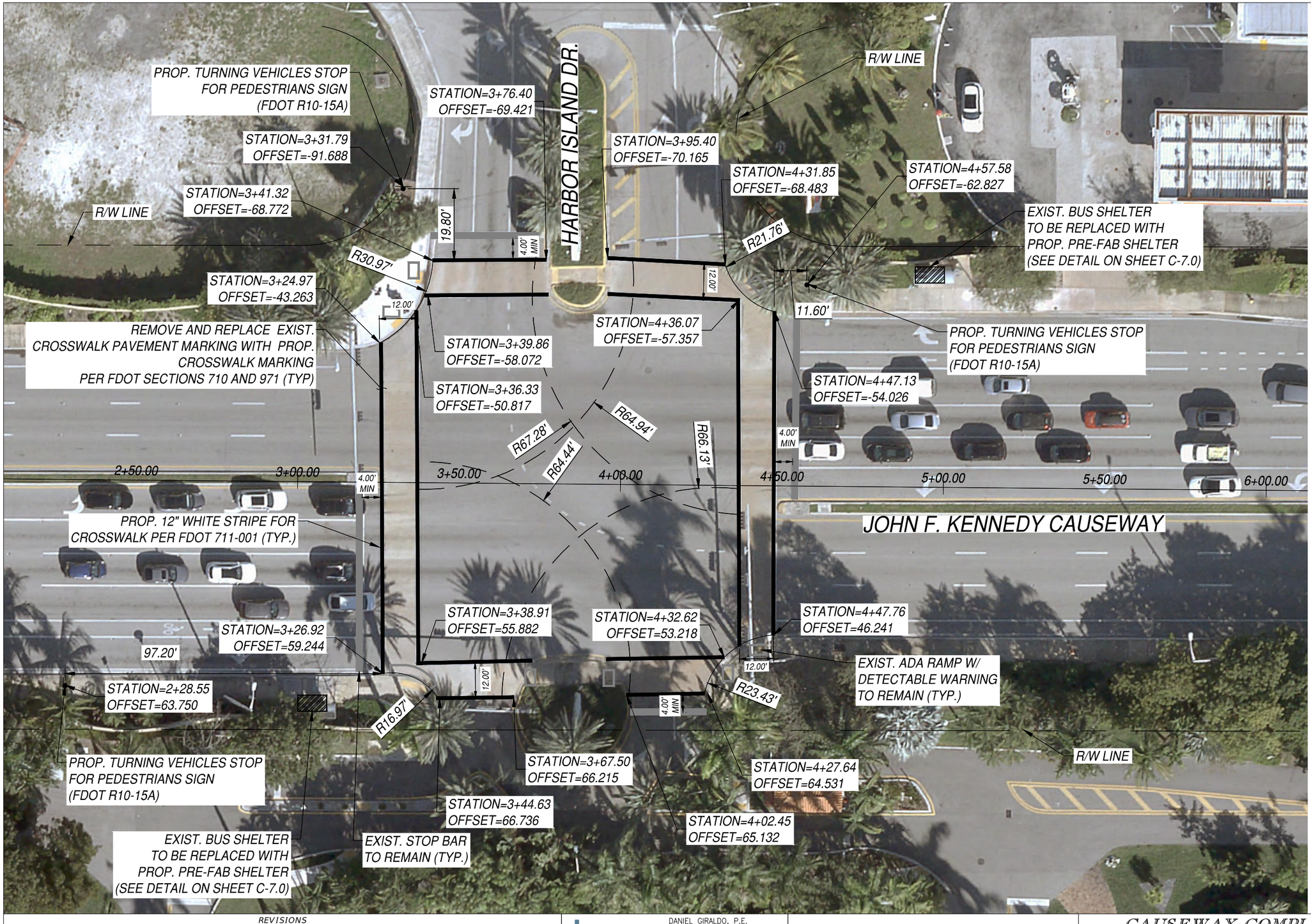
CITY OF NORTH BAY VILLAGE

ROAD NO.	COUNTY	PROJECT NUMBER
SR 934	MIAMI-DADE COUNTY	0190151.10

CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

SITE PLAN

SHEET NO. C-1.0



N

0 10 30

Feet

NOTES

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CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

SITE PLAN

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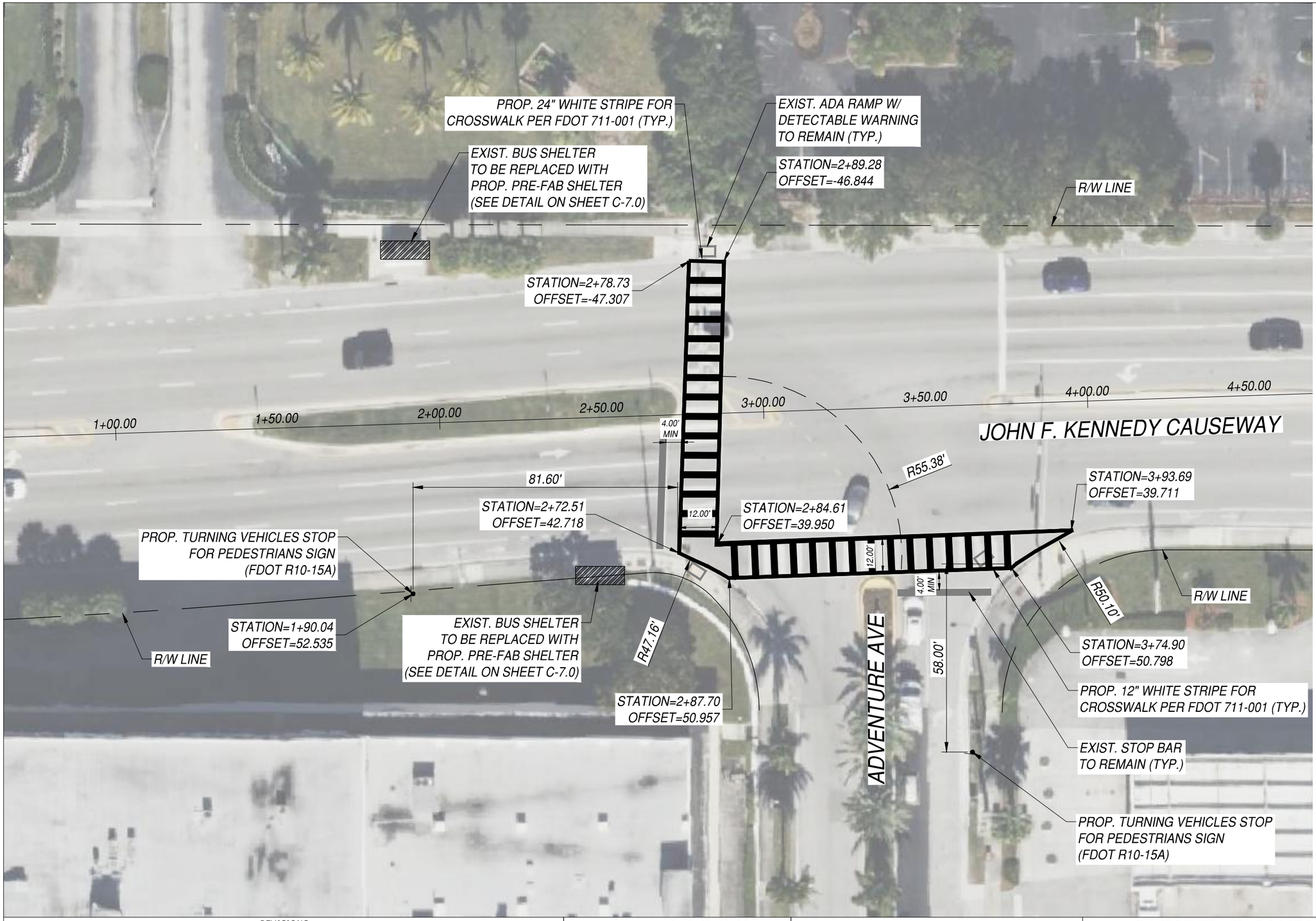

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SR 934	MIAMI-DADE COUNTY	0190151.10

CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

SITE PLAN

SHEET NO. C-2.0

PLOT DATE: 9/11/2024 9:52 AM

PROP. 24" WHITE STRIPE FOR CROSSWALK PER FDOT 711-001 (TYP.)

PROP. CANTILEVER SHELTER TO BE INSTALLED AT EXISTING BUS STOP LOCATION (PER MIAMI DADE COUNTY)

EXIST. ADA RAMP W/ DETECTABLE WARNING TO REMAIN (TYP.)

STATION=3+86.26
OFFSET=-49.312

STATION=3+86.60
OFFSET=-12.867

R/W LINE

STATION=3+77.30
OFFSET=-49.262

12.00'

R50.45'

R47.23'

4.00' MIN

JOHN F. KENNEDY CAUSEWAY

00.00 2+50.00 3+00.00 3+50.00 4+00.00 4+50.00 5+00.00 5+50.00 6+00.

PROP. 12" WHITE STRIPE FOR CROSSWALK PER FDOT 711-001 (TYP.)

STATION=4+16.24
OFFSET=40.503

STATION=4+88.05
OFFSET=36.831

STATION=3+75.45
OFFSET=47.861

61.20'

12.00'

4.00' MIN

R/W LINE

R/W LINE

STATION=3+14.25
OFFSET=46.394

R52.85'

R65.46'

30.00'

PROP. TURNING VEHICLES STOP FOR PEDESTRIANS SIGN (FDOT R10-15A)

STATION=3+84.38
OFFSET=46.864

STATION=4+67.58
OFFSET=49.761

STATION=3+86.16
OFFSET=57.768

EXIST. STOP BAR TO REMAIN (TYP.)

HISPANIOLA AVE

STATION=4+17.72
OFFSET=51.963

PROP. TURNING VEHICLES STOP FOR PEDESTRIANS SIGN (FDOT R10-15A)

N

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Feet

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FILE LOCATION: H:\PROJECTS\0190151.10 NBV CAUSEWAY COMPLETE STREET PROJECT - SHORT TERM IMPROVEMENTS\8 - CAD\0190151.10_18-22_EXHB.DWG

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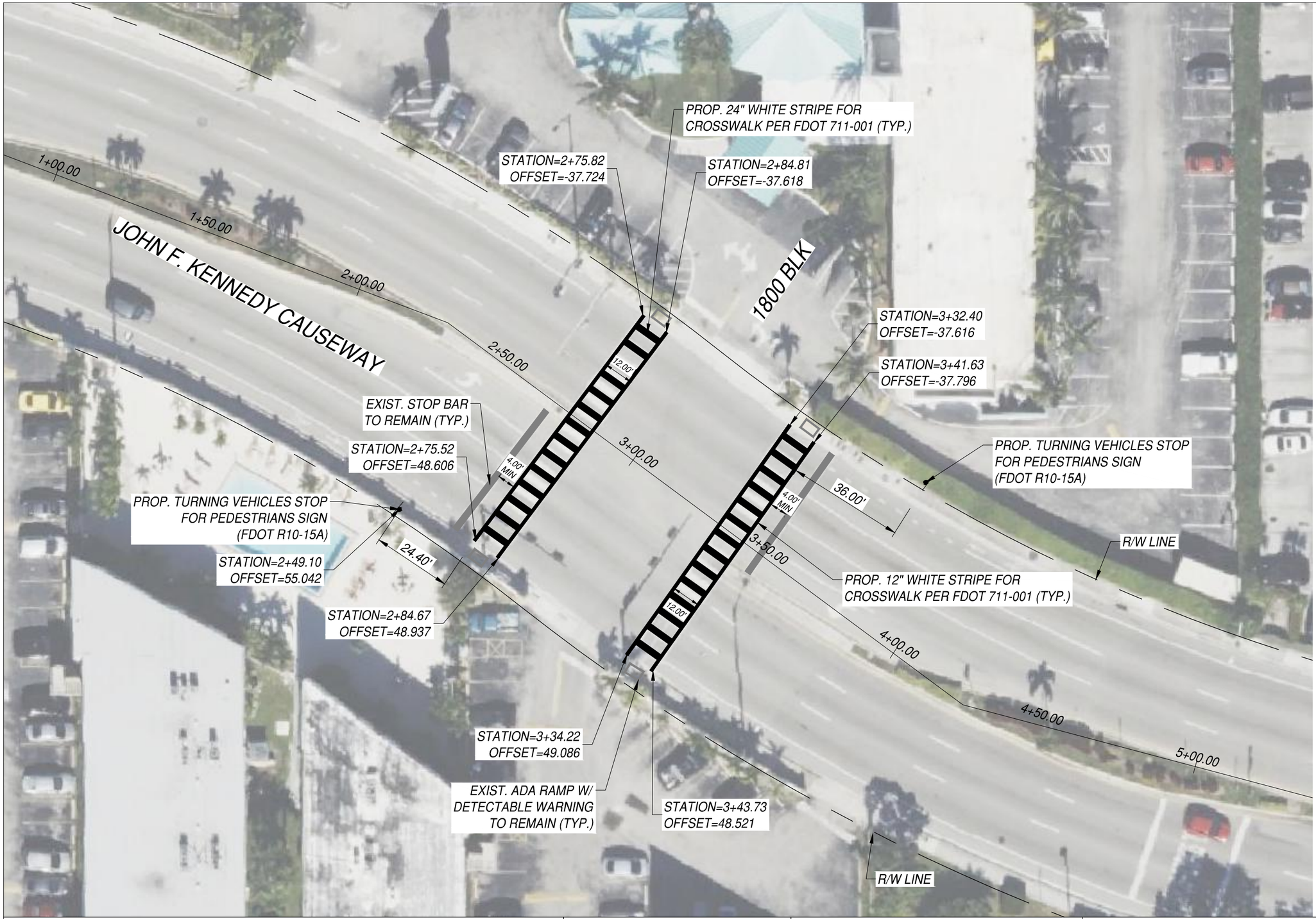
SR 934	MIAMI-DADE COUNTY	0190151.10

CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

SITE PLAN

SHEET NO. C-3.0



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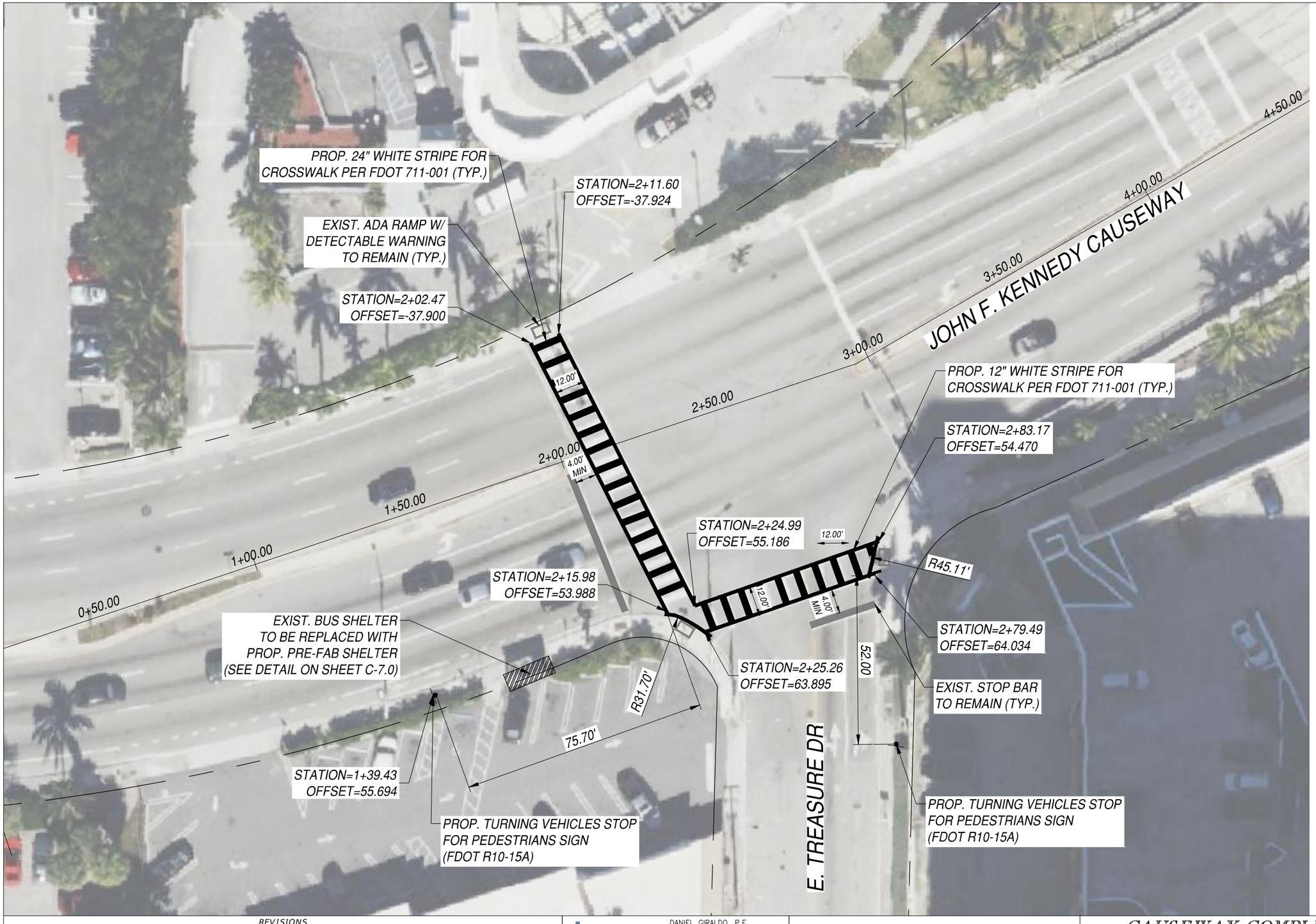
SR 934	MIAMI-DADE COUNTY	0190151.10

CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

SITE PLAN

SHEET NO. C-4.0

PLOT DATE: 9/11/2024 9:54 AM



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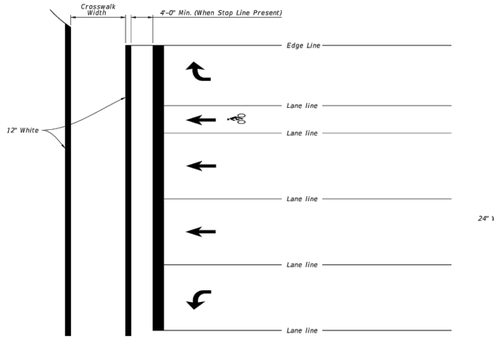
SR 934	MIAMI-DADE COUNTY	0190151.10

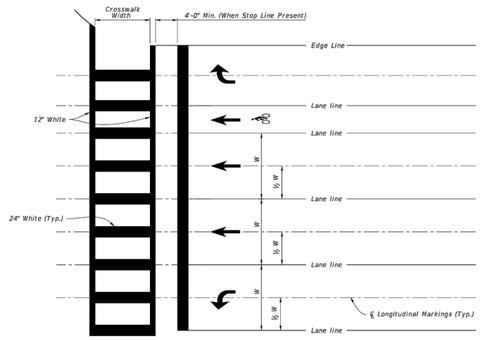
CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

SITE PLAN

SHEET NO. C-5.0



STANDARD CROSSWALK DETAILS



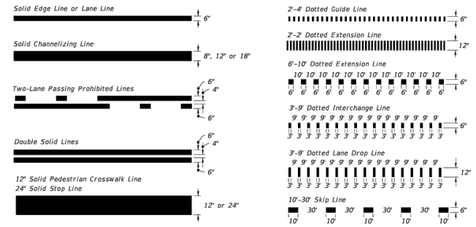
SPECIAL EMPHASIS CROSSWALK DETAILS

NOTES:

1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 6' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.
2. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.
3. Refer to Index 522-002 when Curb Ramps are present.

10/9/2020 3:58:01 PM

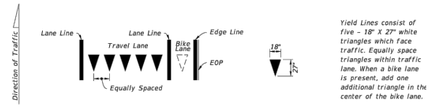
LAST REVISION 11/01/20	DESCRIPTION:	FY 2021-22 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 10 of 13



PAVEMENT MARKING LINES

10'-30' SKIP LINE WITH SHADOW MARKINGS

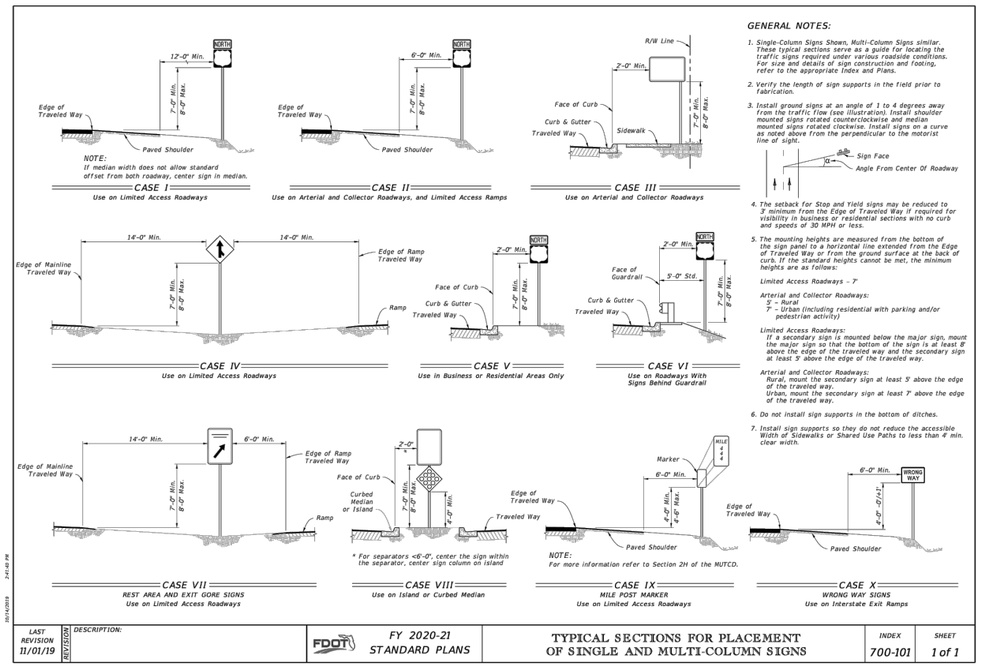
DOTTED LINE WITH ALTERNATING SHADOW MARKINGS
(3'-9' Dotted Line Shown, Other Dotted Lines Similar)



Yield Lines consist of five - 18" X 27" white triangles which face traffic. Equally space triangles within traffic lane. When a bike lane is present, add one additional triangle in the center of the bike lane.

YIELD LINES

LAST REVISION 11/01/19	DESCRIPTION:	FY 2021-22 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 2 of 13



GENERAL NOTES:

1. Single-Column Signs Shown, Multi-Column Signs similar. These typical sections serve as a guide for locating the traffic signs required under various roadside conditions. For size and details of sign construction and footing, refer to the appropriate Index and Plans.
2. Verify the length of sign supports in the field prior to fabrication.
3. Install ground signs at an angle of 1 to 4 degrees away from the traffic flow (see illustration). Install shoulder mounted signs rotated counterclockwise and median mounted signs rotated clockwise. Install signs on a curve as noted above from the perpendicular to the motorist line of sight.

4. The setback for Stop and Yield signs may be reduced to 3' minimum from the Edge of Traveled Way if required for visibility in business or residential sections with no curb and speeds of 30 MPH or less.
5. The mounting heights are measured from the bottom of the sign panel to a horizontal line extended from the Edge of Traveled Way or from the ground surface at the back of curb. If the standard heights cannot be met, the minimum heights are as follows:

   Limited Access Roadways - 7'

   Arterial and Collector Roadways:
   5' - Rural
   7' - Urban (including residential with parking and/or pedestrian activity)

   Limited Access Roadways:
   If a secondary sign is mounted below the major sign, mount the major sign so that the bottom of the sign is at least 8' above the edge of the traveled way and the secondary sign at least 5' above the edge of the traveled way.

   Arterial and Collector Roadways:
   Rural, mount the secondary sign at least 5' above the edge of the traveled way.
   Urban, mount the secondary sign at least 7' above the edge of the traveled way.
6. Do not install sign supports in the bottom of ditches.
7. Install sign supports so they do not reduce the accessible Width of Sidewalks or Shared Use Paths to less than 4' min. clear width.

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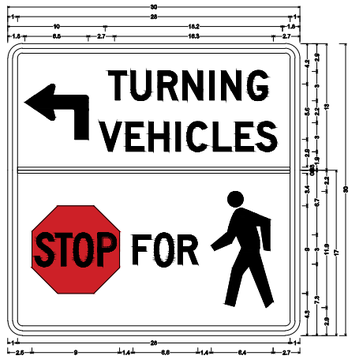
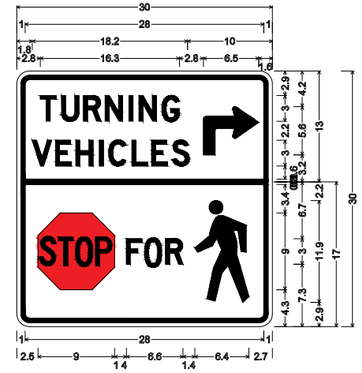
LAST REVISION 11/01/19	DESCRIPTION:	FY 2020-21 STANDARD PLANS	TYPICAL SECTIONS FOR PLACEMENT OF SINGLE AND MULTI-COLUMN SIGNS	INDEX 700-101	SHEET 1 of 1



IDENTIFIER: R10-15aL_30"X30"
1.5" RADIUS, 0.5" BORDER, 0.5" INDENT, BLACK ON BRIGHT YELLOW GREEN;
90 DEG ADVANCE TURN ARROW CUSTOM 6.5"X5.7";
"TURNING" D 2K; "VEHICLES" D 2K;
1.5" RADIUS, 0.5" BORDER, 0.5" INDENT, BLACK AND WHITE;
R1-1; "FOR" D 2K 60% SPACING;



IDENTIFIER: R10-15aR_30"X30"
1.5" RADIUS, 0.5" BORDER, 0.5" INDENT, BLACK ON BRIGHT YELLOW GREEN;
"TURNING" D 2K; "VEHICLES" D 2K;
90 DEG ADVANCE TURN ARROW CUSTOM 6.5"X5.7";
1.5" RADIUS, 0.5" BORDER, 0.5" INDENT, BLACK AND WHITE;
R1-1; "FOR" D 2K 60% SPACING;

LOWER SECTION:

COLORS: LEGENDS, BORDERS --- BLACK
YIELD SYMBOL --- RED (RETROREFLECTIVE)
BACKGROUND --- WHITE (RETROREFLECTIVE)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DANIEL GIRALDO, P.E.
FLORIDA LICENSE NO.: 94566
6401 SW 87th Avenue, Suite 200
Miami, Florida 33173
Tel: 305.670.2350 Fax: 305.670.2351
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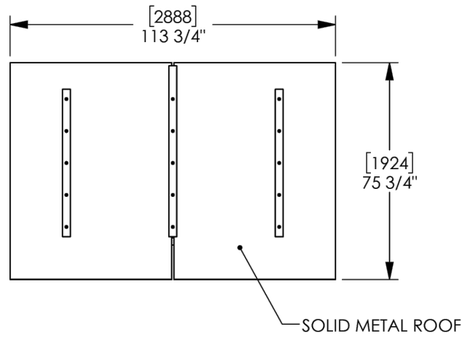
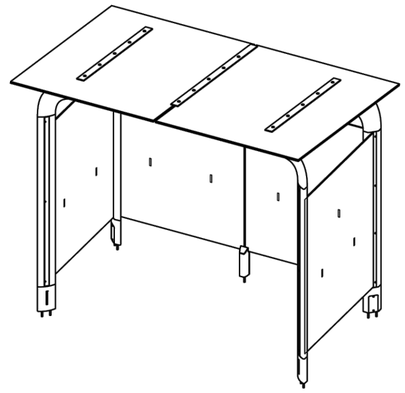
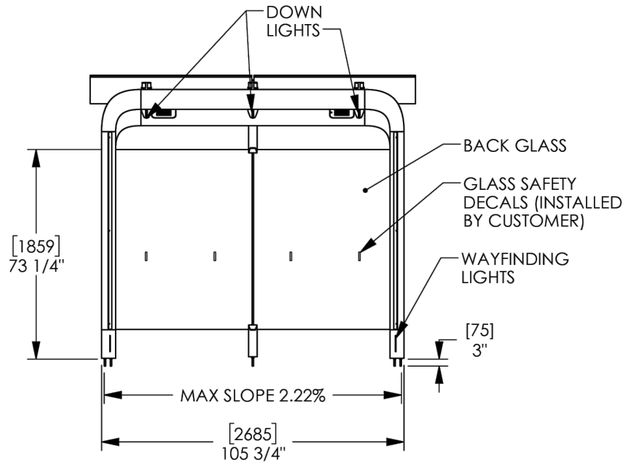
Certificate of Authorization No. 7184

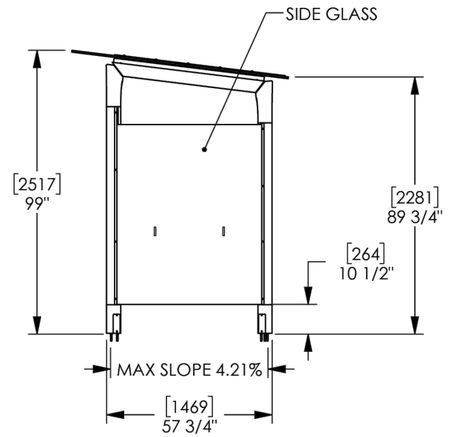
CITY OF NORTH BAY VILLAGE			CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS	SHEET NO.
ROAD NO.	COUNTY	PROJECT NUMBER	GENERAL DETAILS	C-6.0
SR 934	MIAMI-DADE COUNTY	0190151.10		

UNIT MUST BE ANCHORED.
INCLUDES 1/2-13 x 8" THREADED RODS, NUTS AND WASHERS FOR ANCHORING, WITH 2-3/8" OF ADJUSTABILITY.









NOTES

1. CONTRACTOR TO PROVIDE FINAL BUS SHELTER DESIGN.
2. NORTH BAY VILLAGE LOGO MUST BE INCLUDED WITH THE FINAL BUS SHELTER DESIGN.
3. BUS SHELTER MUST BE ANCHORED IN A 4000 PSI CONCRETE SLAB WITH A MINIMUM DEPTH OF 8" AND A MINIMUM HORIZONTAL CONCRETE COVER FOR ALL ANCHOR BOLTS OF 6".

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CITY OF NORTH BAY VILLAGE

ROAD NO.	COUNTY	PROJECT NUMBER
SR 934	MIAMI-DADE COUNTY	0190151.10

CAUSEWAY COMPLETE STREETS - SHORT TERM IMPROVEMENTS

BUS SHELTER SCHEMATIC DETAILS

SHEET NO. C-7.0