

SECTION No.(s): 86010, 86018, 86030, 86070 & 86200
S.R. No.(s): A1A, 5, 9, 824, 858
COUNTY: Broward

**STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR (4) INCLUSIVE LANDSCAPE MAINTENANCE
MEMORANDUM OF AGREEMENT**

THIS AGREEMENT, made and entered into this 29th day of March 2013, by and between the **STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION**, a component agency of the State of Florida, hereinafter called the DEPARTMENT and the **City of Hallandale Beach**, municipal corporation of the State of Florida, existing under the Laws of Florida, hereinafter called the AGENCY.

WITNESSETH:

WHEREAS, the DEPARTMENT has jurisdiction over State Roads A1A, 5, 9, 824 and 858 as part of the State Highway System as described in Exhibit A; and

WHEREAS, the DEPARTMENT seeks to install or has installed and have maintained by the AGENCY certain landscape improvements, as defined in paragraph numbered 2, page 2, within the right of way of State Roads 5, 9, A1A, 824 and 858 as described within Exhibit B and C; and

WHEREAS, the AGENCY has installed and maintains certain landscape improvements within the right of way of State Roads A1A, 5, 9, 824 and 858 as described within Exhibit B, and C; and

WHEREAS, one (1) Adjacent Property owner adjacent to State Road 858 seeks to install landscape improvements described within Exhibits B and D, pursuant to a permit within the corporate limits of the AGENCY and the AGENCY seeks to maintain those landscape improvements; and

WHEREAS, the AGENCY and the DEPARTMENT have entered into previous agreements for the AGENCY to maintain landscape improvements on DEPARTMENT right of way; and

WHEREAS, as part of the continual updating of the State of Florida Highway System, the DEPARTMENT, for the purpose of safety, protection of the investment and other reasons, has constructed and does maintain the highway facilities as State Road(s) A1A, 5, 9, 824 and 858 described further in Exhibit A attached hereto and incorporated by reference herein; and

WHEREAS, the AGENCY is of the opinion that the highway facilities within the AGENCY'S limits that contain landscape improvements shall be maintained by the AGENCY; and

WHEREAS, it is the intent of the AGENCY and the DEPARTMENT that the AGENCY shall maintain all right of way within the medians, outside the travel way and improvements made to the travel way (if applicable) that were made at the request of the AGENCY; and

WHEREAS, as designated to be superseded, the AGENCY and DEPARTMENT intend for this agreement to replace and supersede the landscape agreements described within Exhibit C designated to be superseded, except as otherwise provided in this Agreement; and

WHEREAS, the parties hereto mutually recognize the need for entering into an Agreement designating and setting forth the responsibilities of each party; and

WHEREAS, the AGENCY by Resolution No. 2013-25 dated March 6, 2013, attached hereto and by this reference made a part hereof, desires to enter into this Agreement and authorizes its officers to do so;

NOW THEREFORE, for and in consideration of the mutual benefits to flow each to the other, the parties covenant and agree as follows:

1. The recitals set forth above are true and correct and are deemed incorporated herein.
2. **INSTALLATION OF FACILITIES BY AGENCY**

The AGENCY has installed certain *landscape improvements* described herein as: plant materials, irrigation and/or hardscape on the highway facilities substantially as specified in plans and specifications hereinafter referenced to as the Project(s) and incorporated herein as referenced in Exhibit C. *Hardscape* shall mean, but not be limited to, site furnishings, landscape accent lighting, fountain, tree grates, decorative free standing or retaining wall(s), and/or any non-standard roadway, sidewalk, median or crosswalk surfacing, such as concrete pavers, color stained stamped concrete, and/or asphalt patterned pavement, but excludes standard concrete sidewalk.

When the AGENCY is installing or will install the PROJECT, they shall comply with the following criteria.

- (a) All plant materials shall be installed and maintained in strict accordance with sound nursery practice prescribed by the International Society of Arboriculture (ISA); all plant materials installed shall be Florida #1 or better according to the most current edition of Florida Department of Agriculture, *Florida Grades and Standards for Nursery Stock*; and all trees shall meet Florida Power & Light, *Right Tree, Right Place, South Florida*.
- (b) Trees and palms within the right of way shall be installed and pruned to prevent encroachment to roadways, clear zones and sidewalks. Definition of these criteria is included in the most current editions of FDOT standards for design, construction, maintenance, and utility operations on the state highway system and the Maintenance Plan, Exhibit E.
- (c) Tree and palm pruning shall be supervised by properly trained and certified personnel and shall meet the most current standards set forth by the International Society of Arboriculture (ISA) and the American National Standard Institute (ANSI) Part A-300. Personnel shall be licensed by Broward County Environment Protection Department to perform this work.
- (d) Irrigation installation and maintenance activities shall conform to the most current standards set forth by the Florida Irrigation Society (FIS), *Standards and Specifications for Turf and Landscape Irrigation Systems*.
- (e) The AGENCY shall provide the DEPARTMENT'S local FDOT Operations Center accurate as-built plans of the irrigation system so in the future if there is a need for the DEPARTMENT to perform work in the area, the system can be accommodated as much as possible.
- (f) If it becomes necessary to provide utilities (water/electricity) to the median or side areas, it shall be the AGENCY'S responsibility to obtain a permit for such work through the local FDOT Operations Center. The AGENCY shall be responsible for all associated fees for the installation and maintenance of these utilities.
- (g) Patterned Pavement (if applicable) shall be installed and maintained as described in the plans and further described in Exhibit G and Exhibit H.

- ### 3. INSTALLATION OF FACILITIES BY DEPARTMENT

4. MAINTENANCE OF FACILITIES

- A. The AGENCY agrees to maintain the landscape improvements, as existing and those to be installed, within the physical limits described in Exhibit A. The landscape improvements outside the travelway shall be maintained by the AGENCY regardless if the said improvement was made by the DEPARTMENT, the AGENCY, or others by periodic mowing, fertilizing, weeding, pruning, curb and sidewalk edging, litter pickup, necessary replanting, irrigation system repair and/ or repair of any median concrete replacement associated with the non-standard surfacing (if applicable) following the DEPARTMENT'S landscape safety and maintenance guidelines, Exhibit E the Maintenance Plan and Exhibit H the Patterned Pavement Maintenance (if applicable). The AGENCY'S responsibility for maintenance shall include all landscaped, turfed and hardscape areas within the median and areas outside the travelway to the right of way and areas within the travelway containing non-standard surfacing (if applicable). It shall be the responsibility of the AGENCY to restore an unacceptable ride condition of the roadway caused by the differential characteristics of non-standard surfacing and the associated header curb and concrete areas (if applicable) on DEPARTMENT right of way within the limits of this Agreement.
- B. Such maintenance to be provided by the AGENCY is specifically set out as follows: to maintain, which means to properly water and fertilize all plants; to keep them as free as practicable from disease and harmful insects; to properly mulch the planting beds; to keep the premises free of weeds; to mow the turf to the proper height; to properly prune all plants which at a minimum includes: (1) removing dead or diseased parts of plants, (2) pruning such parts thereof to provide clear visibility to signage and permitted outdoor advertising signs (per Florida Statute 479.106), and for those using the roadway and/or sidewalk; (3) preventing any other potential roadway hazards. Plants shall be those items which would be scientifically classified as plants and include trees, palms, shrubs, groundcover and turf. To maintain also means to remove or replace dead or diseased plants in their entirety, or to remove or replace those that fall below original project standards. Palms shall be kept fruit free year round. To maintain also means to keep the header curbs that contain the specialty surfacing treatment in optimum condition. To maintain also means to keep the hardscape areas clean, free from weeds and to repair said hardscape as is necessary to prevent a safety hazard. To maintain also means to keep litter removed from the median and areas outside the travel way to the right of way line. All plants removed for whatever reason shall be replaced by plants of the same species type, size, and grade as specified in the original plans and specifications. Any changes to the original plans shall be submitted by permit application to the DEPARTMENT for review and approval.
- C. If it becomes necessary to provide utilities (water/electricity) to the medians or areas outside the travelway for these improvements, all costs associated with the utilities associated with landscape accent lighting and/or irrigation including, but not limited to the impact and connection fees, and the on-going cost of utility usage for water and electrical, are the maintaining AGENCY'S responsibility.
- (1) The AGENCY shall be directly responsible for impact and connection fees.
 - (2) If installed by the DEPARTMENT the AGENCY shall become responsible for the above named utility costs upon final acceptance of the construction project by the DEPARTMENT and thereafter. The construction project is accepted prior to the start of the Plant Establishment and Contractor's Warranty Period.
- AND
- (3) The AGENCY shall be responsible for all the improvements immediately after final acceptance of the construction project by the DEPARTMENT except for plant material which will be maintained by the Department's contractor during the Plant Establishment and Contractor's Warranty Period.

The AGENCY shall be responsible for the maintenance of all improvements after the completion of the Plant Establishment and Contractor's Warranty Period. If the AGENCY installs the hardscape, the AGENCY shall be responsible for utilities as provided for in paragraph number 2. (f).

- D. The above named functions to be performed by the AGENCY may be subject to periodic inspections by the DEPARTMENT at the discretion of the DEPARTMENT. Such inspection findings will be shared with the AGENCY and shall be the basis of all decisions regarding, repayment, reworking or agreement termination. The AGENCY shall not change or deviate from said plans without written approval of the DEPARTMENT.

5. SUPERSEDED PRECEDING LANDSCAPE AGREEMENTS

This Agreement shall replace and supersede any and all preceding landscape agreements as listed in Exhibit C except as specifically excepted out. The landscape improvement plans and the associated Maintenance Plan Part II attached to the referenced agreements and project costs shall by reference become a part of this agreement as if they were attached hereto unless superseded by later plans. The AGENCY shall have the same duty to maintain those landscape improvements under this Agreement as the Agency did under the previous landscape agreements, and as more specifically detailed in this Agreement.

This writing embodies the entire Agreement and understanding between the parties hereto and there are no other Agreements and understanding, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby except as specifically reference in Exhibit C.

6. NOTICE OF MAINTENANCE DEFICIENCIES

- A. If at any time after the AGENCY has undertaken the landscape improvement installation and/or maintenance responsibility mentioned above, it shall come to the attention of the DEPARTMENT'S District Secretary that the limits, or a part thereof, are not properly maintained pursuant to the terms of this Agreement, said District Secretary, may at his/her option, issue a written notice that a deficiency or deficiencies exist(s), by sending a certified letter to the AGENCY, to placing said AGENCY on notice thereof. Thereafter, the AGENCY shall have a period of thirty (30) calendar days within which to correct the cited deficiencies. If said deficiencies are not corrected within this time period, the DEPARTMENT may, at its option, proceed as follows:
- (1) Complete the installation, or part thereof, with DEPARTMENT or Contractor's personnel and deduct the cost of such work from the final payment for said work or part thereof, or,
 - (2) Maintain the landscape improvements or any part thereof, with the DEPARTMENT or Contractor's personnel and invoice the AGENCY for expenses incurred, or,
 - (3) At the discretion of the DEPARTMENT, terminate the Agreement in accordance with Paragraph 11, and remove, by the DEPARTMENT or private Contractor's personnel, all of the landscape improvements installed under this Agreement or any preceding Agreements except as to trees and palms and charge the AGENCY the reasonable cost of such removal.
- B. The AGENCY agrees to reimburse the DEPARTMENT all monies expended by the DEPARTMENT for the projects listed in Exhibit B, C and D in the amounts listed in those agreements should the landscape improvement areas fail to be maintained in accordance with the terms and conditions of this Agreement in the amounts listed in those agreements.

7. FUTURE DEPARTMENT IMPROVEMENTS

In the event the DEPARTMENT decides to construct additional landscape improvements or modify these improvements within the limits of the rights of way herein previously identified, the DEPARTMENT and the AGENCY shall agree in writing and require signature from the AGENCY, hereby designated as the (Mayor, City Manager, Director of Public Works, City Engineer) who will have approval signature for the new landscape improvements and maintenance plan thereof. If the AGENCY and the DEPARTMENT are unable to come to an agreement, the DEPARTMENT, in its sole discretion, may install sod and the agency shall be required, pursuant to this Agreement, to continue maintaining said landscape improvements. It is understood between the parties hereto that the landscape improvements covered by this Agreement may be removed, relocated, or adjusted at any time in the future, as determined to be necessary by the DEPARTMENT in order that the adjacent state road(s) be widened, altered, or otherwise changed to meet with future criteria or planning of the DEPARTMENT. The AGENCY shall be given sixty (60) calendar day's notice to remove said landscape/hardscape after which time the DEPARTMENT may remove same. All permits (including tree permits), fees, and any mitigation associated with the removal, relocation or adjustments of these improvements are the maintaining AGENCY'S responsibility.

8. FUTURE AGENCY IMPROVEMENTS

The AGENCY may construct additional landscape improvements within the limits of the rights of ways identified as a result of this document, subject to the following conditions:

- (a) Plans for any new landscape improvements shall be subject to approval by the DEPARTMENT. The AGENCY shall not change or deviate from said plans without written approval by the DEPARTMENT.
- (b) The AGENCY shall procure a permit from the DEPARTMENT.
- (c) All landscape improvements shall be developed and implemented in accordance with appropriate state safety and roadway design standards.
- (d) The AGENCY agrees to comply with the requirements of this Agreement with regard to any additional landscape improvements installed at no cost to the DEPARTMENT.
- (e) If the AGENCY'S landscape improvements include additional maintenance requirements, the AGENCY, through (Mayor, City Manager, Director of Public Works, City Engineer) approval signature, and the DEPARTMENT shall enter into an Agreement Amendment describing the additional requirements.

9. ADJACENT PROPERTY OWNER IMPROVEMENTS

The DEPARTMENT may allow an adjacent property owner to construct additional landscape improvements within the limits of the right of way identified in Exhibit A of this document that the AGENCY shall be responsible for maintaining under this agreement subject to the following conditions:

- (a) Plans for any new landscape improvements shall be subject to approval by the DEPARTMENT and shall require a valid permit attached with a letter of consent to said plans by the AGENCY. The plans shall not be changed or deviated from without written approval by the DEPARTMENT and the AGENCY.
- (b) All landscape improvements shall be developed and implemented in accordance with appropriate state safety and roadway design standards.

- #### 10. PROJECT COST FOR DEPARTMENT INSTALLED PROJECT

The AGENCY shall be invited to assist the DEPARTMENT in final inspection upon completion of the Plant Establishment and Contractor's Warranty Period.

- (a) AGENCY'S contractor shall at all times during the term of this Agreement keep and maintain in full force and effect, at contractor's sole cost and expense, Comprehensive General Liability with minimum limits of \$1,000,000.00 per occurrence combined single limit for Bodily Injury Liability and Property Damage Liability and Worker's Compensation insurance with minimum limits of \$500,000.00 per Liability. Coverage must be afforded on a form no more restrictive than the latest edition of the Comprehensive General Liability and Worker's Compensation policy without restrictive endorsements, as filed by the Insurance Services Office and shall name the DEPARTMENT as an additional insured.
- (b) AGENCY'S contractor shall furnish AGENCY with Certificates of Insurance of Endorsements evidencing the insurance coverage specified herein prior to the beginning performance of work under this Agreement.
- (c) Coverage is not to cease and is to remain in full force and effect (subject to cancellation notice) until all performance required of AGENCY'S contractor is completed. All policies must be endorsed to provide the DEPARTMENT with at least thirty (30) days notice of cancellation and/or restriction. If any of the insurance coverages will expire prior to the completion of work, copies of renewal policies shall be furnished at least (30) days prior to the date of expiration.

14. E-VERIFY REQUIREMENTS

AGENCY shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of;

- (1) Shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Agency during the term of the contract; and
- (2) Shall expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Agency term.

- 15. The DEPARTMENT, during any fiscal year, shall not expend money, incur any liability, nor enter into any contract which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any contract, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such contract. The DEPARTMENT shall require a statement from the Comptroller of the DEPARTMENT that funds are available prior to entering into any such contract or other binding commitment of funds. Nothing herein contained shall prevent the making of contracts for periods exceeding one year, but any contract so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years; and this paragraph shall be incorporated verbatim in all contracts of the DEPARTMENT which are for an amount in excess of TWENTY-FIVE THOUSAND DOLLARS (\$25,000.00) and which have a term for a period of more than one year.

16. DISPUTES

The DEPARTMENT'S District Secretary shall decide all questions, difficulties, and disputes of any nature whatsoever that may arise under or by reason of this Agreement, the prosecution or fulfillment of the service hereunder and the character, quality, amount and value thereof; and his decision upon all claims, questions, and disputes shall be final and conclusive upon the parties hereto.

17. ASSIGNMENT

This Agreement may not be assigned or transferred by the AGENCY, in whole or in part, without the prior written consent of the DEPARTMENT.

18. LAWS GOVERNING

This Agreement shall be governed by and construed in accordance with the laws of the State of Florida. In the event of a conflict between any portion of the contract and Florida law, the laws of Florida shall prevail. The Agency agrees to waive forum and venue and that the Department shall determine the forum and venue in which any dispute under this agreement is decided.

19. EXCEPTION TO SUPERSEDED PRECEDING LANDSCAPE AGREEMENTS

This Agreement constitutes the complete and final expression of parties with respect to the subject matter hereof and supersedes all prior landscape agreements, understandings, or negotiations with respect thereto, with the exception of the landscape improvements plans and the associated Maintenance Plan Part II and the Agreements "Excepted Out" in Exhibit C.

20. NOTICES

Any and all notices given or required under this Agreement shall be in writing and either personally delivered with receipt acknowledgement or sent by certified mail, return receipt requested. All notices shall be sent to the following addresses:

If to the DEPARTMENT:

State of Florida Department of Transportation
3400 West Commercial Blvd.
Ft. Lauderdale, FL 33309-3421
Attention: Elisabeth A. Hassett, R.L.A.
FDOT District IV Landscape Architect

If to the AGENCY:

**City of Hallandale Beach
Utilities & Engineering
630 Northwest 2nd Street
Hallandale Beach, Florida
Attention: Richard Labinsky, P.E.
City Engineer**

21. LIST OF EXHIBITS

- Exhibit A: Landscape Improvements Limits & Maintenance Boundaries List, Table and Graphic
- Exhibit B: Pending Department and Permit Projects Landscape Agreement(s)
- Exhibit C: Preceding Landscape Agreement Description(s) and Other Agreement Descriptions
- Exhibit D: Pending Department and Permit Projects Landscape Improvement Plans
- Exhibit E: Landscape Maintenance Plan
- Exhibit F: Pending Department Project(s) Cost Estimate
- Exhibit G: Agency Patterned Pavement Installation
- Exhibit H: Patterned Pavement Maintenance

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EXHIBIT A

**CITY OF HALLANDALE BEACH
LANDSCAPE IMPROVEMENT LIMITS AND MAINTENANCE BOUNDARIES LIST**

All state rights of way within the limits of the City of Hallandale Beach to be maintained are from:

SR A1A

Section 86030000

(SR A1A) M.P. 0.000 (South City Limits) to M.P. 0.790 (SR 858/Hallandale Beach Boulevard)

SR 5 (US 1)

Section 86010000

(SR 5/US 1) M.P. 0.000 (South City Limits) to M.P. 1.526 (SR 824/Pembroke Road)

SR 824 (Pembroke Road)

Section 86018000

(SR 824/Pembroke Road) M.P. 5.059 (SR 5/US 1) to M.P. 6.547 (SR 5/US 1)

SR 858 (Hallandale Beach Blvd.)

Section 86200000

(SR 858/Hallandale Beach Blvd.) M.P. 2.590 (Median east of SR 9/I-95) to M.P. 5.429 (SR A1A)

SR 9 (I-95)

Section 86070008

(SR 9/I-95) M.P. 0.000 (SR 858/Hallandale Beach Blvd. Interchange - Northeast Quadrant) to M.P. 0.170

Section 86070009

(SR 9/I-95) M.P. 0.000 (SR 858/Hallandale Beach Blvd. Interchange - Southeast Quadrant) to M.P. 0.264

SR 9 (I-95)

Section 86070013

(SR 9/I-95) M.P. 0.000 (SR 824/Pembroke Road Interchange - Southeast Quadrant) to M.P. 0.250

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EXHIBIT A

CITY OF HALLANDALE LANDSCAPE MAINTENANCE LIMITS TABLE
 The following are State Road(s) to be maintained within the limits of the
 City of Hallandale Beach

STATE ROAD	BEGIN LIMITS	BEGIN MILEPOST	END LIMITS	END MILEPOST	MAINTENANCE LIMITS	
A1A	South City Limits	0.000	SR 858/Hallandale Bch. Blvd.	0.790	ROW to ROW	86030000
5/US 1	South City Limits	0.000	824/Pembroke Road	1.526	ROW to ROW	86010000
824/Pembroke Road	SR 9/I-95	5.059	SR 5/US 1	6.547	ROW to ROW	86018000
858/Hallandale Beach Blvd	Median East of SR 9/I-95	2.590	SR A1A	5.429	ROW to ROW	86200000
9/I-95	SR 858/Hallandale Beach Blvd. Interchange					
	Northeast Quadrant	0.000		0.170	NB on ramp	86070008
	Southeast Quadrant	0.000		0.264	NB off ramp	86070009
9/I-95	SR 824/Pembroke Road Interchange					
	Southeast Quadrant	0.000		0.250	NB off ramp	86070013

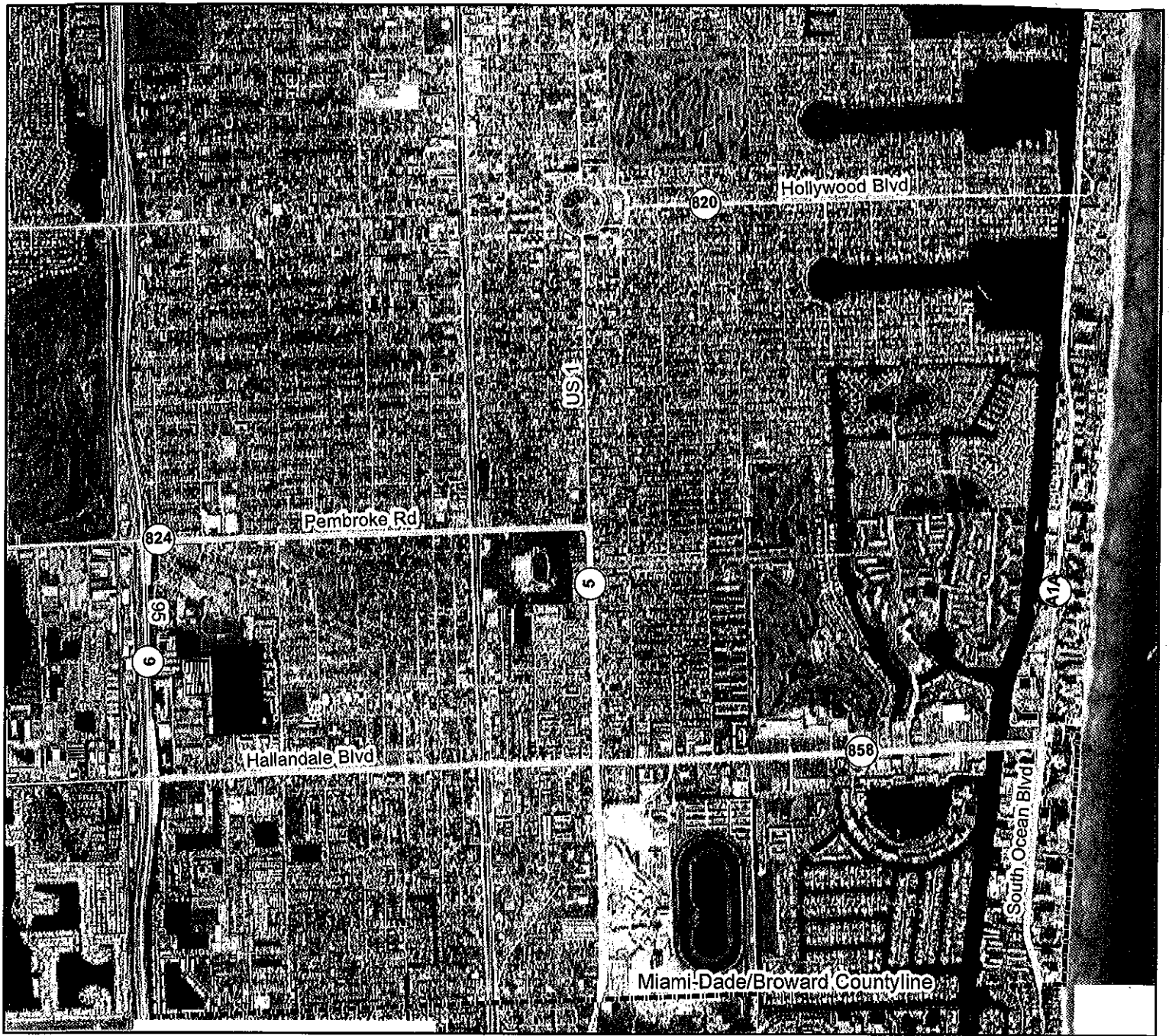
Areas to be maintained by the Agency pursuant to this Landscape Maintenance Memorandum of Agreement (MOA).

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EXHIBIT A

CITY OF HALLANDALE BEACH LANDSCAPE MAINTENANCE LIMITS GRAPHIC

See Attached Graphic of State Road(s) to be maintained within the limits of the City of Hallandale Beach



City of Hallandale Beach

Inclusive Landscape Maintenance Memorandum of Agreement Maintenance Boundary Graphic

LEGEND

- Inclusive Agreement
- Hallandale Beach City Limits



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EXHIBIT B

PENDING DEPARTMENT AND PERMIT PROJECTS LANDSCAPE AGREEMENT(S)

DEPARTMENT PROJECTS:

State Road 9 (I-95) and State Road 858 (Hallandale Beach Boulevard) Interchange, northeast quadrant from M.P. 0.000 to M.P. 0.170 and southeast quadrant from M.P. 0.000 to M.P. 0.264

State Road 9 (I-95) and State Road 824 (Pembroke Road) Interchange, southeast quadrant from M.P. 0.000 to M.P. 0.250

PERMIT PROJECT:

State Road 858 (Hallandale Beach Boulevard) at (M.P. 4.99 to 5.09), Permit #2012-L-491-0014

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EXHIBIT C

**PRECEDING LANDSCAPE AGREEMENT DESCRIPTION(S)
AND OTHER AGREEMENT DESCRIPTIONS**

The following Landscape agreements have been executed for projects that have been installed in accordance with the plans and specifications attached thereto and incorporated herein but not exclusive to the following agreement descriptions:

LANDSCAPE AGREEMENTS SUPERSEDED BY THIS AGREEMENT

State Road 824 (Pembroke Road)

8/8/07 State Road 824 (Pembroke Road) from N.W. 9th Avenue (M.P. 5.374) to N.W. 8th Avenue (M.P. 5.441) Beautification Grant. \$60,800.00 for landscape and irrigation. FM No. 419839.1 Contract No. AOU 49, Resolution No. 2007-02 (1/17/07).

State Road 858 (Hallandale Beach Boulevard)

9/10/07 State Road 858 (Hallandale Beach Boulevard) from west of Lake Shore Drive (M.P. 2.176) to east of Dixie Highway (M.P. 3.632) \$307,264.00 for landscape, irrigation and landscape accent lighting. FM No. 413791.1, Resolution No. 2007-24 (5/2/07).

12/19/03 State Road 858 (Hallandale Beach Boulevard) from State Road 5 (US 1) (M.P.3.999) to Three Islands Boulevard (M.P. 5.00) on the east and State Road 858 (Hallandale Beach Boulevard) from the Florida East Coast Railroad (M.P. 3.662) to State Road 5 (US 1/Federal Highway) (M.P. 3.99) on the west. \$489,933.82 (east) \$95,741.77 (west) for landscape irrigation and pavers, FM Nos. 228159.1 and 228269.1, Resolution No 2003-24 (9/16/03).

3/4/98 State Road 858 (Hallandale Beach Boulevard) from State Road 5 (US 1) (M.P.3.999) east to State Road A1A (M.P. 5.429) and State Road A1A from Hallandale Beach Boulevard south to City Limits (M.P.0.00) \$275,000.00 for landscape and irrigation, WPI No. 4110572, Resolution No. 97-33 (12/16/97).

2/15/91 State Road 858 (Hallandale Beach Boulevard) from State Road 5 (US 1) to ICW (M.P.3.99) to (M.P. 5.25) for landscape materials, 232872.1 WPI No. 4119110, Resolution No. 91-01 (1/22/91).

State Road A1A

8/23/95 State Road A1A from State Road 858 (Hallandale Beach Boulevard) (M.P.0.766) south to City Limits (M.P. 0.000) \$20,000.00 for landscape and irrigation. WPI No. 4119110.

State Road 5 (US 1)

5/28/03 State Road 5 (US 1) from Miami-Dade/Broward County Line (M.P. 0.000) to State Road 824 (Pembroke Road) (M.P.1.597) \$282,418.59 for landscape and irrigation. FM Nos. 228034.1 and 403585.1, Resolution No. 2003-7 (2/18/03).

State Road 9 (I-95)

1-15-04 State Road 9 (I-95) three ramps: 2 eastern quadrants at State Road 858 (Hallandale Beach Boulevard) and the southeastern quadrant at State Road 824 (Pembroke Road). \$136,500.00 for landscape. FM No. 409425.1, Resolution No. 2003-21 (8/19/03).

PERMIT PROJECT PENDING LANDSCAPE AGREEMENT

State Road 858 (Hallandale Beach Boulevard)

10/30/12 State Road 858 (Hallandale Beach Boulevard) at (M.P. 4.99 to 5.09) for landscape Permit #2012-L-491-0014 issued to the City of Hallandale Beach. Agency Letter of Commitment to Maintain signed 10/30/12

This Agreement, pursuant to paragraph number 5, shall supersede all other above agreements except as to the actual landscape plans and project cost that have not been replanted by subsequent FDOT approved projects and those that are "excepted out". The terms of this agreement shall apply to those landscape plans.

S:\Transportation Development\PM\PA\Landscape Architectural\GRUEN\SV1\COA\HALLANDALE BEACH\INCLUSIVE
MMO\Hallandale\ch inclusive_1\COA\2-0-13\docs

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EXHIBIT D

PENDING DEPARTMENT AND PERMIT PROJECT LANDSCAPE IMPROVEMENT PLANS

DEPARTMENT PROJECTS:

State Road 9 (I-95) at State Road 858 (Hallandale Beach Boulevard)

Ronald R. Sill, RLA

Reynolds, Smith and Hills, Inc.

Dated: October 15, 2012

DEPARTMENT PROJECTS:

State Road 9 (I-95) at State Road 824 (Pembroke Road)

Ronald R. Sill, RLA

Reynolds, Smith and Hills, Inc.

Dated: January 31, 2013

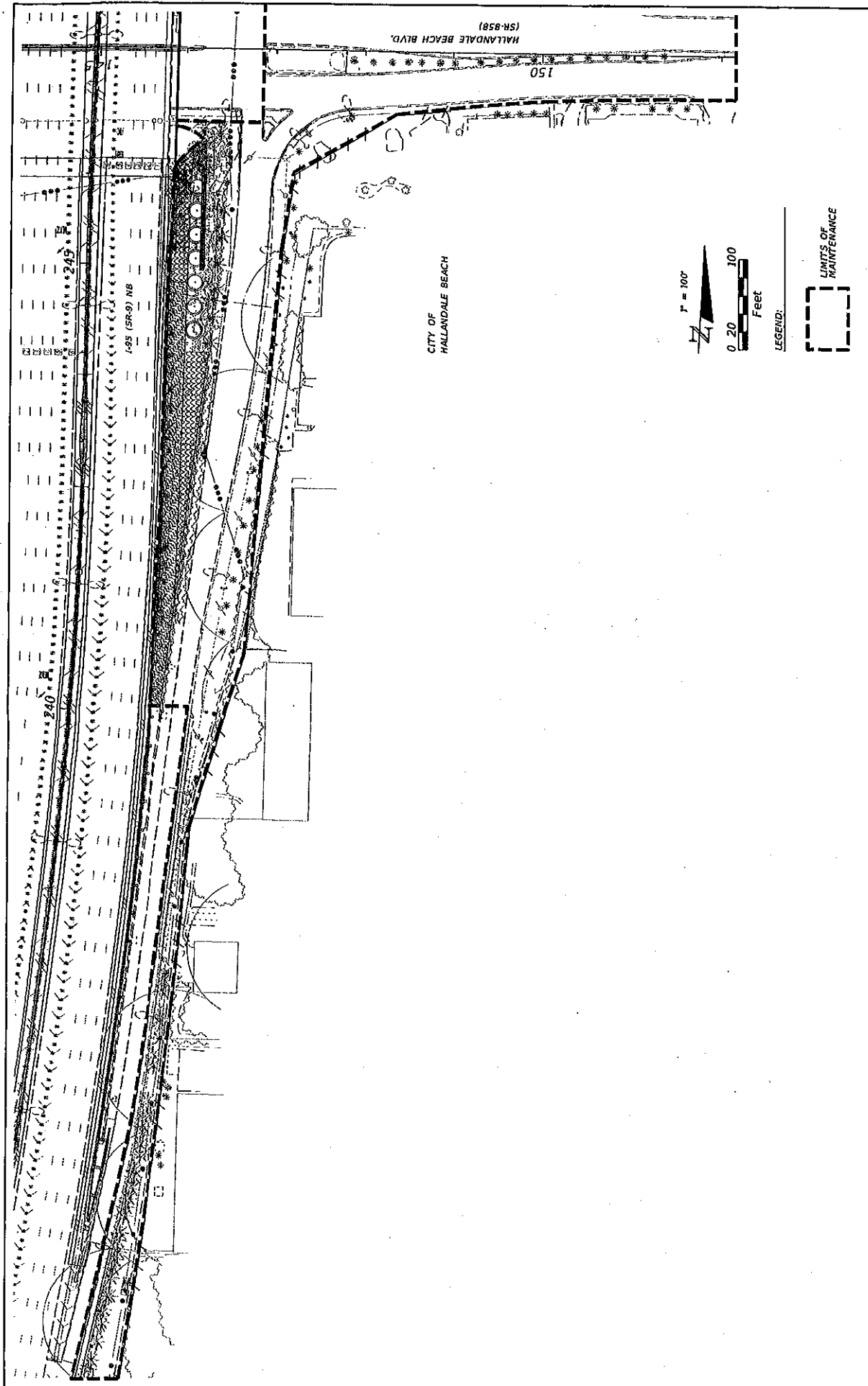
PERMIT PROJECT:

State Road 858 (Hallandale Beach Boulevard)

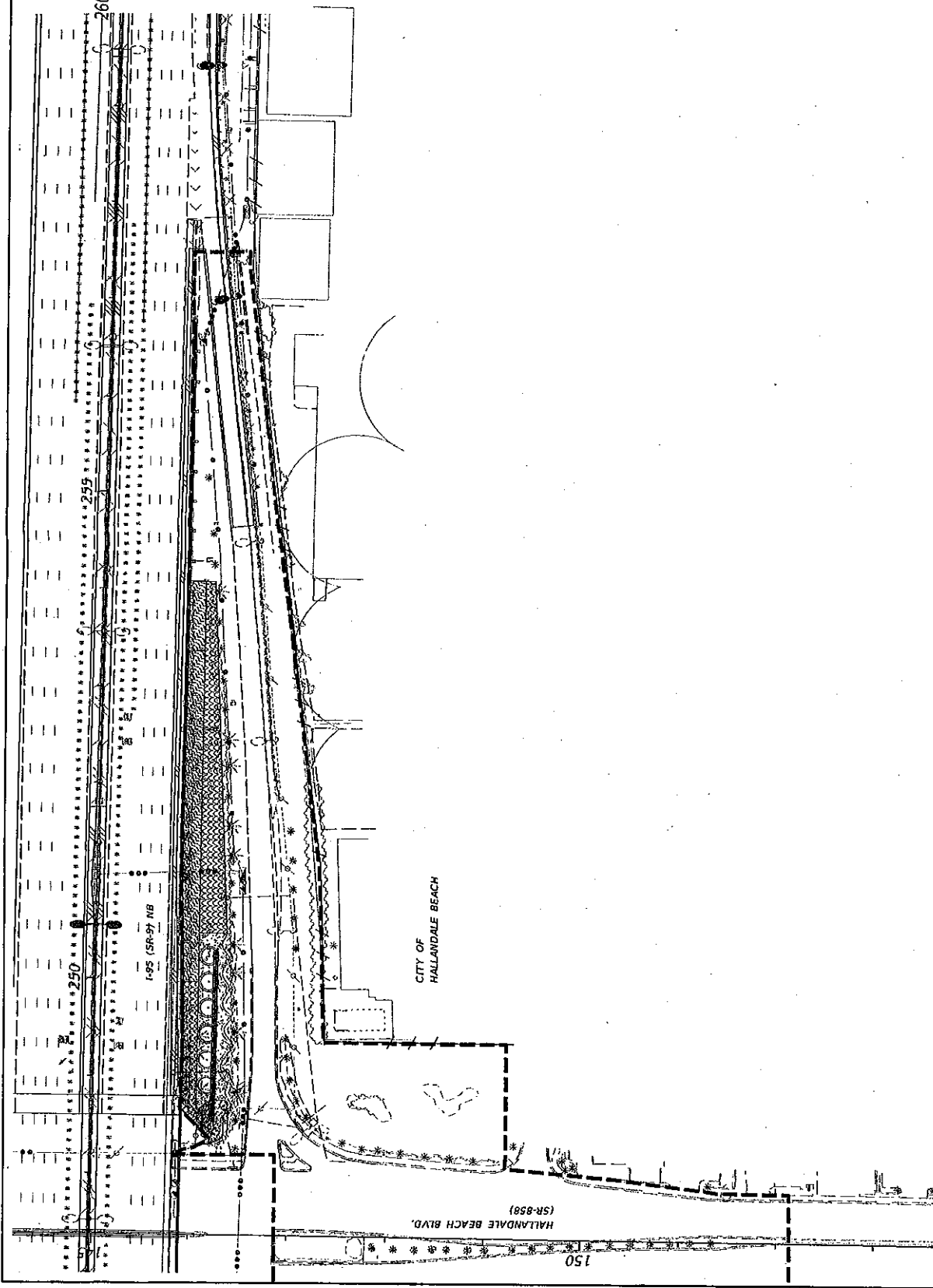
Richard Labinsky, P.E.

City of Hallandale Beach

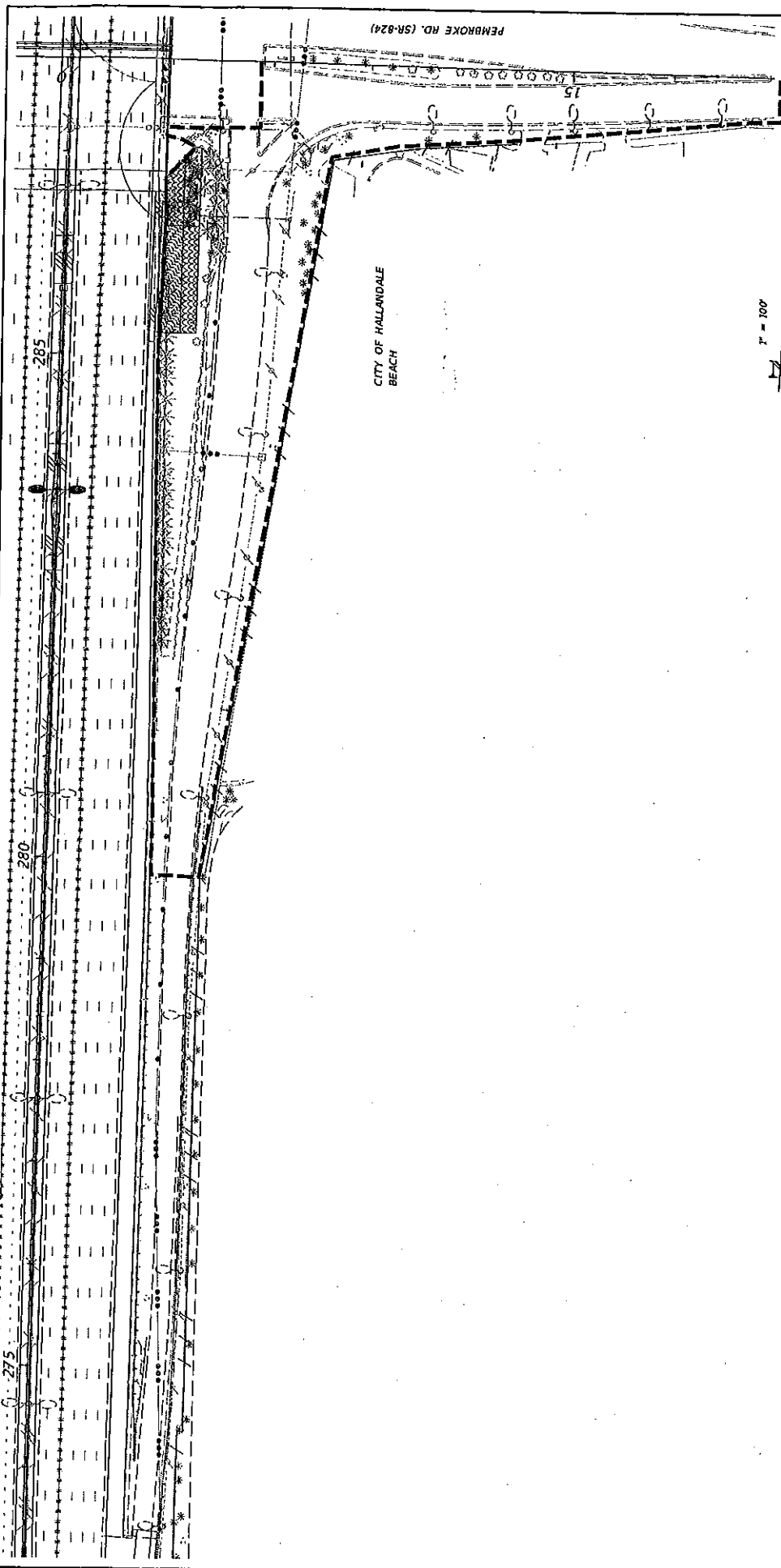
Dated: January 31, 2013



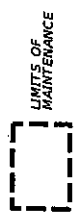
DATE: _____ DESCRIPTION: _____ DATE: _____ DESCRIPTION: _____		REVISIONS	
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		COUNTY: BROWARD MIAMI-DADE	
ROAD NO.: SR 9		FINANCIAL PROJECT ID: 422796-1-52-01 422796-2-52-01	
RSH Reynolds, Smith and Hills, Inc. 2175 N. Commercial Blvd., Suite 100 Fort Lauderdale, FL 33308 (954) 571-1000 Certificate of Registration No. 000 Renewal Date: 12/1/2007		MAINTENANCE AGREEMENT EXHIBIT 102-A	
10/17/2007 2:45:13 PM		PC: 422796-1-52-01 NBR: 45676702038.008	



REVISIONS DATE DESCRIPTION DATE DESCRIPTION		RSH Reynolds, Smith and Hills, Inc. 1100 N.W. 11th St., Suite 1100 Fort Lauderdale, Florida 33304-4448 Certificate of Authorization No. 9020 Renewal E.O. 12812, No. 107	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. SR 9 COUNTY BROWARD MIAMI-DADE FINANCIAL PROJECT ID 422796-1-52-01 422796-2-52-01		MAINTENANCE AGREEMENT EXHIBIT 102-B 10/17/2012 2:45:19 PM 97488 AL:\P\22796\15201\MAINTENANCE\102B.DWG



LEGEND:



DATE DESCRIPTION		REVISIONS DATE DESCRIPTION		RSH Reynolds, Smith and Hills, Inc. 2125 W. Commercial Blvd., Suite 100 Fort Lauderdale, FL 33305-3444 Phone: (954) 771-2000 Fax: (954) 771-1772		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. SR 9 COUNTY BROWARD FINANCIAL PROJECT ID 422796-1-52-01 MIAMI-DADE 422796-2-52-01		MAINTENANCE AGREEMENT EXHIBIT		SHEET NO. 103-B
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FOOT PROJECT MANAGER: DONOVAN PESSOA, P.E.

TABULATION OF QUANTITIES / PLANT SCHEDULE

PAY ITEM NO.	SYM	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MAXIMUM MAINTAINED SIZE	SPACING	REMARKS	UNIT	SHEET NUMBERS						TOTAL THIS SHEET		GRAND TOTAL	
									LD-168	LD-178	LD-188	LD-198	LD-208	LD-218	PLAN	FINAL	PLAN	FINAL
162-1-11		PREPARED SOIL LAYER	FINISH SOIL LAYER, 6"				WITHIN ALL LANDSCAPE AREAS	SY										
580-1-1																		
	SMALL	CHRYSOBALANUS ICACA 'HORIZONTALIS'	HORIZONTAL COCOPLUM HORIZONTALIS	3 GAL	3.0' HT.	3.0' O.C.	10"X10" FULL	LS	2301			259					2559	
	SMALL	FICUS MICROCARPAS 'GREEN ISLAND'	FICUS GREEN ISLAND	3 GAL	3.0'-4.0' HT.	3.0' O.C.	10"X12" FULL	LS										
	SMALL	HAMELIA NODOSA	DWARF FIREBUSH ORANGE FLOWERS	3 GAL	3' O.C.	3.0' O.C.	24"X18" FULL	LS	1519			219					1738	
	SMALL	MUHLBERGIA CAPILLARIS	MUHL GRASS	3 GAL	4.0' HT.	3.5' O.C.	24"X18" FULL	LS										
	SMALL	SPARTINA BAKERI	SAND CORDGRASS	3 GAL	4.0' HT.	3.5' O.C.	24"X18" FULL	LS	204								204	
	SMALL	TRIPSACUM FLORIDANA	DWARF FAKAHATCHEE	3 GAL	3.0' HT.	2.5' O.C.	24"X18" FULL	LS	400			669					1069	
580-1-2																		
	LARGE	BULNESIA ARBOREA	VERAWOOD	25 GAL	NF	AS SHOWN	8.0' HT. MATCHED, FULL STRAIGHT TRUNK	LS										
	LARGE	HYOPHORBE LAGENICALLIS	BOTTLE PALM	FIELD GROWN	NF	AS SHOWN	10' OA HT. MATCHED STRAIGHT, FULL	LS										
	LARGE	SABAL PALMETTO	SABAL PALM	12' C.T.	NATURAL GROWTH	AS SHOWN	BOODED, MATCHED STRAIGHT TRUNK	LS	7			8					15	
	LARGE	SERENOA REPENS CINEREA	SILVER SAW PALMETTO	7 GAL	NF	3.0' O.C.	2.0'X2.0' FULL	LS										
	LARGE	THRINAX RADIATA	THATCH PALM	10'-12' OA	NF	AS SHOWN	FULL CROWN, MATCHED STRAIGHT TRUNK	LS	20								20	

LEGEND: NF= NATURAL FORM, CAL= CALIPER, OA= OVERALL, GAL= GALLON, C.T.= CLEAR TRUNK, GV= GREY WOOD, B & B= BALLED AND BURLAPPED
 SHT= SHEET, STOG= STAGGERED, SPD= SPREAD, O.C.= ON CENTER, Y= YES, N= NO, MAX.= MAXIMUM, MAINT.= MAINTAINED, HT.= HEIGHT, RP= ROOT PLUS GROWER



Reynolds, Smith and Hills, Inc.
 3125 W. Commercial Blvd., Suite 103
 Coral Gables, FL 33134
 Phone: 305-442-0000
 Fax: 305-442-0001

STATES OF FLORIDA
 DEPARTMENT OF TRANSPORTATION

ROAD NO. SR 9
 COUNTY BROWARD
 MIAMI-DADE

FINANCIAL PROJECT ID
 422796-1-52-01
 422796-2-52-01

TABULATION OF QUANTITIES PLANT SCHEDULE

10/1/2013 3:30:18 PM AC-227761301\NAMES\142801_2013_10.DWG

SHEET NO.
LD-4B

PAY ITEM NOTES:

580-1-1, 580-1-2:
INCLUDES ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS FOR THE COMPLETE INSTALLATION OF PLANTS IN ACCORDANCE WITH THE GOVERNING SPECIFICATIONS AND FOOT INDEX #544 INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: EROSION CONTROL, STAKING, TRUNK PROTECTION, MULCH, HAND WATERING, FERTILIZER, PRE-EMERGENT HERBICIDE APPLICATIONS, GUARANTEE AND MAINTENANCE DURING ESTABLISHMENT PERIOD.

LANDSCAPE GENERAL NOTES:

1. THE CONTRACTOR SHALL RESTORE AND REPLACE ALL DAMAGED SOD WITH WEED FREE ARGENTINE BAHIA TO MEET ROADWAY PLAN GRADING SPECIFICATIONS AND CROSS SECTIONS. SOD WILL BE PAID FOR UNDER THE SODDING PAY ITEM (NO. 570-1-2). ALL OTHER AREAS OF EXISTING SOD THAT ARE DAMAGED BY THE CONTRACTOR DURING THE PERFORMANCE OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.
2. ANY IRRIGATION SYSTEMS WITHIN LIMITS OF WORK THAT ARE DISTURBED DUE TO CLEARING AND GRUBBING, AND BRIDGE EXPANSION SHALL BE RESTORED TO WORKING CONDITIONS.
3. LANDSCAPING SHALL BE LOCATED SUCH THAT DRAINAGE DITCHES AND SWALES ARE NOT BLOCKED OR FLOWS IMPEDED. LANDSCAPING LOCATION SHALL ALSO CONSIDER MAINTENANCE ACCESS ALONG/ACROSS DITCHES AND AROUND STORM WATER MANAGEMENT FACILITIES. MAINTENANCE ACCESS SHOULD BE PROVIDED AT THE TOP OF THE SLOPE AND BOTTOM OF THE SLOPE SO THAT MAINTENANCE FORCES MAY GAIN ACCESS TO SIDE SLOPES.
4. ALL PLANTING BEDS ON 2:1 (1:3) SLOPES SHALL INCLUDE THE USE OF WEED CONTROL AND PERMANENT EROSION CONTROL FABRICS, ANCHORED OR TOED SO THAT THE STONMWATER CANNOT RUN UNDERNEATH THE MAT.
5. UTILITY INFORMATION SHOWN IN THE DRAWINGS IS SCHEMATIC IN NATURE AND SHOULD BE CONSIDERED A GRAPHIC DEPICTION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION. REFER TO ROADWAY PLANS FOR A LISTING OF ALL KNOWN UTILITY PROVIDERS IN THE AREA.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES INCLUDING FIBER OF ITS DEVICES AND ENSURE PLANTS DO NOT BLOCK ANY ITS DEVICES (CAMERAS, TRAFFIC COUNTERS, ETC.) PRIOR TO EXCAVATION. NO UTILITY FACILITIES WILL BE REQUIRED TO BE RELOCATED DUE TO THE LANDSCAPE DESIGN. IF A UTILITY IS IN CONFLICT WITH THE PROPOSED LANDSCAPE, THE CONTRACTOR SHALL BE ADJUSTED AS DIRECTED BY THE LANDSCAPE ARCHITECT OF RECORD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES PRIOR TO BEGINNING CONSTRUCTION ON JOB SITE.
7. SEE ROADWAY PLANS FOR MAINTENANCE OF TRAFFIC REQUIREMENTS DURING CONSTRUCTION MAINTENANCE, AND FOR ALLOWABLE CONSTRUCTION TIME, OF WORKDAY RESTRICTIONS, AND CONSTRUCTION CALENDAR INFORMATION.
8. WATER FORCE FROM WATER TRUCK SHALL NOT BE APPLIED IN A MANNER WHICH WOULD DAMAGE PLANTS. NOR IN A MANNER WHICH WOULD REMOVE SOIL SAUCER RING OR MULCH AROUND EACH PLANT. ANY DAMAGE TO PLANTS OR OTHER SURROUNDING ITEMS, EITHER BY WATER FORCE OR WATER TRUCK, IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR OR REPLACE.
9. ANY PRUNING TO BE DONE ON EXISTING TREES TO REMAIN SHALL BE SUPERVISED BY A FLORIDA CERTIFIED ISA ARBORIST USING AMERICAN STANDARD INSTITUTE ANSI A300 STANDARDS. CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA). ANY CATEGORY ONE INVASIVES (I.E. BRAZILIAN PEPPERS, MELALEUCA, AUSTRALIAN PINE, EARLEAF ACACIA, LEAD TREE) FOUND WITHIN THE PROJECT LIMITS SHOULD BE REMOVED AS PART OF THE SITE WORK.
10. PROVIDE AS-BUILT DRAWINGS OF LANDSCAPE AFTER FINAL ACCEPTANCE AND BEFORE THE START OF THE ESTABLISHMENT PERIOD TO FOOT MAINTENANCE.

11. SUBMITTALS:

- A) CONTRACTOR SHALL TAG AND LANDSCAPE ARCHITECT OF RECORD SHALL APPROVE ALL LARGE PALMS AND TREES AT THE NURSERY PRIOR TO DELIVERY TO THE SITE.
- B) HIGH RESOLUTION PHOTOGRAPHS MAY BE SUBMITTED TO THE LANDSCAPE ARCHITECT OF RECORD FOR APPROVAL FOR SHRUBS AND GROUND COVER MATERIALS. EACH PLANT PHOTOGRAPH APPROVED FOR THE PROJECT OF RECORD SHALL BE THE MINIMUM STANDARD ACCEPTED FOR EACH PLANT SPECIES. THE PHOTOGRAPHS SHALL SHOW THE ENTIRE PLANT AND HAVE A LEGIBLE VERTICAL SCALE TO SHOW THE OVERALL HEIGHT OF THE PLANT.
- C) THE FOLLOWING ITEMS SHALL BE SUPPLIED TO THE LANDSCAPE ARCHITECT OF RECORD FOR APPROVAL:
 1. FERTILIZER: SHALL BE FORMULATED FOR FLORIDA SOILS AND APPROPRIATE BALANCE OF MACRO- AND MICRO- NUTRIENTS FOR PALMS. CONTRACTOR SHALL SUBMIT MANUFACTURER'S CUT SHEET WITH APPROPRIATE APPLICATION RATES AND AN APPLICATION SCHEDULE SHALL BE SPECIFIED TO ENSURE A CONTINUOUS FEED THROUGHOUT THE ESTABLISHMENT PERIOD. A FINAL APPLICATION SHALL BE MADE PRIOR TO THE END OF THE 1-YEAR ESTABLISHMENT PERIOD.
 2. TOPSOIL ANALYSIS AND SAMPLES OF TOPSOIL AND COMPOST
 3. SAMPLE OF MULCH MATERIAL.
 4. PRE-EMERGENT HERBICIDE
 5. HAND WATERING SCHEDULE
 6. PRE-EMERGENT HERBICIDE
 7. TRUNK PROTECTOR SAMPLE
 8. CONTRACTOR SHALL SUBMIT AN AFFIDAVIT FROM THE NURSERY SOURCE FOR PALMS PURCHASED FOR THE PROJECT CERTIFYING THAT THE PALMS ARE FREE OF GANODERMA, GANODERMA ZONATU IS A LETHAL FUNGAL INFECTION THAT AFFECTS MOST PALMS, AND HAS RECENTLY AFFECTED PALMS ON FLORIDA'S HIGHWAYS. ALL CARE SHALL BE TAKEN IN TRANSPORTING, PLANTING, AND STAKING ACTIVITIES TO AVOID TRUNK DAMAGE, SUCH INJURIES TO THE TRUNK ARE KNOWN TO INCREASE EXPOSURE TO THE FUNGUS, AND INCREASE THE CHANCE OF FATALITY TO THE PALM.
 9. CONTRACTOR SHALL SUBMIT AN AFFIDAVIT FROM A PRIVATE CONSULTANT, PRIOR TO PROVIDING AFFIDAVIT, SPECIALIST FROM IFAS, OR A PRIVATE CONSULTANT, PRIOR TO PROVIDING AFFIDAVIT.
12. ALL LANDSCAPE BEDS SHALL RECEIVE A UNIFORMLY APPLIED MULCH MATERIAL TO A MINIMUM THICKNESS OF 3" OVER THE ENTIRE PLANT BED, (EXCEPT WITHIN 6" OF TREE TRUNKS). INDIVIDUALLY PLANTED TREES (NOT WITHIN SHRUB BEDS) SHALL RECEIVE A 4" MULCH RING. TRUNK PROTECTION (SEE DETAIL) MULCH TYPE TO BE FLORIMULCH (MULCH AND SOIL COUNCIL CERTIFIED). THE CONTRACTOR SHALL ALSO APPLY A PRE-EMERGENT HERBICIDE TO ALL PLANT BEDS PRIOR TO MULCHING. (FOLLOW MANUF. RECOMMENDATIONS FOR RATES AND METHODS OF APPLICATION).
13. SPECIAL BED PREPARATION:
 - A) NEW TOPSOIL AND COMPOST SHALL BE MULCH AND SOIL COUNCIL CERTIFIED REFILL (BACKFILL) WITH APPROVED PLANTING SOIL MIXTURE FOLLOWING EXCAVATION'S FOLLOWING: PLANTING BEDS, TREES AND PALMS: MIX: 25% NEW TOPSOIL, 25% COMPOST, 50% EXISTING SOIL. PROVIDE NEW TOPSOIL WHICH IS FERTILE, FRABLE, NATURAL LOAM, BRUSH, WEEDS AND OTHER LITTER, AND FREE OF ROOTS. STONES LARGER THAN 1.5" IN ANY DIMENSION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. PROVIDE COMPOST WHICH CONSISTS OF 100% VEGETATIVE ORGANIC COMPOST. SCREENED TO 1/2" MINUS. SOIL TESTING SHALL BE CONDUCTED BY AN APPROVED SOIL-TESTING LABORATORY. THE CONTRACTOR SHALL PROVIDE THE LANDSCAPE ARCHITECT OF RECORD WITH THE RESULTS OF THE SOIL ANALYSIS PRIOR TO ANY INSTALLATIONS THROUGHOUT THE PROJECT. PLANTING AND SOIL MIXTURE SHALL BE USED FOR ALL PROPOSED PLANTING MATERIAL.
14. BASELINE STATIONING IS SHOWN FOR REFERENCE ONLY.
15. CONTRACTOR TO PROVIDE SCHEDULE OF VALUES AT PRE-CONSTRUCTION MEETING.

DATE	DESCRIPTION	DATE	REVISIONS	DESCRIPTION

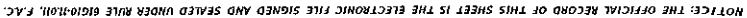


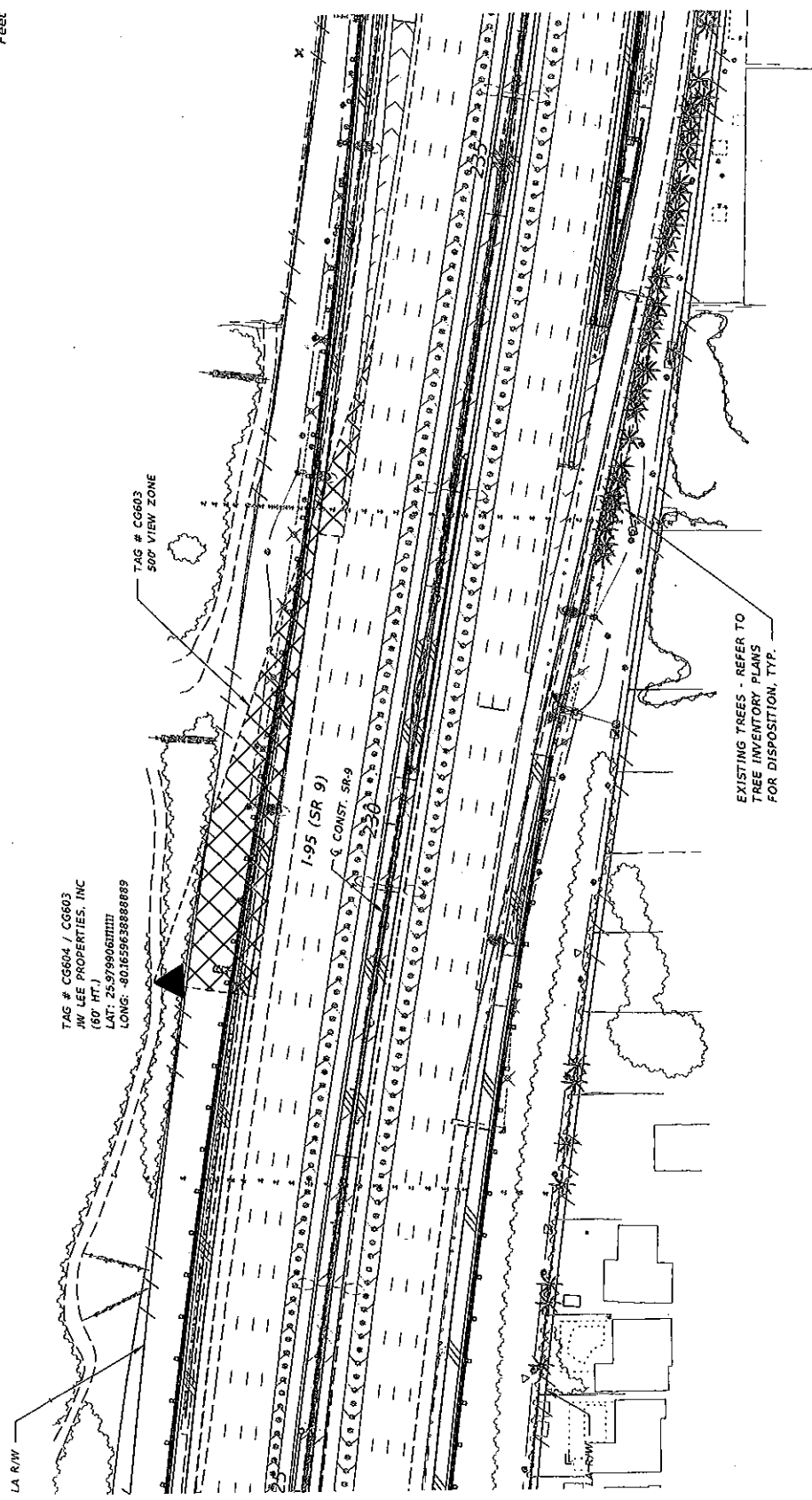
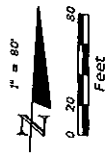
Reynolds, Smith and Hills, Inc.
11111 Commerce Center, Suite 100
Miami, FL 33156
Tel: 305-444-2000
Fax: 305-444-2001
E-Mail: info@rsh.com

STATE OF FLORIDA	DEPARTMENT OF TRANSPORTATION
ROAD NO.	COUNTY
SR 9	BROWARD
	MIAMI-DADE
	FINANCIAL PROJECT ID
	422796-1-52-01
	422796-2-52-01

LANDSCAPE GENERAL NOTES

SHEET NO.
LD-6B





DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

RS&H
 Reynolds Smith and Hills, Inc.
 3125 N. Commercial Ave., Suite 100
 Fort Lauderdale, FL 33309
 (954) 576-1100
 FAX (954) 576-1101

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	FINANCIAL PROJECT ID
ROAD NO. COUNTY	422796-1-52-01
SR 9 BROWARD	422796-2-52-01
MIAMI-DADE	

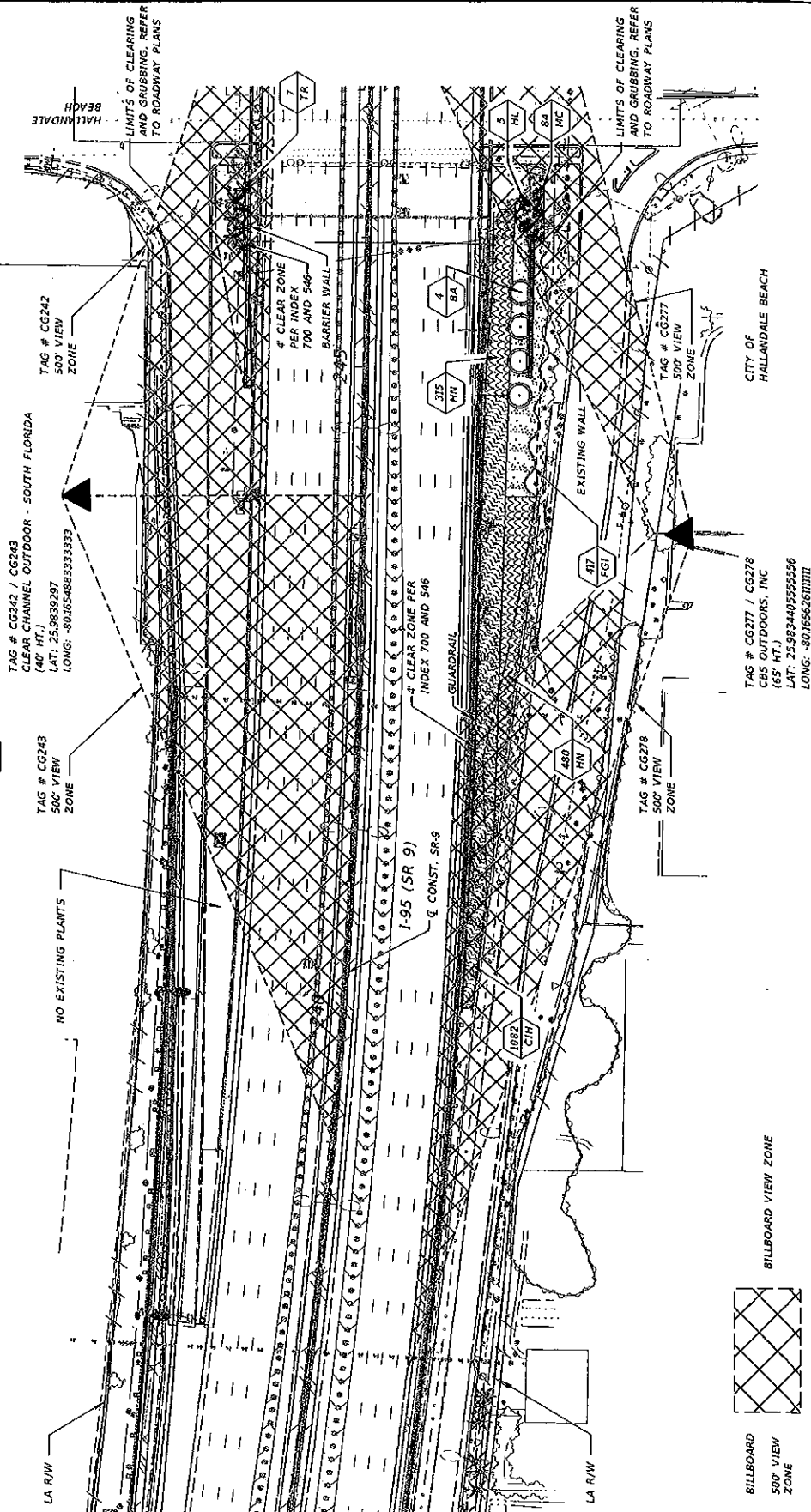
LANDSCAPE PLAN (1)
HALLANDALE BEACH

SHEET NO. LD-88

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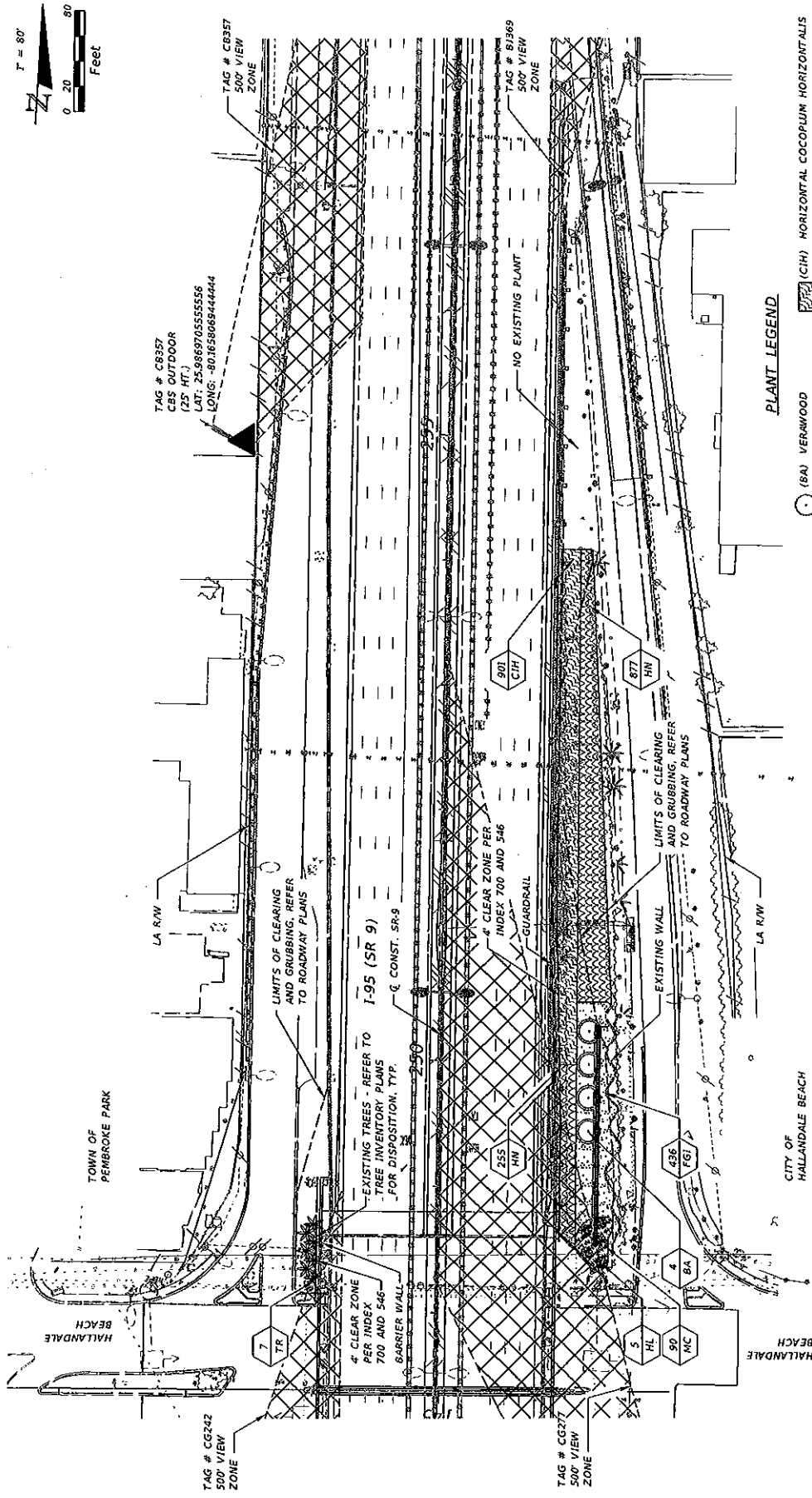
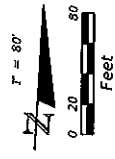
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(BA)	VERA WOOD	(CIH)	HORIZONTAL COCOPLUM HORIZONTALIS
(ML)	BOTTLE PALM	(FGI)	FICUS 'GREEN ISLAND'
(SP)	SABAL PALM	(HN)	DWARF FIREBUSH ORANGE FLOWERS
(SR)	SILVER SAW PALMETTO	(MC)	MUNLY GRASS
(TR)	THATCH PALM	(SB)	SAND CORDGRASS
		(TF)	DWARF FAKAMATCHEE



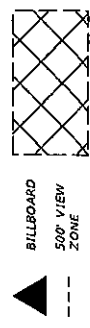
DATE		DESCRIPTION		REVISIONS		 Reynolds, Smith and Hills, Inc. 310 N. Commercial Blvd., Suite 113 Fort Lauderdale, Florida 33304-3448 (407) 561-1000 Certified Professional Engineer Florida C.E. No. 1272	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION <table><tr><td>ROAD NO.</td><td>COUNTY</td><td>FINANCIAL PROJECT ID</td></tr><tr><td>SR 9</td><td>BROWARD</td><td>422796-1-32-01 422796-2-32-01</td></tr></table>	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	SR 9	BROWARD	422796-1-32-01 422796-2-32-01	LANDSCAPE PLAN 12) HALLANDALE BEACH	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID													
SR 9	BROWARD	422796-1-32-01 422796-2-32-01													
						LD-98									

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PLANT LEGEND

- (BA) VERAWOOD
- (HL) BOTTLE PALM
- (SP) SABAL PALM
- (SR) SILVER SAW PALMETTO
- (TR) THATCH PALM
- (CH) HORIZONTAL COCORUM HORIZONTALS
- (FGI) FICUS 'GREEN ISLAND'
- (HN) DWARF FIREBUSH ORANGE FLOWERS
- (MC) MUHLY GRASS
- (SB) SAND CORDGRASS
- (TF) DWARF FAKAHATCHEE



BILLBOARD
500' VIEW
ZONE

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

RS&H
Reynolds, Smith and Hills, Inc.
1101 N. Commercial Ave., Suite 100
Fort Lauderdale, FL 33304
Phone: 561-581-1000
Fax: 561-581-1001

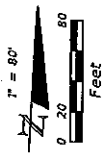
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
ROAD NO. SR 9
COUNTY MIAMI-DADE
FINANCIAL PROJECT ID 422796-1-52-01
422796-2-52-01

SHEET NO. LD-108

**LANDSCAPE PLAN (3)
HALLANDALE BEACH**

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LANDSCAPE PLAN (A)	SHEET NO.
	LD-11B



TAG # CH354 / CH633
CLEAR CHANNEL OUTDOOR - S. FLORIDA DIV.
(50' HT.)
LAT: 25.997711111111
LONG: -80.165869444444

TAG # BX154 / CG258
CLEAR CHANNEL OUTDOOR
S. FLORIDA DIV.
(40' HT.)
LAT: 25.99434
LONG: -80.1659575

TAG # CC633
500' VIEW
ZONE

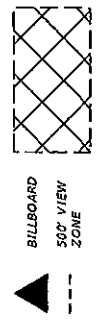
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500' VIEW
ZONE

TAG # BX154
500' VIEW
ZONE

TAG # BX151
500' VIEW
ZONE

TAG # BX151
500' VIEW
ZONE

TAG # CH430
500' VIEW
ZONE



NO PLANTINGS THIS SHEET

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

RS&H
Reynolds, Smith and Hills, Inc.
1945 E. Commercial Blvd., Suite 100
Fort Lauderdale, FL 33305
Phone: 954-442-2255
Fax: 954-442-2256
E-MAIL: RS&H@AOL.COM

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	
ROAD NO.	COUNTY
SR 9	BROWARD
FINANCIAL PROJECT ID	
422796-1-52-01	
MIAMI-DADE	
422796-2-52-01	

LANDSCAPE PLAN (1)
PEMBROKE RD / SR 894

SHEET NO.
LD-12B

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NOTE:
EXISTING 500' VIEW ZONE
FOR TAG # BX150 / BX151

TOWN OF
PEMBROKE PARK

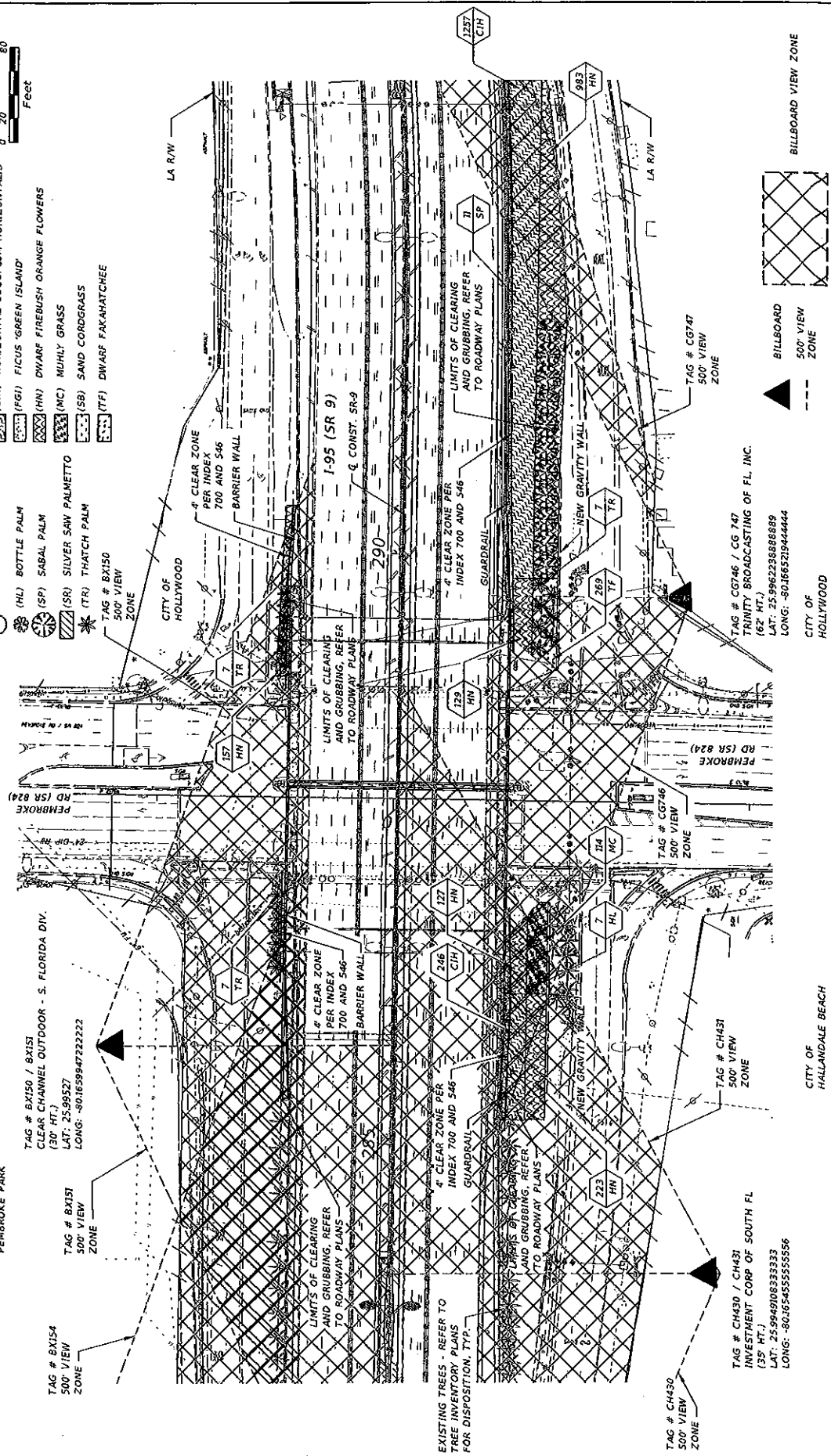
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(30' HT.)
LAT: 25.95527
LONG: -80.16594722222

TAG # BX151
500' VIEW
ZONE

TAG # BX154
500' VIEW
ZONE

PLANT LEGEND

- (BA) VERAWOOD
- (HL) BOTTLE PALM
- (SP) SABAL PALM
- (SR) SILVER SAW PALMETTO
- (TR) THATCH PALM
- (T) TAG # BX150
500' VIEW
ZONE
- (CIH) HORIZONTAL COCOPALM HORIZONTALIS
- (FGI) FICUS GREEN ISLAND
- (HN) DWARF FIREBUSH ORANGE FLOWERS
- (MC) MUHLY GRASS
- (SB) SAND CORDGRASS
- (TF) DWARF FAKAHATCHEE



TAG # CH430 / CH431
INVESTMENT CORP OF SOUTH FL
(35' HT.)
LAT: 25.944708333333
LONG: -80.165455555556

TAG # CH431
500' VIEW
ZONE

TAG # CG746
500' VIEW
ZONE

TAG # CG746 / CG 747
TRINITY BROADCASTING OF FL INC.
(62' HT.)
LAT: 25.962238888889
LONG: -80.166521944444

TAG # CG747
500' VIEW
ZONE



DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

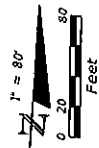
RSH
Reynolds, Smith and Hills, Inc.
1201 N. Commercial Blvd., Suite 110
Pembroke Park, FL 33428
Tel: 305-392-0000
Fax: 305-392-0001
E-mail: rsh@rshinc.com

ROAD NO.	SR 9	COUNTY	BROWARD	FINANCIAL PROJECT ID	422796-1-52-01
SR	9	CITY	MIAMI-DADE	FINANCIAL PROJECT ID	422796-2-52-01

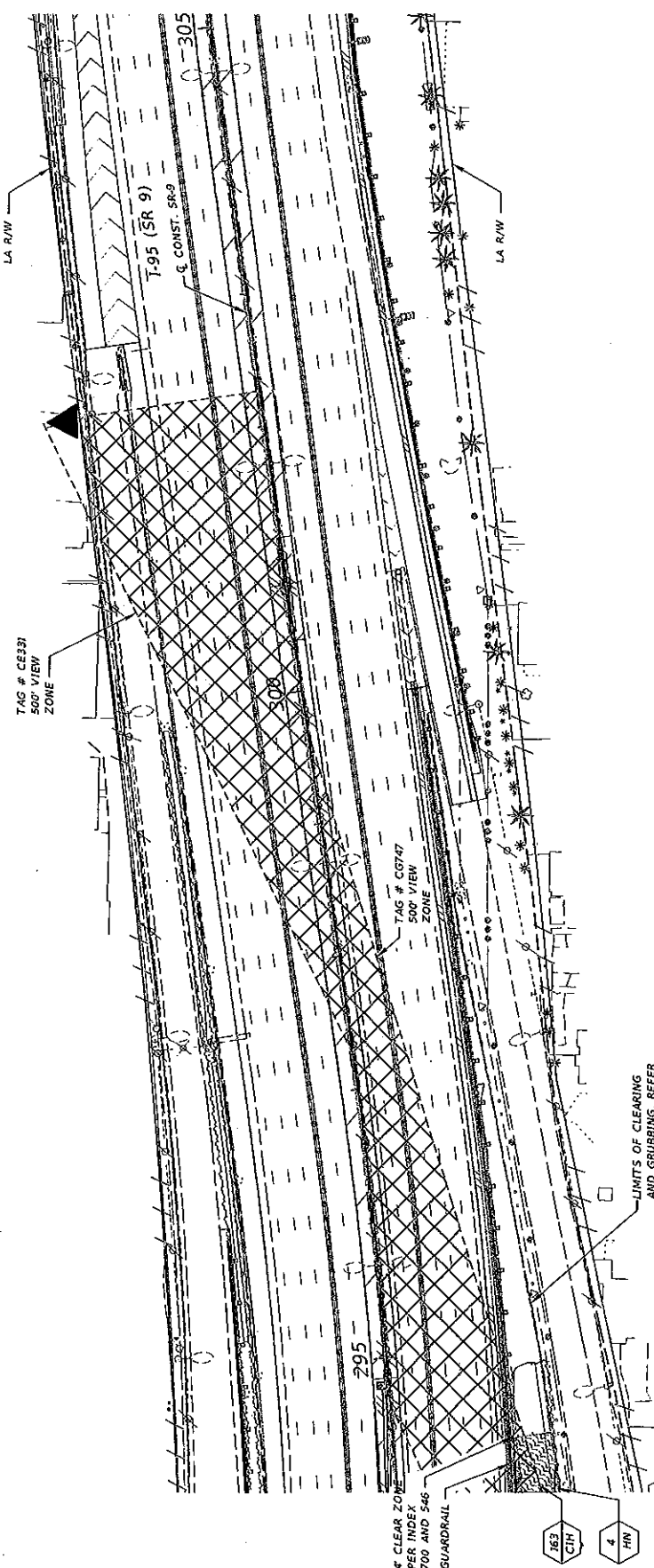
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

LANDSCAPE PLAN (2)
PEMBROKE RD / SR 824

SHEET NO.
LD-138

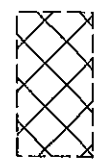


TAG # CE331 / CE330
CBS OUTDOOR, INC.
(62' HT.)
LAT: 25.998925
LONG: -80.16672944444444



PLANT LEGEND

- (BA) VERAWOOD
- (HL) BOTTLE PALM
- (SP) SABAL PALM
- (SR) SILVER SAW PALMETTO
- (TR) THATCH PALM
- (CH) HORIZONTAL COCOPLUM HORIZONTALIS
- (FG) FICUS 'GREEN ISLAND'
- (HN) DWARF FIREBUSH ORANGE FLOWERS
- (NC) MUHLY GRASS
- (SB) SAND CORDGRASS
- (TF) DWARF FAKAHATCHEE



BILLBOARD
500' VIEW
ZONE

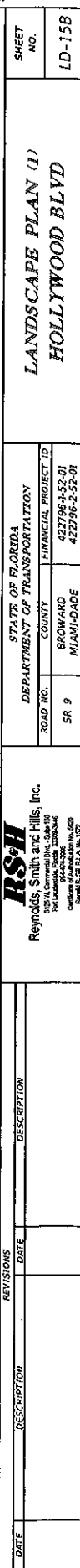
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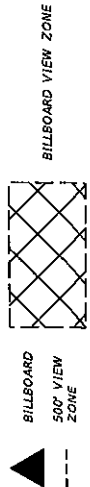
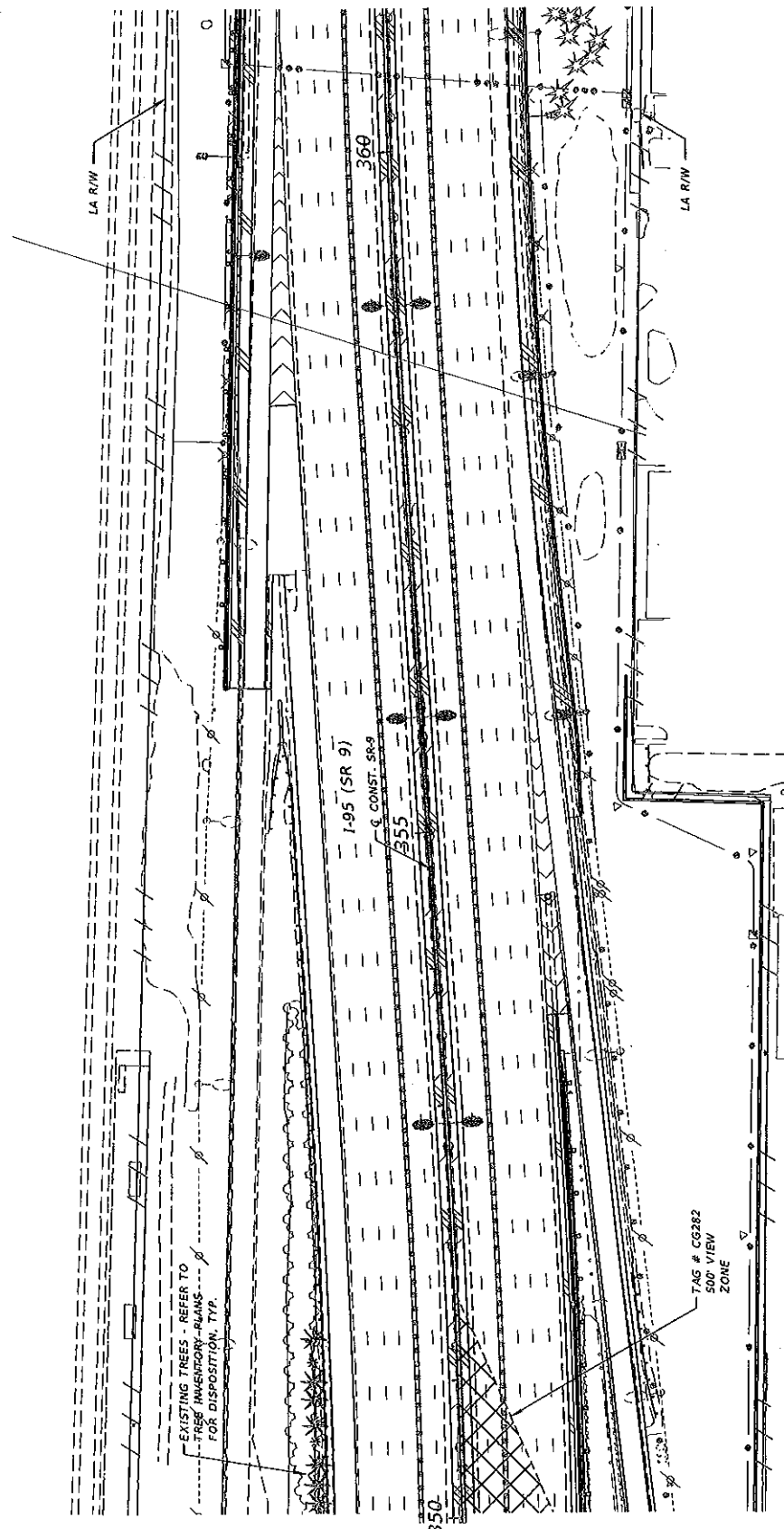
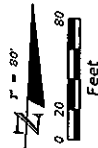
RSH
Reynolds, Smith and Hills, Inc.
375 N. Commercial Ave., Suite 200
Fort Lauderdale, FL 33301
Phone: (954) 571-1000
Fax: (954) 571-1001
E-Mail: rsh@rshinc.com

STATE OF FLORIDA	
DEPARTMENT OF TRANSPORTATION	
ROAD NO.	FINANCIAL PROJECT ID
SR 9	422796-1-52-01
COUNTY	422796-2-52-01
BROWARD	
MIAMI-DADE	

SHEET
NO.
LD-148

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G(10)(11), F.A.C.





NO PLANTINGS THIS SHEET

REVISIONS		DESCRIPTION	
DATE	DESCRIPTION	DATE	DESCRIPTION

RS&H
 Reynolds, Smith and Hills, Inc.
 1001 N. Commercial Blvd., Suite 100
 Fort Lauderdale, Florida 33304
 Phone: (305) 466-1000
 Fax: (305) 466-1001
 Email: info@rsandh.com

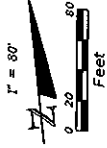
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	
ROAD NO. SR 9	COUNTY BROWARD
FINANCIAL PROJECT ID 422796-152-01 422796-252-01	

LANDSCAPE PLAN (3)
 HOLLYWOOD BLVD

SHEET NO.
 LD-17B

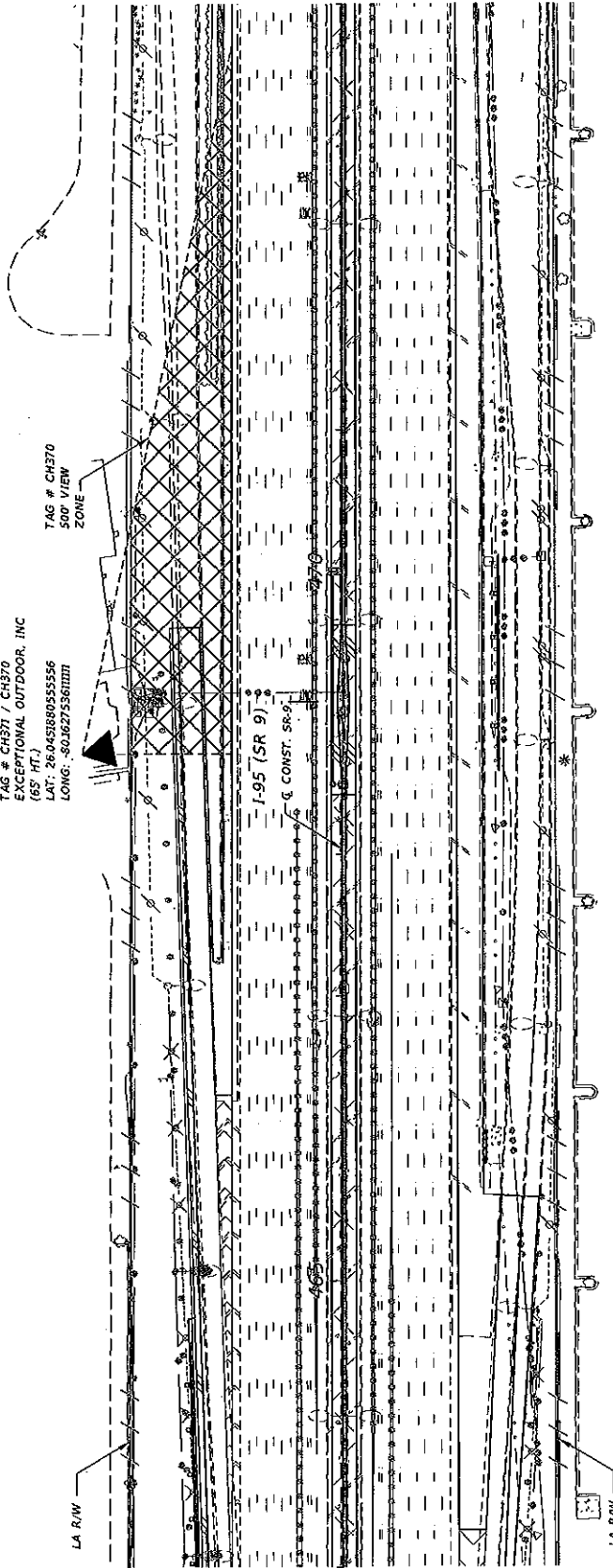
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NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61S10-101, F.A.C.



TAG # CH371 / CH370
EXCEPTIONAL OUTDOOR, INC.
(65' HT.)
LAT: 26.045180555556
LONG: -80.627536111111

TAG # CH370
500' VIEW
ZONE



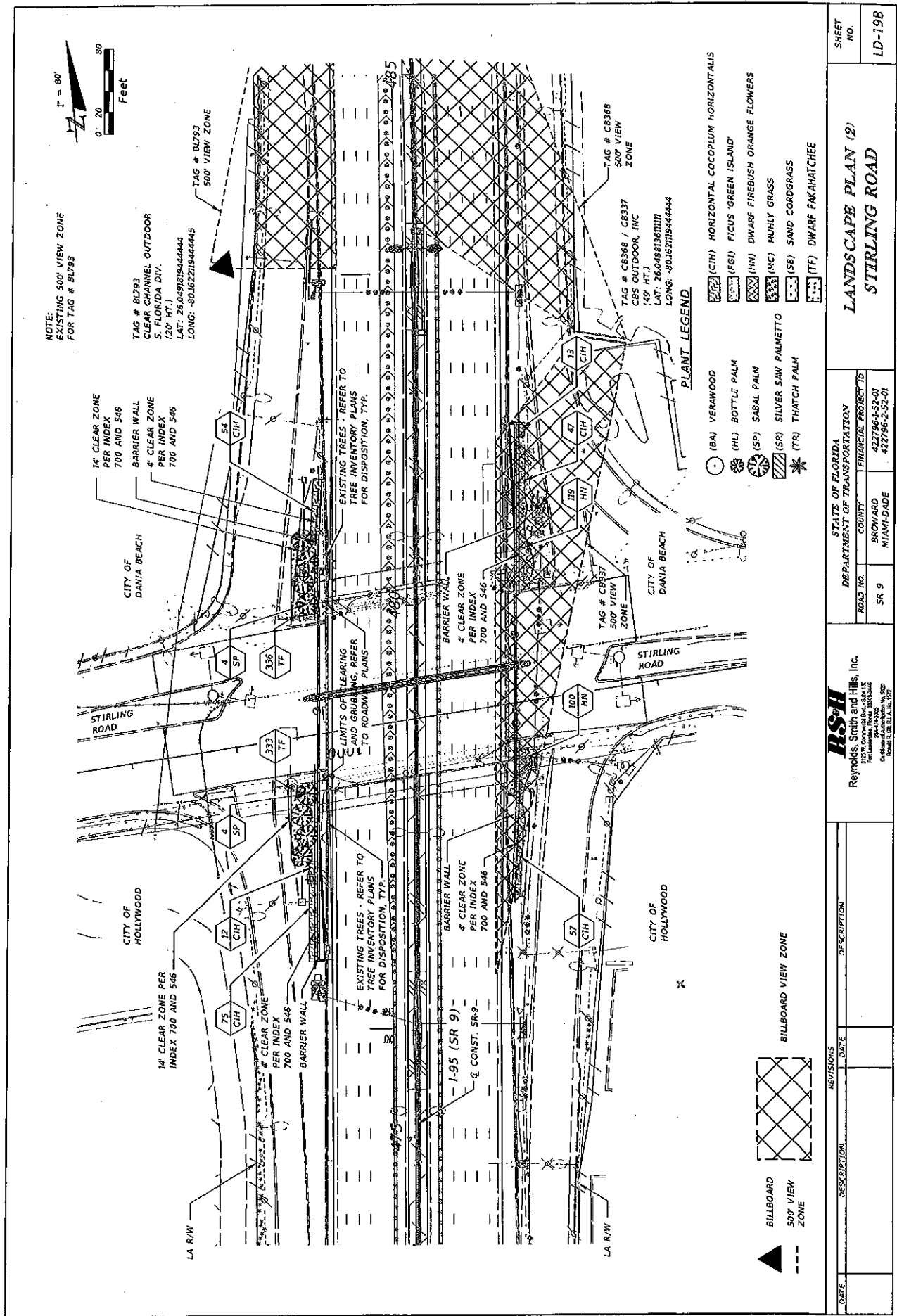
NO PLANTINGS THIS SHEET

DATE		REVISIONS		STATE OF FLORIDA		DEPARTMENT OF TRANSPORTATION		LANDSCAPE PLAN (1)		SHEET NO.	
DESCRIPTION		DATE		COUNTY		FINANCIAL PROJECT ID		STIRLING ROAD		LD-188	
				BROWARD		422796-1-52-01					
				MIAMI-DADE		422796-2-52-01					

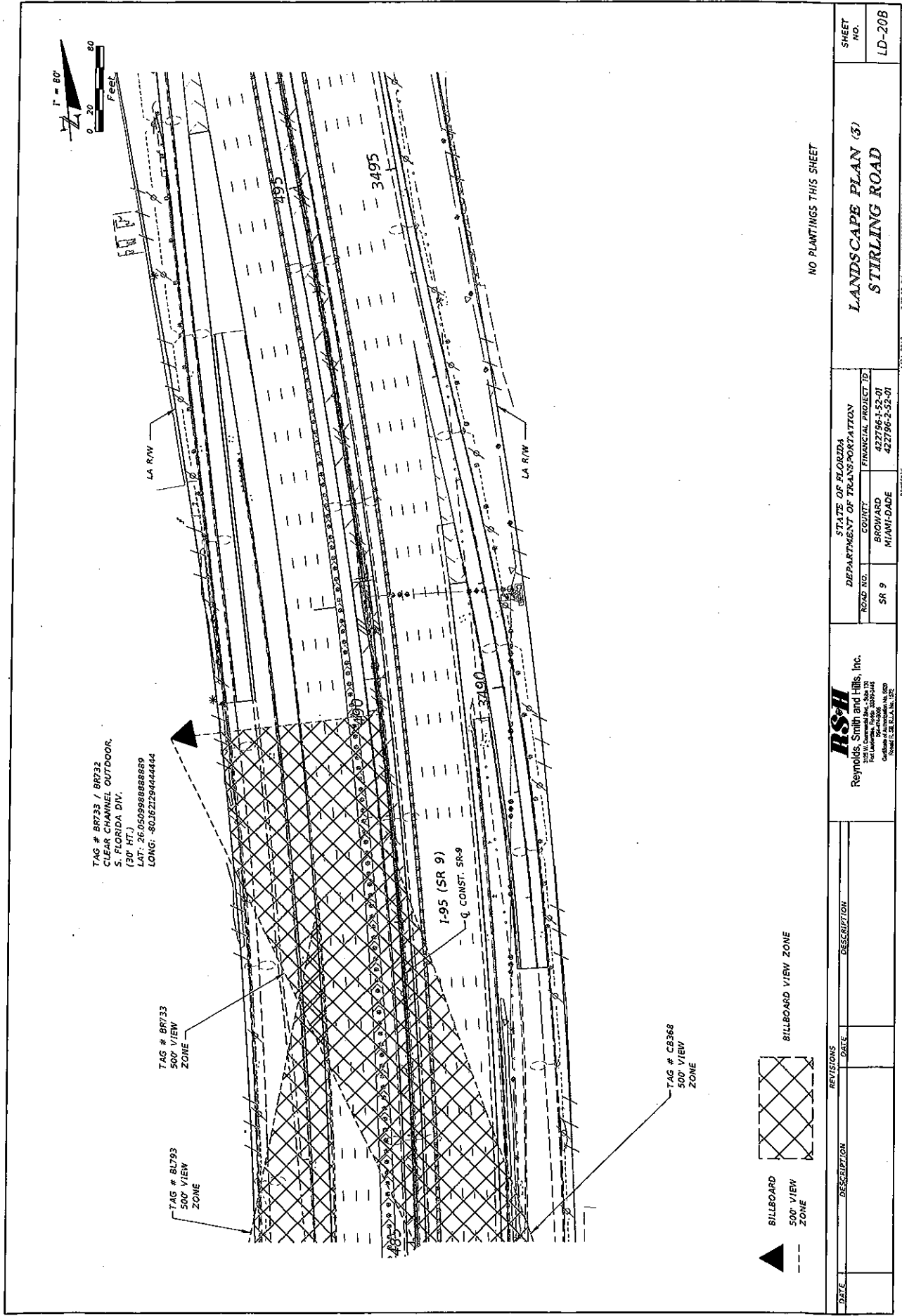
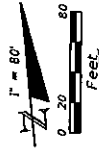
RS+H
Reynolds Smith and Hills, Inc.
1000 N. Commercial Blvd., Suite 100
Fort Lauderdale, Florida 33304
Certified Professional Engineer, No. 12500
Professional Seal, No. 12500

1/23/2013 2:30:43 PM A:\27796\12500\UNAPPROVED_DRAWING_11.DWG

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REVISIONS DATE DESCRIPTION		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. SR 9 COUNTY MIAMI-DADE FINANCIAL PROJECT ID 422796-152-01 422796-252-01		SHEET NO. LD-198
REYNOLDS SMITH AND HILLS, INC. 100 N. W. 10th Ave., Suite 100 Fort Lauderdale, FL 33304 Phone: (305) 463-1000 Fax: (305) 463-1001		LANDSCAPE PLAN (2) STIRLING ROAD		

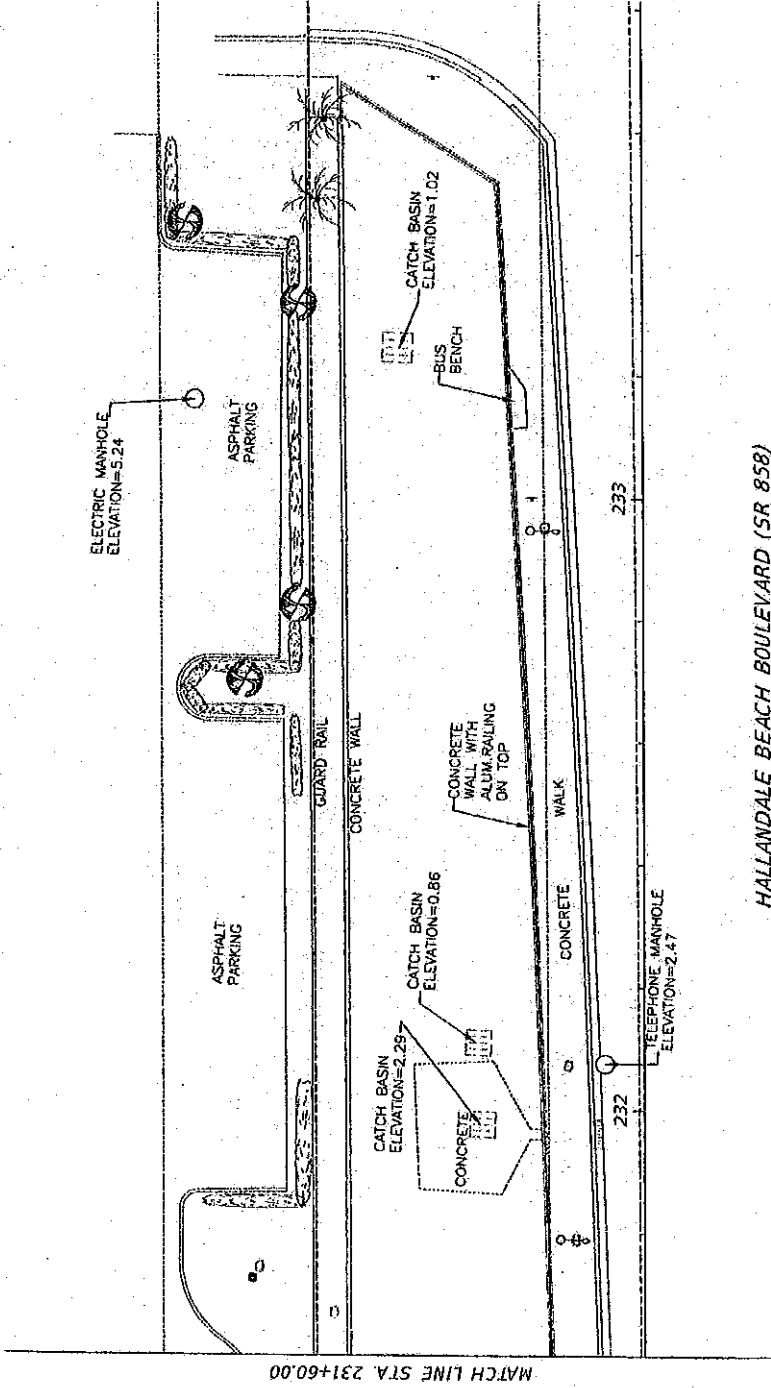
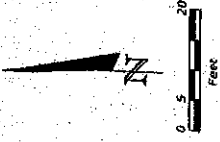


NO PLANTINGS THIS SHEET

DATE: _____ DESCRIPTION: _____ DATE: _____ DESCRIPTION: _____		REVISIONS DATE: _____ DESCRIPTION: _____		RS+H Reynolds, Smith and Hills, Inc. 1215 N. Commercial Ave., Suite 100 Fort Lauderdale, FL 33304 (954) 576-1100 FAX (954) 576-1101 WWW.RS+H.COM		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. SR 9 COUNTY BROWARD MIAMI-DADE FINANCIAL PROJECT ID 422796-1-52-01 422796-2-52-01		LANDSCAPE PLAN (3) STIRLING ROAD		SHEET NO. LD-208	
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NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G10-1.001, F.A.C.



HALLANDALE BEACH BOULEVARD (SR 858)

REVISIONS		PREPARED BY:		STATE OF FLORIDA		ROADWAY PLANS		SHEET NO.	
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	3 OF 9		

METRIC ENGINEERING, INC.
 1000 N.W. 10th Ave., Suite 100
 Miami, Florida 33136
 XAVIER A. SANCHEZ, P.E. No. 45049
 CERTIFICATE OF REGISTRATION NO. 00002094

7/17/2012 3:43:50 PM A:\005\HALLANDALE\01725 HALLANDALE BEACH SR 858\PLAN\PLAN.PLT

Ve=4.26 V=5.32

A=9.00

STA 281+75.00

Ag=7.06

Ve=7.74 V=10.42

A=13.50

STA 281+50.00

Ag=9.85

Ve=10.54 V=14.69

A=18.25

STA 281+25.00

Ag=13.13

Scale: 1" = 20' Horizontal
1" = 10' Vertical

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

WALMART SWALE
CROSS SECTIONS

SHEET
NO.

6 OF 9

ROAD NO. COUNTY FINANCIAL PROJECT ID

6/13/2012 5:43:35 PM K:\08\ENVIRONMENTAL\01235 Wal-Mart Swale\01111111\Roadway\00150

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

VE=13.74 V=18.07

GL 2.29
A=17.53
A=14.63

STA 232+50.00

VE=11.36 V=14.28

GL 2.29
A=13.32
A=9.92

STA 232+25.00

VE=5.58 V=7.32

GL 2.29
A=2.49
A=2.13

STA 232+00.00

Scale: 1" = 20' Horizontal
1" = 10' Vertical

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO. COUNTY FINANCIAL PROJECT ID

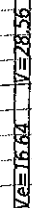
SHEET NO.

7 OF 9

WALMART SWALE CROSS SECTIONS

8/13/2012 5:48:36 PM

W:\05\ENVIRONMENTAL\1735 Wal-Mart Swale\1735 Wal-Mart Swale.dwg


$$A = 26.96$$

STIA 233+75x00

[illegible] $A = 23.82$

STA 233+00.00

Ve=	14.23	V=	20.98
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 $A = 2750$

STA 232+75.00

 $AP = 75.05$

Scale: 1" = 20' Horizontal
1" = 10' Vertical

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
NO.	COUNTY	FINANCIAL PROJECT

WALMART SWALE
CROSS SECTIONS

NO. _____

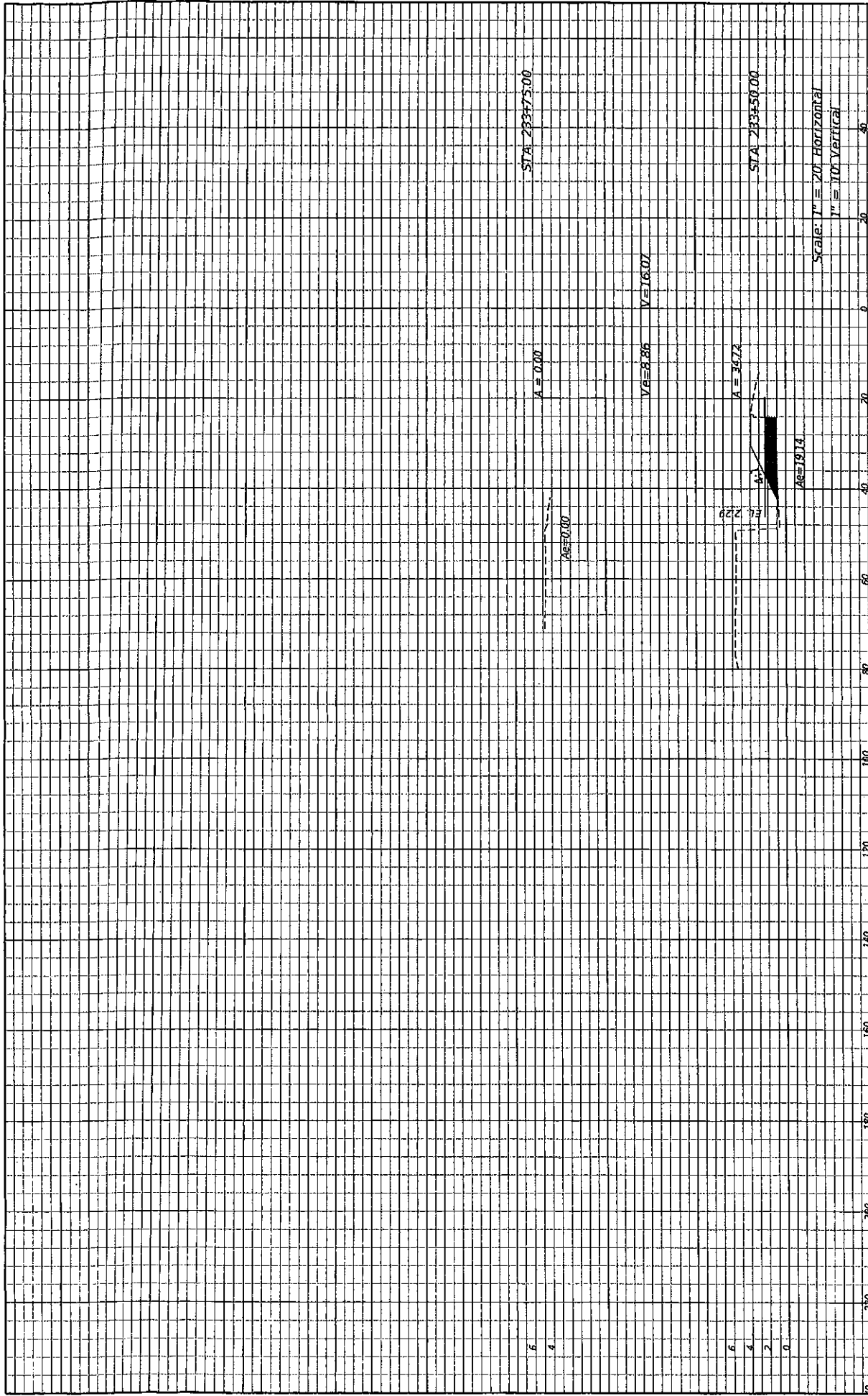
SHEET _____

8 OF 9

5:44:35 PM

N:\08-ENVIRONMENTAL\017235 Hallandale Beach Swale\1111111111\Roadway\ROXSR

Ministrillo



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. _____ COUNTY _____ FINANCIAL PROJECT ID _____		SHEET NO. 9 OF 9
WALMART SWALE CROSS SECTIONS		
DATE _____ DESCRIPTION _____		
REVISIONS DATE _____		

CITY OF HALLANDALE BEACH

LANDSCAPE PLANS

INDEX OF LANDSCAPE PLANS

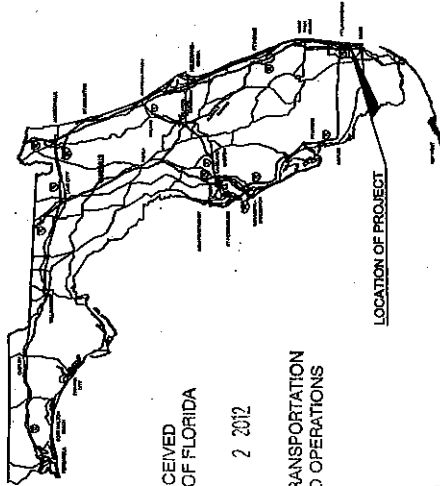
SHEET NO.	SHEET DESCRIPTION
CS	KEY SHEET
LD-1	TABULATION OF QUANTITIES
LD-2	LANDSCAPE NOTES
LD-3	LANDSCAPE DETAILS
LD-4 Thru LD-5	LANDSCAPE PLANS

RECEIVED
STATE OF FLORIDA

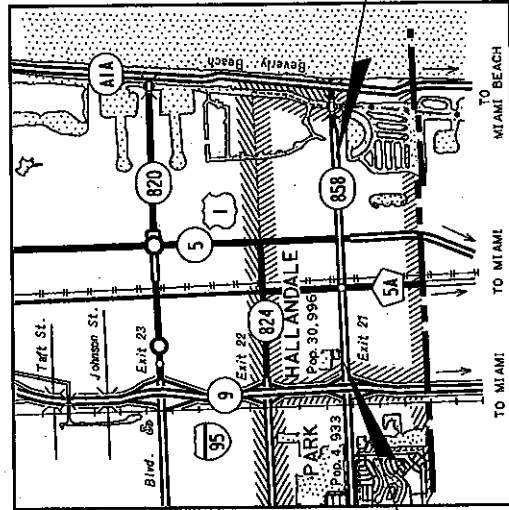
OCT 2 2012

DEPT OF TRANSPORTATION
BROWARD OPERATIONS

HALLANDALE BEACH BOULEVARD SWALE LANDSCAPING



LOCATION OF PROJECT



BEGIN PROJECT
M.P. 2.635

END PROJECT
M.P. 5.000

PLANS PREPARED BY:
ENGINEERS
PLANNERS
SURVEYORS



METRIC ENGINEERING, INC.
1340 S.W. 13TH STREET, SUITE 200
MIAMI, FLORIDA 33136
TEL: (305) 225-5888
FAX: (305) 251-5884
VENDOR # F-89-186550
CONTRACT NO. 1-1725

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN MANUAL FOR HIGHWAYS AND BRIDGES,
AS AMENDED BY CONTRACT DOCUMENTS.

KEY SHEET REVISIONS	
DATE	DESCRIPTION

FISCAL YEAR	SHEET NO.
	CS

CITY PROJECT MANAGER: RICHARD LABINSKY, P.E.

9/19/2012 2:53:06 PM

5/19/2012 2:53:06 PM

PAY ITEM NO.	PAYSZ	SYM	BOTANICAL NAME	COMMON NAME	MINIMUM INSTALLED SIZE	OC SPACING (FT)	Mature Size	UNIT	SHEET NUMBERS				TOTAL THIS SHEET (EA)	
									LD-4		LD-5			
									ORIG.	FINAL	ORIG.	FINAL		
			TREES (TOTALS)						20		21		41	
		AR	<i>Acer rubrum</i>	Red maple	3 IN CAL MIN, 12 FT HT X 4 FT SPR, STANDARD	20	60 FT HT X 25 FT SPR	EA					19	
		IC	<i>Ilex cassine</i>	Daroon holly	1.5 IN CAL MIN, 8 FT HT X 3 FT SPR, STANDARD	14	20 FT HT X 8 FT SPR	EA					4	
		P8	<i>Persea borbonia</i>	Red bay	3 IN CAL MIN, 12 FT HT X 4 FT SPR, STANDARD	80	40 FT HT X 15 FT SPR	EA					2	
		TD	<i>Taxodium distichum</i>	Bald cypress	3 IN CAL MIN, 12 FT HT X 4 FT SPR, STANDARD	20	60 FT HT X 25 FT SPR	EA					16	
			PLANTS (TOTALS)											
		AD	<i>Acrostichum danifolium</i>	Leather fern	3 GAL MIN, 18 IN X 9 IN SPR	4	4 FT HT X 3 FT SPR	EA	716		633		1,349	
		CO	<i>Cephalanthus occidentalis</i>	Button bush	3 GAL MIN, 18 IN X 9 IN SPR	4	6 FT HT X 6 FT SPR	EA	5		5		10	
		HP	<i>Hamelia patens</i>	Firebush	3 GAL MIN, 18 IN X 9 IN SPR	4	6 FT HT X 5 FT SPR	EA	62		56		118	
			<i>Spartina alterniflora</i>	Congrass	PLUGS	1-2	2 FT HT X # FT	EA	646		569		1,215	
			MISC (TOTALS)						55		53		108	
		LB	Large Boulders	Cap Rock	2 FT X 4 FT			EA			53		108	
								FT	L	265.00	L	247.00		
								FT	W	1.485	W	1.485		
								FT	H	0.25	H	0.25		
		SR	Small Rocks	Mexican Beach Pebble	6 IN- 12 IN TYP			FT ²	AREA	393.53	AREA	366.8		760.32
								FT ³	VOLUME	98.381	VOLUME	91.699		190.08

ABBREVIATIONS: MIN - MINIMUM GAL - GALLON HT - HEIGHT SPR - SPREAD OC - ON CENTER

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION	CITY OF HALLANDALE BEACH			SHEET NO.
					ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
						BROWARD		LD-1

TABULATION OF QUANTITIES

9/15/2012

5/9/2012

2:53:39 PM

N:\05-ENVIRONMENTAL\11225 Hallandale Beach - Sinks\Plans\mst\TAB001.DWG

General Notes

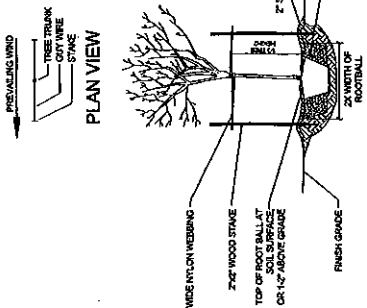
1. A pre-construction meeting with a representative of the City's Project Manager is required prior to landscaping activities including removal of trees and/or installation of plant material. Call 954-458-3251 a minimum of 5 days prior to desired start date to schedule pre-construction meeting.
2. All existing trees proposed to remain are to be separated from the limits of disturbance of the construction area by tree protection fencing and signage. The tree protection fencing shall be located at the edge of the tree protection zone as depicted on the plan or at the edge of the dripline(s) if a tree protection zone is not designated. No material storage or construction access is permitted within the tree protection zone.
3. All existing trees shall be pruned to ANSI A-300 standards to correct potential hazards.
4. A tree removal permit is required prior to removal or relocation of any tree or palm. Contact the City to obtain permit information.
5. Landscape contractor shall notify Sunshine One Call of Florida, Inc. at 1-800-432-4770 a minimum of 2 full business days prior to digging. Landscape contractor is responsible for avoiding damage to utilities from plant installation.
6. All planting must follow planting specifications and details shown on the plan and in Florida Department of Transportation Design Standard Index 544.
7. Substitutions of plant species or specifications must be approved in writing by the City's Project Manager prior to use.
8. All plant material planted per this landscape plan shall be Florida Grade #1 or better, as specified in the current edition of the Florida Department of Agriculture's Grades and Standards for Nursery Plants. Damaged plant material shall be rejected and replaced prior to installation.
9. All sizes shown for plant material are to be considered minimums.
10. Where quantities and/or species differ between the planting plans and plant lists, the plans shall take precedence.
11. All new plant material shall be warranted by the landscape contractor for a minimum period of one year. The warrantee period shall begin after acceptance of the plants by the City's Project Manager.

12. Plant beds to be treated with pre-emergent herbicide prior to planting.
13. All tree and palm staking and support shall be removed one year after installation.
14. No fertilizer shall be applied to newly planted trees and palms.
15. All landscape material shall be thoroughly watered at the time of planting, no dry planting permitted.
16. Landscape contractor shall be responsible for providing temporary water provisions until such time as the irrigation system is operational.
17. All wire guys and/or fabric straps shall be flagged with fluorescent colored tape.
18. Mulching:
 - a. All landscape areas not covered by sod shall be covered by a minimum 3-inch layer of mulch.
 - b. A mulch ring with a minimum radius of 24 inches (48 inch diameter), is required around all newly installed trees and palms.
 - c. Cypress mulch shall not be used.
 - d. No mulch shall be placed touching or within six inches of the trunk of a tree or palm.
19. All newly landscaped areas shall be excavated down to a depth of 24 inches below final grade and back filled with clean debris-free soil. Existing soil may be re-used for backfilling if debris is removed and organic content is sufficient or soil is augmented with topsoil. Construction access shall be restricted from the landscape area after excavation and backfill is complete.
20. All landscape areas shall be finish graded such that they are a minimum of 3.5 inches below surrounding paved surfaces so as not to impede the flow of drainage into landscaped areas and to allow for a 3-inch mulch layer.
21. Maintenance of Traffic to be conducted per Florida Department of Transportation Design Standard Index 611.

DATE		DESCRIPTION		REVISIONS		DATE		DESCRIPTION	
				CITY OF HALLANDALE BEACH				SHEET NO.	
				ROAD NO.				LD-2	
				COUNTY				BROWARD	
				FINANCIAL PROJECT ID				LANDSCAPE NOTES	

NOTES: SMALL TREE PLANTING (<2' CAL.)

1. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1-2004). PLANT ACCORDING TO ANSI A300 PART 6.
2. DIG THE PLANTING HOLE A MINIMUM OF 2X WIDTH OF ROOTBALL FOR AT LEAST THE FIRST 12 INCHES OF DEPTH. BELOW 12 INCHES, DIG HOLE WIDE ENOUGH TO PERMIT ADJUSTING. DO NOT DIG THE HOLE DEEPER THAN ROOT BALL DEPTH.
3. SCARIFY THE SURFACE AND SIDES OF THE PLANTING HOLE WHEN PLANTING IN CLAY SOILS (MORE THAN 15% CLAY).
4. LIFT AND SET THE TREE BY ROOT BALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS A LEVER.
5. SET THE TOP OF THE ROOT BALL LEVEL WITH THE SOIL SURFACE OR SLIGHTLY HIGHER IF THE SOIL IS PRONE TO SETTLING.
6. AFTER THE TREE IS SET IN PLACE, REMOVE BURLAP, WIRE AND STRAPS FROM AT LEAST THE UPPER 1/3 OF THE ROOTBALL.
7. BACKFILL WITH EXISTING SOIL THAT HAS BEEN WELL-TILLED OR BROKEN UP. DO NOT ADD AMENDMENTS TO THE BACKFILL SOIL. AMEND THE SURFACE WITH MULCH.
8. USE THREE 2" X 2" WOOD STAKES 1/3 TREE HEIGHT IN LENGTH DRIVEN INTO UNDISTURBED SOIL A MINIMUM OF 16 INCHES. STAKES SHOULD BE SPACED EQUALLY ACROSS FROM AND IN LINE WITH THE TRUNK PARALLEL TO THE PREVAILING WIND.
9. ATTACH 3/4" NYLON WEBBING TO CONNECT THE TREE TO STAKES. ATTACH WEBBING AT 1/3 THE TREE HEIGHT.
10. APPLY A 2" (SETTLED) DEPTH OF PINE STRAW OR BARK MULCH TO THE PLANTING SURFACE. LEAVE A 2" SPACE AROUND THE TRUNK FOR AIR CIRCULATION.
11. PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY AND SHALL BE IN ACCORDANCE WITH ANSI A300 SPECIFICATIONS.
12. REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO WRAPS SHALL BE PLACED ON TRUNK.



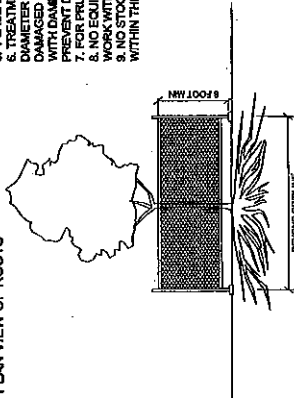
SMALL TREE PLANTING (<2' CAL.)

NOTES: TREE PROTECTION

1. REFER TO STANDARDS IN GENERAL SPECIFICATIONS FOR TREE PROTECTION.
2. DIAMETER OF PROTECTION ZONE SHOULD BE ONE FOOT FOR EACH INCH OF TRUNK CALIPER. TREES OR SMALLER: THE PROTECTION ZONE SHALL BE 6 FOOT MINIMUM DIAMETER.
3. TEMPORARY FENCING (6 FT HIGH) SHALL BE PLACED AT THE DRIPLINE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCLOSE THE TREES. TO INSTALL FENCE POSTS, AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
4. DEAD TREES, SCRUB, OR UNDERGROWTH SHALL BE CUT DOWN WITH ADJACENT PRESERVED TREES WILL BE NO SOIL DISTURBANCE UNDER THE DRIPLINE OF TREES TO BE PRESERVED.
5. PLACE 6 INCHES OF BARK MULCH AT AREAS NOT PROTECTED BY BARRIER.
6. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER 1 INCH IN DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHOULD BE TEMPORARILY COVERED WITH DAMP BURLAP AND COVERED WITH SOIL OR MULCH AS SOON AS POSSIBLE TO PREVENT DRYING.
7. FOR PRUNING GUIDELINES, SEE ANSI A300.
8. NO EQUIPMENT OR MACHINERY SHALL BE USED WITHIN THE PROTECTION FENCE.
9. WORK WITHIN THE PROTECTION ZONE SHALL BE DONE MANUALLY.
10. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE IS ALLOWED WITHIN THE LIMIT OF THE FENCING.



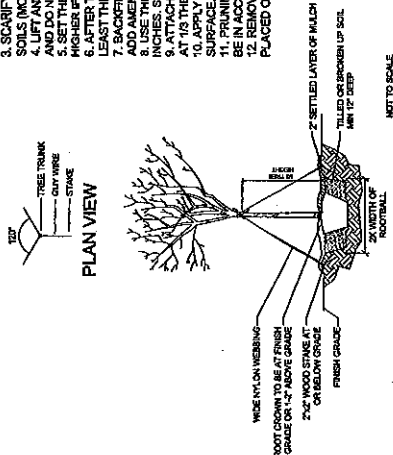
PLAN VIEW OF ROOTS



TREE PROTECTION

NOTES: TREE PLANTING (>2' CAL.)

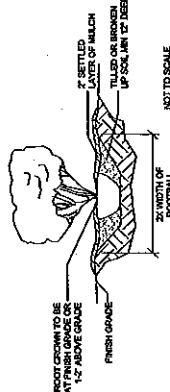
1. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1-2004). PLANT ACCORDING TO ANSI A300 PART 6.
2. DIG THE PLANTING HOLE A MINIMUM OF 2X WIDTH OF ROOTBALL FOR AT LEAST THE FIRST 12 INCHES OF DEPTH. BELOW 12 INCHES, DIG HOLE WIDE ENOUGH TO PERMIT ADJUSTING. DO NOT DIG THE HOLE DEEPER THAN ROOT BALL DEPTH.
3. SCARIFY THE SURFACE AND SIDES OF THE PLANTING HOLE WHEN PLANTING IN CLAY SOILS (MORE THAN 15% CLAY).
4. LIFT AND SET THE TREE BY ROOT BALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS A LEVER.
5. SET THE TOP OF THE ROOT BALL LEVEL WITH THE SOIL SURFACE OR SLIGHTLY HIGHER IF THE SOIL IS PRONE TO SETTLING.
6. AFTER THE TREE IS SET IN PLACE, REMOVE BURLAP, WIRE AND STRAPS FROM AT LEAST THE UPPER 1/3 OF THE ROOTBALL.
7. BACKFILL WITH EXISTING SOIL THAT HAS BEEN WELL-TILLED OR BROKEN UP. DO NOT ADD AMENDMENTS TO THE BACKFILL SOIL. AMEND THE SURFACE WITH MULCH.
8. USE THREE 2" X 2" WOOD STAKES 1/3 TREE HEIGHT IN LENGTH DRIVEN INTO UNDISTURBED SOIL A MINIMUM OF 16 INCHES. STAKES SHOULD BE SPACED EQUALLY ACROSS FROM AND IN LINE WITH THE TRUNK PARALLEL TO THE PREVAILING WIND.
9. ATTACH 3/4" NYLON WEBBING TO CONNECT THE TREE TO STAKES. ATTACH WEBBING AT 1/3 THE TREE HEIGHT.
10. APPLY A 2" (SETTLED) DEPTH OF PINE STRAW OR BARK MULCH TO THE PLANTING SURFACE. LEAVE A 2" SPACE AROUND THE TRUNK FOR AIR CIRCULATION.
11. PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY AND SHALL BE IN ACCORDANCE WITH ANSI A300 SPECIFICATIONS.
12. REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO WRAPS SHALL BE PLACED ON TRUNK.



TREE PLANTING (>2' CAL.)

NOTES: TYPICAL SHRUB PLANTING, INDIVIDUAL PLANTING HOLE

1. DIG PLANTING HOLE AT LEAST 2X THE WIDTH OF THE ROOT BALL OR CONTAINERS OF PLANTING.
2. BACKFILL WITH EXISTING SOIL THAT HAS BEEN WELL-TILLED OR BROKEN UP. DO NOT ADD AMENDMENTS TO THE BACKFILL SOIL. AMEND THE SURFACE WITH MULCH.
3. SET THE TOP OF THE ROOT BALL LEVEL WITH THE SOIL SURFACE, OR 1/2" ABOVE IF THE SOIL IS PRONE TO SETTLING.
4. IF CONTAINER GROWN PLANT, GENTLY SLIDE PLANT OUT OF CONTAINER, DISTURB THE ROOTS.
5. IF BURLAP OR WIRE IS USED TO HOLD PLANT, REMOVE BURLAP AND WIRE FROM THE TRUNK. REMOVE BURLAP AND WIRE BASKET (IF PRESENT) FROM THE ROOT BALL.
6. BACK FILL THE PLANTING HOLE WITH EXCAVATED NATIVE SOIL, BROKEN UP OR TILLED. WATER TO REMOVE AIR POCKETS. DO NOT ADD AMENDMENTS.
7. PLACE PINE STRAW OR BARK MULCH ON THE SURFACE TO A (SETTLED) DEPTH OF 1 TO 3 INCHES.



TYP. SHRUB PLANTING: INDIVIDUAL PLANTING HOLE

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

CITY OF HALLANDALE BEACH	
ROAD NO.	FINANCIAL PROJECT ID
COUNTY	
BROWARD	

SHEET NO.	LD-3
-----------	------

LANDSCAPE DETAILS



THREE ISLANDS BOULEVARD

8 TD
102 HP
9 AR

12' WIDE DRIVEWAY
PER ROAD PLAN 17-0000-00
15' WIDE DRIVEWAY
PER ROAD PLAN 17-0000-00
15' WIDE DRIVEWAY
PER ROAD PLAN 17-0000-00

CATCH BASIN
ELEVATION 10.00

15' UTILITY DRAINAGE DISTANCE
(PER 5.0' C.O.D. 8' WIDE 8' 100' 100' 100')

MATCHLINE

5 AD
2 IC
1 PB
3 CO

55 LARGE BOULDERS

646 PLUGS
SR 858/HALLANDALE BEACH BOULEVARD

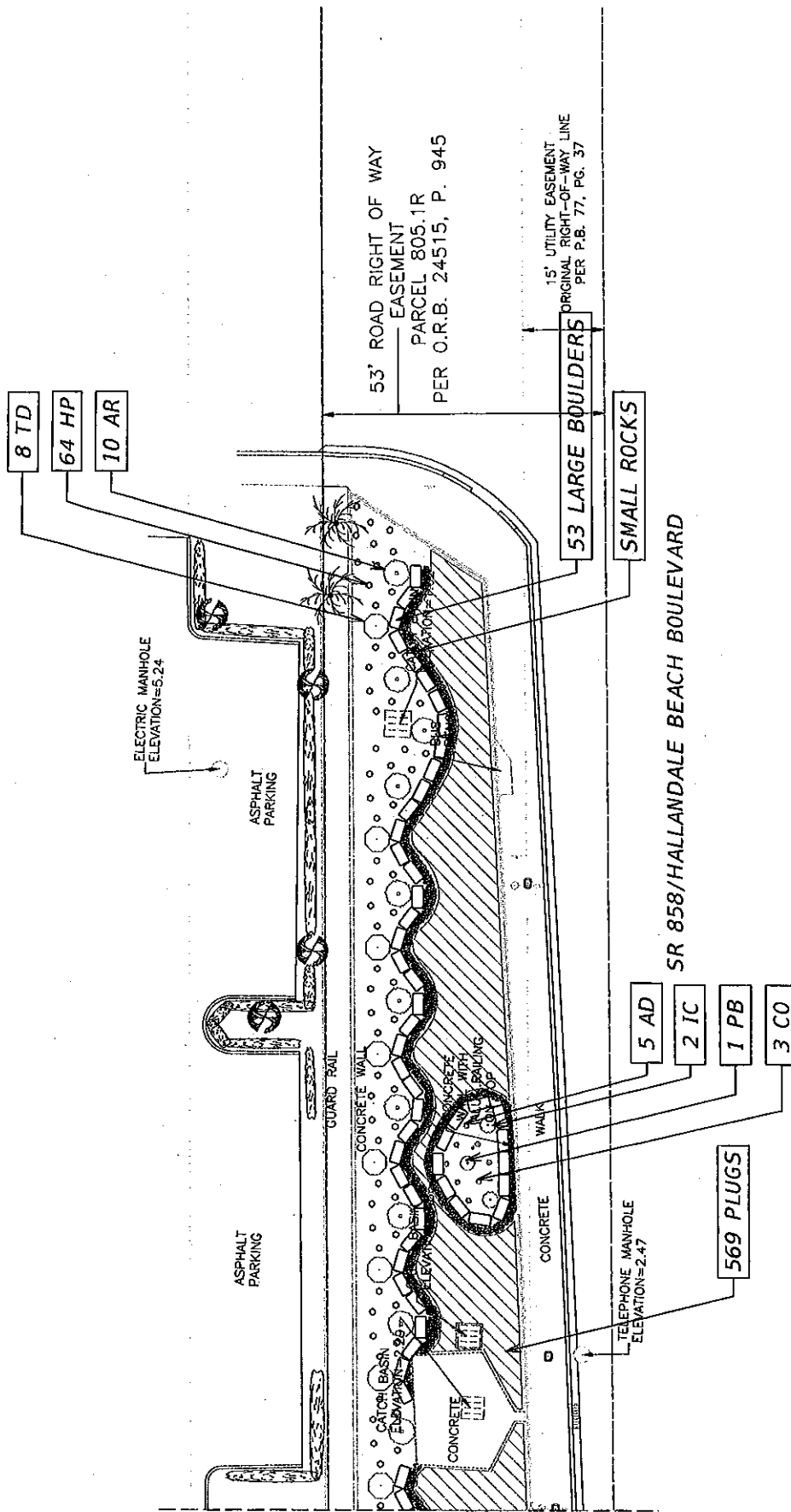
SMALL ROCKS

5' UTILITY EASE-OUT
ORIGINAL PROPOSED LINE
PER 10' 10' 10' 10' 10' 10'

EASTSIDE 8' WIDE 8' 100' 100' 100'

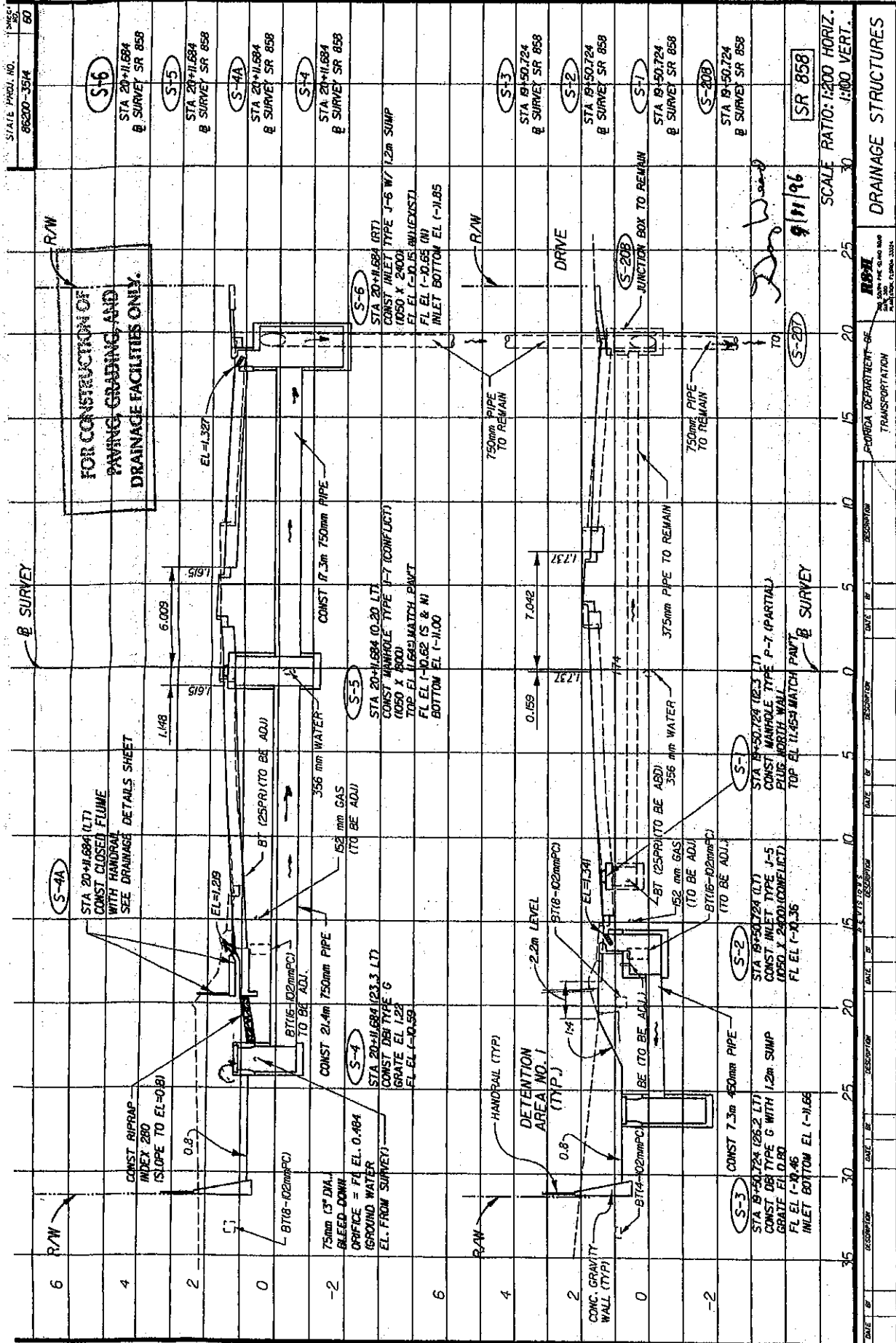
REVISIONS		CITY OF HALLANDALE BEACH		LANDSCAPE PLANS		SHEET NO.	LD-4
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	FINANCIAL PROJECT ID		
				COUNTY			
				BROWARD			

3/23/2012 11:26:17 AM K:\GIS\GROWTH\HALL\225 Hallandale Beach Shoreline\HALLANDALE.DWG

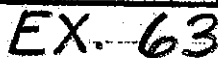


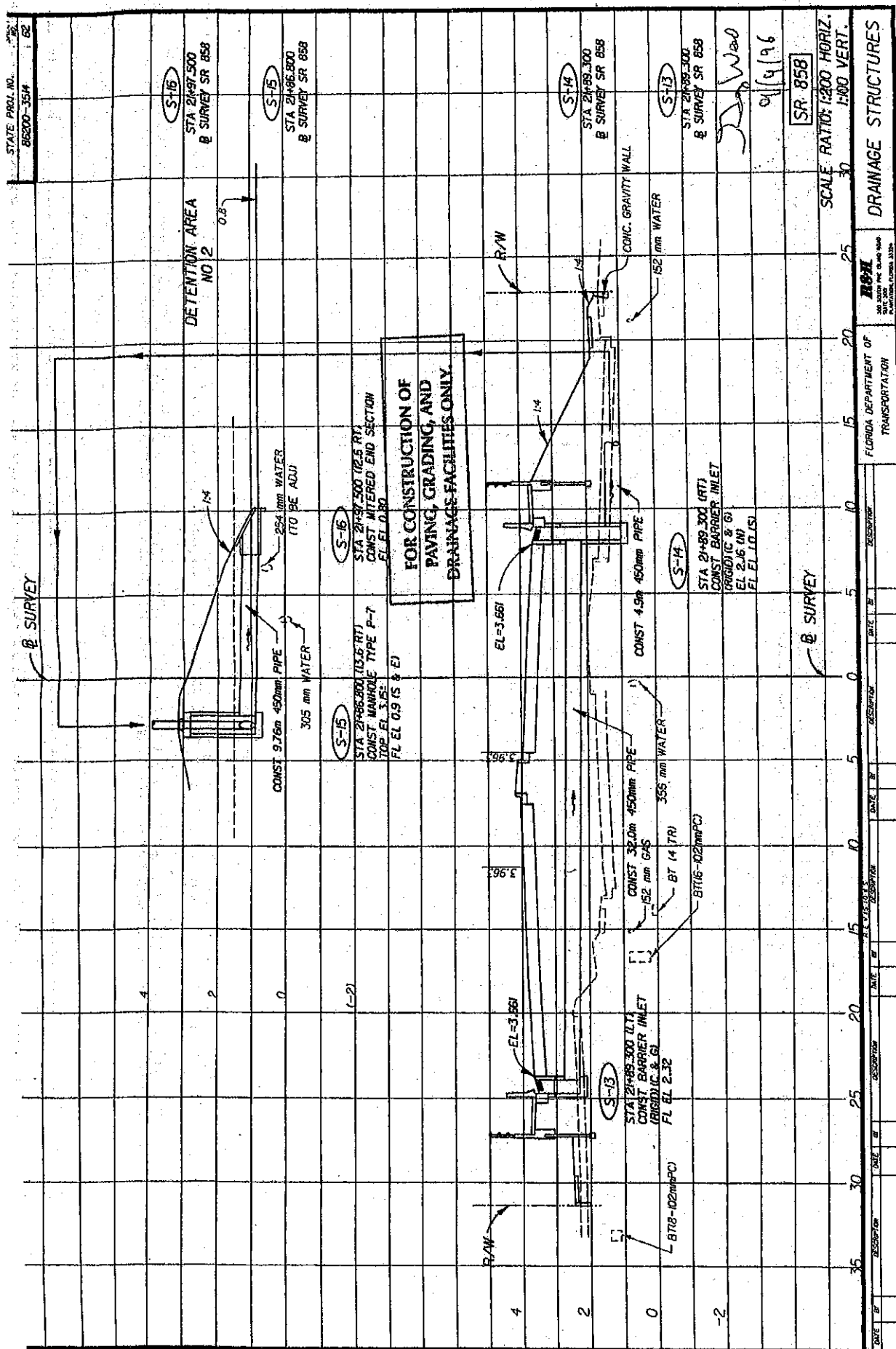
REVISIONS		CITY OF HALLANDALE BEACH		LANDSCAPE PLANS		SHEET NO.	
DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	ROAD NO.	NO.	NO.
			BROWARD				LD-5

5/23/2012 11:37:34 AM R:\08-ENVIRONMENT\AL1725 HALLANDALE BEACH SWAMPY\DWG\LANDSCAPE.DWG



EX. 62





#06-02357-P #960521-13

STATE PROJ. NO.
86200-3514
80

A-2, A-3 MATL.
RDWY. EXC. FILL

A V A V

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B SURVEY

UTILITY & DRAINAGE EASEMENT

CONC. GRAVITY WALL & HANDRAIL

DEFLECTION AREA (TYP.)

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

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B716-102mm(4")

B716-102mm(4")

FOR CONSTRUCTION OF
PAVING, GRADING, AND
DRAINAGE FACILITIES ONLY.

BEGIN DETENTION AREA No. 1 (I.T.)
STA 19+37

THREE STANDS BLVD.

1.30

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

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B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

B716-102mm(4")

1.524

0.444

18+89.764

BEGIN EARTHWORK
STA 18+87.135

750mm PIPE

SCALE RATIO: 1:200 HORIZ.
1:100 VERT.

SR 858

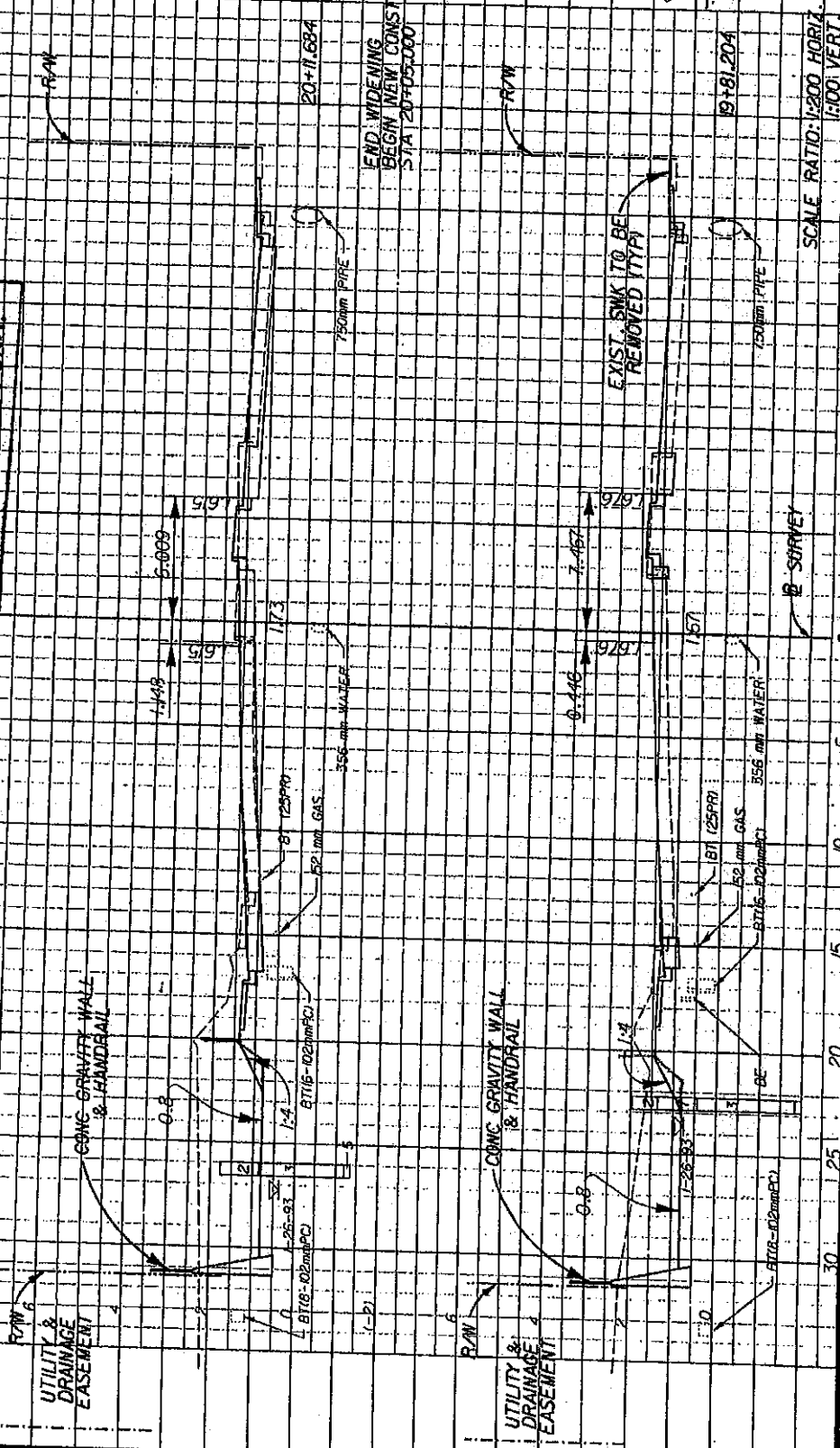
CROSS SECTIONS

#06-02357-P = 960521-13

STATE PROJ. NO. 86200-354
SHEET NO. 81

A-2, A-3 MATL.
ROWY. EXC. FILL
A V A V

FOR CONSTRUCTION OF
PAVING, GRADING, AND
DRAINAGE FACILITIES ONLY



SR 858

SCALE RATIO: 1:200 HORIZ.
1:100 VERT.

CROSS SECTIONS

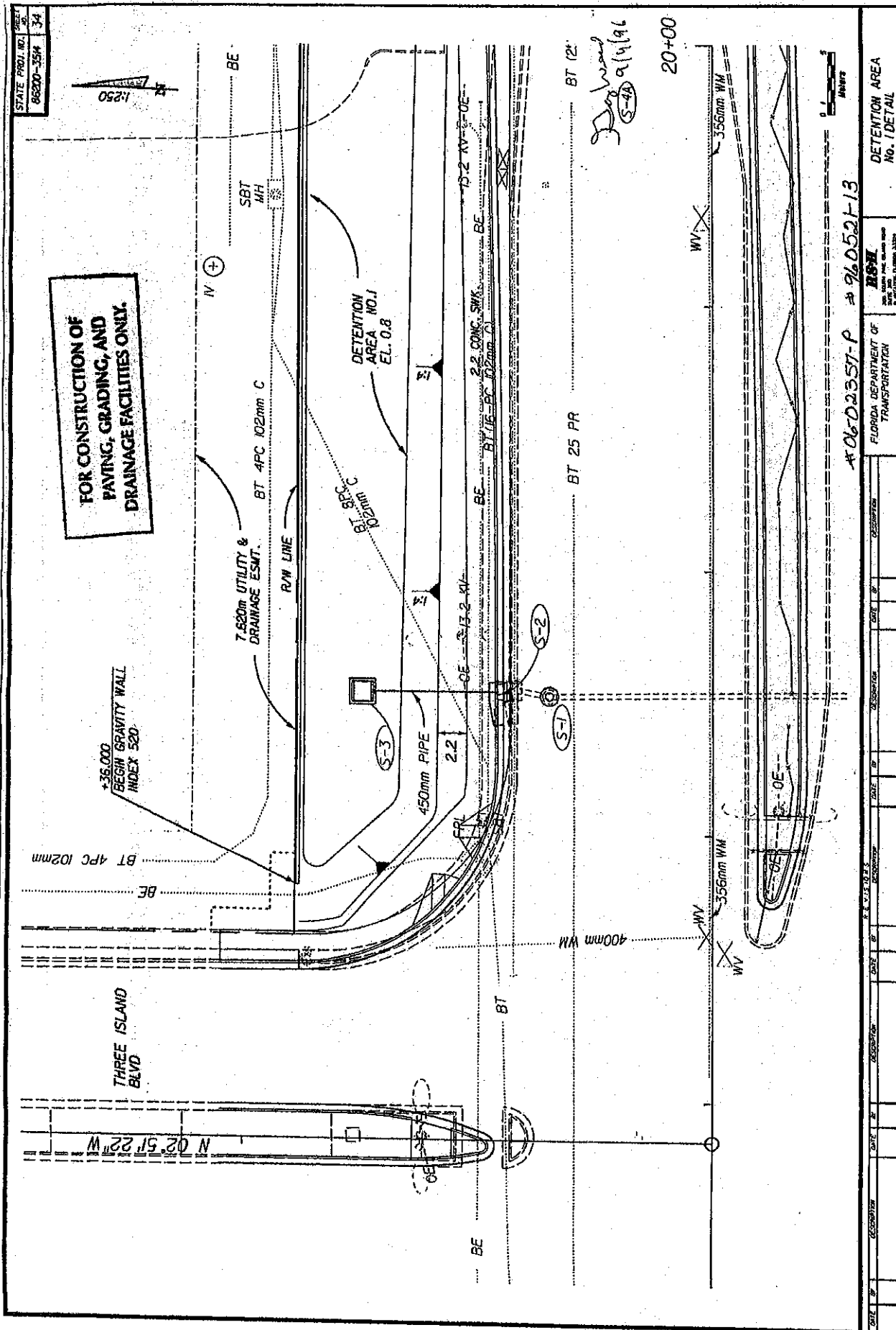
FLORIDA DEPARTMENT OF
TRANSPORTATION
BSH
200 SOUTH W. 6TH AVE
SUITE 200
FORT WORTH, TEXAS 76102

#06-02357-F #960521-13

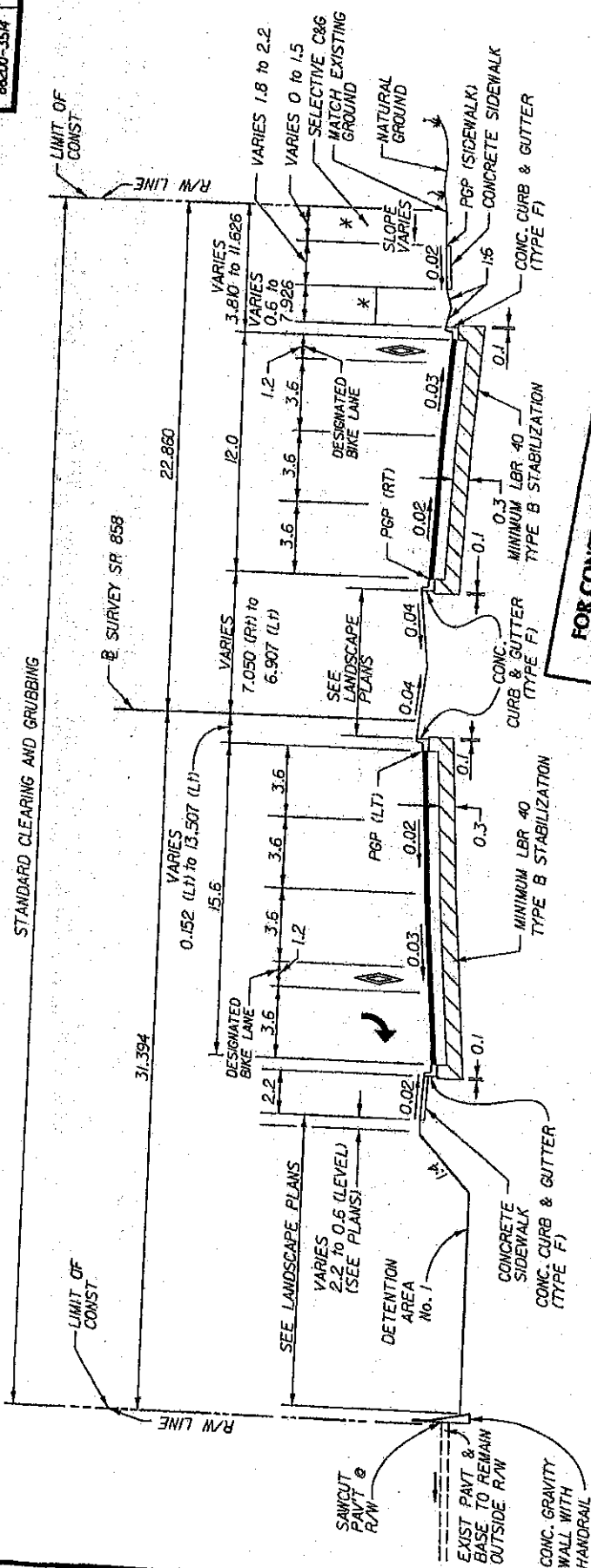
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

EX. 81

1.77.35.02



EX. 37



**FOR CONSTRUCTION OF
PAVING, GRADING, AND
DRAINAGE FACILITIES ONLY.**

TYPICAL SECTION ②

STA 20+05.000 TO STA 21+67.053 (SE 26 AVE RELOC.)

SR 858 / HALLANDALE BEACH BLVD.

OPTIONAL BASE GROUP 9 AND TYPE S STRUCTURAL COURSE (80 mm) AND FRICTION COURSE FC-3 (25mm) (RUBBER)

* SEE LANDSCAPE PLANS

76-4-10
D. W. D.

#06-02357-p

960521-13

SR 858/HALLANDALE BEACH BLVD.
DESIGN SPEED = 60 km/h

DESIGN SPEED = 60 km/h

TYPICAL SECTION

FLORIDA DEPARTMENT OF
TRANSPORTATION

NOTES

DATE	BY
------	----

10/10/2010

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1

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4

1

1

CITY OF HALLANDALE

NOTE: FOR CURVE DATA
SEE CURVE DATA SHEET

WAL-MART ENTRANCE

WAL-MART CENTER

EXIST. PAVT.



EXIST. PIPE (TO REMAIN)
CONVERT TO CONC. PIPE

CONC. GRAVITY WALL WITH HANDRAIL
SMOOTH & REMOVE PART OF ROW LINE

UTILITY & DRAINAGE EASEMENT
BT 40' EXIST. C.

DETENTION AREA NO. 1

CONC. GRAVITY WALL WITH HANDRAIL
INDEX 250

EXIST. ASPHALT & BASE
(TO BE REMOVED)

SEE LANDSCAPE PLANS

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

CONC. CURB & GUTTER
TYPE F

MATCH LINE STA 19+60

MATCH LINE STA 21+00

FOR CONSTRUCTION OF
PAVING, GRADING, AND
DRAINAGE FACILITIES ONLY.



EXIST. TREES (TO REMAIN)

EXIST. INLET & PIPE (TO REMAIN)

0 2 4 Meters

SR 858

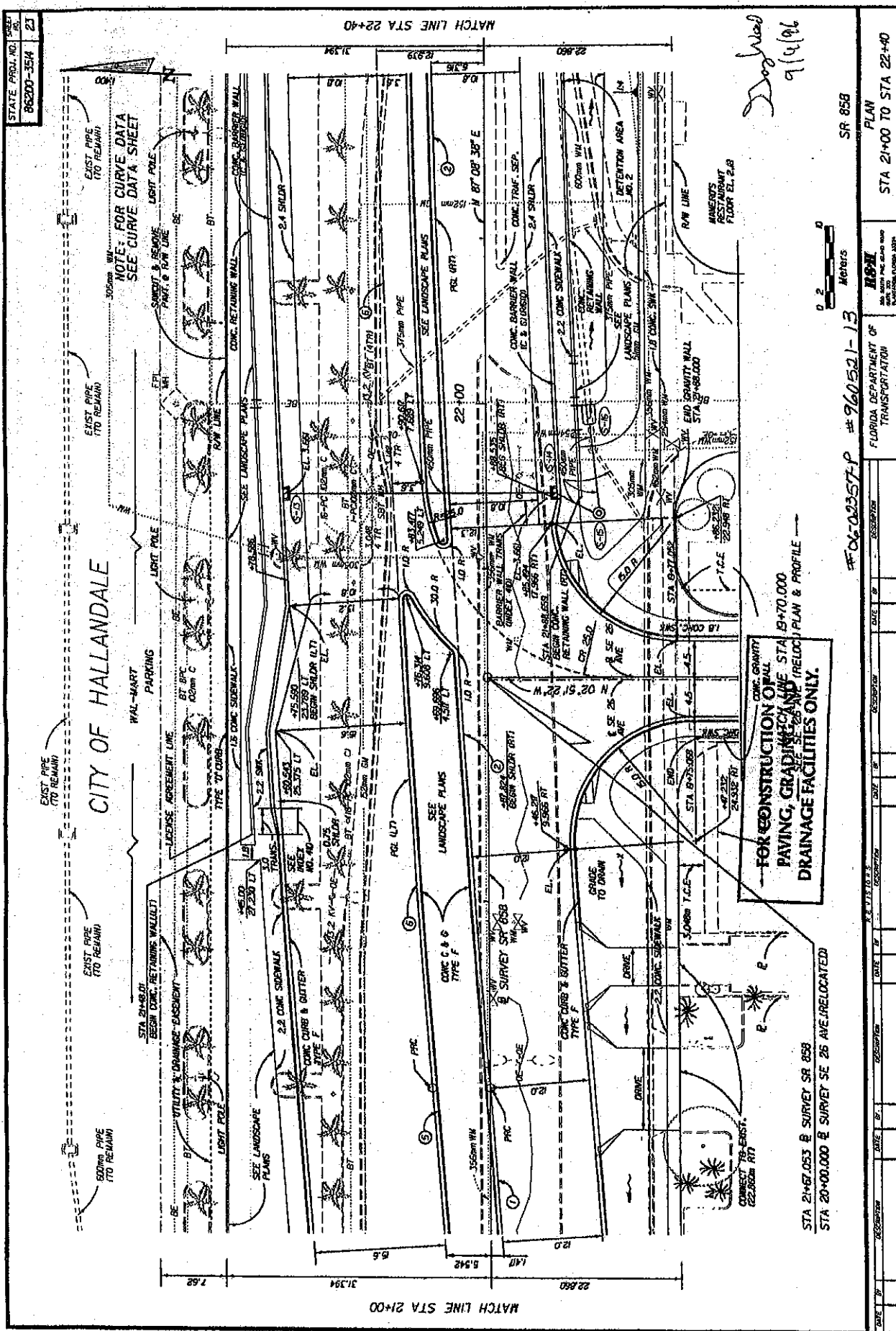
#06-02357-P #940521-13

FLORIDA DEPARTMENT OF
TRANSPORTATION

PLAN
STA 19+60 TO 21+00

DATE: 10/15/94
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
IN CHARGE: [Signature]

EX. 25



EX. 26

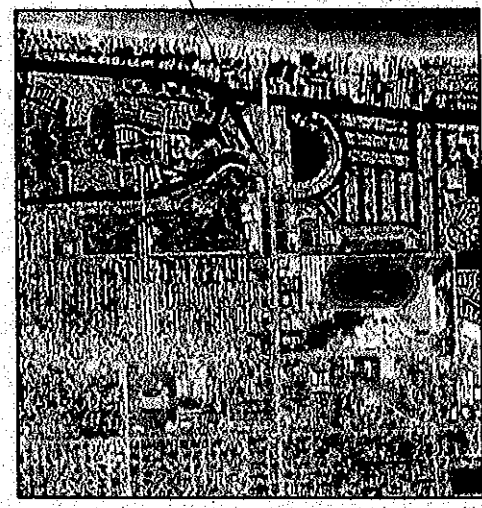
CONTRACT PLANS

BROWARD COUNTY
STATE ROAD NO. 858
WALMART SWALE

A DETAILED INDEX APPEARS ON THE
KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	LOCATION SKETCH
2	PLAN VIEW
3	SCALE CROSS SECTIONS



ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:
MANUELA A. SAULEDA, P.E.
METRIC ENGINEERING, INC.
13940 S.W. 10th STREET, SUITE 200
MIAMI, FLORIDA 33186
TEL: (305) 256-0388

PLANS PREPARED BY:
ENGINEERS
PLANNERS
SURVEYORS

METRIC ENGINEERING, INC.
13940 S.W. 10th STREET, SUITE 200
MIAMI, FLORIDA 33186
TEL: (305) 256-0388
FAX: (305) 251-0884
VENDOR REF: 58-1603309
CERTIFICATE OF AUTHORIZATION NO. EL-0002294
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

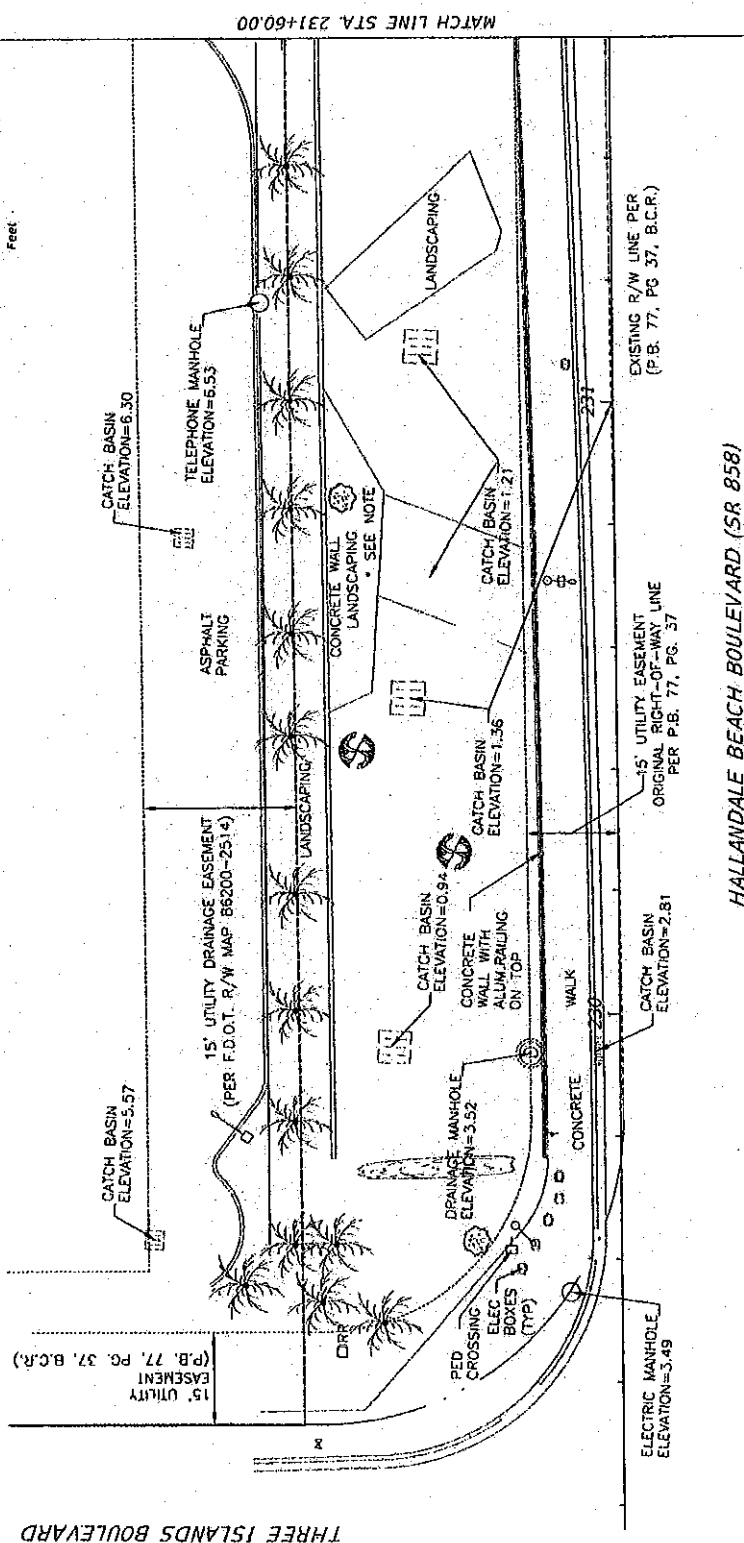
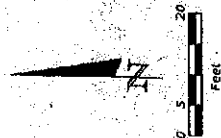
GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARD FISCAL YEAR 2012/2013,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED 2010,
AS AMENDED BY CONTRACT DOCUMENTS.
APPLICABLE DESIGN STANDARDS REVISIONS: 07/10/12
For Design Standards Revisions click on
"Design Standards" at the following web site:
<http://www.dot.state.fl.us/rdesign/>

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY		
BRIDGES		
NET LENGTH OF PROJECT		
EXCEPTIONS		
GROSS LENGTH OF PROJECT		

ROADWAY PLANS
ENGINEER OF RECORD: MANUELA A. SAULEDA, P.E.

P.E. NO. 45953

FISCAL YEAR	SHEET NO.
	1 OF 9



HALLANDALE BEACH BOULEVARD (SR 858)

REVISIONS DESCRIPTION DATE		PREPARED BY: METRIC ENGINEERING, INC. 1400 N. W. 10th Ave., Suite 100 Miami, Florida 33136 MANUEL A. SANCHEZ, P.E. No. 43885 CERTIFICATE OF INFORMATION 00000004		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. COUNTY FINANCIAL PROJECT ID		SHEET NO. 2 OF 9
		7/27/2012 1:45:09 PM AL-005-CAD/ENGINEERING/AL-01233-HALLANDALE BEACH BOULEVARD SR 858-00000004				

SECTION No.(s): 86010, 86018, 86030, 86070 & 86200
S.R. No.(s): A1A, 5, 9, 824, 858
COUNTY: Broward

EXHIBIT E

LANDSCAPE MAINTENANCE PLAN

See Attached

MAINTENANCE PLAN

Landscape Improvements

City of Hallandale Beach

I. General Maintenance Requirements and Recommendations:

The purpose of a plan for the landscape improvements maintenance practices is to allow the plant material on your project to thrive in a safe and vigorous manner while fulfilling their intended purpose and conserving our natural resources. Plantings and all other landscape improvements shall be maintained to avoid potential roadway hazards and to provide required clear visibility, accessibility, clearance, and setbacks as set forth by Florida Department of Transportation (FDOT) governing standards and specifications: *FDOT Design Standards*, *FDOT Plans Preparation Manual Vol. I*, *Chapter 2.11* and *FDOT Standard Specifications for Road and Bridge Construction*, as amended by contract documents, and all other requirements set forth by the District 4 Operations Maintenance Engineer. The initial portion of the Maintenance Plan describes general maintenance requirements and recommendations. The concluding section provides recommendations prepared by the Registered Landscape Architect of Record specific to the attached approved plans.

Watering Requirements:

Watering is a critical concern for not only the maintenance of healthy plant material but also for observing water conservation practices. The amount of water to apply at any one time varies with the weather, drainage conditions and water holding capacity of the soil. For plant materials that have been established, it is imperative that any mandated water restrictions be fully conformed to on FDOT roadways.

Proper watering techniques should provide even and thorough water dispersal to wet the entire root zone, but not saturate the soil or over-spray onto travel lanes.

Irrigation System:

The Agency shall ensure there are no roadway overspray or irrigation activities during daytime hours (most notably "rush hour" traffic periods). It is imperative the irrigation controller is properly set to run early enough that the watering process will be entirely completed before high traffic periods, while adhering to mandated water restrictions. To ensure water conservation, the Agency shall monitor the system for water leaks and the rain sensors to ensure they are functioning properly so that the system shuts down when there is sufficient rainfall.

Integrated Plant Management:

An assessment of each planting area's soil is recommended to periodically determine the nutrient levels needed to sustain healthy, vigorous plant growth.

Palms, shrubs, trees and turf areas shall be fertilized in such a manner and frequency to ensure that the plant material remains healthy and vigorously growing. Establishment of an integrated pest management program is encouraged to ensure healthy plants, which are free of disease and pests.

Mulching:

Mulch planting beds in such a manner as to prevent weed growth, retain moisture to the plants, protect against soil erosion and nutrient loss, maintain a more uniform soil temperature, and improve the appearance of the planting beds. Avoid mulch mounded up on the trunks of trees, palms, and the base of shrubs to encourage air movement in this area which aids in lowering disease susceptibility. Cypress mulch is prohibited on state right of way.

Pruning:

All pruning, and the associated safety criteria, shall be performed according to American National Standard Institute (ANSI) A300 standards and shall be supervised by an International Society of Arboriculture (ISA) Certified Arborist. Pruning shall be carried out with the health and natural growth of plant materials in mind, to specific pruning heights maintaining clear visibility for motorists, and provide vertical clearance for pedestrian, bicyclist, and truck traffic where applicable. Visibility windows must be maintained free of view obstructions, and all trees and palms must be maintained to prevent potential roadway and pedestrian hazards, all palms are to be kept fruit free. The specific pruning heights are determined by understanding the designer's intent when selecting and placing the plants. The intended mature maintained height and spread of plants are noted on the plans (See Exhibit B.) and see Part II. Specific Requirements and Recommendations for guidelines. The understory plant materials selected for use within the restricted planting areas (Limits of Clear Sight) are to be maintained at a height in compliance with *FDOT Design Standards* Index 546; Page 6 of 6, Window Detail. Vertical tree heights must meet *FDOT Maintenance Rating Program* (MRP) standards.

Staking and Guying:

All staking materials, except for replacements, are to be removed by the completion of FDOT warranty period or at one year (whichever comes first). Any subsequent staking and guying activities by the Agency must adhere to *FDOT Design Standards* guidelines (See Index 544). The Agency shall closely monitor staking and guying attachment materials so that they are securely fastened to avoid potential roadway hazards.

Turf Mowing:

All grassed areas are to be mowed and trimmed with sufficient frequency to maintain a deep, healthy root system while providing a neat and clean appearance to the urban landscape. All turf efforts, mowing, curb/sidewalk edging and turf condition, must at a minimum, meet *FDOT Maintenance Rating Program* (MRP).

Litter Control:

The project site shall remain as litter free as practicable. It is recommended to recycle this litter to avoid unnecessary waste by its reuse. Litter removal efforts must meet *FDOT Maintenance Rating Program* (MRP) standards.

Weeding/Herbicide:

All planting areas shall be maintained as weed free as practicable by enlisting integrated pest management practices in areas specified on the plans and maintaining proper mulch levels. Extreme care is recommended if using a chemical herbicide to avoid overspray onto plant materials. It is the applicator's responsibility to restore any damage, resulting from overspray to the plantings, per the approved plans.

Plant Replacement:

Plant Replacement: Plant replacement shall be the same species and specification as the approved plan. Move and replace all plant materials that may conflict with utility relocations and service. Only plants graded Florida #1 or better, per the *Florida Department of Agriculture and Consumer Services, Grades and Standards for Nursery Plants* are permitted on FDOT roadways. Should it become necessary to change the species, a general use permit is required from FDOT for approval by the FDOT District Landscape Architect.

Hardscape (Specialty Surfacing):

All tree grates and specialty surfacing (if applicable) shall be maintained in such a manner as to prevent any potential tripping hazards and protect damage to the pavers and tree grates. Final surface tolerance from grade elevations shall, at a minimum, meet the most current *Interlocking Concrete Pavement Institute (ICPI), Guide Specifications for Pavers on an Aggregate Base, Section 23 14 13 Interlocking Concrete Pavers*, Part 3.05. If the specialty surfacing or tree grates become damaged, they shall be replaced with the same type and specification as the approved plan.

Hardscape (Non-Standard Travelway Surfacing):

It shall be the responsibility of the AGENCY to restore an unacceptable ride condition of the roadway, including asphalt pavement (if applicable), caused or contributed by the installation or failure of non-standard surfacing, and/or the header curb, on the Department of Transportation right-of-way within the limits of this Agreement. Pavement restoration areas or "patches" will have a minimum length of 10-ft, measured from the edge of the header curb, and a width to cover full lanes for each lane affected by the restoration.

It shall be the responsibility of the AGENCY to maintain all signs located within a non-standard surfacing area. Such maintenance to be provided by the AGENCY shall include repair and replacement of the sign panel, post, and base.

Landscape accent lighting shall be maintained in such a manner as to prolong the life of the lighting fixture and prevent potential safety hazards. If the lighting fixtures and their system become damaged, they shall be replaced with the same type and specification as the approved plan. Landscape lighting shall meet requirements for the sea turtle nesting and hatching.

Reference the FDOT website regarding the selection of the proper traffic control requirements to be provided during routine maintenance and / or new installations of this DOT roadway.

To avoid conflicts with permitted outdoor advertising, please reference the State of Florida website regarding the vegetation management of outdoor advertising. This website provides a portal to search the FDOT Outdoor Advertising Inventory Management System Database. The database contains an inventory of outdoor advertising structures, permits and other related information maintained by the Department.

II. Specific Project Site Maintenance Requirements and Recommendations:

Superseded agreements' Maintenance Plans and any specific project site maintenance requirements continue to apply.

Revised 12/20/12

This reference list is provided as a courtesy. The list may not contain the most current websites. The most current references must be accessed for up to date information.

Accessible Sidewalk Videos (ADA)

<http://www.access-board.gov/news/sidewalk-videos.htm>

Americans with Disabilities Act (ADA) (ADAAG)

http://www.ada.gov/2010ADASTandards_index.htm

American National Standard Institute, *ANSI A300, (Part 1) for Tree Care Operations – Trees, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning)*, available for purchase

www.isa-arbor.com

Florida Department of Agriculture and Consumer Services, Division of Plant Industry, *Florida Grades and Standards for Nursery Plants*, available for purchase

<http://www.doacs.state.fl.us/pi/pubs.html>

Florida Department of Community Affairs (DCA), *Florida Board of Building Codes & Standards, 2010 Florida Building Code, Chapter 11 Florida Accessibility Code for Building Construction Part A*

http://www2.iccsafe.org/states/florida_codes/

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 544 Landscape Installation*

<http://www.dot.state.fl.us/rddesign/DS/13/IDx/00544.pdf>

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 546 Sight Distance at Intersections*

<http://www.dot.state.fl.us/rddesign/DS/13/IDx/00546.pdf>

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 600 Traffic Control through Work Zones*

<http://www.dot.state.fl.us/rddesign/DS/13/IDx/00600.pdf>

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 700 Roadside Offsets*

<http://www.dot.state.fl.us/rddesign/DS/13/IDx/00700.pdf>

Florida Department of Transportation, *FDOT Plans Preparation Manual (PPM) Vol. I Chapter 2.11 Horizontal Clearance*

Table 2.11.5 Horizontal Clearance to Trees

Table 2.11.11 Recoverable Terrain

<http://www.dot.state.fl.us/rddesign/PPMManual/2012/Volume1/Chap02.pdf>

Florida Department of Transportation, *FDOT Standard Specifications for Road and Bridge Construction, Section 580 Landscape Installation*

<http://www.dot.state.fl.us/specificationoffice/Implemented/SpecBooks/2013/Files/580-2013.pdf>

Florida Department of Transportation, Landscape Architecture Website

www.MyFloridaBeautiful.com

Florida Department of Transportation, *Maintenance Rating Program Handbook*
<http://www.dot.state.fl.us/statemaintenanceoffice/MRPHandbook2011.pdf>

Florida Department of Transportation Outdoor Advertising Database
<http://www2.dot.state.fl.us/rightofway/>

Florida Exotic Pest Plant Council Invasive Plant Lists
<http://www.fleppc.org/list/list.htm>

Florida Irrigation Society
<http://www.fisstate.org>

Florida Power and Light (FPL), *Plant the Right Tree in the Right Place*
http://www.fpl.com/residential/trees/right_tree_right_place.shtml

Guide to Roadside Mowing and Guide to Turf Management, available for purchase
<http://infonet.dot.state.fl.us/SupportServicesOffice/plist.htm>

Interlocking Concrete Pavement Institute (ICPI)
<http://www.icpi.org/>

International Society of Arboriculture (ISA)
www.isa-arbor.com

UF IFAS: *Selecting Tropical and Subtropical Tree Species for Wind Resistance*
<http://edis.ifas.ufl.edu/pdffiles/FR/FR17500.pdf>

U.S. Department of Transportation, Federal Highway Administration, *Manual on Uniform Traffic Control Devices*
<http://www.mutcd.fhwa.dot.gov>

SECTION No.(s): 86010, 86018, 86030, 86070 & 86200
S.R. No.(s): A1A, 5, 9, 824, 858
COUNTY: Broward

EXHIBIT F

PENDING DEPARTMENT PROJECT(S) ESTIMATE

State Road 9 (I-95) and State Road 858 (Hallandale Beach Boulevard) Interchange southeast and northeast quadrants **\$59,892.50**
See Attached

State Road 9 (I-95) and State Road 824 (Pembroke Road) Interchange southeast quadrant	<u>\$22,505.00</u>
See Attached	

CITY OF HALLANDALE BEACH
Plan Sheets 9B - 10B

CITY OF HALLANDALE BEACH							
I-95 @ Hallandale Beach Blvd.							
422796-1-52-01							
30-Jan-13							
OVERALL LANDSCAPE							
COST ESTIMATE							
	UNIT COST	UNIT	QUANTITY	TOTAL COST	SPECIFICATION		
<u>TREES</u>							
VERAWOOD	\$170.00	EA	8	\$1,360.00	25 Gallon, 8' HT., Matched, Full, Straight Trunk		
<u>PALMS</u>							
BOTTLE PALM	\$1,000.00	EA	10	\$10,000.00	10' Overall HT., Matched, Full, Straight		
<u>SHRUBS</u>							
COCOPLUM HORIZONTAL	\$8.00	EA	1,983	\$15,864.00	3 Gallon, 10"x10", Full, 3' On Center		
DWARF FIREBUSH	\$7.50	EA	1,927	\$14,452.50	3 Gallon, 24"x18", Full, 3' On Center		
FICUS GREEN ISLAND	\$8.00	EA	853	\$6,824.00	3 Gallon, 10"x12", Full, 3' On Center		
MUHLY GRASS	\$8.00	EA	174	\$1,392.00	3 Gallon, 24"x18", Full, 3.5' On Center		
<u>IRRIGATION</u>							
MODIFICATIONS	\$10,000.00	LS	1	\$10,000.00	Modify / Repair Existing Irrigation		
TOTAL OVERALL COST				\$59,892.50			

CITY OF HALLANDALE BEACH
Plan Sheet 13B

CITY OF HALLANDALE BEACH						
I-95 @ Pembroke Road						
422796-1-52-01						
30-Jan-13						
OVERALL LANDSCAPE						
COST ESTIMATE						
	UNIT COST	UNIT	QUANTITY	TOTAL COST	SPECIFICATION	
<u>*PALMS</u>						
BOTTLE PALM	\$1,000.00	EA	7	\$7,000.00	10' Overall HT., Matched, Full, Straight	
<u>*SHRUBS</u>						
DWARF FIREBUSH	\$7.50	EA	350	\$2,625.00	3 Gallon, 24"x18", Full, 3' On Center	
COCOPALM HORIZONTAL	\$8.00	EA	246	\$1,968.00	3 Gallon, 10"x10", Full, 3' On Center	
MUHLY GRASS	\$8.00	EA	114	\$912.00	3 Gallon, 24"x18", Full, 3.5' On Center	
<u>IRRIGATION</u>						
MODIFICATIONS	\$10,000.00	LS	1	\$10,000.00	Modify / Repair Existing Irrigation	
TOTAL OVERALL COST				\$22,505.00		

SECTION No.(s): 86010, 86018, 86030, 86070 & 86200
S.R. No.(s): A1A, 5, 9, 824, 858
COUNTY: Broward

EXHIBIT G

PATTERNED PAVEMENT INSTALLATION (When Applicable)

This Exhibit forms an integral part of the DISTRICT FOUR (4) MAINTENANCE MEMORANDUM OF AGREEMENT between the State of Florida, Department of Transportation and the AGENCY.

1. Prior to acceptance by the DEPARTMENT, all lanes for each of the stamped asphalt crossings projects shall be tested for friction in accordance with ASTM E 274-06. All costs for friction testing will be the responsibility of the AGENCY. The initial friction resistance shall be at least 35 obtained at 40 mph with a ribbed test tire (FN40R) or equivalent. Failure to achieve this minimum resistance shall require all deficient crosswalk areas to be removed to their full extent (lane-by-lane) and replaced with the same product installed initially. If more than 50% of the lanes in the intersection require replacement, the entire intersection installation may be reconstructed with a different product on the Qualified Products List (QPL). All lanes receiving new installations shall again be friction tested within 60-90 days of their acceptance by the local AGENCY. The initial friction resistance of each new installation shall be at least 35 (FN40R) or equivalent. Failure to achieve this minimum resistance shall require all deficient areas be removed to their full extent (lane-by-lane) and replaced with the same product installed initially. If more than 50% of the lanes in the intersection require replacement, the entire intersection installation may be reconstructed with a different product on the DEPARTMENT 'S Qualified Products List (QPL), or replaced with conventional pavement.
- The results of all friction tests and condition surveys shall be sent to the **Operations Engineer** at the local FDOT District Four Operations Center located at Broward Operations, 5548 NW 9th Avenue, Ft. Lauderdale, FL 33309 (954) 776-4300, with a cover letter either certifying that the crosswalks comply with the above stated requirements; or what remedial action will be taken to restore the friction and/or integrity of the crosswalk area.
2. When remedial action is required in accordance with the above requirements, the local AGENCY at its own expense shall complete all necessary repairs within 90 days of the date the deficiency was identified.
3. Should the local AGENCY fail to satisfactorily perform any required remedial work or testing in accordance with this agreement, the DEPARTMENT reserves the right to replace the patterned pavement with conventional pavement and bill the local AGENCY for this cost. No more than two full stamped asphalt pavement depth repairs shall be made to an area without first resurfacing the pavement to its full depth.

SECTION No.(s): 86010, 86018, 86030, 86070 & 86200
S.R. No.(s): A1A, 5, 9, 824, 858
COUNTY: Broward

EXHIBIT H

PATTERNED PAVEMENT MAINTENANCE (If Applicable)

This Exhibit forms an integral part of the DISTRICT FOUR (4) MAINTENANCE MEMORANDUM OF AGREEMENT between the State of Florida, Department of Transportation and the AGENCY.

"Maintenance" of all patterned pavement crosswalks in these Agreements shall be defined, as a minimum, to include its frictional characteristics and integrity as follows:

1. Within 60 days of project acceptance by the Department, all lanes of each patterned crosswalk shall be evaluated for surface friction. The friction test shall be conducted using either a locked wheel tester in accordance with **FM 5-592 (Florida Test Method for Friction Measuring Protocol for Patterned Pavements)** or Dynamic Friction Tester in accordance with **ASTM E1911**. **All costs for friction testing are the responsibility of the AGENCY.**

The initial friction resistance shall be at least 35 obtained at 40 mph with a ribbed tire test (FN40R) or equivalent (FM 5-592 attached). Failure to achieve this minimum resistance shall require all deficient crosswalk areas to be removed to their full extent (land-by-land) and replaced with the same product installed initially. The AGENCY is responsible for all costs associated with the removal and replacement of the crosswalk. If the Department determines that more than 50% of the lanes in the intersection require replacement, the entire intersection installation may be reconstructed with a different product on the Qualified Products List (QPL) or replaced with conventional pavement.

2. Approximately **one year** after project acceptance and **every two years** thereafter and for the life of the adjacent pavement, only the outside traffic lane areas of each patterned crosswalk shall be tested for friction resistance in accordance with **ASTM E274** or **ASTME 1911**. Friction resistance shall, at a minimum, have a FN40R value of 35 (or equivalent).
3. The results of all friction tests shall be sent to the **Operations Engineer** at the local FDOT District Four Operations Center located at Broward Operations, 5548 NW 9th Avenue, Ft. Lauderdale, FL 33309 (954) 776-4300, with a cover letter either certifying, that the crosswalks comply with the minimum friction criteria, or stating what remedial action will be taken to restore the friction.
4. Failure to achieve the minimum resistance shall require all lanes of the crosswalk to be friction tested to determine the extent of the deficiency. All deficient areas shall be removed to their full extent (lane-by-lane) and replaced with the same product installed initially. If the Department determines that more than 50% of the lanes in the intersection require replacement, the entire intersection installation may be reconstructed with a different product on the QPL, or replaced with conventional pavement.

5. When remedial action is required in accordance with the above requirements, the local agency shall complete all necessary repairs at its own expense within 90 days of the date when the deficiency was identified. No more than two full depth patterned pavement repairs shall be made to an area without first resurfacing the underlying pavement to 1" minimum depth.
6. The Department will not be responsible for replacing the treatment following any construction activities by the Department in the vicinity of the treatment, or any costs for testing.
7. Should the local agency fail to satisfactorily perform any required remedial work or testing in accordance with this agreement, the Department reserves the right to replace the patterned pavement with conventional pavement (matching the adjacent pavement) and bill the local agency for this cost.

Florida Test Method
for
Friction Measuring Protocol for Patterned Pavements

Designation: FM 5-592

1. SCOPE

This method covers the testing procedures for evaluating the friction resistance of Patterned surfaces used in crosswalks over asphalt and concrete surfaces

Note: This test method contains two parts:

Part A- Friction testing performed with the Locked Wheel Friction Tester

Part B- Friction testing performed with the Dynamic Friction Tester (DFT)

2. APPARATUS

2.1 Locked Wheel Friction Tester- This apparatus shall be standardized in accordance with ASTM E 274, "Standard Test Method for Skid Resistance of Paved Surfaces Using a Full-Scale Tire". The friction test tire used shall be in accordance with ASTM E 501, "Standard Specification for Standard Rib Tire for Pavement Skid-Resistance".

2.2 Dynamic Friction Tester- This apparatus shall be standardized in accordance with ASTM E 1911, "Standard Test Method for Measuring Paved Surface Frictional Properties Using the Dynamic Friction Tester".

3. FRICTION NUMBER CONVERSION

The regression equations relating the locked wheel test results and the DFT results at 40 mph (65 km/h) are:

$$FN40R = 0.64 \cdot DFT40 + 9.23 \quad (1)$$

$$DFT40 = 1.56 \cdot FN40R - 14.42 \quad (2)$$

where,

FN40R = Friction Number from locked wheel testing at 40 mph using a ribbed tire
DFT40 = Coefficient of Friction from DFT at 40 mph multiplied by 100.

Although the above equations can be used to convert the DFT result to the locked wheel friction number at 40 mph and vice versa, conditions do exist where the DFT testing or the locked wheel testing at 40 mph is not feasible due to constraints such as safety, traffic congestion, speed limits, and/or roadway geometries. In these cases, it may be preferable to conduct the locked wheel

testing at a slower speed, e.g., 20 or 30 mph. The following regression equations have been developed to convert the locked wheel test results at 20 and 30 mph to those at 40 mph:

$$FN40R = 0.89 \cdot FN20R - 4.88 \quad (3)$$

where,

FN20R = Friction Number from locked wheel testing at 20 mph using a ribbed tire, and

$$FN40R = 0.95 \cdot FN30R - 2.91 \quad (4)$$

where,

FN30R = Friction Number from locked wheel testing at 30 mph using a ribbed tire.

For ease of application of the above harmonization results, Table 1 summarizes the conversions from FN30R, FN20R and DFT40 to FN40R. Note that the friction numbers shown in this table were rounded to the closest integer. The numbers highlighted in yellow represent the current minimum required friction numbers depending on survey cycle, test method, and speed evaluated.

Table 1. Friction Number Table

FN40R	FN30R	FN20R	DFT40
22	26	30	20
23	27	31	21
24	28	32	23
25	29	34	25
26	30	35	26
27	31	36	28
28	33	37	29
29	34	38	31
30*	35*	39*	32*
31	36	40	34
32	37	41	36
33	38	43	37
34	39	44	39
35**	40**	45**	40**
36	41	46	42
37	42	47	43
38	43	48	45
39	44	49	46
40	45	50	48
41	46	52	50
42	47	53	51
43	48	54	53
44	49	55	54
45	50	56	56

* Minimum friction numbers required for inventory cycles of patterned crosswalks.

**Minimum friction numbers required for new construction and 3-year QPL test decks for patterned crosswalks.

4. PROCEDURE

The test procedures for both the Locked Wheel Friction Tester and the Dynamic Friction Tester are described in the following. All testing should be performed within either the driver or passenger side wheel path, regardless of the equipment used.

4.1 PART A- Friction Testing with the Locked Wheel Friction Tester

- A) **New Construction** – The locked wheel test shall be conducted on all crosswalks within 60 days of the new surface completion date. One valid lockup test is required for each lane; all lanes shall be evaluated

and compared. The test layout is shown in Figure 1.

- B) **Inventory** – For in-service Qualified Product List (QPL) test sections, the locked wheel test is conducted at 6 month intervals up to 3 years. Maintenance surveys are conducted on a yearly basis. Test site shall be confined to a single outside traffic lane (single direction) for each crosswalk location. The locked wheel test will require three repeat lockups and averaged for the designated test lane. The lane in which the friction tests were conducted must be identified in the report along with the test results.
- C) **Retest** – At any point when friction numbers are determined to be below the required values shown in Table 1, all lanes shall be evaluated and the range of friction values shall be determined.
- D) **Special Request** – At any time a patterned pavement is in need of a special assessment, the designated lane(s) shall be evaluated to determine the range of representative friction values.

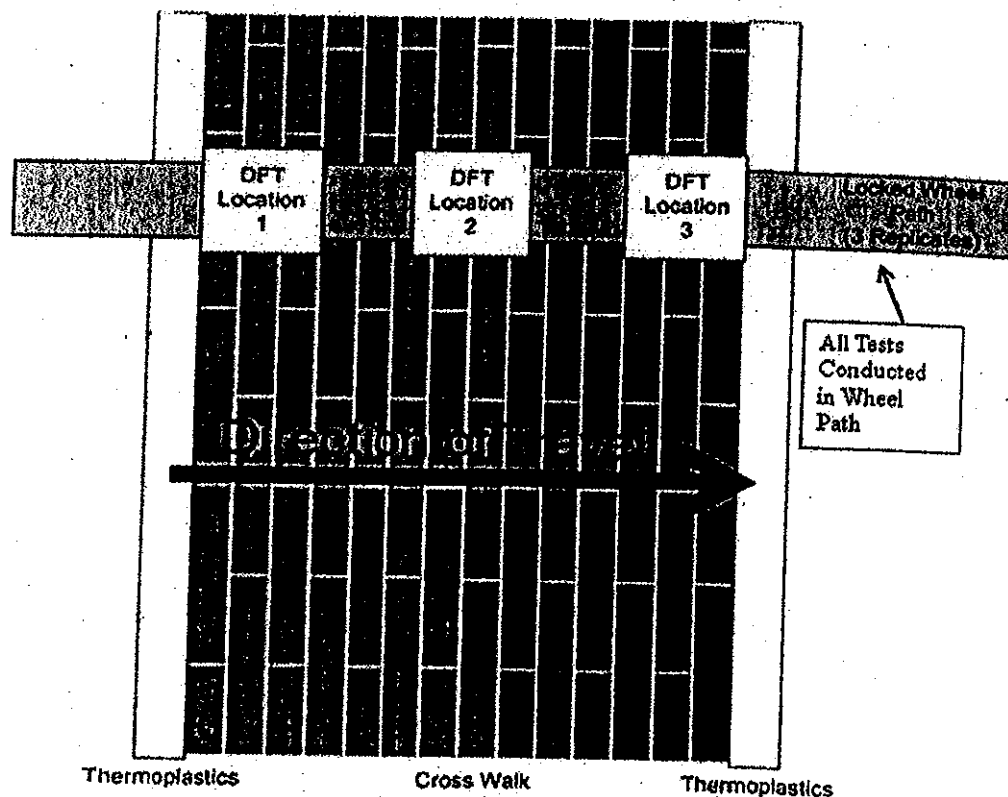


FIGURE 1 Testing protocol for patterned pavement.

4.2 PART B- Skid Testing with the Dynamic Friction Tester (DFT)

- A) **New Construction** – The DFT test shall be conducted on all crosswalks within 60 days of the new surface completion date. DFT tests shall be conducted at three (3) discrete locations in each lane; the results shall be averaged and reported for each lane tested. All lanes shall be evaluated and compared. The test layout is shown in Figure 1.
- B) **Inventory** – For in-service QPL test sections, the DFT test is conducted at 6 month intervals up to 3 years. Maintenance surveys are conducted on a yearly basis. Test site shall be confined to a single outside traffic lane (single direction) for each crosswalk location. DFT tests will be conducted at three (3) discrete locations (Figure 1) in each lane; the results shall be averaged and reported for each lane tested. The lane in which the friction tests were conducted should be identified in the report with the test results.
- C) **Retest** – At any point when friction numbers are determined to be below the required values shown in Table 1, all lanes shall be evaluated and the range of friction values shall be determined.
- D) **Special Request** – At any time a patterned pavement is in need of a special assessment, the designated lane(s) shall be evaluated to determine the range of representative friction values.

5 REPORT

- 5.1 Friction numbers for the patterned crosswalks should be reported using FDOT's Materials form number 675-060-05. This form can be downloaded from FDOT's website at:
<http://formserver.dot.state.fl.us/MiscRepository/forms/67506005.xls>.