



**INVITATION TO BID (ITB)  
BID # FY 2017-2018-016**

**43<sup>RD</sup> YEAR COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)  
PUBLIC WORKS STORMWATER IMPROVEMENTS PROJECT**

**EXHIBIT A – TECHNICAL SPECIFICATIONS**

# City of Hallandale Beach



## Technical Specifications

### **43 YR CDBG Improvements NW 2<sup>nd</sup> Avenue From NW 4<sup>th</sup> Street to NW 5<sup>th</sup> Street**

Prepared by:



**R.J. Behar & Company, Inc.**  
Engineers • Planners

6861 S.W. 196<sup>th</sup> Avenue, Suite 302  
Pembroke Pines, FL 33332

**Juan H. Vazquez, PE, PH, BCEE**  
PE License No. 51143,  
Certificate of Authorization No. 00008365

**SPECIAL PROVISIONS  
FOR**

**43 YR CDBG Improvements  
NW 2<sup>nd</sup> Avenue  
From NW 4<sup>th</sup> Street to NW 5<sup>th</sup> Street**

**1. GENERAL**

The applicable portions of the July 2018 Edition of the FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION and its supplements with changes pertaining thereto, as amended by the general Specifications and the following Special Provisions; all are hereby made a part of this Contract. All testing, as required, shall be the responsibility of the Contractor, who shall submit test results to the City Inspector for his approval. Further, the applicable portions of the SOUTH FLORIDA BUILDING CODE and the BROWARD COUNTY MINIMUM STANDARDS, shall apply to this project.

Unless otherwise noted, all page references in the Special Provisions refer to the Florida Department of Transportation's STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION. All references to the Florida Department of Transportation (Department) as it relates to the Owner shall refer to the City of Hallandale Beach.

**2. LOCATION OF WORK**

The area where the work is to be performed is **NW 2<sup>nd</sup> Avenue from NW 4<sup>th</sup> Street to NW 5<sup>th</sup> Street**. The exact location and limits of construction are shown in the plans accompanying the contract documents.

**3. SECTION 2, PROPOSAL REQUIREMENTS AND CONDITIONS**

This section is deleted. Refer to the City of Hallandale Beach bid documents and requirements.

In addition, the City assumes no responsibility for the accuracy of any test results shown in the plans. They are included only as a general indication of the materials likely to be found adjacent to the holes bored at the site of the proposed work. The Contractor shall examine these data and interpret the subsoil investigation and other preliminary data, and the bid shall be based on the contractor's opinion of the conditions likely to be encountered. The proposal the bidder submits, shall be considered "prima facie" evidence that the bidder has made an examination of the information provided and the site conditions.

**4. SECTION 3, AWARD AND EXECUTION OF CONTRACT**

This section is deleted. Refer to the City of Hallandale Beach bid documents and requirements.

**5. SECTION 4, SCOPE OF WORK**

Page 20, Section 4-1, Intent of Contract shall read: The work proposed under this contract consists of furnishing all supervision, labor, materials, transportation equipment, tools and any incidentals necessary to perform all operations for roadway milling and resurfacing, pavement restoration, swale regrading and stabilization, driveway restoration, curb and gutter, curb valley gutter, sidewalk, exfiltration drainage system, storm sewers, drainage structures, sodding, signing and pavement markings.

**6. SECTION 5, CONTROL OF THE WORK**

Page 32, Section 5-1.2, Department's Plans, add the following: plans accompanying these contracts documents are entitled **43 Year CDBG Improvements, NW 2<sup>nd</sup> Avenue from NW 4<sup>th</sup> Street to NW 5<sup>th</sup> Street.**

**7. SECTION 7, LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC**

Page 61, Section 7-2.1 – General: This subarticle is amended to include the following:

Permits which are issued by CITY OF HALLANDALE BEACH for construction within the public right-of-way, will be issued at no cost to the Contractor.

Additional permits, which may be required by other municipalities or agencies, including those required for tree removal, will be the responsibility of the Contractor.

Page 67, Section 7-11 – Preservation of Property: This sub-article is expanded to include:

Property public or private damaged during construction or removed for the convenience of the work, shall be repaired or replaced at the expense of the Contractor in a manner acceptable to the City Inspector, prior to the final acceptance of the work. Such facilities shall include, but are not limited to: signalization equipment and miscellaneous hardware removed from the construction site, driveways, mailboxes, walkways, walls, fences, footings or underground utilities.

**NOTE:** All street name signs shall remain in place during the period of construction except those that are required to be relocated due to interference with the actual construction. All signs that are relocated or damaged by the Contractor during the course of the work shall be re-installed or replaced at the proper location, as soon as possible by the Contractor.

Prior to the removal of any traffic control signs that interfere with the construction, the Contractor shall provide temporary signing or other provisions to assure a continuous flow of traffic under at least the same conditions as previously existed.

All signs that are found to be unserviceable shall be reported to the City of Hallandale Beach.

Page 69, Section 7-11.5 – Utilities: This sub-article is expanded to include:

The Contractor shall make all necessary arrangements with the utility companies concerned for maintenance of their lines during the construction period. The utility companies will provide the Contractor with updates of their schedules for completing any required relocation work. The Contractor shall incorporate these schedules into his/her sequence of construction.

NOTE:The Contractor shall contact the Sunshine 811 at least forty-eight (48) hours prior to commencing any trenching or excavation on this project.

## **8. SECTION 8, PROSECUTION AND PROGRESS**

Page 84, Section 8-3.5 – Preconstruction Conference: This sub-article is expanded to include:

After the award of contract and prior to the issuance of the “Notice to Proceed,” a Preconstruction Conference will be held with the Contractors, members of the City of Hallandale Beach Departments, representatives of Utility Companies, and other contractors affected by the work. The time and place of this conference will be set by the City of Hallandale Beach.

At the Preconstruction Conference, the Contractor must provide two copies of a detailed construction schedule showing the proposed starting and completion dates for each work classification or bid item. The work classification should be sub-divided to the extent necessary to provide adequate detail and shall also include such items as mobilization, shop drawing review, etc.

Page 84 Section 8-4.1 – Night Work: Replace this article as follows:

No work shall be done at all on Sunday or any day between the hours of 7:00 p.m. and 7:00 a.m., except such work as is necessary for the proper care and protection of the work already performed, or, except that permission do such work may be secured from the City Inspector.

## **9. PROJECT SIGN**

The Contractor shall construct two project signs in accordance with the instructions of the City inspector. The signs shall be constructed of ¾-inch Marine Plywood, newly painted and lettered according to the instructions of the City inspector. The signs shall be painted and lettered in accordance with professional outdoor sign painting standards as to layout, symmetry, proportion, clarity, neatness and use of weather-resistant colors and materials. The Contractor shall place the signs, securely braced and mounted, as directed by the City Inspector. All materials, except for decals as applicable, shall be provided by the Contractor

and the signs shall remain the property of the Contractor at the completion of the Contract. No work shall commence until the project signs are secured in place.

No separate payment will be made for the project signs.

## **10. FIELD OFFICE**

Field office will not be needed.

## **11. PAYMENT ADJUSTMENT – BITUMINOUS MATERIAL**

Page 96, Section 9-2.1.1 – Fuels: This sub-article is replaced as follows: No contract adjustment will be made for fuel requirements. Unit prices submitted at the time of bid will be used for payment purposes.

Page 97, Section 9-2.1.2 – Bituminous Material: This sub-article is replaced as follows: Contractor shall submit Certification of Quantities as required by the contract documents.

No contract adjustment will be made to bituminous material based on increases or decreases of Asphalt Price Index. Unit prices submitted at the time of bid will be used for payment purposes.

Page 102, Section 9-5.5 – Partial Payments for Delivery of Certain Materials: This sub-article is replaced as follows: No partial payments will be allowed for materials stockpiled.

## **12. SECTION 101: MOBILIZATION**

Page 108, Section 101-2.2 – Partial Payments: This sub-article is replaced as follows: This work shall be paid on a lump sum basis. Payments will be divided equally over the life of the contract and paid on a monthly basis.

## **13. SECTION 102: MAINTENANCE OF TRAFFIC**

Page 109, Section 102-1 – Description: This sub-article is amended to include:

Temporary Traffic Control Details are included in the Plans for this project. No work shall commence on this project or any portion thereof without implementation of this Plan.

Excavated or other material stored adjacent to, or partially upon a roadway pavement, shall be adequately marked for traffic safety at all times.

The Contractor shall provide the necessary access to all adjacent property during construction. This may include temporary limerock base at driveways and/or closing only one driveway per property at a time. Cost should be included as part of the Lump Sum item for Maintenance of Traffic.

Special attention shall be given for directing the flow of pedestrian and vehicular traffic, especially in areas surrounding schools. At the discretion of the City Inspector, the City may require the Contractor to call for and hire off-duty police officers for directing the traffic and maintaining safety if in any way the operations will curtail the use of the streets, roads and work areas specified herein.

Page 126, Section 102-13 – Basis of Payment: Partial payment for lump sum Maintenance of Traffic shall be made with each partial progress estimate. Partial payment shall be provided on progress estimates and shall be provided on a percentage equal to the percentage of contract time expired.

#### **14. SECTION 105: CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS**

Section 105: This Section is replaced as follows:

105.01 CONTRACTOR QUALITY CONTROL: The Contractor shall provide and maintain an effective quality control program that will demonstrate compliance with the contract specifications.

- A. Establish a quality control system to perform sufficient inspection of all items of Work, including that of Subcontractors, to insure conformance to the Specifications and Drawings with respect to the materials, workmanship, construction, equipment performance, and identification.
- B. The Contractor's job supervisory staff may be used for quality control, supplemented as necessary by additional personnel for surveillance or special technicians to provide capability for the controls required by the Technical Specifications. The Contractor's quality control plan must clearly identify the quality control leader and personnel organizational system. The leader must have the authority to direct the removal and replacement of work.
- C. After the Contract is awarded and before construction begins, the Contractor shall meet with the City or its representative to discuss quality control requirements. The meeting shall develop mutual understanding relative to details of the system, including the Contractor's forms to be used for recording the quality control operations, inspections, administration of the system, and the interrelationship of Contractor and City inspection.
- D. All compliance inspections shall be recorded on appropriate forms, including but not limited to the specific items required in each section of the Technical Specifications. Those forms, including record of corrective actions taken, shall be furnished to the City. The City's quality control representative shall maintain a check off list of all deficiencies which are not corrected the same day as they are discovered.

- E. Should recurring deficiencies in an item or items indicate that the quality control system is not adequate, the Contractor shall take such corrective actions as may be directed by the City.
- F. Contractor shall submit his written quality control plan for review, describing the activities and listing those inspection and testing activities that the Contractor will perform prior to beginning the Work. The Contractors Quality Control Plan shall describe how he will communicate timely notification to allow for test and inspection activities performed by the City, or its representatives, for on and off-site construction activities.
- G. Ensure that the equipment used in the production and testing of the materials provides accurate and precise measurements in accordance with the applicable Specifications. Maintain a record of all inspections, including but not limited to, date of inspection, results of inspection, and any subsequent corrective actions taken. Make available to the City the inspection records, when requested.

105.02 TESTING LABORATORY SERVICES: All tests which require the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing laboratory acceptable to City. The laboratory shall be staffed with experienced technicians, properly equipped, FDOT certified, and fully qualified to perform the tests in accordance with the specified standards. Submit certifications prior to placement of materials.

105.03 TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR: Testing that the City will coordinate and pay for is described in Section 1.04 below. All other testing laboratory services in connection with tests (which are identified as the Contractor's responsibility in the Contract Documents) shall be performed and paid for by the Contractor, and a certified copy of the results will be furnished to the CITY within 5 days of the test. The Contractor shall pay all charges for services on: cast-in-place concrete, moisture density (Proctor) and relative density tests on embankment, fill and backfill materials, in-place field density tests on embankments and fills, and paving construction.

The Contractor is also responsible for testing and inspection services required to achieve an effective quality control program, to assure that the work strictly complies with the contract requirements. Contractor shall pay all costs for such services. Contractor shall also pay for any tests performed by City which do not meet Specifications, as described below.

1.04 TESTING LABORATORY SERVICES FURNISHED BY CITY:

- A. The City may secure the services of a material's testing company, for field and laboratory tests verification, for certain items of work. The City shall only pay for cost of verification tests. Verification sampling and testing will be performed in the general manner indicated in the Specifications, with minimum interference with construction operations.

While the Contractor may perform testing in order to proceed to a following construction stage, the City will determine the exact time and location of field sampling and testing, and may require additional sampling and/or testing as necessary to determine that materials and equipment conform with Contractor-submitted data and with the Contract Documents.

- B. Arrangements for delivery of samples and test specimens to the testing laboratory under this paragraph will be made by the Contractor. The testing laboratory shall perform all laboratory tests within a reasonable time consistent with the specified standards and shall furnish a written report of each test.
- C. Contractor shall furnish all sample materials and cooperate in the sampling and field testing activities, interrupting the Work when necessary.
- D. Testing Laboratory employed by the City will not be authorized to:
  - 1. Release, revoke, alter or enlarge on requirements of the Contract Documents.
  - 2. Approve or accept any portion of the Work.
  - 3. Perform any duties of the Contractor.

Costs for material testing shall be included within the applicable items of construction.

#### **15. SECTION 110: CLEARING AND GRUBBING**

Page 159, Section 110-1 – Description: This sub-article is amended to include:

The Contract Unit Price bid as indicated in the Bid Form of the proposal shall be full compensation for all work required for clearing and grubbing; removal and disposal of flexible pavement, curb and gutter, drainage structures and pipes, miscellaneous concrete, vegetation, trash and debris, and miscellaneous roadway items; and cleaning of existing drainage systems left in place within the Project. The bid price for this item shall include all costs of disposing of sediments removed from existing drainage structures.

Page 164, Section 110-12 – Basis of Payment: This sub-article is amended to include: Partial Payment for lump sum clearing and grubbing shall be made with each partial progress estimate. Partial payment shall be provided on progress estimates on a percentage equal to the percentage of clearing and grubbing work performed.

#### **16. SECTION 120: EXCAVATION AND EMBANKMENT**

Page 167, Section 120-1.2 – Unidentified Areas of Contamination: This article is amended as follows: Delete paragraphs 3 to 6. The City may hire an external contractor (CAR) to manage possible contamination materials or contract with the Prime Contractor to manage any possible contamination materials. Coordinate and cooperate with the CAR for completion of the work efforts.

Page 180, Section 120-12 – Construction: This article is amended to add the following:

The Contractor shall include the costs of all grading in the unit bid prices for the appropriate items. No separate payments will be made for any grading required on this project. The Contractor shall provide an As-built survey of profile grade prior to placing asphaltic concrete. The survey shall be taken at 50' intervals, along finished limerock. The survey shall include points along center line construction and lip of curb for roadway and edge of pavement for shoulder areas. The Contractor will refinish areas not conforming to specified tolerance in Article 120-12.1.

Page 180, Section 120-13 Method of Measurement Article 120-13.2 Roadway Excavation, is Modified as Follows:

The Contractor is advised that Roadway Excavation measurement for payment shall be made by the difference in volumes determined by elevations taken prior to excavation and elevations taken after excavation compacted and shaped in accordance with the plans and contract documents. The Contractor shall include these survey costs within the unit prices for excavation and embankment items. No payment will be made for grass swales regrading.

#### **17. SECTION 200: ROCK BASE**

Page 215, Section 200-5 – Spreading Rock: This section is amended to include: At the option of the City Inspector, unless the use of forms is specifically called for in the plans, the base may be constructed six inches wider in lieu of using forms. These extra widths will not be measured for payment and shall be provided at no additional expense to the City.

Page 216, Section 200-6 – Compacting and Finishing Base: This section is amended to include: Prior to placing the base, the subgrade will be inspected by the City Inspector to ascertain whether or not the work satisfies the requirements to the specified density, lines, grades, and cross sections. It shall be the responsibility of the Contractor to maintain the required subgrade density until the base is placed in the subgrade.

Page 217, Section 200-7.2.1 – Density: This section is amended to include: The minimum density, which will be acceptable at any location outside the traveled roadway (such as intersections, crossovers, turnouts, etc.) shall be 95% of maximum density.

Page 220, Section 200-8– Priming and Maintaining: This section is amended to include: Upon the City Inspector's approval of the limerock base, it shall be primed with a prime coat having a minimum curing period of 48 hours. Under no circumstances will the City Inspector allow the prepared base to remain unsurfaced pending completion of other work remaining on the project.

Page 220, Section 200-10 – Method of Measurement: This section is amended to include: The areas of base course to be measured for payment shall include the areas of extra base required at various intersections. The cost of replacing base materials removed only for the construction of underground items shall be included in the bid price for the various items.

Page 221, Section 200-11 – Basis of Payment: This section is revised to read: The quantity of limerock base, determined as provided in this section, shall be paid for at the unit price as indicated in the Bid Form of the proposal. Such price and payment shall be full compensation for all work specified for the complete construction of the base course as specified herein, including the necessary preparation and compaction of the subgrade, correcting all defective surfaces of the subgrade removing all cracks and checks as provided in 200-6.4.2, and/or deficient thickness and priming of the base course.

### **18. SECTION 300: PRIME AND TACK COATS FOR BASE COURSES**

Page 255, Section 300-10 Basis of Payment: This article is modified to read:

A prime coat is required for all limerock base construction and the cost will be included in the unit price bid for limerock base per square yard as noted in the Bid Form of the Proposal. No separate payment shall be made for the prime coat or its application.

### **19. SECTION 334: SUPERPAVE ASPHALT CONCRETE**

Page 284, Section 334-3.2.1 – General: This article is modified to add the following:

No work shall be started on this portion of the contract until the Contractor has conferred with the City Inspector and has submitted the mix designs to be used and has obtained approval prior to construction:

The verification of conformity to specification of a job mix formula, submitted by the Contractor, could be granted if the plant has previously operated in conformity with the same material specification as used in this contract. Provide documentation that the mix designs has been granted approval on other jobs by the Florida Department of Transportation.

Page 296, Section 334-8 – Basis of Payment: This article is modified as follows: Payment will full compensation for furnishing all new materials, for mixing, hauling, compacting, and testing new pavement as directed and accepted by the City on a per TON basis as noted in the Bid Form of the Proposal. Delete Section 334-8.2 and 334-8.3.

### **20. SECTION 425: INLETS, MANHOLES AND JUNCTION BOXES**

Page 451, Section 425-8.2 – Adjusted Structures: This subarticle is expanded to include:

All structures such as manholes, valve boxes, or existing inlets shall be adjusted to the final grades. If no item of payment is provided in the Bid Form, the cost shall be included in other items of work. Upon completion of the work, and prior to acceptance and final payment, all such structures will be inspected by the City Inspector to ensure that they are free of all debris and thoroughly cleaned. No additional payment will be made for removing debris and cleaning the structures.

### **21. SECTION 430: PIPE CULVERT**

Page 452, Section 430-1 Description: This section has been expanded to include:

Pipe culverts, installed under the terms of these contract documents shall consist of the same material throughout the project – for example – all RCP, or all HDPE.

\*Contractor's option Bid for Storm Sewer Pipe can be different than option for Exfiltration Drain.

Page 461, Section 430-9.3 Installation Requirements Including Trenching, Foundation and Back Filling Operations. This section is amended to add:

Backfilling to the original ground surface or subgrade surface of openings made for the above structures is included in the work required under this Section. All material used for backfill shall be of a quality acceptable to the City Inspector. It shall consist of well graded limerock or limerock and sand fill, free of deleterious material. The structures shall be inspected by the City Inspector, in place, prior to the actual backfilling.

Page 462, Section 430-12.1 General. This section is modified to read:

Payment for the work under this Section shall be full compensation for furnishing of the pipe culvert, fittings (coupler bands, gaskets, etc.) and all materials required for the work specified, including excavation, backfilling, restoration of pavement, curb and gutter, sidewalks, etc., as shown on the Plans, disposal of surplus material, clean-out and all other items necessary to complete the work within the intent of these specifications. The Contractor shall not include any costs incurred for pavement, sidewalk, and curb and gutter restoration in the price for the Pipe Culvert if payment for these items are specifically provided for in separate bid items.

## **22. FRENCH DRAIN (EXFILTRATION TRENCH) (SECTIONS 443 AND 514)**

Page 472, Section 443-3 Excavating Trench. This section is expanded to include:

The Contractor shall furnish, place and maintain sheet piling, underpinning or other approved bracing and shoring material, which may be required to support the sides of the excavation and prevent any failure of the trench walls, which in any way may delay construction, endanger personnel, damage public or private property or be determined to maintaining traffic. All such work shall be in accordance with the governing specifications and payment shall be considered incidental to the unit price bid for French Drain. No additional payment will be made.

Page 473, Section 443-5 Placing Coarse Aggregate and Backfilling. Add the following:

Areas where the filter is to be placed shall be reasonably smooth and free of projections which could damage the filter material.

The material shall be loosely laid (not stretched). Adjacent strips shall overlap by a minimum of one foot. The filter material shall be placed in such a manner that no bridging effects occur and in no place shall there be voids between the filter material and the surrounding trench.

When placing the ballast rock for bedding of the pipe as well as backfill, the ballast rock as well as the adjacent sides of the trench shall be thoroughly saturated to reduce the possibility of voids occurring after placement of the ballast rock. Any voids or pockets created should then be refilled with ballast rock.

Page 473, Section 443-6 Method of Measurement. This article is modified to read:

The quantity of French Drain to be paid for under this Section shall be the length in linear feet measured in place, completed and accepted, as indicated on the Plans.

Page 473, Section 443-7, Basis of Payment. This section is amended to add:

The quantity of French Drain to be paid for under this Section shall include the plastic filter blanket when the utilization of such is required, as indicated on the Plans.

**23. SECTION 522: CONCRETE SIDEWALK AND DRIVEWAYS**

Page 710, Section 522-1, Description: This article is expanded to include:

The work specified under the Section consists of the construction and or replacement of sidewalks utilizing Class I Concrete having a minimum compressive strength of 3,000 p.s.i. at 28 days. The width, thickness and type shall be as shown and noted in the Plans. All work will be in accordance with this Section except as modified herein.

PAGE 711, SECTION 522-10, Basis of Payment: Delete this article and substitute the following:

The quantity, determined as provided above, shall be paid for at the contract unit price bid per square yard for each particular type of sidewalk construction as designed and noted in the plans. Such price and payment shall be full compensation for all work specified under this Section, including the necessary preparation and compaction of the subgrade in both cut and fill areas, as well as backfilling, grading and final dressing required as directed by the City Inspector.

Payment will be made under the following item(s) as applicable:

<u>Description</u>	<u>Unit</u>
CONCRETE SIDEWALK (6" thick) (Class I Concrete, 3000 p.s.i.)	S.Y.
CONCRETE PEDESTRIAN RAMPS (4" thick) (Class I Concrete, 3000 p.s.i.)	S.Y.

## **24. SECTION 572 - TREE RELOCATION**

Relocate, establish and maintain landscaping in accordance with the Contract Documents.

**Water:** Meet the requirements of Section 983.

**Mulch:** Use of cypress mulch is prohibited.

**Soil:** Remove unsuitable soil and debris to root ball depth. Replace soil meeting the requirements of Section 987.

**Submittals:** Before the preconstruction meeting, submit as applicable:

- a. Schedule of values for each item of work.
- b. Weed control product information and application procedures.
- c. Watering application procedures.
- d. Soil amendment product information and application procedures.
- e. Fertilizer product information and application procedures.
- f. Landscape Contractor Certification by the Florida Nursery Growers and Landscape Association.
- g. Arborist Certification by the International Society of Arboriculture.
- h. Shop drawing of the tree tagging method to the City's Landscape Architect for review.
- i. Root pruning procedures.

### **Installation.**

**Installation Plan:** Not less than 14 days before the scheduled installation, submit an Installation Plan to the Engineer for review and comment. Specifically describe the methods, activities, materials and schedule to achieve installation of plant material and incidental landscaping.

**Layout:** Before installation, mark proposed individual locations of plants as shown in the Contract Documents. Notify the Engineer when marking is complete. Adjust final locations when directed by the Engineer to accommodate unforeseen field conditions or to comply with safety setbacks and requirements. Make no changes to the layout, materials or any variations of plant materials from the Contract Documents without the Engineer's written approval.

**Soil Drainage:** Planting holes and beds must drain sufficiently. Notify the Engineer of drainage or percolation problems before plant installation.

### **Relocation:**

- a. A FNGLA certified landscape contractor shall direct landscape operations. Meet the requirements in the Contract Documents.
- b. Attach tree identification tags that match the plan numbers.
- c. Water the root zones to Field Capacity for 5 continuous days before root pruning.
- d. Root prune with equipment to sever roots. Ensure roots are not torn or pulled apart.
- e. Root prune 8 weeks before relocation.
- f. Maintain the soil moisture at field capacity throughout the 8 weeks.

**Site Repair and Restoration:** Repair and restore existing areas disturbed by relocation, establishment or maintenance activities. Where new turf is required to restore and repair disturbed areas, meet the requirements of Section 570.

**Disposal of Debris:** Remove and dispose of debris and excess material generated from the installation at the end of each day's work.

**Reporting:** Certify monthly that the plants have been installed and are being established and maintained in accordance with the Contract Documents.

**Installation Completion:** Notify the Engineer no less than seven calendar days in advance of completion. Upon completion of the installation of plants and incidental landscaping, certify that the landscaping has been installed and is being established in accordance with the Contract Documents.

**Establishment.**

**Establishment Plan:** Submit an Establishment Plan to the Engineer for review and comment. Installation will be considered complete only when the Establishment Plan has been accepted by the Engineer. Specifically describe the methods, activities, materials and schedule to achieve establishment of relocations and incidental landscaping. Acceptance of the Establishment Plan is not a release from responsibility of the establishment and maintenance as required in the Contract Documents. Perform any ancillary activities that may be required to establish and maintain the plant material and incidental landscaping.

**Establishment Period:** The Establishment Period is defined as the day the plant is installed until final acceptance. During the establishment period, at a minimum:

- a. Maintain the soil moisture at Field Capacity. Field Capacity will be determined from a 4-inch deep excavation where the soil must hold together and form a hand clump.
- b. Apply fertilizer, plus water soluble micronutrients as needed to make a successful relocation.
- c. Maintain a 3-inch mulch cover.
- d. Remove undesirable vegetation and eradicate Florida Exotic Plant Pest Council Category One invasive plant species.
- e. Maintain plant material at the specified minimum grade throughout the duration of the project construction period and establishment period.
- f. Pruning is required during installation and throughout the establishment period. An ISA certified arborist shall direct pruning operations. Follow ANSI A300 Part 1 and the Contract Documents. At a minimum, prune for structure, to remove crossing, deflecting and circling roots, crossing, dead, damaged and codominant branching, for sign visibility, for FDOT maintenance rating program requirements, and for index 546 sight clearance.
- g. Remove staking and guying from established plants.

**Inspection and Reporting Requirements:** During the Establishment Period, inspect and certify monthly that the landscaping is being established in accordance with the Contract Documents. Include in the inspection report, at a minimum, the following:

- a. Date of inspection.
- b. Location of inspection.
- c. Condition of plants - identify by species, location, and number of plants that are no longer the specified minimum grade.
- d. Condition of mulch, weeds, and staking and guying.
- e. Soil moisture level.
- f. Condition of mulch cover.
- g. Pruning requirements.
- h. Weed control.
- i. Accompanying photographs.

- j. Condition and operation of the irrigation system, if applicable.
- k. Contractor's response, action, and schedule.
- l. Other comments.

Submit the monthly inspection form to the Engineer within seven calendar days after performing the inspection.

**Establishment and Maintenance**

Perform maintenance and corrective work as identified in the landscape monthly inspection form or after inspection by the Engineer, before the next scheduled monthly inspection. Replace relocated trees that fall below their original condition with the same species size and quality or better.

**Method of Measurement.**

The quantities to be paid will be the lump sum quantity for landscape installation and establishment.

**Basis of Payment.**

Prices and Payments will be full compensation for all work and materials specified in this Section.

Payment will be made under:

<u>Description</u>	<u>Unit</u>
LANDSCAPE COMPLETE (Tree Relocations)	LUMP SUM

**25. SECTION 700: HIGHWAY SIGNING**

Page 971, Section 700 General Requirements. This section is modified to add the following:

The post shall be furnished in appropriate length to provide a minimum 7-ft clearance from the bottom of the sign to the ground with full length attachment to the sign blank. In the event that a street name sign is to be attached above the stop sign, additional length of post must be allowed for said attachment.

Page 974, Section 700-2.4 Basis of Payment. This article is amended to add the following:

The contractor shall be responsible for removal of all existing signs conflicting with the design. The existing signs, when removed, shall be disassembled and delivered to the City of Hallandale Beach, location to be indicated. This is considered incidental to the project, with no direct payment for this work.

**GEOTECHNICAL REPORT (for reference only)**

**Usual Open Hole Test**

Date: Wednesday, February 21, 2018

Job Order Number 18SB113

**R.J. Behar & Company, Inc.**  
6861 S.W. 196 Avenue, Suite 302  
Pembroke Pines, FL 33332  
Attn.: Juan H. Vazquez

RE: **Proposed Geotechnical Services**  
Proposed Drainage  
NW 1st Ave, NW 2nd Ave. & NW 5th St.  
Hallandale Beach, FL 33009

**Results of Test**

Tested by: \_\_\_\_\_ MM \_\_\_\_\_ Reported to: \_\_\_\_\_ Client \_\_\_\_\_  
Diameter of Hole: \_\_\_\_\_ 8" \_\_\_\_\_ Depth of Hole: \_\_\_\_\_ 10' \_\_\_\_\_  
Tested Location: \_\_\_\_\_ See Attached Site Sketch EX-1 \_\_\_\_\_

**Subsurface Investigation**

Gallons/ Minutes	Elapsed Time in Minutes
3.4	1
3.4	2
3.2	3
3.3	4
3.2	5
3.2	10

Depth Below Ground Surface	Soil Description
0" - 3"	Asphalt
3" - 1'6"	Light Brown Sand with Rock
1'6" - 3'	Gray Sand
3' - 6'	Pale Gray Sand
6' - 8'	Light Brown Sand
8' - 10'	Brown Sand

Water Table Elevation: 7'6" Below existing ground Surface

Hydraulic Conductivity:  $K = 7.1 \times 10^{-5}$  CFS/FT<sup>2</sup> - FT. HEAD

The above hydraulic conductivity represents an ultimate value. The designer should decide on the required safety factor. This value is based on the existing soils at the location of the test.

Tested By: SJ  
Checked By: KL

Sincerely,

  
\_\_\_\_\_  
Keith LeBlanc, P.E.  
Federal Engineering & Testing, Inc.  
Florida Reg. No. 59394  
Certificate of Authorization # 5471



Construction Material  
Engineering Council



American Concrete  
Institute



Miami Dade  
County



Florida Department  
of Transportation

### Usual Open Hole Test

Date: Wednesday, February 21, 2018

Job Order Number

18SB113

**R.J. Behar & Company, Inc.**

6861 S.W. 196 Avenue, Suite 302  
Pembroke Pines, FL 33332  
Attn.: Juan H. Vazquez

**RE: Proposed Geotechnical Services**

Proposed Drainage  
NW 1st Ave, NW 2nd Ave. & NW 5th St.  
Hallandale Beach, FL 33009

#### Results of Test

Tested by: MM Reported to: Client  
Diameter of Hole: 8" Depth of Hole: 10'  
Tested Location: See Attached Site Sketch EX-2

#### Subsurface Investigation

Gallons/ Minutes	Elapsed Time in Minutes
3.8	1
3.9	2
3.7	3
3.7	4
3.6	5
3.6	10

Depth Below Ground Surface	Soil Description
0" - 3"	Asphalt
3" - 1'8"	Light Brown Sand with Rock
1'8" - 4'	Pale Brown Sand
4' - 7'	Brown Sand
7' - 10'	Light Brown Sand

Water Table Elevation: 7'7" Below existing ground Surface

Hydraulic Conductivity:  $K = 7.9 \times 10^{-5}$  CFS/FT<sup>2</sup> - FT. HEAD

The above hydraulic conductivity represents an ultimate value. The designer should decide on the required safety factor. This value is based on the existing soils at the location of the test.

Sincerely,



Keith LeBlanc, P.E.  
Federal Engineering & Testing, Inc.  
Florida Reg. No. 59394  
Certificate of Authorization # 5471

Tested By: SJ  
Checked By: KL



Construction Material  
Engineering Council



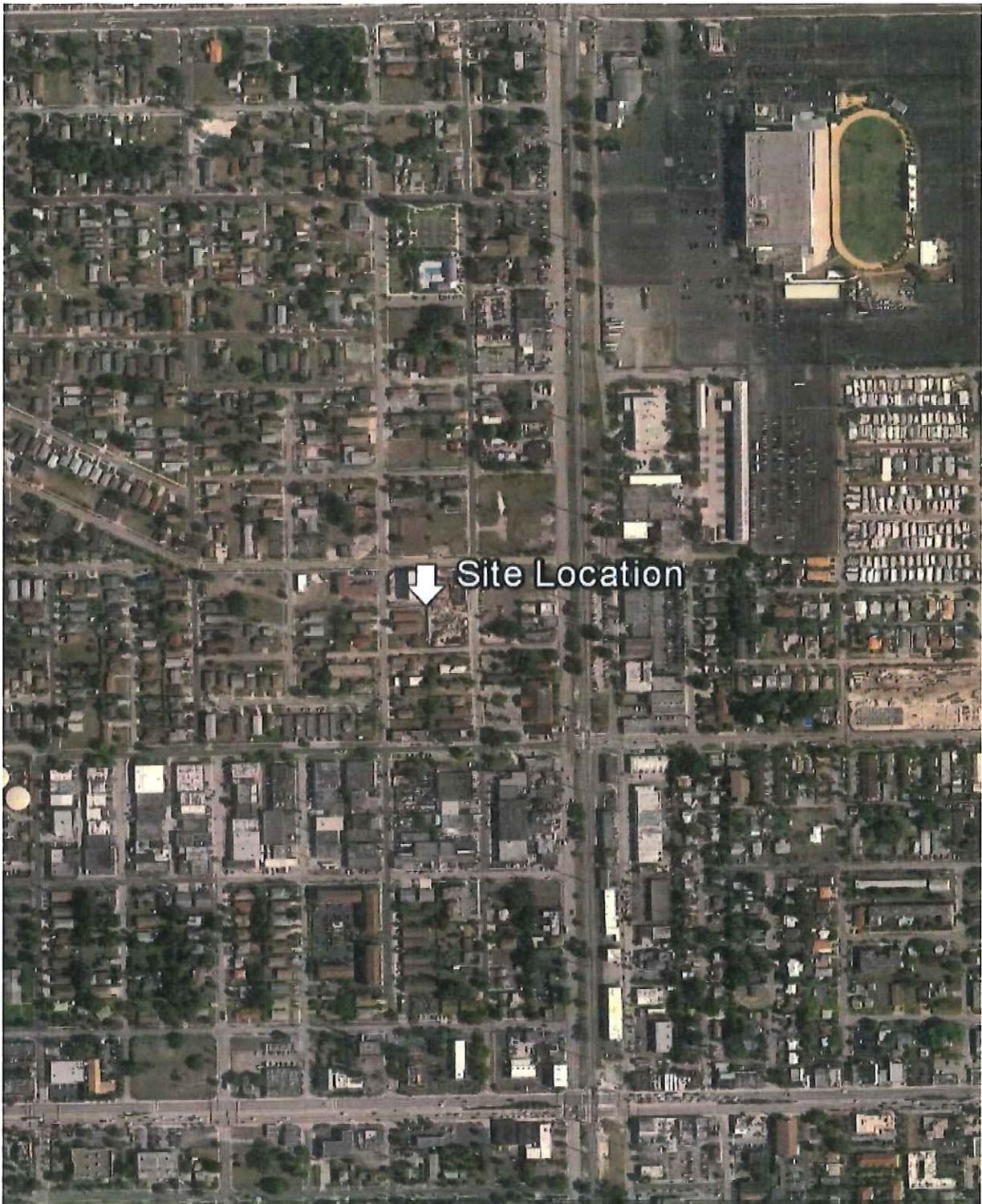
American Concrete  
Institute



Miami Dade  
County



Florida Department  
of Transportation



**Site Location Map**

**Federal Engineering & Testing Inc.** 250 SW 13th AVE Pompano Beach, FL 33069 (954) 784-2941

Client: R.J. Behar & Company, Inc.  
Test: Subsoil Investigation  
*(site map is not to scale)*

Project: Proposed Drainage  
Project Address: NW 1st Ave, NW 2nd Ave. & NW 5th St.  
Hallandale Beach, FL 33009



**Soil Boring Location Map**

**Federal Engineering & Testing Inc.** 250 SW 13th AVE Pompano Beach, FL 33069 (954) 784-2941

Client: R.J. Behar & Company, Inc.  
Test: Subsoil Investigation  
(site map is not to scale)

Project: Proposed Drainage  
Project Address: NW 1st Ave, NW 2nd Ave. & NW 5th St.  
Hallandale Beach, FL 33009

## Soil Classifications

<b>Correlation of Penetration Resistance with Relative Density and Consistency</b>		
<b>Sands</b>		
Dynamic Cone Penetrometer <i>Penetrometer Resistance</i>	Standard Penetration <i>Hammer Blows</i>	Relative Density
0 - 10	0 - 4	Very Loose
11 - 25	5 - 10	Loose
26 - 45	11 - 20	Firm
45 - 75	21 - 30	Very Firm
76 - 120	31 - 50	Dense
> 120	> 50	Very Dense

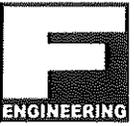
<b>Silts &amp; Clay</b>		
Dynamic Cone Penetrometer <i>Penetrometer Resistance</i>	Standard Penetration <i>Hammer Blows</i>	Relative Density
0 - 6	0 - 2	Very Soft
7 - 15	3 - 5	Soft
16 - 30	6 - 10	Firm
31 - 45	11 - 15	Stiff
46 - 90	16 - 30	Very Stiff
91 - 150	31 - 50	Hard

<b>Rock Hardness Description</b>	
Soft	Rock core crumbles when handled
Medium	Can break core with your hands
Moderately Hard	Thin edges of rock core can be broken with fingers
Hard	Thin edges of rock core cannot be broken with fingers
Very Hard	Rock core rings when struck with a hammer

<b>Sand Quantity Modifiers</b>	
Very Slight Trace	0 - 2 %
Slight Trace	2 - 5 %
Trace	5 - 10 %
Little Trace	10 - 15 %
Some	15 - 30 %
With	> 30 %

<b>Particle Size</b>	
Boulder	> 12 in
Cobble	3 - 12 in
Gravel	4.76 mm - 3 in
Sand	0.074 mm - 4.76 mm
Silt	0.005 mm - 0.074 mm
Clay	< 0.005 mm

<b>Silt - Clay Quantity Modifiers</b>	
Slightly Silty / Clayey	0 - 5 %
Silty / Clayey	5 - 30 %
Very Silty / Clayey	30 - 50 %



## Drilling & Sampling Procedures

The soil borings were installed in accordance with Standard Penetration Tests procedures as set forth in ASTM D-1586. Representative samples were collected utilizing spilt-barrel techniques in accordance with the procedures set forth in "Penetration Tests and Spilt-Barrel Sampling of Soil in ASTM D-1586. The following field tests, measurements and laboratory analysis were performed/collected during the installation of each soil boring.

### Penetration Tests

During the sampling procedures, Standard Penetration Tests were performed at five (5) foot intervals to obtain the standard penetration value (N) of the subsurface soil. The standard penetration value (N) is identified as the number of blows of a 140-pound hammer falling thirty (30) inches, required to advance the spilt-barrel sampler one (1) foot into the subsurface soil. The sampler was lower into the bottom of the previously cleaned drill hole and advanced by blows from the hammer. The number of blows was recorded for each of the three (3) successive increments of six (6) inches penetration. The "N" value is obtained by adding the second and third incremental numbers.

### Water Level Measurements

Water Level depths were obtained during the test boring operations. In relatively pervious soils, such as sandy soils, the indicated depths are usually reliable groundwater levels. Seasonal variations, tidal conditions, temperature, land-use and recent rainfall conditions may influence the depths to groundwater levels.

### Soil Properties / Classification

All samples collected were classified in accordance with the Unified Soil Classification System criteria to determined soil material properties and compared with published literature of the USDA Soil Conservation Survey.

### Ground Surface Elevations

Ground surface elevations have not been provided for the proposed boring locations. Therefore, all references to depth of the various strata and materials encountered were from existing grade at the time of the drilling operations.

## Limitations of Liability

### *Warranty*

We warrant that the services performed by Federal Engineering and Testing, Inc. (F.E.T.) are conducted in a manner consistent with the level of skill and care ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranties, expressed or implied, are made. While the services of F.E.T. are an integral and valuable part of the design and construction process, we do not warrant, guarantee, or insure the quality or completeness of services or satisfactory performance provided by other members of the construction process and/or the construction plans and specifications which we have not prepared, nor the ultimate performance of building site materials. As mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. Reports are not intended for 3rd party use.

### *Subsurface Exploration*

Subsurface exploration is normally accomplished by test borings. The soil boring log includes sampling information, description of the materials recovered, approximate depths of boundaries between soil and rock strata and groundwater data. The log represents conditions specifically at the location and time the boring was made. The boundaries between different soil strata are indicated at specific depths; however, these depths are in fact approximate and dependent upon the frequency of sampling. The transitions between soil stratum are often gradual. Water level readings are made at the time the boring was performed and can change with time, precipitation, canal levels, local well drawdown, and other factors. Regardless of the thoroughness of a Geotechnical exploration there is always a possibility that conditions may be different from those of the test locations; therefore F.E.T. does not guarantee any subsoil condition surrounding the bore test holes. For a more accurate portrayal of subsurface conditions, the site contractor should perform tests pits. If different conditions are encountered, F.E.T. shall be notified to review the findings and make any recommendations as needed.

### *Laboratory and Field Tests*

Tests are performed in accordance with specific ASTM Standards unless otherwise indicated. All criteria included in a given ASTM Standard are not always required and performed. Each test report indicates the measurements and determinations actually made.

### *Ownership of Tests / Reports*

All test results and/or reports prepared by F.E.T. pursuant to this agreement and/or Addendum(s) thereto, shall remain the property of F.E.T. until all monies due and owing to F.E.T. under this Agreement and/or Addendum(s) thereto, are paid in full.

### *Analysis and Recommendations*

The Geotechnical report is prepared primarily to aid in the design of site work and structural foundations. Although the information in the report is expected to be sufficient for these purposes, it is not intended to determine the cost of construction or to stand alone as construction specifications.

### *Analysis and Recommendations cont.*

In accepting this report the client understands that all data from the soil boring is intended for foundation analysis only and is not to be used for excavating, backfilling or pricing estimates. In accepting this report the client understands that all data from the soil boring is intended for foundation analysis only and is not to be used for excavating, backfilling or pricing estimates. The site contractor must familiarize themselves with the job site conditions. Soil boring(s) on unmarked vacant property or existing structure(s) to be demolished is considered preliminary with further boring(s) to be performed after proposed building pad is staked out. Report recommendations are based primarily on data from test borings made at the locations shown on the test boring reports. Soil variations may exist between borings and may not become evident until construction. If variations are then noted, F.E.T. must be contacted so that field conditions can be examined and recommendations revised if necessary. The Geotechnical report states our understanding as to the location, dimensions, and structural features proposed of the site. Any significant changes in the nature, design, or location of the site improvements must be communicated to F.E.T. so that the Geotechnical analysis, conclusions, and recommendations can be appropriately adjusted.

### *Construction Observations*

Construction observation and testing is an important element of Geotechnical services. The Geotechnical Engineer's Field Representative (Field Rep.) is the "owner's representative" observing the work of the contractor, performing tests, and reporting data from such tests and observations. The Geotechnical Engineer's Field Representative does not direct the contractor's construction means, methods, operations, or personnel. The Field Rep. does not interfere with the relationship between the owner and the contractor, and except as an observer, does not become a substitute owner on site. The Field Rep. is only collecting data for our Engineer to review. The Field Rep. is responsible for his/her safety only, but has no responsibility for the safety of other personnel and/or the general public at the site. If the Field Rep. does not feel that the site is offering a safe environment for him/her, the Field Rep. will stop his/her observation/ testing until he/she deems the site is safe. The Field Rep. is an important member of a team whose responsibility is to observe the test and work being done and report to the client whether that work is being carried out in general conformance with the plans and specifications.

### *Limitations of Report*

Federal Engineering & Testing, Inc. shall have no liability, in contract, tort or otherwise, for any inaccuracy, defect, or omission in interpreting this report and shall not in any event have any liability for lost profits or any other indirect, special, incidental, consequential, exemplary or punitive damages. In the event of future conflict between owners and contractors the following applies: F.E.T.(s) legal and/or company representation and preparation for representation fees will be billed on an hourly rate, i.e. deposition, expert witness, etc. F.E.T. has no obligation to amend its conclusions or recommendations after the date of this report. Any alterations or changes in the location of the project should be brought to our attention at the earliest convenience for review and applicability of this report.

## Partial List of Services

### Geotechnical Engineering Services

#### **Soil / Aggregate Tests**

Soil Borings  
Density Compaction Tests  
Grain Size Analysis  
Moisture Contents  
Soil Classifications  
Limerock Bearing Ratios  
Florida Bearing Values  
Specific Gravity  
Carbonate Analysis  
Hydraulic Conductivity  
Organic Contents  
L.A. Abrasion

#### **FDOT Inspections**

QC Management  
Earthwork Inspections  
QC Concrete Inspections  
QC Asphalt Inspections

#### **Field Inspection Services**

Fill & Quality Control Inspections  
Demucking Inspections  
Building Inspections  
Pile Driving Inspections  
Pile Load Tests  
Steel Inspection  
Threshold Inspection  
Bolt Inspection  
Weld Inspection  
Vibration Monitoring

#### **Geotechnical Engineering**

Foundation Engineering  
Foundation Design & Recommendation  
Subsoil Investigation  
Pile Load Calculations  
Piling Installation Monitoring

#### **Asphalt Services**

Backscatter Density Tests  
Extractions & Gradations  
Marshall Limits  
Bulk Specific Gravity  
Cores for Thickness Determination  
Asphalt Pavement Monitoring  
Asphalt Assessment

#### **Concrete Tests**

Concrete Strength Testing  
Slump Tests  
Windsor Probe Testing  
Schmidt Hammer Testing  
Core Testing  
Air Content  
Concrete Unit Weight  
Flexural Strength Testing

### Environmental Engineering Services

#### **Phase I Site Assessments**

Site Inspections  
Research of Property Records

#### **Phase II Site Assessments**

Phase I Follow up on Contaminated Sites  
Installation of Monitoring Wells  
Soil Borings  
Soil and Ground Water Analysis

#### **Lead Base Paint Surveys**

Report and Analysis  
Air Monitoring

### Roof Testing & Inspection Services

TAS 105 Field Fastener Withdrawal Test  
TAS 106 Tile Uplift Test  
TAS 124 Bell Chamber / Bonded Pull Test  
TAS 126 Moisture Survey  
Windload Calculation  
Drainage Calculations  
Lightweight Concrete placement Inspection  
Roof Assessment / Evaluation  
Cap Sheet Inspection  
Fastener Spacing Inspection  
Tile/ Shingle/ Standing Seam Inspection  
Base Sheet Installation Inspection  
Insurance Mitigation  
Retrofit Mitigation/ Certification  
Roof Drainage Calculations



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County



Florida Department  
of Transportation

**UTILITY SCHEDULES**

FLORIDA DEPARTMENT OF TRANSPORTATION  
**UTILITY WORK SCHEDULE**

Pursuant to Section 337.403 F.S., the UAO and FDOT agree to the UAO's need for relocation or adjustment to its utilities and FDOT's need for a schedule for the UAO to effect the relocation or adjustment. This utility work schedule is based on FDOT plans dated in the project information box below. Any deviation by FDOT or its contractor from these plans, may void this utility work schedule. Upon notification by FDOT of a change to these plans, the UAO may negotiate a new utility work schedule. The UAO agrees to notify FDOT and the contractor in writing prior to starting, stopping, resuming, and completing work in accordance with this utility work schedule. The UAO shall obtain a utility permit and comply with requirements of the 2017 Utility Accommodation Manual (UAM) for all work done under this utility work schedule. The UAO is not responsible for events beyond the control of the UAO that could not be reasonably anticipated by the UAO and which could not be avoided by the UAO with exercise of due diligence at the time of the occurrence.

**FDOT PROJECT INFORMATION**

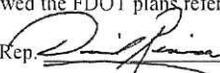
Financial Project ID: N/a	Federal Project ID: N/A
State Road Number: N/A	County: Broward
FDOT Plans Dated: N/A	District Document No.: N/A

**UTILITY AGENCY/OWNER (UAO)**

Utility Company: TECO Peoples Gas			
UAO Project Rep: David Rivera	Phone: (954) 453-0794	E-mail: DRRivera@tecoenergy.com	
UAO Field Rep: Bob Edwards	Phone: (786) 562-0725	E-mail: REdwards@tecoenergy.com	

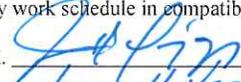
**UTILITY SIGNATURE**

I have reviewed the FDOT plans referenced above and submit this utility work schedule in compliance with UAM Section 5 and agree to be bound by the terms of this utility work schedule.

UAO Rep.  Date 7 / 30 / 2018  
 Name David Rivera  
 Title Gas Design Tech

**ENGINEER OF RECORD SIGNATURE**

I attest this utility work schedule is compatible with the FDOT plans referenced above.

EOR.  Date 8 / 2 / 18  
 Name Juan H. Vazquez  
 Title Project Manager

**APPROVAL BY DISTRICT UTILITIES**

This utility work schedule is complete and acceptable to FDOT.

FDOT Rep. \_\_\_\_\_ Date    /    /     
 Name \_\_\_\_\_  
 Title \_\_\_\_\_

**SECTION A: SUMMARY OF UTILITY WORK**

The below days are the total numbers of days shown for all activities in Section C of this utility work schedule. The breakdown of how these days are to be incorporated into the FDOT project and the dependence of these days upon the completion of other activities by the UAO or others is shown in Section C.

Days prior to FDOT project construction: \_\_\_\_\_ Days during FDOT project construction: \_\_\_\_\_

Financial Project ID: N/A  
Utility Company: TECO Peoples Gas  
FDOT Plans Dated:   /  /  

**SECTION B: UAO SPECIAL CONDITIONS/CONSTRAINTS**

- 1 - City contractor to call 811 to have utilities located. With those locates spot dig utilities to verify that a conflict does exist as well as any additional not mentioned in section C
- 2 - In the event of an emergency contact 1-877-832-6747



**From:** KEEVE, OTIS T  
**To:** [Kira Leon](#); [Natan Hoffmann](#)  
**Subject:** NW 2ave- AT&T Relocation Schedule  
**Date:** Thursday, August 02, 2018 11:16:48 AM  
**Attachments:** [DOC.PDF](#)

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After further research, there is a 900pr copper cable in conflict with structures S-1, and S-2. The revised marked up plan is attached.

Also, I created a work order (8EA22063N) to relocate the 900pr cable to the back of the ROW, to avoid conflicts with the proposed french drains. We will have to replace the existing cable from NW 4th Street to NW 5th Street, which will include relocating the pole mounted terminals from the old wooden poles to the new concrete poles. This work will include designing, getting an approved City permit, ordering material, and performing the work in the field. Due to the amount of work to be done, I am giving this an estimated completion date of October 31, 2018. We will do everything possible to resolve this conflict before that date.

-----Original Message-----

**From:** KEEVE, OTIS T  
**Sent:** Thursday, August 02, 2018 10:45 AM  
**To:** KEEVE, OTIS T <[ok1184@att.com](mailto:ok1184@att.com)>  
**Subject:** Scan from a Xerox WorkCentre

Please open the attached document. It was scanned and sent to you using a Xerox WorkCentre.

Sent by: [ok1184 \[ok1184@att.com\]](mailto:ok1184@att.com)  
Number of Images: 1  
Attachment File Type: PDF

WorkCentre Location: USA/FL/Plantation/8601 W Sunrise Blvd/FL: 1  
Device Name: xrx0000aacbf59

For more information on Xerox products and solutions, please visit <http://www.xerox.com>