Town of Surfside
Parking Lots Improvements

DRAFT

September 8, 2011.

Florida Transportation Engineering, Inc.
7955 NW 12th Street, Suite 418
Doral, FL 33126
Phone: 305-463-8411 / Fax: 305-463-8744
jcalderon@fteinc.net
Juan S. Calderon, P.E. PTOE

Draft Parking Memorandum

DATE: September, 2011

TO: Roger M. Carton, Town Manager

FROM: Juan S. Calderon, P.E., PTOE, Project Manager

CC: John Dicenso, Assistant Chief of Police

Bill Evans, Public Works Director

SUBJECT: **Town of Surfside Parking Lot Improvements**

PREPARED BY

FLORIDA TRANSPORTATION ENGINEERING, INC
7955 NW 12 Street, Suite 418
Miami, Florida 33126
Phone: (305) 463-8411
Fax: (305) 463-8744

Engineer's Certification

I, Juan S. Calderon, certify that I currently hold an active Professional Engineer's License in the State of Florida and I am competent through education and experience to provide engineering services in the civil and traffic engineering disciplines contained in this report. I further certify that this report was prepared by me or under my responsible charge as defined in Chapter 61G15-18.001 F.A.C. and that all statements, conclusions and recommendations made herein are true and correct to the best of my knowledge and ability.

Project: Town of Surfside Parking Lot Improvements

Juan S. Calderon, P.E. PTOE
State of Florida Board of Professional Engineers,
Professional Engineer License No. 58569

Florida Transportation Engineering, Inc
7955 NW 12 Street, Suite 418
Miami, FL 33126
State of Florida Board of Professional Engineers,
Certificate of Authorization No. 792

Table of Contents

LIST OF FIGURES

LIST OF TABLES

APPENDIX

1. INTRODUCTION

The Town of Surfside as part of the RFP #FY2011-04 **(Appendix A)** sought proposals for analyzing, recommending, and prioritizing the improvements for the six (6) Town Parking Lots under the Town jurisdiction.

The RFP FY2011-04 indicated that the recommendations proposed as part of this project must comply with Miami-Dade County code and any applicable Town code. For that purpose the Town requested inspections at appropriate times to insure that specifications are met.

The final objective of the RFP FY2011-04 regarding the parking lots is to prepare plans that will encompass enhancements for each site geometry, pavement, wheel stops, stall size, landscaping, accessible parking, and signing. Those plans will be prepared to contract a builder that will obtain permits from the Town Building Department and other entities as necessary.

1.1. Report's Purpose

The Town of Surfside as part of the RFP #FY2011-04 requested Florida Transportation Engineering (FTE) to provide engineering services in relation to inspecting and producing the plans for the six (6) parking lots under the Town jurisdiction.

This report was prepared with the purpose to evaluate the existing conditions of each parking lot under the Town jurisdiction prior to the improvement plans. This report documents professional opinions regarding traffic engineering, civil engineering, architecture, landscaping architecture, topographic survey and geotechnical.

Studies also includes findings regarding traffic accumulation and occupancy, observations of driver's behavior, physical and geometric design concerns, as well as, other deficiencies noted based on field visits by the experts in the areas mentioned before.

2. EXISTING CONDITIONS

The Town of Surfside is located in north-eastern area of Miami-Dade County. The six (6) parking lots in reference currently operated through a municipal fund established by the Town to provide public parking, planning, operations and improvements. Each parking lot geographic location within the Town of Surfside is illustrated in **Figure 1**.

Also, a preliminary inventory of each of the parking lots of this study was performed to document the exiting general characteristics and elements that each parking lot contains. A summary of the existing conditions is presented in **Table 1.**

Parking Lot No.	Spaces
1	17
2	37
3	99
4	61
5	20
6	207

Prepared for
Town of Surfside

Figure 1. Site Location Map

Table 1. Existing Conditions Inventory for Parking Lots

Lot #	Lot Name	Address	Area	Standard Spaces	Stall Size	Accesible Spaces	Stall Size	Wheel Stops	Type of Pavement	Pave Condition	Pave Markings	Signage	Way-find Signs	Lighting	Landscape	Ingress/Egress	Drainage	Sidewalk	Comments
1	Collins Lot	SW Corner of 93rd St & Collins Avenue	18,426 S.F.	16	9'x17'	1	12'x11.2'	Wheel Stops/ Sidewalk	Asphalt	Fair	Deteriorated	"Employee parking only" "Pay Here" "Stop" "Left turn only"		3 Light Poles (2 heads each) plus 3 light poles serving Collins Ave	Palm Trees & shrubs.	One-way Parking with Ingress along 93rd Street and Exit along Collins Ave	Cath Basin	Sidewalk provided	3 On-street parking spaces provided along Collins Ave
2	Town Hall Lot	NE Corner of 93rd St & Harding Avenue	17,315 S.F.	35	9'x23.4'	2	12'x16'	Sidewalk	Asphalt	Fair	Old markings need to be removed	"Pay Here" Town Hall Signs "Stop""Head In"		6 Light poles	Palm Trees and Cat Tail. Sprinkle system	Along 93rd Street	Catch Basins provided	Sidewalk provided	4 parking spaces with 15 min free parking, and 1 space reserved for municipality employee.
3	94th Street Lot	SE Corner of 94th St & Harding Avenue	34,166 S.F.	95	8.8'x17.3'	4	12'x18.7'	Wheel Stops/ Sidewalk	Asphalt	Deteriorated	Bad	"Head in parking only" "Pay Here"		3 Light Poles (2 heads each)	Palm Trees & shrubs.	Along 94th Street	Catch Basins	Sidewalk provided	
4	Post Office Lot	SW Corner of 95th St & Collins Avenue	28,604 S.F.	58	South 9'x19.5' & North 9.5'x20'	3	12'x19.5' 5'Buffer 12.5'x21.6'	Sidewalk	Asphalt	Fair	Shaded	"Park head in only" "Pay Here" "Stop" Right turn prohibited sign	"Parking" sign provided along 95th St	12 Light poles	Palm Trees & shrubs.	One-way parking with access from 95th St and Exit to Collins Ave	2 Catch Basins provided. Evidence of minor drainage problems around them.	Sidewalk provided	Work zone south of the lot seems to be an extension of the parking lot. On-Street parking provided along Collins Ave
5	Shul Lot	NW Corner of 95th St & Collins Avenue	7,425 S.F.	20	9'x19'	0	12'x19'	Sidewalk	Asphalt	Deteriorated	Shaded	"Pay here" Sign	"Public Parking" Sign located too high & difficult to be seen	2 Light Poles	Palm Trees & shrubs. Landscape irrigation provided	One-way parking with access from Collins Ave and Exit to the Alley	No major evidence of drainage problems	Sidewalk provided	On-street parking spaces provided along 95th Street
6	Abbott Lot	East Side of 9500 Abbott Avenue	68,356 S.F.	201	8'x20' & 8.7'x20'	6	13'x22.7'	Sidewalk	Asphalt	Good	Fair/Good	"Head in parking only" "Pay Here" "Stop"	"Parking" sign provided along Abbott Ave	5 Light Poles (3 heads each)	Palm Trees & shrubs. Sprinkle System provided	Along Abbott Ave	Catch Basins provided	Sidewalk provided	Parking dimensions vary. The north side of the parking lot has more deteriorated pavement and markings than the south side.

2.1. Traffic Engineering

The assessment of traffic engineering and operations within the six (6) parking lots were based on observations for the behavior and the travel patterns of drivers and pedestrians. In order to establish the efficiency of the parking lot, parking data was collected through a demand accumulation study performed during a 7-day period on the summer week of July 25, 2011

2.1.1. Field Observations

The general observed issues of all parking lots are summarized as below;

- Tight turning radius
- Substandard ADA compliance
- Lack of pedestrian guide-signs
- Sidewalk connectivity deficiency
- Vehicles parking along the aisles blocking operations
- Parking, circulation, and driveway design deficiencies
- Poor pavement and drainage conditions
- Deteriorated marking and signs

An outline of the field observation per parking lot is presented below;

a. Parking Lot 1 (Collins Lot) : Southwest Corner of Collins Avenue and 93rd Street

- Driveway to exit o Collins is used as entrance driveway.
- Some vehicles used the parking lot to bypass the signal or to head towards building in south side of the intersection front.
- Vehicles are using the parking as load and unload areas interfering with the other vehicles right at the entrance of the parking lot.
- Vehicles traveling in counter-flow were notices

b. Parking Lot 2 (Town Hall Lot) : Northeast Corner of 93rd Street and Harding Avenue

- Vehicles traveling in counter-flow
- Vehicles speeding were noticed inside the parking
- Overnight use of the parking lot
- Only one pay and display meter for the overall parking
- Lack of protective fencing (accident observed during a field visit)

c. Parking Lot 3 (94th Street Lot) : Southeast Corner of 94th Street and Harding Avenue

- Vehicles speeding
- Vehicles traveling in counter-flow
- Entrance and Exit driveways are very narrow for 2 vehicles
- There is only one pay and display meter at the entrance of the parking lot. People choose to park along the aisles to collect the ticket, which creates congestion and queues that interfere with the traffic along 94 Street.

d. Parking Lot 4 (Post Office Lot) : Southwest Corner of 95th Street and Collins Avenue

- Vehicles speeding
- Vehicles traveling in counter-flow
- The parking is used to bypass the signal at intersection
- Drivers were noticed looking for an exit driveway towards the south end of the parking lot

e. Parking Lot 5 (Shul Lot) : Northwest Corner of 95th Street and Collins Avenue

- Vehicles traveling in counter-flow
- Vehicles were observed using the exit driveway at the alleyway to access the parking lot
- Tight maneuverability causing potential conflicts between vehicles traveling along the aisle and vehicles backing up
- Vehicles stopping to obtain the ticket in the pay and display meter close to Collins are blocking the driveway and creating queues that block the northbound traffic along Collins Avenue

f. Parking Lot 6 (Abbott Lot) : East Side of 9500 Abbott Avenue

- Vehicles speeding
- Vehicles traveling in counter-flow
- Few Handicap spaces were noticed
- Large vehicle accumulation nearby the CVS pharmacy and Flannigan's restaurant
- Aisles are being use the parking as load drop off zone interfering with traffic
- Missing additional bicycle racks

2.1.2. Vehicle Accumulation Study

A parking accumulation study each 15-minute intervals were conducted during typical weekdays and weekends from Monday, July 25, 2011 to Sunday, July 31, 2011 for a twelve (12) hour period between 9:00 AM and 9:00 PM. The hourly parking demand and the raw traffic counts (15-minute interval) is provided in **Appendix B**.

a. Parking Lot 1 (Collins Lot) : Southwest Corner of Collins Avenue and 93rd Street

- The parking lot at the southwest corner of 93rd Street and Collins Avenue provides 17 spaces.
- The average number of parked vehicles over the twelve-hour period was 14 vehicles (82%) during the weekdays and 13 vehicles (76%) during the weekend.
- The highest hourly parking demand was 17 vehicles 100%) between 10:40 AM and 1:30 PM during the weekdays and 17 vehicles (100%) between 1:45 PM to 5:35 PM during the weekend.

b. Parking Lot 2 (Town Hall Lot) : Northeast Corner of 93rd Street and Harding Avenue

- The parking lot at the northeast corner of 93rd Street and Harding Avenue provides 37 spaces.

- The average number of parked vehicles over the twelve-hour period was 21 vehicles (57%) during the weekdays and 19 vehicles (51%) in the weekend.
- The highest hourly parking demand was 28 vehicles (76%) between 11:45 AM and 11:45 AM during the weekdays and 29 vehicles (78%) between 2:00 PM and 2:45 PM in the weekend.

c. Parking Lot 3 (94th Street Lot) : Southeast Corner of 94th Street and Harding Avenue

- The parking lot at the southeast corner of 94th Street and Harding Avenue provides 99 spaces.
- The average number of parked vehicles over the twelve-hour period was 48 vehicles (47%) during both weekdays and weekend.
- The highest hourly parking demand was 63 vehicles (64%) between 11:30 AM and 12:15 PM during the weekdays and 76 vehicles (76%) between 4:45 PM and 5:00 PM during the weekend.

d. Parking Lot 4 (Post Office Lot) : Southwest Corner of 95th Street and Collins Avenue

- The parking lot at the southwest corner of 95th Street and Collins Avenue provides 61 spaces.
- The average number of parked vehicles over the twelve-hour period was 29 vehicles (48%) during the weekdays and 38 vehicles (62%) in the weekend.
- The highest hourly parking demand was 41 vehicles (67%) at 1:30 PM during the weekdays and 49 vehicles (80%) between 3:30 PM and 4:00 PM during the weekend.

e. Parking Lot 5 (Shul Lot) : Northwest Corner of 95th Street and Collins Avenue

- The parking lot at the northwest corner of 95th Street and Collins Avenue provides 20 spaces.
- The average number of parked vehicles over the twelve-hour period was 13 vehicles (65%) during the weekdays and 8 vehicles (40%) in the weekend.
- The highest hourly parking demand was 18 vehicles (90%) between 10:00 AM and 11:45 AM during the weekdays and 12 vehicles (60%) between 5:15 PM and 6:30 PM in the weekend.

f. Parking Lot 6 (Abbott Lot) : East Side of 9500 Abbott Avenue

- The parking lot at 95th Street and Abott Avenue provides 207 spaces.
- The average number of parked vehicles over the twelve-hour period was 113 vehicles (55%) during the weekdays and 77 vehicles (37%) in the weekend.
- The highest hourly parking demand was 157 vehicles (76%) at 2:00 PM during the weekdays and 93 vehicles (45%) between 4:30 PM and 4:45 PM in the weekend.

Therefore, from the parking accumulation study, it is concluded as below;

- All parking lots have 3 or more hours of occupancy above 60% average during weekdays
- High occupancy is noted in the parking lots nearby the coastal area in the weekend
- Slightly higher occupancy is recorded for the parking lots west of Harding and Abbott Avenue during the weekdays than during the weekends

- However, it is noted that the occupancy of Handing and Abbott Avenue parking lots during the weekend nighttime (7 PM to 9PM) is above 20%.
- It is important to mention that the parking lot at 95th and Abbott Avenue presents an average occupancy close to 40% at 9 PM during the weekend

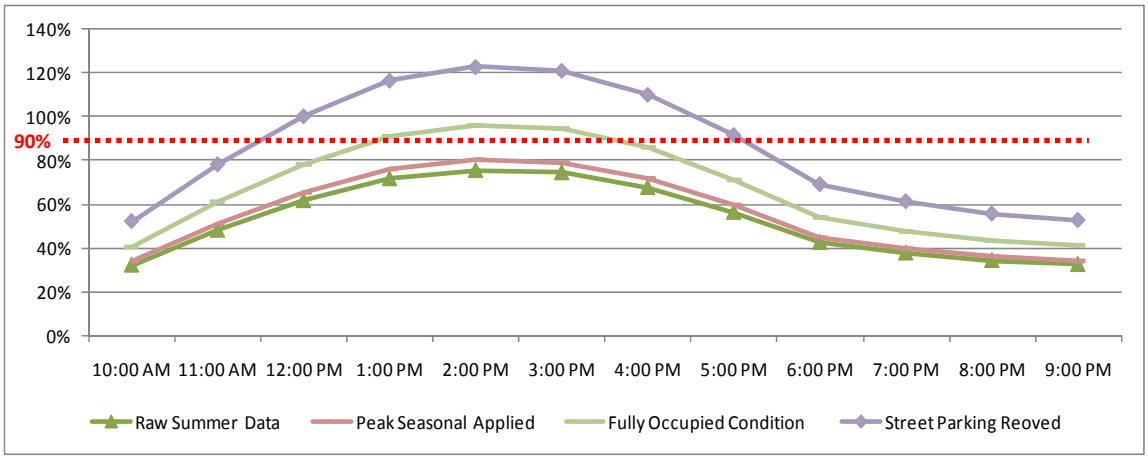
2.1.3. Parking Garage Analysis

The Town of Surfside has been considering a new parking garage at 95th Street and Abbot Avenue. It is determined that a parking garage could be required when the occupancy reaches to a level of 90% of the capacity. In order to properly validate the need of a parking garage at this location, additional site-specific aspects that need to be aggregated to the raw traffic data collected. Among those aspects are as follows and **Table 2** summarizes the result of parking garage analysis;

- A peak seasonal factor of 1.06 is applied to the raw traffic counts (15-minute interval) since the raw traffic counts were collected during the summer period. The seasonal factor was obtained from a nearby FDOT station.
- Currently, there are eight (8) vacant stores front along Harding Avenue abutting the parking lot. When these stores are fully occupied, it is expected that 32 new trips will be generated based on the ITE Trip Generation Manual
  - 1,000 S.F. per Store
  - 4 vehicles per 1,000 S.F. for Retail/Small Restaurant
- Furthermore, the Town of Surface is planning the removal of the existing side-street parking spaces (74 spaces) along Harding Avenue between 94th and 96th Street.
- It is assessed that a parking garage is required when the occupancy reaches a 90% level.

Table 2. Parking Demand Analysis for the Proposed Parking Garage

95 St & Abbot Ave (207 Spaces) - Summer Weekdays								
Time	Raw Data		Peak Seasonal Applied		Fully Occupied		Street Parking Reoved	
	veh	%	veh	%	veh	%	veh	%
10:00 AM	67	32%	70	34%	84	41%	108	52%
11:00 AM	100	48%	106	51%	126	61%	162	78%
12:00 PM	128	62%	135	65%	162	78%	207	100%
1:00 PM	149	72%	157	76%	188	91%	241	116%
2:00 PM	156	76%	166	80%	198	96%	254	123%
3:00 PM	154	75%	164	79%	195	94%	250	121%
4:00 PM	140	68%	149	72%	177	86%	228	110%
5:00 PM	117	56%	124	60%	148	71%	189	91%
6:00 PM	88	43%	93	45%	111	54%	143	69%
7:00 PM	78	38%	83	40%	99	48%	127	61%
8:00 PM	71	34%	75	36%	90	43%	115	56%
9:00 PM	67	32%	71	34%	85	41%	109	53%



This analysis indicates that, after the site-specific aspects are applied, the occupancy in the existing parking lot will exceed 90% of the capacity during the daytime between 10:00 AM and 5:00 PM. Therefore, it is calculated that a parking garage could be justified for a further study at this location.

2.2. Architecture and Parking Design

A preliminary review of the parking layout was performed by FTE and CHALGUB, INC. This preliminary review vetted the zoning standards compliance for each of the six Town Parking Lots and evaluates preliminary parking layouts considering the RFP requirements and the applicable codes (Town of Surfside & Miami-Dade County).

2.2.1. Zoning Standards

The RFP indicates that improvements shall conform to Miami Dade County code & all Town Codes as a result a summary of the Town of Surfside Zoning Ordinance requirements that are applicable to the architectural design of the Parking Lots are presented follows:

a. ARTICLE III – Establishment of Zoning Designations

- Section 90-39: Zoning Districts, & the Zoning Map: designates each lot as **MU-MUNICIPAL**

b. ARTICLE VII – Off-Street Parking & Loading

- Division 1 Off-street Parking; Section 90-77 Off-street parking requirements.
- 90-81.1 Minimum Stall Area: 9 foot x 18 foot exclusive of driveways and Miami-Dade County is 8 foot x 23 foot.
- Aisle dimensions: shall comply with Miami-Dade County Standards "Minimum Parking Stall Dimensions": 45 deg. spaces-12 foot aisle; 60 deg. spaces-17 foot aisle; 75 deg. spaces-21 foot aisle; and 90 deg. spaces-22 foot aisle
- Bumper overhang per Miami-Dade County: 45 deg. spaces-1.8 foot; 60 deg. spaces-2.2 foot; 75 deg. spaces-2.4 foot; and 90 deg. spaces-2.5 foot.
- Handicap parking spaces per Chapter 11 FBC: 12 foot x 18 foot with 5 foot access;
- 90-81.2 adequate Ingress/Egress and interior driveways; Miami-Dade County requirements indicates that Interior driveways: 12 foot-one way, 20 foot- two way

- 90-81.3 Drainage & Maintenance: drain away from streets and property; minimum1 inch asphaltic concrete on a 6 inch compacted lime rock base.
- 90.81.5 Entrances and Exits: not more than 1 not exceeding 12 foot in width for every 50 foot of width of Parking Lot
- 90-81.7 Lighting: comply with Section 90-61
- 90-81.8 Screening: 6 or more vehicles- provide along the lot lines, except ingress and egress, a visual screen not less than 2 foot high but no more than 3 foot high; shall consist of a compact evergreen hedge.

c. ARTICLE VIII – Landscape Requirements

The Town code section 90-91.2 Requires a buffer landscaping adjacent to STREETS AND ABUTTING PROPERTIES: *"On any proposed, redeveloped site, or ....., or municipal plots where such area is abutting street(s) and/or property lines, including dedicated alleys, landscaping shall be provided between such area and such perimeters as follows:*

1) At least 10 foot in depth along all the property lines abutting streets and/or property lines; Landscape barrier (Hedge, fence, wall) along abutting street property line place along the inside perimeter. A fence or wall along abutting property line**,** install at property line and screen with a hedge from the inside.

4) Parking area interior landscaping: 20% of the total vehicular area *exclusive* of perimeter landscape buffers is required.

5) Parking Aisle Stalls: 11 foot wide landscape islands/10 or less stalls. All row shall be terminated with 11 foot wide islands; Landscape divider Medians minimum 6 foot wide; other proposed landscape areas minimum 6 foot wide.

6) Wheel Stops or curbs located min. 2.5 foot from any landscaped area. Type "D" curb encouraged where abutting Landscape area (cannot be counted towards landscape buffer or median requirement.

2.2.2. Zoning Analysis

A zoning analysis for the six study parking lots was performed to evaluate the compliance with the off-street parking requirements by the Town of Surfside as included in **Appendix C**. The analysis concludes that the study parking lots have deficiencies to meet minimum code requirements. The following deficiencies in all parking lots were found:

- Parking stalls are smaller than the 9'x18' standard. Most stalls are 9 foot x 14 foot or 9 foot x 16 foot assuming an overhang of 2.5 foot over existing raised concrete curb.
- Handicap spaces do not meet the minimum of 12 foot x18 foot. One of the lots (Shul Lot) does not provide an accessible space
- For most of the parking lots, driving aisles or bumper overhang do not comply with minimum dimensions as per Miami-Dade code
- The study parking lots present the lack of landscape buffer or substandard below the 10 foot minimum.
- Interior landscape was observed very limited or below 20% requirement.
- End landscape islands are smaller than 11 foot wide; in Parking Lot No. 6 (Abbot Lot) and there are no intermediate Islands. Large number of continuous spaces with no intermediate Islands.

Based on the parking lot layouts that were prepared to take in consideration the goals of the RFP and the Standards Minimum dimensions as per the Town and County codes; the dimensions and configurations of each lot coupled with the zoning standards will result in a considerable reduction in the number of parking spaces. Furthermore a 10 foot x 20 foot stalls as per item F of the RFP would have a larger reduction in the number of spaces.

2.2.3. Lighting Study

A lighting inventory at the six study parking lots was performed . The height and general depicted characteristics are shown in **Appendix D**. The field observation for the lighting system at the study parking lots indicates that;

- It is appeared that the larger size of parking lots have few lighting poles
- The lighting poles heights range between 17 foot to 24 foot.
- Further conditions of the lighting design will be prepared upon definition of the final architectural and zoning elements

2.3. Topographic Surveys

John Ibarra & Assoc., Inc. conducted the existing topographic surveys for the six study parking lots as included in **Appendix E**.

2.4. Geotechnical Engineering

Geosol, Inc. (GEOSOL) performed the subsurface exploration and the geotechnical engineering evaluations to investigate the subsurface and groundwater conditions and to provide geotechnical engineering recommendations for the proposed parking lot improvements. The report is included in **Appendix F**.

Appendix A

RFP #FY2011-04

REQUEST FOR PROPOSALS (RFP)

TO PROVIDE PARKING LOT STANDARDS

RFP #FY2011-04

I. PURPOSE

The purpose of this RFP is to seek proposals for analyzing each of the Town's parking lots, recommending improvements, prioritizing the recommendations and providing an engineering estimate of what the improvements would cost.

The improvements must be in compliance with Miami-Dade County code and any applicable Town codes. Once the Town receives and reviews the consultants work, the Town will provide a list of improvements to be bid and the consultant will prepare the bid documents.

A. General

Driveways, driveway ramps, parking stalls, aisles, including pavement, drainage, landscaping, screen fencing, and lighting shall conform to these standards and all requirements of the Town Code. All spaces and driveways must function properly. Town inspection is required at appropriate times to insure that all specifications are met.

B. Permits

The builder shall obtain a parking lot permit from the Building Department prior to modifying an existing parking lot. To obtain a permit, a plan for the project must be submitted to the Building Department. Any restriping or improvements, other than for maintenance purposes, to a parking lot also requires approval of a parking lot permit by the Building Development Department.

C. Plans

Plans for the parking lots shall conform to Miami-Dade County standards and the code of ordinances of the Town of Surfside and shall show the following on a priority basis with each item estimated for cost:

1. Paving

2. Striping with comparison of single stripe vs. double stripe

3. Signage to include business directory and beach access information. The proposal shall include a line item for commercial design of the signage program to be used throughout the Town.

4. Curbing

5. Lighting to include high intensity energy efficient bulbs. Consideration shall be given for shielding where lighting is near residential property.

6. Landscaping upgrade or replacement depending on condition to include irrigation

7. Drainage

8. Trash receptacles

9. Design concepts for alleys on the west and east side of Harding Avenue from 94th Street to 96th Street to include paving.

10. Ingress/Egress

D. Pavement

Parking lots shall be paved or resurfaced with an all-weather surface such as asphaltic concrete (AC). All spaces shall be marked, with disabled spaces having special marking in each space. Directional entrances, exits and aisles shall be signed and marked on the pavement.

E. Wheel Stops

Wheel stops shall be checked and replaced as needed.

F .Stall Sizes

All parking stalls shall comply with the parking bay dimension standards for average sized cars. (10’ x 20’).

G. Landscaping

In all zones, required street yard areas shall be landscaped. All dead plants shall be replaced as necessary. Drought tolerant planting must be used in accordance with the Miami-Dade County landscape standards for water conservation.

Landscape areas shall have a permanent underground irrigation system. Irrigation shall provide uniform precipitation and adequate water to maintain healthy plants.

H. Accessible Parking

All accessible parking spaces shall be constructed and signed in accordance with state and local laws, and shall be located conveniently for use by disabled persons, as approved by the Building Department. The number of accessible parking spaces shall be two per cent of the total spaces in each lot.

I. Signing

All existing signs will be checked and replaced as needed. Entrances and exits that are one-way shall be marked with an approved sign and pavement marking. Accessible spaces shall be signed with pavement marking or markings on wheel stops in accordance with state code and local laws. All pavement markings, striping, and signs shall be approved by the Public Works Department.

J. Parking Lot Locations

- Town Hall Lot – NE corner of 93rd Street & Harding Avenue
- Collins Lot – SW corner of 93rd Street & Collins Avenue
- 94th Street Lot – SE corner of 94th Street & Harding Avenue
- Post Office Lot – SW corner of 95th Street & Collins Avenue
- Shul Lot – NW corner of 95th Street & Collins Avenue
- Abbott Lot – East side 9500 Abbott Avenue

K. PLAN OF ACTION

Please deliver one (1) original and six (6) copies of the written proposal in a 3-ring binder format, labeled "RFP #11-04 Parking Lot Standards". Proposals must be received by **Debra Eastman, Town Clerk, Town of Surfside, 9293 Harding Avenue, Surfside, Fl 33154 on or before 3p.m., Wednesday, May 4, 2011** after which time receipt will officially be closed. The time/date stamp located in Town Hall will be the official authority for determining late applications. Proposals submitted by facsimile (fax) or electronically will NOT be accepted.

Questions regarding the proposal request must be submitted in writing to **Assistant Chief John Di Censo, Town of Surfside, 9293 Harding Avenue,**

Surfside, Fl 33154 or e-mail jdicenso@townofsurfsidefl.gov before 5:00 p.m., Monday, April 25, 2011.

A review of the written proposals will be completed by May 9, 2011 by a committee selected by the Town Manager.

The Town of Surfside reserves the right to reject any and all proposals, or any part thereof, or to accept any proposals or any part thereof, or to waive any informalities or defects in any proposal, as deemed to be in the best interest of the Town within the sole discretion of the Town.

II. OPENING OF PROPOSALS

All proposals submitted will be opened and read aloud publicly at the Office of the Town Clerk, 9293 Harding Avenue Surfside, Florida, on the date and at the time stated, or as may be amended by addendum.

III. COMMUNICATIONS OR INQUIRIES

Any communication or inquiries, except for clarification of process or procedure already contained in the solicitation, are to be made to the attention of **Assistant Chief John Di Censo, Town of Surfside, 9293 Harding Avenue, Surfside, Fl 33154 or e-mail at jdicenso@townofsurfsidefl.gov.** Such inquiries or requests for information shall be submitted in writing and shall contain the requester's name, address, telephone number and email address.

IV. ADDENDA

The Town may issue an addendum in response to any inquiry received, prior to proposal opening, which changes, adds to or clarifies the terms provisions or requirements of the solicitation. The applicant shall not rely on any representation, statement or explanation whether written or verbal, other than those made in this RFP or in any addenda issued. **Where there appears to be a conflict between this RFP and any addenda, the last addendum issued shall prevail.**

It is the applicant's responsibility to ensure receipt of all addenda, and any accompanying documentation. The application is required to acknowledge the receipt of all addenda in its application.

Appendix B

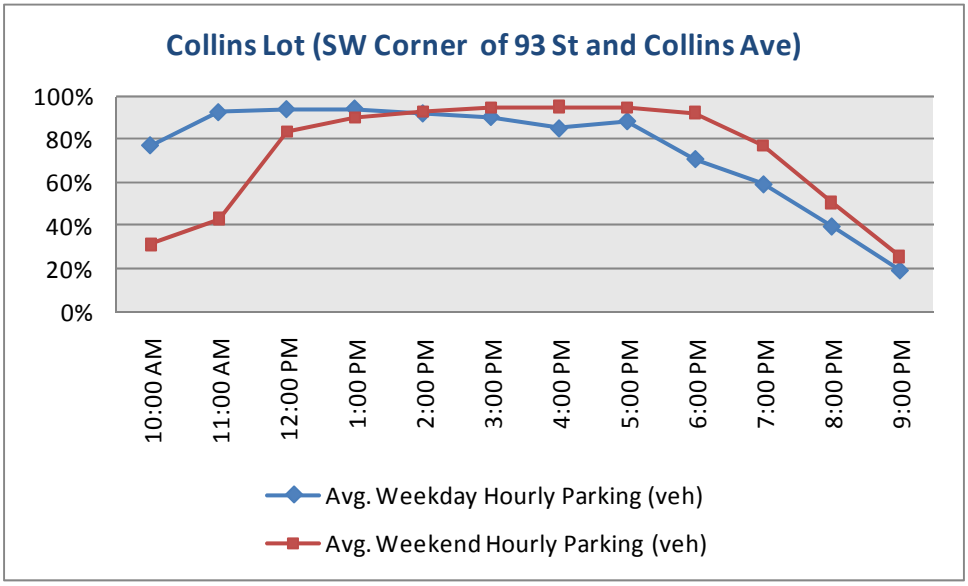
Parking Accumulation Study

Collins Lot – Raw Accumulation Data

Start Time	Weekday											Weekend				
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg. Weekday Hourly Parking (veh)	Saturday		Sunday		Avg. Weekend Hourly Parking (veh)
	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)		15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	
9:00 AM	10	-	13	-	16	-	10	-	9	-	-	9	-	3	-	-
9:15 AM	11	-	15	-	15	-	14	-	10	-	-	5	-	4	-	-
9:30 AM	12	-	17	-	15	-	17	-	13	-	-	5	-	6	-	-
9:45 AM	16	12	17	16	14	15	17	15	15	12	14	5	6	8	5	6
10:00 AM	17	14	17	17	15	15	17	16	15	13	15	7	6	6	6	6
10:15 AM	16	15	17	17	17	15	17	17	16	15	16	7	6	7	7	6
10:30 AM	17	17	17	17	16	16	17	17	16	16	16	8	7	8	7	7
10:45 AM	17	17	17	17	17	16	15	17	17	16	17	10	8	9	8	8
11:00 AM	17	17	16	17	15	16	17	17	17	17	17	13	10	13	9	9
11:15 AM	17	17	17	17	16	16	16	16	17	17	17	15	12	17	12	12
11:30 AM	17	17	17	17	17	16	16	16	17	17	17	14	13	17	14	14
11:45 AM	17	17	17	17	17	16	17	17	17	17	17	12	14	17	16	15
12:00 PM	16	17	17	17	16	17	16	16	17	17	17	12	13	17	17	15
12:15 PM	17	17	17	17	17	17	17	17	17	17	17	15	13	17	17	15
12:30 PM	17	17	16	17	17	17	17	17	17	17	17	16	14	17	17	15
12:45 PM	17	17	17	17	17	17	16	17	17	17	17	16	15	17	17	16
1:00 PM	17	17	17	17	15	17	17	17	17	17	17	14	15	16	17	16
1:15 PM	16	17	17	17	15	16	17	17	17	17	17	17	16	17	17	16
1:30 PM	16	17	17	17	15	16	17	17	17	17	17	17	16	17	17	16
1:45 PM	16	16	17	17	16	15	17	17	16	17	16	17	16	17	17	17
2:00 PM	16	16	17	17	17	16	17	17	15	16	16	17	17	16	17	17
2:15 PM	17	16	17	17	16	16	16	17	15	16	16	16	17	17	17	17
2:30 PM	17	17	17	17	15	16	17	17	14	15	16	17	17	17	17	17
2:45 PM	17	17	15	17	17	16	16	17	15	15	16	17	17	17	17	17
3:00 PM	17	17	12	15	16	16	14	16	16	15	16	16	17	17	17	17
3:15 PM	16	17	13	14	16	16	15	16	16	15	16	17	17	17	17	17
3:30 PM	17	17	15	14	17	17	15	15	17	16	16	17	17	17	17	17
3:45 PM	17	17	14	14	14	16	14	15	15	16	15	17	17	17	17	17
4:00 PM	17	17	13	14	15	16	17	15	17	16	16	16	17	17	17	17
4:15 PM	15	17	17	15	16	16	17	16	17	17	16	16	17	17	17	17
4:30 PM	16	16	15	15	14	15	17	16	17	17	16	15	16	17	17	17
4:45 PM	17	16	13	15	11	14	17	17	17	17	16	17	16	17	17	17
5:00 PM	15	16	12	14	13	14	16	17	16	17	15	17	16	17	17	17
5:15 PM	14	16	10	13	12	13	14	16	17	17	15	15	16	17	17	17
5:30 PM	16	16	7	11	8	11	11	15	15	16	14	15	16	17	17	17
5:45 PM	16	15	6	9	7	10	13	14	17	16	13	16	16	17	17	16
6:00 PM	15	15	7	8	9	9	10	12	17	17	12	15	15	16	17	16
6:15 PM	13	15	4	6	6	8	12	12	17	17	11	16	16	12	16	16
6:30 PM	12	14	6	6	6	7	13	12	17	17	11	15	16	11	14	15
6:45 PM	10	13	4	5	7	7	12	12	14	16	11	17	16	9	12	14
7:00 PM	9	11	3	4	7	7	12	12	16	16	10	13	15	10	11	13
7:15 PM	7	10	2	4	4	6	11	12	14	15	9	10	14	11	10	12
7:30 PM	5	8	1	3	2	5	14	12	10	14	8	7	12	9	10	11
7:45 PM	4	6	1	2	1	4	13	13	7	12	7	6	9	7	9	9
8:00 PM	1	4	1	1	1	2	12	13	5	9	6	4	7	5	8	7
8:15 PM	1	3	1	1	1	1	10	12	4	7	5	4	5	5	7	6
8:30 PM	1	2	1	1	2	1	9	11	3	5	4	5	5	5	6	5
8:45 PM	1	1	1	1	2	2	10	10	3	4	4	4	4	5	5	5
Average	14		12		13		15		15		14	13		14		13

Collins Lot – Hourly Parking Demand

Time	Accum. Weekdays Hourly Parking												Accum. Weekend Hourly Parking					
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg.		Friday		Sunday		Avg.	
	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%
10:00 AM	12	72%	16	94%	15	88%	15	85%	12	69%	14	82%	6	35%	5	31%	6	33%
11:00 AM	17	99%	17	100%	16	96%	17	99%	16	94%	17	98%	8	47%	8	44%	8	46%
12:00 PM	17	100%	17	101%	16	96%	17	97%	17	100%	17	99%	14	79%	16	94%	15	88%
1:00 PM	17	99%	17	100%	17	101%	17	97%	17	101%	17	100%	15	87%	17	100%	16	96%
2:00 PM	16	96%	17	101%	15	90%	17	100%	17	100%	17	97%	16	94%	17	100%	17	99%
3:00 PM	17	99%	17	99%	16	96%	17	99%	15	87%	16	96%	17	99%	17	101%	17	100%
4:00 PM	17	99%	14	79%	16	93%	15	85%	16	94%	15	90%	17	99%	17	100%	17	101%
5:00 PM	16	96%	15	85%	14	82%	17	100%	17	100%	16	94%	16	94%	17	100%	17	100%
6:00 PM	15	90%	9	51%	10	59%	14	79%	16	96%	13	75%	16	93%	17	100%	16	94%
7:00 PM	13	74%	5	31%	7	41%	12	69%	16	94%	11	63%	16	93%	12	71%	14	82%
8:00 PM	6	37%	2	10%	4	21%	13	74%	12	69%	7	42%	9	53%	9	54%	9	54%
9:00 PM	1	6%	1	6%	2	9%	10	60%	4	22%	4	21%	4	25%	5	29%	5	27%
Average	14	80%	12	72%	12	73%	15	87%	15	86%	14	80%	13	79%	14	81%	14	81%

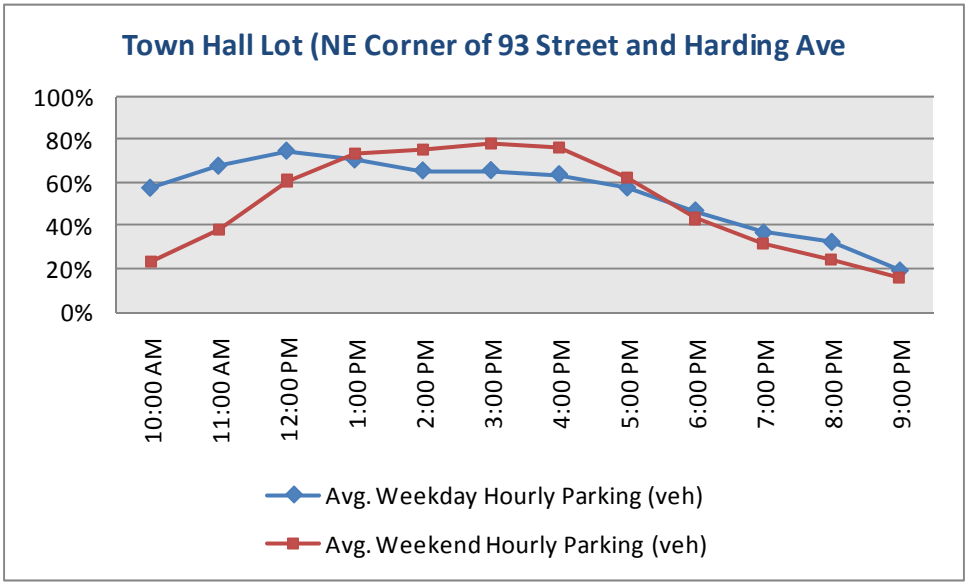


Town Hall Lot – Raw Accumulation Data

Start Time	Weekday											Weekend				
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg. Weekday Hourly Parking (veh)	Saturday		Sunday		Avg. Weekend Hourly Parking (veh)
	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)		15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	
9:00 AM	22	-	24	-	20	-	17	-	15	-	-	7	-	4	-	-
9:15 AM	20	-	22	-	20	-	22	-	18	-	-	8	-	8	-	-
9:30 AM	22	-	24	-	21	-	23	-	17	-	-	9	-	9	-	-
9:45 AM	23	22	26	24	20	20	29	23	19	17	21	11	9	12	8	9
10:00 AM	22	22	31	26	23	21	28	26	19	18	22	12	10	14	11	10
10:15 AM	23	23	27	27	24	22	25	26	24	20	24	11	11	15	13	12
10:30 AM	24	23	30	29	25	23	26	27	22	21	25	11	11	18	15	13
10:45 AM	24	23	29	29	24	24	28	27	21	22	25	13	12	19	17	14
11:00 AM	25	24	32	30	28	25	30	27	24	23	26	15	13	21	18	15
11:15 AM	28	25	30	30	31	27	30	29	26	23	27	17	14	27	21	18
11:30 AM	25	26	31	31	27	28	28	29	23	24	27	19	16	29	24	20
11:45 AM	24	26	30	31	23	27	28	29	27	25	28	20	18	32	27	23
12:00 PM	24	25	31	31	29	28	28	29	25	25	27	21	19	34	31	25
12:15 PM	21	24	27	30	31	28	27	28	22	24	27	21	20	34	32	26
12:30 PM	22	23	27	29	29	28	25	27	24	25	26	20	21	33	33	27
12:45 PM	23	23	25	28	27	29	28	27	25	24	26	20	21	35	34	27
1:00 PM	21	22	27	27	25	28	33	28	23	24	26	21	21	35	34	27
1:15 PM	19	21	26	26	25	27	29	29	22	24	25	19	20	35	35	27
1:30 PM	18	20	26	26	24	25	30	30	19	22	25	21	20	36	35	28
1:45 PM	18	19	26	26	25	25	27	30	20	21	24	22	21	34	35	28
2:00 PM	20	19	25	26	24	25	26	28	22	21	24	26	22	35	35	29
2:15 PM	21	19	28	26	25	25	29	28	21	21	24	26	24	33	35	29
2:30 PM	17	19	28	27	26	25	29	28	21	21	24	23	24	32	34	29
2:45 PM	19	19	26	27	27	26	27	28	23	22	24	22	24	34	34	29
3:00 PM	19	19	28	28	25	26	26	28	24	22	24	23	24	34	33	28
3:15 PM	19	19	25	27	23	25	25	27	25	23	24	24	23	31	33	28
3:30 PM	18	19	24	26	22	24	23	25	27	25	24	25	24	33	33	28
3:45 PM	18	19	24	25	25	24	24	25	26	26	24	25	24	30	32	28
4:00 PM	14	17	24	24	26	24	23	24	23	25	23	23	24	27	30	27
4:15 PM	14	16	23	24	23	24	23	23	22	25	22	25	25	25	29	27
4:30 PM	14	15	25	24	21	24	21	23	23	24	22	23	24	22	26	25
4:45 PM	13	14	23	24	26	24	21	22	23	23	21	20	23	19	23	23
5:00 PM	15	14	20	23	23	23	19	21	24	23	21	20	22	17	21	21
5:15 PM	12	14	15	21	19	22	20	20	22	23	20	20	21	15	18	20
5:30 PM	14	14	11	17	19	22	17	19	21	23	19	16	19	12	16	17
5:45 PM	12	13	9	14	24	21	12	17	19	22	17	17	18	11	14	16
6:00 PM	11	12	6	10	23	21	14	16	18	20	16	14	17	11	12	15
6:15 PM	10	12	5	8	20	22	11	14	20	20	15	11	15	10	11	13
6:30 PM	10	11	5	6	22	22	13	13	19	19	14	13	14	12	11	12
6:45 PM	8	10	5	5	25	23	12	13	15	18	14	11	12	12	11	12
7:00 PM	7	9	6	5	28	24	11	12	13	17	13	10	11	12	12	11
7:15 PM	6	8	6	6	28	26	6	11	13	15	13	10	11	9	11	11
7:30 PM	5	7	6	6	27	27	6	9	16	14	12	9	10	6	10	10
7:45 PM	8	7	5	6	27	28	4	7	12	14	12	9	10	7	9	9
8:00 PM	6	6	8	6	25	27	4	5	7	12	11	8	9	7	7	8
8:15 PM	6	6	7	7	12	23	4	5	5	10	10	6	8	6	7	7
8:30 PM	4	6	7	7	11	19	5	4	5	7	9	6	7	6	7	7
8:45 PM	4	5	6	7	9	14	4	4	4	5	7	4	6	4	6	6
Average	17		21		24		21		20		21	17		22		19

Town Hall Lot – Hourly Parking Demand

Time	Accum. Weekdays Hourly Parking												Accum. Weekend Hourly Parking					
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg.		Friday		Sunday		Avg.	
	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%
10:00 AM	22	59%	24	65%	20	55%	23	61%	17	47%	21	57%	9	24%	8	22%	9	23%
11:00 AM	23	63%	29	79%	24	65%	27	72%	22	58%	25	67%	12	32%	17	45%	14	38%
12:00 PM	26	69%	31	83%	27	74%	29	78%	25	68%	28	74%	18	48%	27	74%	23	61%
1:00 PM	23	61%	28	74%	29	78%	27	73%	24	65%	26	70%	21	55%	34	92%	27	74%
2:00 PM	19	51%	26	71%	25	67%	30	80%	21	57%	24	65%	21	56%	35	95%	28	75%
3:00 PM	19	52%	27	72%	26	69%	28	75%	22	59%	24	65%	24	66%	34	91%	29	78%
4:00 PM	19	50%	25	68%	24	64%	25	66%	26	69%	24	64%	24	66%	32	86%	28	76%
5:00 PM	14	37%	24	64%	24	65%	22	59%	23	61%	21	57%	23	61%	23	63%	23	62%
6:00 PM	13	36%	14	37%	21	57%	17	46%	22	58%	17	47%	18	49%	14	37%	16	43%
7:00 PM	10	26%	5	14%	23	61%	13	34%	18	49%	14	37%	12	33%	11	30%	12	32%
8:00 PM	7	18%	6	16%	28	74%	7	18%	14	36%	12	32%	10	26%	9	23%	9	24%
9:00 PM	5	14%	7	19%	14	39%	4	11%	5	14%	7	19%	6	16%	6	16%	6	16%
Average	17	45%	20	55%	24	64%	21	56%	20	53%	20	55%	16	44%	21	56%	19	50%

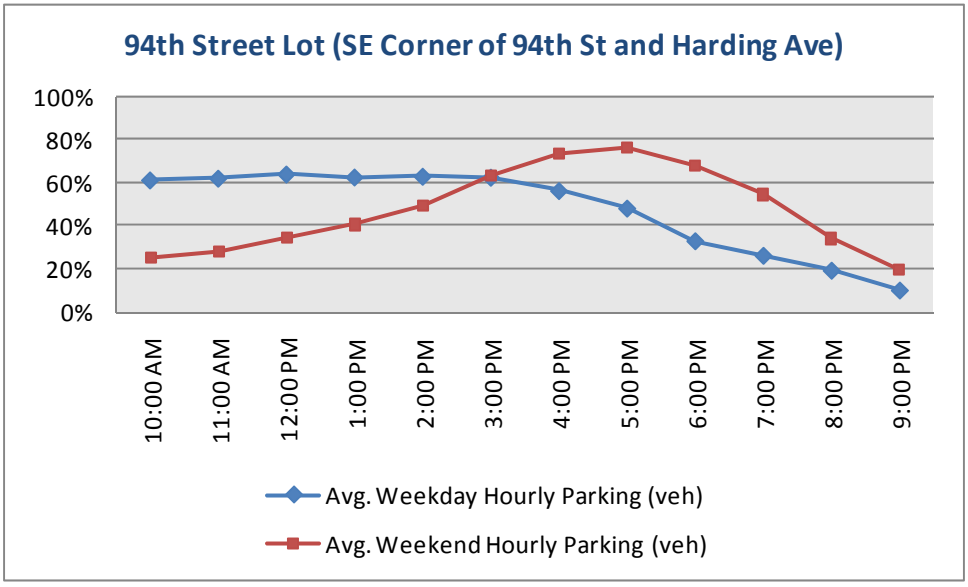


94th Street Lot – Raw Accumulation Data

Start Time	Weekday											Weekend				
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg. Weekday Hourly Parking (veh)	Saturday		Sunday		Avg. Weekend Hourly Parking (veh)
	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)		15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	
9:00 AM	61	-	59	-	60	-	54	-	59	-	-	29	-	21	-	-
9:15 AM	60	-	56	-	64	-	56	-	61	-	-	30	-	22	-	-
9:30 AM	62	-	57	-	65	-	59	-	63	-	-	29	-	17	-	-
9:45 AM	65	62	59	58	64	63	60	57	68	63	61	32	30	18	20	25
10:00 AM	69	64	55	57	64	64	57	58	68	65	62	37	32	18	19	25
10:15 AM	58	64	55	57	62	64	58	59	69	67	62	37	34	14	17	25
10:30 AM	65	64	55	56	63	63	59	59	67	68	62	37	36	17	17	26
10:45 AM	63	64	55	55	62	63	57	58	67	68	61	40	38	21	18	28
11:00 AM	64	63	56	55	66	63	59	58	68	68	61	43	39	21	18	29
11:15 AM	65	64	58	56	64	64	61	59	71	68	62	44	41	23	21	31
11:30 AM	66	65	57	57	63	64	63	60	71	69	63	46	43	24	22	33
11:45 AM	64	65	54	56	65	65	61	61	70	70	63	46	45	25	23	34
12:00 PM	64	65	55	56	63	64	60	61	65	69	63	47	46	25	24	35
12:15 PM	64	65	54	55	65	64	63	62	66	68	63	46	46	31	26	36
12:30 PM	66	65	57	55	67	65	62	62	62	66	62	50	47	34	29	38
12:45 PM	62	64	55	55	67	66	61	62	61	64	62	51	49	37	32	40
1:00 PM	62	64	56	56	69	67	62	62	61	63	62	55	51	35	34	42
1:15 PM	61	63	57	56	69	68	64	62	61	61	62	58	54	35	35	44
1:30 PM	62	62	56	56	68	68	67	64	62	61	62	62	57	40	37	47
1:45 PM	64	62	55	56	65	68	64	64	61	61	62	60	59	46	39	49
2:00 PM	63	63	55	56	65	67	61	64	63	62	62	65	61	50	43	52
2:15 PM	66	64	57	56	67	66	65	64	59	61	62	66	63	58	49	56
2:30 PM	68	65	57	56	67	66	65	64	58	60	62	67	65	62	54	59
2:45 PM	67	66	56	56	60	65	62	63	56	59	62	66	66	66	59	63
3:00 PM	66	67	51	55	58	63	64	64	52	56	61	69	67	73	65	66
3:15 PM	64	66	49	53	55	60	63	64	51	54	59	69	68	75	69	68
3:30 PM	63	65	48	51	53	57	61	63	50	52	57	68	68	80	74	71
3:45 PM	63	64	46	49	51	54	57	61	49	51	56	65	68	81	77	73
4:00 PM	58	62	45	47	50	52	59	60	49	50	54	66	67	83	80	73
4:15 PM	54	60	43	46	46	50	55	58	44	48	52	68	67	84	82	74
4:30 PM	49	56	44	45	43	48	52	56	46	47	50	62	65	89	84	75
4:45 PM	45	52	38	43	45	46	47	53	41	45	48	59	64	93	87	76
5:00 PM	42	48	36	40	42	44	46	50	38	42	45	60	62	90	89	76
5:15 PM	37	43	29	37	35	41	39	46	34	40	41	49	58	88	90	74
5:30 PM	32	39	29	33	27	37	31	41	31	36	37	45	53	83	89	71
5:45 PM	28	35	25	30	18	31	28	36	26	32	33	42	49	81	86	67
6:00 PM	30	32	54	34	17	24	29	32	23	29	30	44	45	78	83	64
6:15 PM	32	31	27	34	20	21	29	29	22	26	28	41	43	74	79	61
6:30 PM	33	31	22	32	19	19	30	29	17	22	26	37	41	67	75	58
6:45 PM	33	32	22	31	18	19	27	29	15	19	26	37	40	53	68	54
7:00 PM	32	33	21	23	19	19	25	28	14	17	24	36	38	47	60	49
7:15 PM	34	33	20	21	14	18	23	26	12	15	23	34	36	40	52	44
7:30 PM	33	33	19	21	12	16	30	26	14	14	22	30	34	31	43	39
7:45 PM	20	30	7	17	5	13	16	24	12	13	19	29	32	22	35	34
8:00 PM	16	26	12	15	5	9	14	21	12	13	17	28	30	15	27	29
8:15 PM	15	21	13	13	4	7	12	18	12	13	14	28	29	13	20	25
8:30 PM	10	15	12	11	5	5	9	13	11	12	11	27	28	12	16	22
8:45 PM	4	11	10	12	7	5	6	10	11	12	10	23	27	9	12	19
Average	52		44		47		49		47		48	48		48		48

94th Street Lot – Hourly Parking Demand

Time	Accum. Weekdays Hourly Parking												Accum. Weekend Hourly Parking					
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg.		Friday		Sunday		Avg.	
	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%
10:00 AM	62	63%	58	58%	63	64%	57	58%	63	63%	61	61%	30	30%	20	20%	25	25%
11:00 AM	64	64%	55	56%	63	63%	58	58%	68	68%	61	62%	38	38%	18	18%	28	28%
12:00 PM	65	65%	56	57%	65	65%	61	62%	70	71%	63	64%	45	45%	23	23%	34	34%
1:00 PM	64	65%	55	56%	66	66%	62	62%	64	64%	62	63%	49	49%	32	32%	40	41%
2:00 PM	62	63%	56	57%	68	68%	64	65%	61	62%	62	63%	59	59%	39	39%	49	49%
3:00 PM	66	67%	56	57%	65	65%	63	64%	59	60%	62	62%	66	67%	59	60%	63	63%
4:00 PM	64	65%	49	49%	54	55%	61	62%	51	51%	56	56%	68	68%	77	78%	73	73%
5:00 PM	52	52%	43	43%	46	46%	53	54%	45	45%	48	48%	64	64%	87	88%	76	76%
6:00 PM	35	35%	30	30%	31	31%	36	36%	32	33%	33	33%	49	49%	86	86%	67	68%
7:00 PM	32	32%	31	32%	19	19%	29	29%	19	19%	26	26%	40	40%	68	69%	54	54%
8:00 PM	30	30%	17	17%	13	13%	24	24%	13	13%	19	19%	32	33%	35	35%	34	34%
9:00 PM	11	11%	12	12%	5	5%	10	10%	12	12%	10	10%	27	27%	12	12%	19	20%
Average	51	51%	43	44%	46	47%	48	49%	46	47%	47	47%	47	48%	46	47%	47	47%

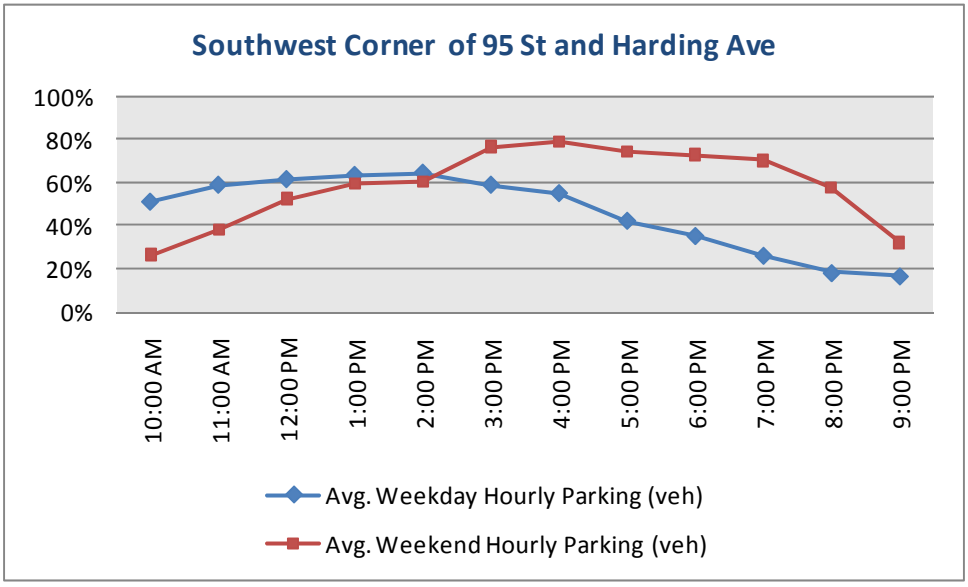


Post Office Lot – Raw Accumulation Data

Start Time	Weekday											Weekend				
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg. Weekday Hourly Parking (veh)	Saturday		Sunday		Avg. Weekend Hourly Parking (veh)
	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)		15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	
9:00 AM	41	-	29	-	24	-	28	-	23	-	-	9	-	14	-	-
9:15 AM	44	-	31	-	28	-	28	-	25	-	-	11	-	20	-	-
9:30 AM	41	-	34	-	30	-	29	-	30	-	-	14	-	19	-	-
9:45 AM	43	42	33	32	33	29	31	29	28	27	32	16	13	28	20	16
10:00 AM	46	44	36	34	33	31	38	32	30	28	34	17	15	27	24	19
10:15 AM	41	43	34	34	30	32	39	34	32	30	35	18	16	26	25	21
10:30 AM	44	44	35	35	30	32	42	38	32	31	36	18	17	29	28	22
10:45 AM	43	44	36	35	32	31	46	41	31	31	37	21	19	34	29	24
11:00 AM	43	43	41	37	31	31	46	43	30	31	37	21	20	39	32	26
11:15 AM	45	44	43	39	30	31	41	44	29	31	38	21	20	42	36	28
11:30 AM	47	45	38	40	25	30	42	44	36	32	38	26	22	41	39	31
11:45 AM	48	46	40	41	31	29	41	43	35	33	38	29	24	41	41	33
12:00 PM	46	47	41	41	29	29	42	42	44	36	39	35	28	41	41	35
12:15 PM	42	46	40	40	27	28	41	42	41	39	39	36	32	44	42	37
12:30 PM	40	44	37	40	31	30	41	41	40	40	39	28	32	43	42	37
12:45 PM	44	43	41	40	29	29	43	42	47	43	39	26	31	43	43	37
1:00 PM	46	43	39	39	29	29	48	43	45	43	40	29	30	50	45	37
1:15 PM	46	44	39	39	28	29	52	46	43	44	40	28	28	25	40	34
1:30 PM	44	45	37	39	28	29	49	48	39	44	41	27	28	52	43	35
1:45 PM	47	46	39	39	19	26	48	49	34	40	40	32	29	57	46	38
2:00 PM	48	46	37	38	21	24	42	48	34	38	39	33	30	62	49	40
2:15 PM	49	47	35	37	25	23	41	45	36	36	38	35	32	60	58	45
2:30 PM	46	48	35	37	24	22	42	43	35	35	37	34	34	62	60	47
2:45 PM	48	48	35	36	23	23	39	41	35	35	37	36	35	58	61	48
3:00 PM	50	48	36	35	25	24	42	41	34	35	37	37	36	61	60	48
3:15 PM	48	48	33	35	20	23	38	40	30	34	36	38	36	61	61	48
3:30 PM	44	48	37	35	25	23	33	38	32	33	35	37	37	60	60	49
3:45 PM	33	44	32	35	24	24	34	37	32	32	34	36	37	62	61	49
4:00 PM	36	40	24	32	21	23	31	34	24	30	32	35	37	61	61	49
4:15 PM	33	37	23	29	18	22	33	33	28	29	30	36	36	58	60	48
4:30 PM	31	33	19	25	17	20	27	31	28	28	27	32	35	57	60	47
4:45 PM	33	33	19	21	21	19	34	31	24	26	26	32	34	59	59	46
5:00 PM	30	32	16	19	17	18	30	31	25	26	25	30	33	58	58	45
5:15 PM	25	30	16	18	15	18	27	30	27	26	24	32	32	61	59	45
5:30 PM	23	28	18	17	19	18	26	29	21	24	23	29	31	59	59	45
5:45 PM	21	25	15	16	16	17	28	28	22	24	22	32	31	60	60	45
6:00 PM	23	23	13	16	15	16	26	27	18	22	21	30	31	59	60	45
6:15 PM	19	22	15	15	11	15	20	25	15	19	19	29	30	58	59	45
6:30 PM	20	21	16	15	9	13	18	23	14	17	18	30	30	57	59	44
6:45 PM	18	20	13	14	7	11	25	22	9	14	16	27	29	58	58	44
7:00 PM	16	18	12	14	7	9	22	21	9	12	15	23	27	54	57	42
7:15 PM	12	17	9	13	6	7	21	22	9	10	14	26	27	49	55	41
7:30 PM	7	13	10	11	6	7	20	22	9	9	12	25	25	45	52	38
7:45 PM	5	10	8	10	9	7	19	21	9	9	11	26	25	38	47	36
8:00 PM	7	8	5	8	9	8	14	19	9	9	10	19	24	32	41	33
8:15 PM	11	8	9	8	8	8	17	18	9	9	10	20	23	22	34	28
8:30 PM	11	9	10	8	10	9	14	16	11	10	10	15	20	21	28	24
8:45 PM	10	10	9	8	10	9	14	15	9	10	10	13	17	17	23	20
Average	35		28		21		34		28		29	28		47		38

Post Office Lot – Hourly Parking Demand

Time	Accum. Weekdays Hourly Parking												Accum. Weekend Hourly Parking					
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg.		Friday		Sunday		Avg.	
	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%
10:00 AM	42	69%	32	52%	29	47%	29	48%	27	43%	32	52%	16	26%	28	46%	16	27%
11:00 AM	44	71%	35	58%	31	51%	41	68%	31	51%	37	60%	21	34%	34	56%	24	39%
12:00 PM	46	75%	41	66%	29	48%	43	70%	33	53%	38	62%	29	48%	41	67%	33	53%
1:00 PM	43	70%	40	65%	29	48%	42	68%	43	70%	39	64%	26	43%	43	70%	37	61%
2:00 PM	46	75%	39	63%	26	43%	49	81%	40	66%	40	65%	32	52%	57	93%	38	61%
3:00 PM	48	78%	36	58%	23	38%	41	67%	35	57%	37	60%	36	59%	58	95%	48	78%
4:00 PM	44	72%	35	57%	24	39%	37	60%	32	52%	34	56%	36	59%	62	102%	49	80%
5:00 PM	33	55%	21	35%	19	32%	31	51%	26	43%	26	43%	32	52%	59	97%	46	76%
6:00 PM	25	41%	16	27%	17	27%	28	45%	24	39%	22	36%	32	52%	60	98%	45	74%
7:00 PM	20	33%	14	23%	11	17%	22	36%	14	23%	16	27%	27	44%	58	95%	44	71%
8:00 PM	10	16%	10	16%	7	11%	21	34%	9	15%	11	18%	26	43%	38	62%	36	59%
9:00 PM	10	16%	8	14%	9	15%	15	24%	10	16%	10	17%	13	21%	17	28%	20	33%
Average	34	56%	27	44%	21	35%	33	54%	27	44%	28	47%	27	45%	46	76%	36	59%

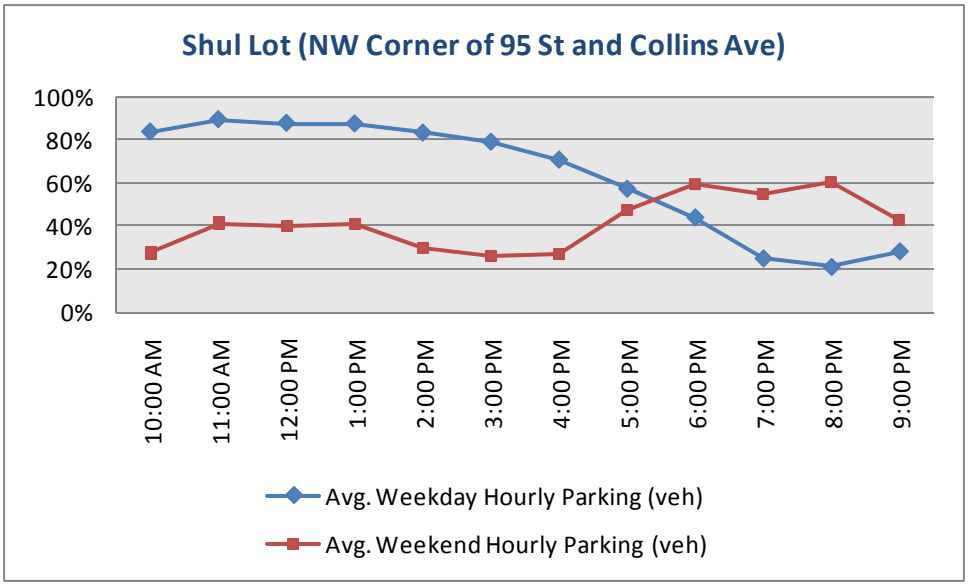


Shul Lot – Raw Accumulation Data

Start Time	Weekday											Weekend				
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg. Weekday Hourly Parking (veh)	Saturday		Sunday		Avg. Weekend Hourly Parking (veh)
	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)		15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	
9:00 AM	15	-	14	-	12	-	14	-	18	-	-	3	-	5	-	-
9:15 AM	17	-	14	-	18	-	18	-	18	-	-	3	-	7	-	-
9:30 AM	18	-	15	-	20	-	16	-	19	-	-	4	-	8	-	-
9:45 AM	18	17	17	15	18	17	17	16	19	19	17	5	4	9	7	6
10:00 AM	20	18	17	16	18	19	17	17	20	19	18	7	5	9	8	7
10:15 AM	18	19	17	17	16	18	17	17	20	20	18	7	6	9	9	7
10:30 AM	17	18	16	17	19	18	18	17	19	20	18	11	8	8	9	8
10:45 AM	20	19	12	16	20	18	18	18	19	20	18	10	9	5	8	8
11:00 AM	19	19	17	16	18	18	17	18	19	19	18	14	11	3	6	8
11:15 AM	18	19	14	15	19	19	17	18	18	19	18	14	12	3	5	9
11:30 AM	20	19	15	15	17	19	19	18	16	18	18	14	13	2	3	8
11:45 AM	18	19	16	16	17	18	20	18	17	18	18	12	14	2	3	8
12:00 PM	17	18	15	15	20	18	18	19	16	17	17	15	14	2	2	8
12:15 PM	17	18	14	15	20	19	16	18	18	17	17	17	15	3	2	8
12:30 PM	18	18	16	15	20	19	19	18	17	17	17	12	14	3	3	8
12:45 PM	16	17	17	16	20	20	18	18	18	17	18	10	14	3	3	8
1:00 PM	15	17	14	15	20	20	20	18	15	17	17	9	12	2	3	7
1:15 PM	15	16	13	15	20	20	18	19	17	17	17	9	10	2	3	6
1:30 PM	17	16	16	15	20	20	16	18	17	17	17	11	10	2	2	6
1:45 PM	15	16	14	14	19	20	16	18	16	16	17	11	10	2	2	6
2:00 PM	16	16	14	14	17	19	15	16	18	17	16	9	10	2	2	6
2:15 PM	20	17	12	14	19	19	15	16	13	16	16	9	10	1	2	6
2:30 PM	18	17	15	14	18	18	13	15	14	15	16	10	10	1	2	6
2:45 PM	16	18	12	13	18	18	15	15	18	16	16	9	9	1	1	5
3:00 PM	16	18	11	13	12	17	14	14	18	16	15	9	9	1	1	5
3:15 PM	17	17	13	13	13	15	15	14	16	17	15	8	9	1	1	5
3:30 PM	17	17	12	12	13	14	15	15	16	17	15	10	9	1	1	5
3:45 PM	17	17	11	12	13	13	12	14	12	16	14	11	10	2	1	5
4:00 PM	14	16	11	12	13	13	11	13	12	14	14	11	10	3	2	6
4:15 PM	14	16	11	11	12	13	13	13	12	13	13	13	11	5	3	7
4:30 PM	13	15	10	11	12	13	6	11	11	12	12	13	12	9	5	8
4:45 PM	10	13	9	10	12	12	11	10	12	12	11	13	13	9	7	10
5:00 PM	10	12	11	10	12	12	9	10	12	12	11	13	13	12	9	11
5:15 PM	9	11	7	9	12	12	8	9	11	12	10	10	12	13	11	12
5:30 PM	9	10	7	9	10	12	5	8	9	11	10	11	12	12	12	12
5:45 PM	9	9	5	8	8	11	6	7	7	10	9	10	11	14	13	12
6:00 PM	8	9	5	6	9	10	6	6	5	8	8	10	10	14	13	12
6:15 PM	7	8	4	5	3	8	5	6	5	7	7	10	10	12	13	12
6:30 PM	8	8	2	4	3	6	5	6	4	5	6	9	10	13	13	12
6:45 PM	8	8	2	3	3	5	4	5	4	5	5	9	10	11	13	11
7:00 PM	8	8	2	3	3	3	7	5	3	4	5	11	10	12	12	11
7:15 PM	8	8	1	2	4	3	6	6	2	3	4	13	11	11	12	11
7:30 PM	5	7	1	2	2	3	7	6	1	3	4	12	11	11	11	11
7:45 PM	7	7	2	2	9	5	5	6	1	2	4	16	13	11	11	12
8:00 PM	9	7	2	2	12	7	6	6	1	1	5	8	12	11	11	12
8:15 PM	10	8	3	2	11	9	4	6	1	1	5	7	11	10	11	11
8:30 PM	7	8	2	2	11	11	5	5	1	1	5	6	9	12	11	10
8:45 PM	5	8	1	2	16	13	5	5	1	1	6	4	6	10	11	9
Average	14		11		14		13		13		13	10		6		8

Shul Lot – Hourly Parking Demand

Time	Accum. Weekdays Hourly Parking												Accum. Weekend Hourly Parking					
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg.		Friday		Sunday		Avg.	
	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%
10:00 AM	17	85%	15	75%	17	85%	16	81%	19	93%	17	84%	4	19%	7	36%	6	28%
11:00 AM	19	94%	16	78%	18	91%	18	88%	20	98%	18	90%	9	44%	8	39%	8	41%
12:00 PM	19	94%	16	78%	18	89%	18	91%	18	88%	18	88%	14	68%	3	13%	8	40%
1:00 PM	17	85%	16	78%	20	100%	18	89%	17	86%	18	88%	14	68%	3	14%	8	41%
2:00 PM	16	78%	14	71%	20	99%	18	88%	16	81%	17	83%	10	50%	2	10%	6	30%
3:00 PM	18	88%	13	66%	18	90%	15	73%	16	79%	16	79%	9	46%	1	6%	5	26%
4:00 PM	17	84%	12	59%	13	64%	14	70%	16	78%	14	71%	10	48%	1	6%	5	27%
5:00 PM	13	64%	10	51%	12	61%	10	51%	12	59%	11	57%	13	63%	7	33%	10	48%
6:00 PM	9	46%	8	38%	11	53%	7	35%	10	49%	9	44%	11	55%	13	64%	12	59%
7:00 PM	8	39%	3	16%	5	23%	5	25%	5	23%	5	25%	10	48%	13	63%	11	55%
8:00 PM	7	35%	2	8%	5	23%	6	31%	2	9%	4	21%	13	65%	11	56%	12	61%
9:00 PM	8	39%	2	10%	13	63%	5	25%	1	5%	6	28%	6	31%	11	54%	9	43%
Average	14	69%	10	52%	14	70%	12	62%	12	62%	13	63%	10	50%	7	33%	8	41%

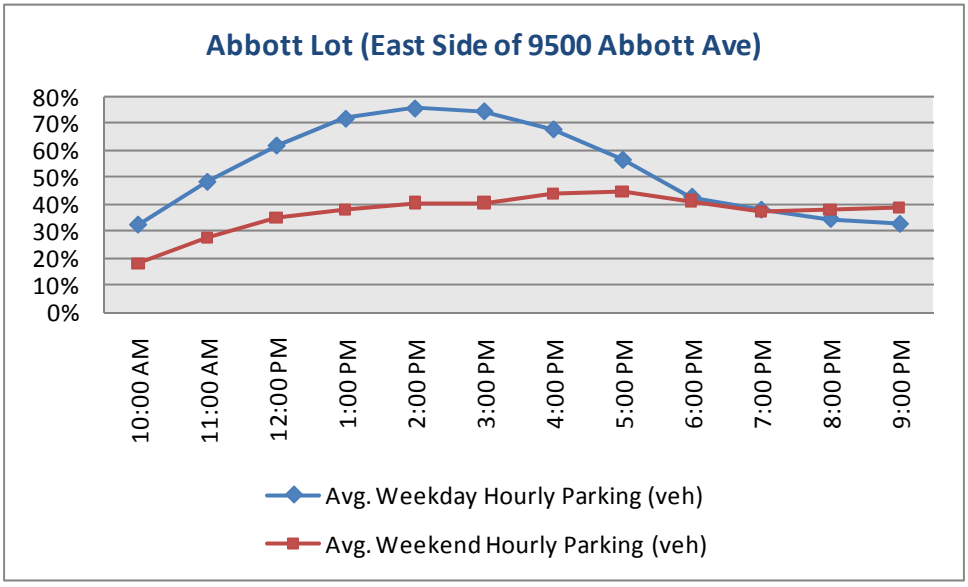


Abbott Lot – Raw Accumulation Data

Start Time	Weekday											Weekend				
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg. Weekday Hourly Parking (veh)	Saturday		Sunday		Avg. Weekend Hourly Parking (veh)
	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)		15-Min Parking (veh)	Avg. Hourly Parking (veh)	15-Min Parking (veh)	Avg. Hourly Parking (veh)	
9:00 AM	49	-	59	-	59	-	43	-	55	-	-	59	-	9	-	-
9:15 AM	58	-	67	-	64	-	58	-	62	-	-	57	-	9	-	-
9:30 AM	65	-	78	-	69	-	66	-	88	-	-	64	-	13	-	-
9:45 AM	69	60	82	72	86	70	75	61	78	71	67	72	63	12	11	37
10:00 AM	88	70	97	81	92	78	86	71	102	83	77	81	69	18	13	41
10:15 AM	88	78	105	91	108	89	98	81	121	97	87	91	77	16	15	46
10:30 AM	94	85	100	96	109	99	107	92	125	107	96	100	86	18	16	51
10:45 AM	109	95	110	103	112	105	11	76	131	120	100	106	95	22	19	57
11:00 AM	115	102	113	107	110	110	114	83	138	129	106	116	103	27	21	62
11:15 AM	128	112	113	109	105	109	131	91	155	137	112	114	109	26	23	66
11:30 AM	119	118	112	112	110	109	142	100	166	148	117	118	114	30	26	70
11:45 AM	127	122	118	114	120	111	150	134	169	157	128	114	116	34	29	72
12:00 PM	140	129	121	116	126	115	153	144	184	169	134	116	116	35	31	73
12:15 PM	139	131	136	122	134	123	157	151	178	174	140	120	117	33	33	75
12:30 PM	133	135	128	126	146	132	162	156	177	177	145	118	117	43	36	77
12:45 PM	137	137	142	132	147	138	162	159	169	177	149	113	117	50	40	79
1:00 PM	147	139	139	136	158	146	158	160	173	174	151	115	117	51	44	80
1:15 PM	146	141	146	139	156	152	168	163	183	176	154	109	114	50	49	81
1:30 PM	155	146	132	140	160	155	149	159	195	180	156	116	113	50	50	82
1:45 PM	158	152	139	139	139	153	144	155	184	184	156	126	117	52	51	84
2:00 PM	156	154	143	140	141	149	156	154	181	186	157	116	117	51	51	84
2:15 PM	152	155	149	141	145	146	160	152	177	184	156	113	118	53	52	85
2:30 PM	136	151	148	145	144	142	163	156	167	177	154	107	116	55	53	84
2:45 PM	145	147	145	146	142	143	157	159	179	176	154	110	112	65	56	84
3:00 PM	139	143	151	148	142	143	147	157	170	173	153	107	109	67	60	85
3:15 PM	134	139	147	148	123	138	143	153	137	163	148	115	110	68	64	87
3:30 PM	123	135	149	148	146	138	139	147	151	159	145	111	111	71	68	89
3:45 PM	118	129	132	145	130	135	143	143	142	150	140	110	111	74	70	90
4:00 PM	105	120	127	139	130	132	141	142	131	140	135	110	112	73	72	92
4:15 PM	106	113	119	132	125	133	136	140	133	139	131	109	110	76	74	92
4:30 PM	97	107	111	122	110	124	124	136	125	133	124	105	109	83	77	93
4:45 PM	92	100	96	113	98	116	113	129	115	126	117	96	105	88	80	93
5:00 PM	70	91	84	103	90	106	104	119	122	124	109	90	100	85	83	92
5:15 PM	72	83	77	92	83	95	102	111	108	118	100	87	95	85	85	90
5:30 PM	72	77	74	83	81	88	97	104	106	113	93	83	89	88	87	88
5:45 PM	66	70	77	78	78	83	92	99	107	111	88	77	84	87	86	85
6:00 PM	64	69	78	77	77	80	102	98	93	104	85	79	82	83	86	84
6:15 PM	65	67	72	75	75	78	104	99	72	95	83	73	78	78	84	81
6:30 PM	63	65	71	75	66	74	108	102	78	88	80	62	73	83	83	78
6:45 PM	59	63	67	72	58	69	104	105	85	82	78	73	72	83	82	77
7:00 PM	59	62	71	70	62	65	88	101	85	80	76	64	68	86	83	75
7:15 PM	69	63	58	67	67	63	81	95	84	83	74	68	67	85	84	76
7:30 PM	70	64	59	64	68	64	75	87	78	83	72	71	69	88	86	77
7:45 PM	69	67	62	63	64	65	69	78	80	82	71	73	69	90	87	78
8:00 PM	62	68	64	61	66	66	68	73	83	81	70	75	72	89	88	80
8:15 PM	58	65	66	63	69	67	65	69	80	80	69	78	74	82	87	81
8:30 PM	58	62	66	65	67	67	63	66	86	82	68	79	76	76	84	80
8:45 PM	55	58	58	64	62	66	57	63	89	85	67	86	80	71	80	80
Average	103		106		107		117		130		113	96		59		77

Abbott Lot – Raw Count Data

Time	Accum. Weekdays Hourly Parking												Accum. Weekend Hourly Parking					
	Monday		Tuesday		Wednesday		Thursday		Friday		Avg.		Friday		Sunday		Avg.	
	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%	veh	%
10:00 AM	60	29%	72	35%	70	34%	61	29%	71	34%	67	32%	63	30%	11	5%	37	18%
11:00 AM	95	46%	103	50%	105	51%	76	36%	120	58%	100	48%	95	46%	19	9%	57	27%
12:00 PM	122	59%	114	55%	111	54%	134	65%	157	76%	128	62%	116	56%	29	14%	72	35%
1:00 PM	137	66%	132	64%	138	67%	159	77%	177	86%	149	72%	117	56%	40	19%	79	38%
2:00 PM	152	73%	139	67%	153	74%	155	75%	184	89%	156	76%	117	56%	51	25%	84	40%
3:00 PM	147	71%	146	71%	143	69%	159	77%	176	85%	154	75%	112	54%	56	27%	84	40%
4:00 PM	129	62%	145	70%	135	65%	143	69%	150	72%	140	68%	111	54%	70	34%	90	44%
5:00 PM	100	48%	113	55%	116	56%	129	62%	126	61%	117	56%	105	51%	80	39%	93	45%
6:00 PM	70	34%	78	38%	83	40%	99	48%	111	54%	88	43%	84	41%	86	42%	85	41%
7:00 PM	63	30%	72	35%	69	33%	105	50%	82	40%	78	38%	72	35%	82	39%	77	37%
8:00 PM	67	32%	63	30%	65	32%	78	38%	82	39%	71	34%	69	33%	87	42%	78	38%
9:00 PM	58	28%	64	31%	66	32%	63	31%	85	41%	67	32%	80	38%	80	38%	80	38%
Average	112	54%	116	56%	117	57%	124	60%	141	68%	122	59%	102	49%	49	24%	76	36%



Appendix C

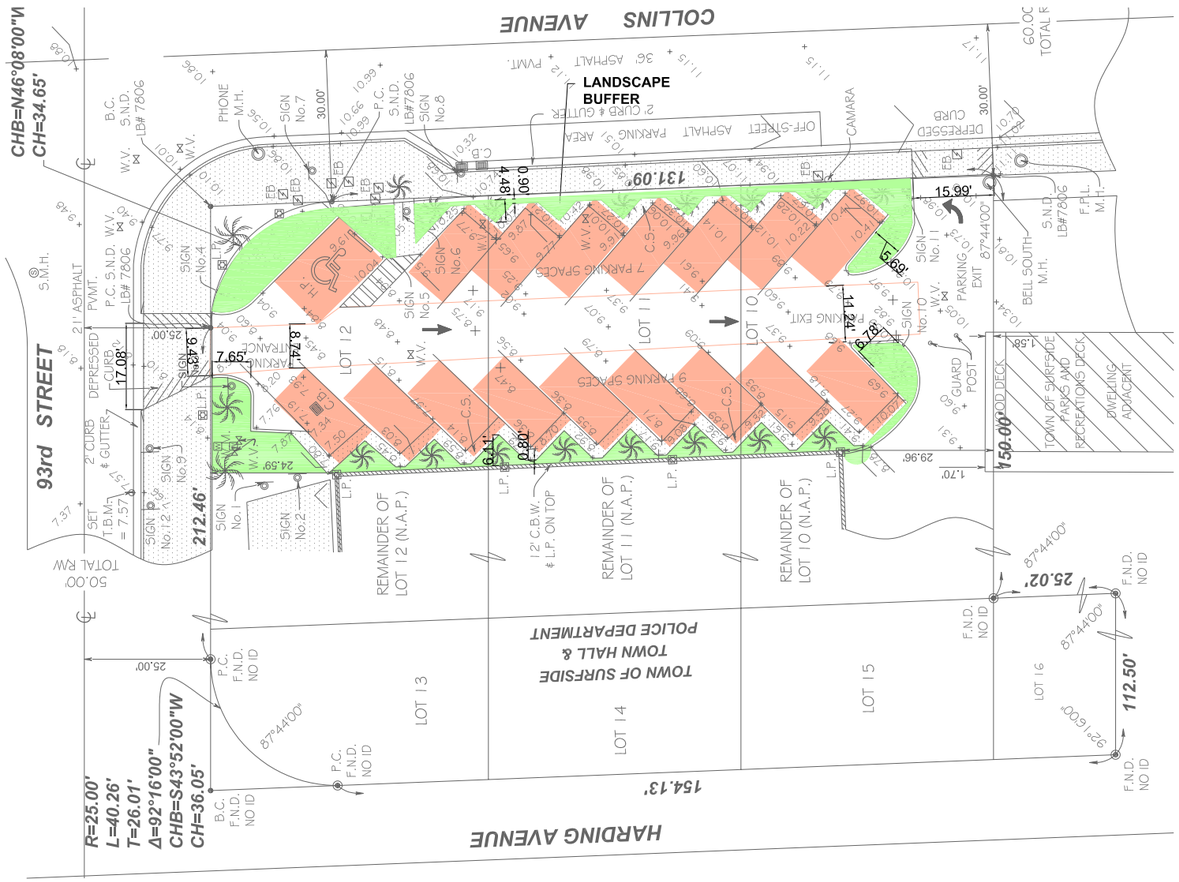
Zoning Analysis

ZONING INFORMATION : OFF-STREET PARKING REQUIREMENTS & LANDSCAPE REQUIREMENTS

ZONING DISTRICT: (MU) MUNICIPAL

	REQUIRED / ALLOWED	EXISTING
LOT AREA:	N/A	18,426 SQ. FT.
NO. OF PARKING SPACES	N/A	16 SPACES
NO. OF HC SPACES	PER FBC CHAPTER 11: 1 TO 25: 1 SPACE	1 SPACE
SEC. 90-81.1 MIN. STALL DIMENSIONS REGULAR SPACES: HANDICAP SPACES:	 9' x 18' 12' x 18' + 5' WIDE APPROACH	 9' x 18' 12' x 14' + 5' APPROACH
SEC. 90-81.1 AISLE DIMENSIONS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 12' AISLE; 60 DEG. = 17' AISLE 75 DEG. = 21' AISLE; 90 DEG. = 22' AISLE	45 DEG. = 11.5'; HC: 8.75'
SEC. 90-81.1 BUMPER OVERHANG:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 1.8'; 60 DEG. = 2.2'; 75 DEG. = 2.4' AISLE; 90 DEG. = 2.5';	VARIES: 45 DEG. = 1.8'

	REQUIRED / ALLOWED	EXISTING
SEC. 90-81.2 INTERIOR DRIVEWAYS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" ONE WAY: 14' TWO WAY: 20'	VARIES: ONE WAY: 15.77'
SEC. 90-81.2 INGRESS / EGRESS:	PER "MIAMI-DADE COUNTY PUBLIC WORKS MANUAL" ONE WAY: XX' TWO WAY: XX'	 INGRESS: ONE WAY=12' EGRES: ONE WAY: 14'
SEC. 90-91 LANDSCAPE BUFFERS	ABUTTING STREETS & ADJ. LOT LINES: MIN.10' WIDE INT. LANDSCAPE AREA: MIN 20% OF VEHICULAR AREA PARKING AISLE STALL: 11' EVERY 10 VEHICLES & ENDS OF ROWS DIVIDER MEDIAN: MIN. 6' WIDE OTHER LANDSCAPE AREAS: MIN. 6' WIDE	1.5' & 9.0' 700 S.F.0 5' TO 6.78' 0 0



TOWN OF SURFSIDE
PARKING LOT NO. 1

SCALE: 1" = 30'

N

TOWN OF SURFSIDE
RFP # FY2011-04:
PARKING LOT STANDARDS

PARKING LOT NO. 1
ANALYSIS OF EXISTING LAYOUT

CHALGUB INC
ARCHITECTURE INTERIOR DESIGN URBANISM
AA 2600797

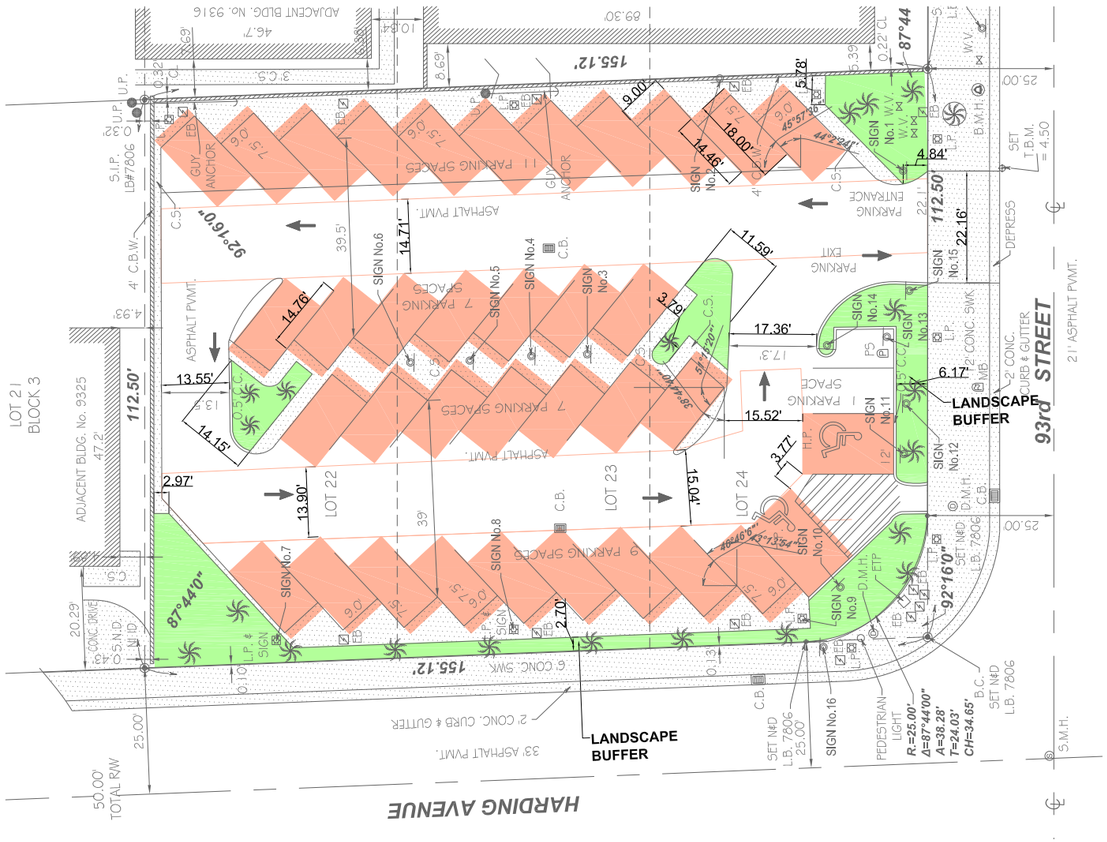
2701 S Bayshore Dr Suite 500 Miami, FL 33133
305-854-2822 (TEL) 305-854-2830 (FAX)
mchalgub@chalgub.com

ZONING ANALYSIS : OFF-STREET PARKING REQUIREMENTS & LANDSCAPE REQUIREMENTS

ZONING DISTRICT: (MU) MUNICIPAL

	REQUIRED / ALLOWED	EXISTING
LOT AREA:	N/A	17,315 SQ. FT.
NO. OF PARKING SPACES	N/A	35 SPACES
NO. OF HC SPACES	PER FBC CHAPTER 11: 26 TO 50: 2 SPACES	2 SPACES
SEC. 90-81.1 MIN. STALL DIMENSIONS REGULAR SPACES: HANDICAP SPACES:	 9' x 18' 12' x 18' + 5' WIDE APPROACH	 9' x 14' 12' x 16' + APPROACH (3.77' MIN)
SEC. 90-81.1 AISLE DIMENSIONS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 12' AISLE; 60 DEG. = 17' AISLE 75 DEG. = 21' AISLE; 90 DEG. = 22' AISLE	45 DEG. = VARIES FROM 14' TO 15' 90 DEG. HANDICAP SPACES= 15.5'
SEC. 90-81.1 BUMPER OVERHANG:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 1.8'; 60 DEG. = 2.2'; 75 DEG. = 2.4' AISLE; 90 DEG. = 2.5';	VARIES: 45 DEG. = 1.8' 90 DEG. HC SPACES = NONE

	REQUIRED / ALLOWED	EXISTING
SEC. 90-81.2 INTERIOR DRIVEWAYS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" ONE WAY: 14' TWO WAY: 20'	VARIES: ONE WAY: 13.5' & 17.38'
SEC. 90-81.2 INGRESS / EGRESS:	PER "MIAMI-DADE COUNTY PUBLIC WORKS MANUAL" ONE WAY: XX' TWO WAY: XX'	 TWO WAY: 22.16'
SEC. 90-91 LANDSCAPE BUFFERS	ABUTTING STREETS & ADJ. LOT LINES: MIN.10' WIDE INT. LANDSCAPE AREA: MIN 20% OF VEHICULAR AREA PARKING AISLE STALL: 11' EVERY 10 VEHICLES & ENDS OF ROWS DIVIDER MEDIAN: MIN. 6' WIDE OTHER LANDSCAPE AREAS: MIN. 6' WIDE	2.77' & 6.17' 698 S.F. 0 0 0 0



TOWN OF SURFSIDE
PARKING LOT NO. 2

SCALE: 1" = 30'

N

TOWN OF SURFSIDE
RFP # FY2011-04:
PARKING LOT STANDARDS

PARKING LOT NO. 2
ANALYSIS OF EXISTING LAYOUT

CHALGUB INC
ARCHITECTURE INTERIOR DESIGN URBANISM
AA 2600797

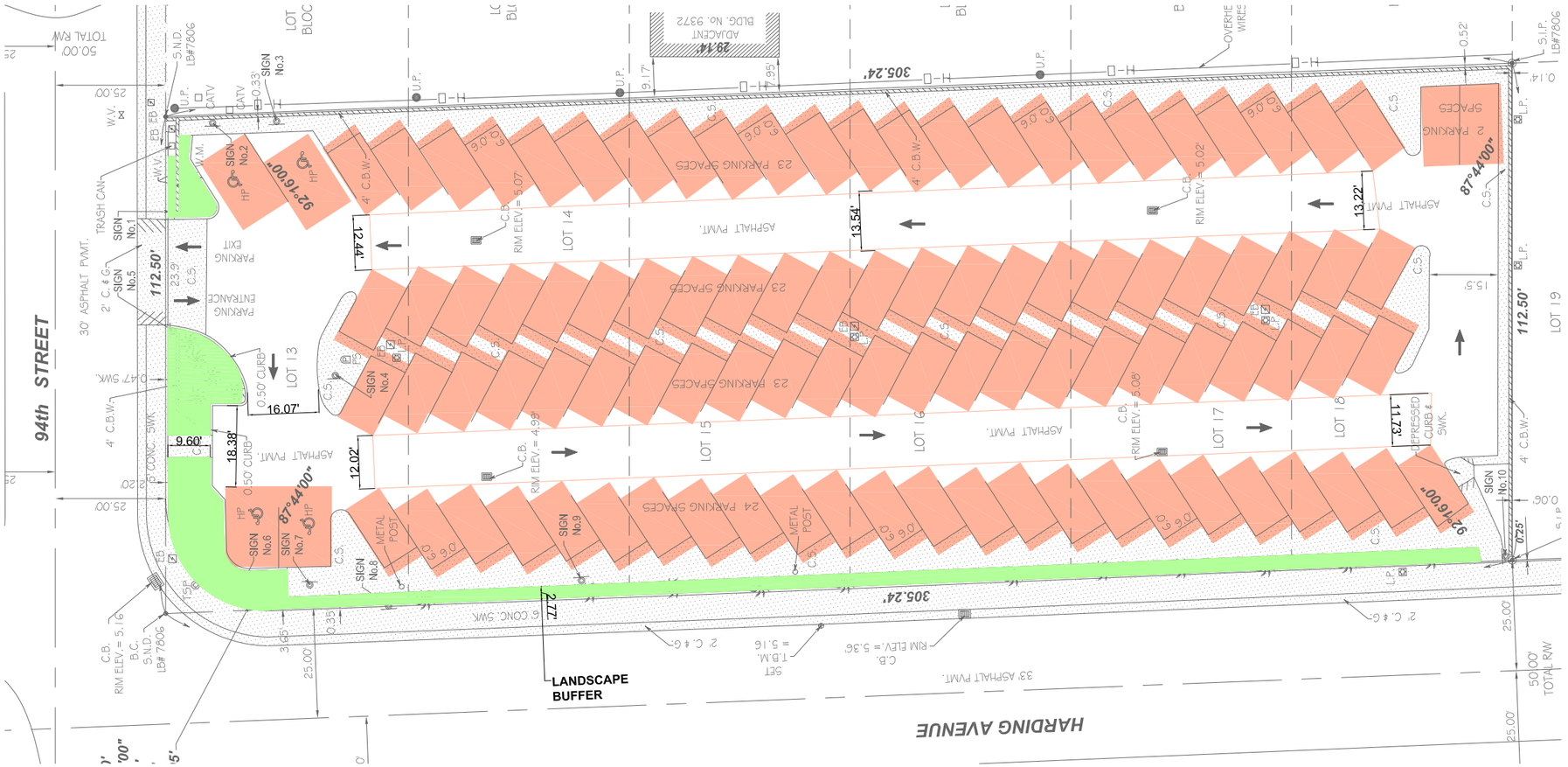
2701 S Bayshore Dr Suite 500 Miami, FL 33133
305-854-2822 (TEL) 305-854-2830 (FAX)
mchalgub@chalgub.com

ZONING INFORMATION : OFF-STREET PARKING REQUIREMENTS & LANDSCAPE REQUIREMENTS

ZONING DISTRICT: (MU) MUNICIPAL

	REQUIRED / ALLOWED	EXISTING
LOT AREA:	N/A	34,166 SQ. FT.
NO. OF PARKING SPACES	N/A	95 SPACES
NO. OF HC SPACES	PER FBC CHAPTER 11: 76 TO 100: 4 SPACES	4 SPACES
SEC. 90-81.1 MIN. STALL DIMENSIONS REGULAR SPACES: HANDICAP SPACES:	 9' x 18' 12' x 18' + 5' WIDE APPROACH	 9' x 14' 12' x 14' + NO APPROACH
SEC. 90-81.1 AISLE DIMENSIONS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 12' AISLE; 60 DEG. = 17' AISLE 75 DEG. = 21' AISLE; 90 DEG. = 22' AISLE	60 DEG. = VARIES FROM 12' TO 14' 90 DEG. HANDICAP SPACES= 18'
SEC. 90-81.1 BUMPER OVERHANG:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 1.8'; 60 DEG. = 2.2'; 75 DEG. = 2.4' AISLE; 90 DEG. = 2.5';	VARIES: 60 DEG. = 2.2' 90 DEG. HC SPACES = NONE

	REQUIRED / ALLOWED	EXISTING
SEC. 90-81.2 INTERIOR DRIVEWAYS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" ONE WAY: 14' TWO WAY: 20'	VARIES: ONE WAY: 15.5' & 16'
SEC. 90-81.2 INGRESS / EGRESS:	PER "MIAMI-DADE COUNTY PUBLIC WORKS MANUAL" ONE WAY: XX' TWO WAY: XX'	 TWO WAY: 24'
SEC. 90-91 LANDSCAPE BUFFERS	ABUTTING STREETS & ADJ. LOT LINES: MIN.10' WIDE INT. LANDSCAPE AREA: MIN 20% OF VEHICULAR AREA PARKING AISLE STALL: 11' EVERY 10 VEHICLES & ENDS OF ROWS DIVIDER MEDIAN: MIN. 6' WIDE OTHER LANDSCAPE AREAS: MIN. 6' WIDE	2.77' & 9.6' 0 0 0 0 0



TOWN OF SURFSIDE
PARKING LOT NO. 3

SCALE: 1" = 30'

N

TOWN OF SURFSIDE
RFP # FY2011-04:
PARKING LOT STANDARDS

PARKING LOT NO. 3
ANALYSIS OF EXISTING LAYOUT

CHALGUB INC
ARCHITECTURE INTERIOR DESIGN URBANISM
AA 2600797

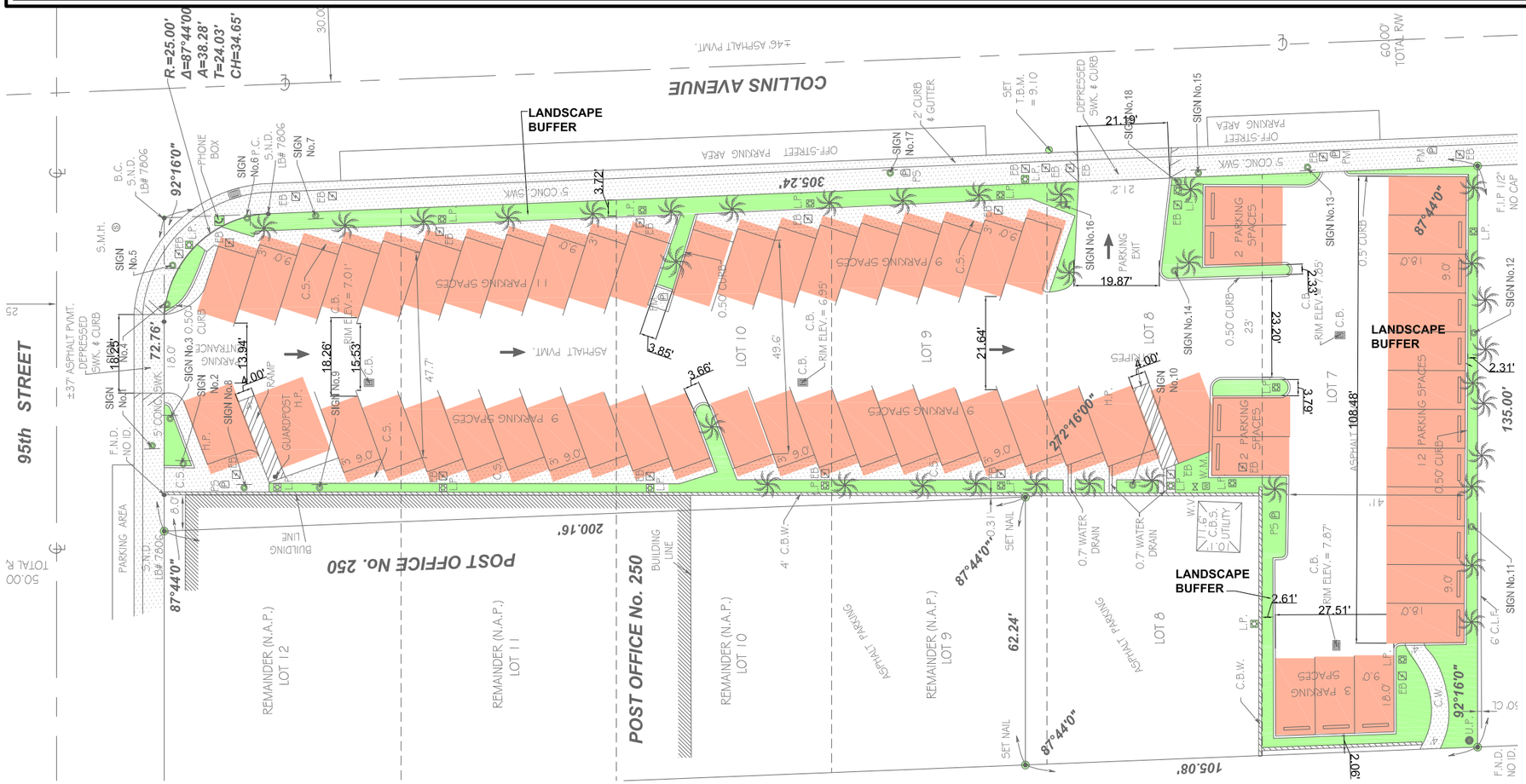
2701 S Bayshore Dr Suite 500 Miami, FL 33133
305-854-2822 (TEL) 305-854-2830 (FAX)
mchalgub@chalgub.com

ZONING INFORMATION : OFF-STREET PARKING REQUIREMENTS & LANDSCAPE REQUIREMENTS

ZONING DISTRICT: (MU) MUNICIPAL

	REQUIRED / ALLOWED	EXISTING
LOT AREA:	N/A	28,604 SQ. FT.
NO. OF PARKING SPACES	N/A	58 SPACES
NO. OF HC SPACES	PER FBC CHAPTER 11: 51 TO 75: 3 SPACES	3 SPACES
SEC. 90-81.1 MIN. STALL DIMENSIONS REGULAR SPACES: HANDICAP SPACES:	 9' x 18' 12' x 18' + 5' WIDE APPROACH	 9' x 18' 12' x 14' + 4' APPROACH
SEC. 90-81.1 AISLE DIMENSIONS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 12' AISLE; 60 DEG. = 17' AISLE 75 DEG. = 21' AISLE; 90 DEG. = 22' AISLE	60 DEG. = VARIES FROM 13.94' TO 21.64' 90 DEG. = 27.91'
SEC. 90-81.1 BUMPER OVERHANG:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 1.8'; 60 DEG. = 2.2'; 75 DEG. = 2.4' AISLE; 90 DEG. = 2.5';	VARIES: 60 DEG. = 2.2'

	REQUIRED / ALLOWED	EXISTING
SEC. 90-81.2 INTERIOR DRIVEWAYS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" ONE WAY: 14' TWO WAY: 20'	VARIES: ONE WAY: 19.87' TWO WAY: 23.20'
SEC. 90-81.2 INGRESS / EGRESS:	PER "MIAMI-DADE COUNTY PUBLIC WORKS MANUAL" ONE WAY: XX' TWO WAY: XX'	 ONE WAY: 18.15 & 21.2'
SEC. 90-91 LANDSCAPE BUFFERS	ABUTTING STREETS & ADJ. LOT LINES: MIN.10' WIDE INT. LANDSCAPE AREA: MIN 20% OF VEHICULAR AREA PARKING AISLE STALL: 11' EVERY 10 VEHICLES & ENDS OF ROWS DIVIDER MEDIAN: MIN. 6' WIDE OTHER LANDSCAPE AREAS: MIN. 6' WIDE	2.0' & 4.0' 880 S.F. 5' 0 0 < 6'



TOWN OF SURFSIDE
PARKING LOT NO. 4

SCALE: 1" = 30'

N

TOWN OF SURFSIDE
RFP # FY2011-04:
PARKING LOT STANDARDS

PARKING LOT NO. 4
ANALYSIS OF EXISTING LAYOUT

CHALGUB INC
ARCHITECTURE INTERIOR DESIGN URBANISM
AA 2600797

2701 S Bayshore Dr Suite 500 Miami, FL 33133
305-854-2822 (TEL) 305-854-2830 (FAX)
mchalgub@chalgub.com

ZONING INFORMATION : OFF-STREET PARKING REQUIREMENTS & LANDSCAPE REQUIREMENTS

ZONING DISTRICT: (MU) MUNICIPAL

	REQUIRED / ALLOWED	EXISTING
LOT AREA:	N/A	7,425 SQ. FT.
NO. OF PARKING SPACES	N/A	20 SPACES
NO. OF HC SPACES	PER FBC CHAPTER 11: 1 TO 25= 1 SPACE	0 SPACES
SEC. 90-81.1 MIN. STALL DIMENSIONS REGULAR SPACES: HANDICAP SPACES:	 9' x 18' 12' x 18' + 5' WIDE APPROACH	 9' x 16' NOT PROVIDED
SEC. 90-81.1 AISLE DIMENSIONS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 12' AISLE; 60 DEG. = 17' AISLE 75 DEG. = 21' AISLE; 90 DEG. = 22' AISLE	54 DEG. = 10.82'
SEC. 90-81.1 BUMPER OVERHANG:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 1.8'; 60 DEG. = 2.2'; 75 DEG. = 2.4' AISLE; 90 DEG. = 2.5';	54 DEG. = 2.5'

	REQUIRED / ALLOWED	EXISTING
SEC. 90-81.2 INTERIOR DRIVEWAYS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" ONE WAY: 14' TWO WAY: 20'	NONE
SEC. 90-81.2 INGRESS / EGRESS:	PER "MIAMI-DADE COUNTY PUBLIC WORKS MANUAL" ONE WAY: XX' TWO WAY: XX'	 INGRESS:ONE WAY= 23' EGRESS: ONE WAY= 15'
SEC. 90-91 LANDSCAPE BUFFERS	ABUTTING STREETS & ADJ. LOT LINES: MIN.10' WIDE INT. LANDSCAPE AREA: MIN 20% OF VEHICULAR AREA PARKING AISLE STALL: 11' EVERY 10 VEHICLES & ENDS OF ROWS DIVIDER MEDIAN: MIN. 6' WIDE OTHER LANDSCAPE AREAS: MIN. 6' WIDE	4.0' TO 9.6' 0 0 0 0 0

N

TOWN OF SURFSIDE
PARKING LOT NO. 5

SCALE: 1" = 20'

TOWN OF SURFSIDE
RFP # FY2011-04:
PARKING LOT STANDARDS

PARKING LOT NO. 5
ANALYSIS OF EXISTING LAYOUT

CHALGUB INC
ARCHITECTURE INTERIOR DESIGN URBANISM
AA 2600797

2701 S Bayshore Dr Suite 500 Miami, FL 33133
305-854-2822 (TEL) 305-854-2830 (FAX)
mchalgub@chalgub.com

ZONING INFORMATION : OFF-STREET PARKING REQUIREMENTS & LANDSCAPE REQUIREMENTS

ZONING DISTRICT: (MU) MUNICIPAL

	REQUIRED / ALLOWED	EXISTING
LOT AREA:	N/A	68,356 SQ. FT.
NO. OF PARKING SPACES	N/A	201 SPACES
NO. OF HC SPACES	PER FBC CHAPTER 11: 151 TO 200 = 6 SPACES	6 SPACES
SEC. 90-81.1 MIN. STALL DIMENSIONS REGULAR SPACES: HANDICAP SPACES:	 9' x 18' 12' x 18' + 5' WIDE APPROACH	 9' x 16' 11', 12' X 18' (2 W/ 4' APPROACH)
SEC. 90-81.1 AISLE DIMENSIONS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 12' AISLE; 60 DEG. = 17' AISLE 75 DEG. = 21' AISLE; 90 DEG. = 22' AISLE	65 DEG. = 15.77' TO 17'
SEC. 90-81.1 BUMPER OVERHANG:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" 45 DEG. = 1.8'; 60 DEG. = 2.2'; 75 DEG. = 2.4' AISLE; 90 DEG. = 2.5';	65 DEG. = 2.2'

	REQUIRED / ALLOWED	EXISTING
SEC. 90-81.2 INTERIOR DRIVEWAYS:	PER "MIAMI-DADE COUNTY MIMNIMUM PARKING STALL DIMENSIONS" ONE WAY: 14' TWO WAY: 20'	 ONE WAY:19.8', 17.98' TWO WAY: 25.8', 24',
SEC. 90-81.2 INGRESS / EGRESS:	PER "MIAMI-DADE COUNTY PUBLIC WORKS MANUAL" ONE WAY: XX' TWO WAY: XX'	 2 INGRESS / EGRESS: TWO WAY= 29.45' & 25'
SEC. 90-91 LANDSCAPE BUFFERS	ABUTTING STREETS & ADJ. LOT LINES: MIN.10' WIDE INT. LANDSCAPE AREA: MIN 20% OF VEHICULAR AREA PARKING AISLE STALL: 11' EVERY 10 VEHICLES & ENDS OF ROWS DIVIDER MEDIAN: MIN. 6' WIDE OTHER LANDSCAPE AREAS: MIN. 6' WIDE	0' (2' ON ABBOTT R.O.W.) 388 S.F. 0 (> 10 SPACES W/O) 0 0' MEDIAN 9 ISLANDS < 6'

TOWN OF SURFSIDE
PARKING LOT NO. 6

SCALE: 1" = 50'

N

TOWN OF SURFSIDE
RFP # FY2011-04:
PARKING LOT STANDARDS

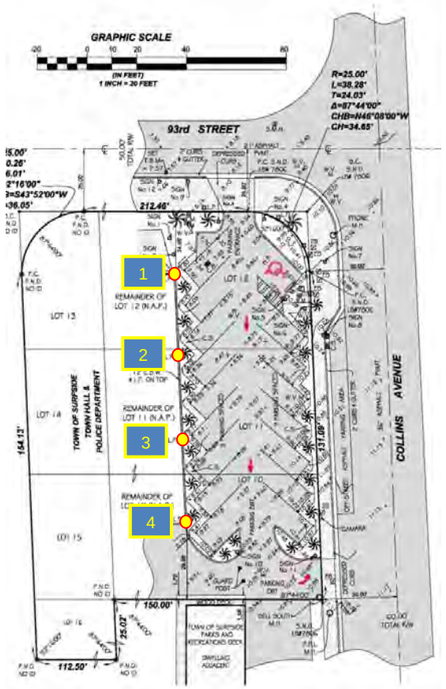
PARKING LOT NO. 6
ANALYSIS OF EXISTING LAYOUT

CHALGUB INC
ARCHITECTURE INTERIOR DESIGN URBANISM
AA 2600797

2701 S Bayshore Dr Suite 500 Miami, FL 33133
305-854-2822 (TEL) 305-854-2830 (FAX)
mchalgub@chalgub.com

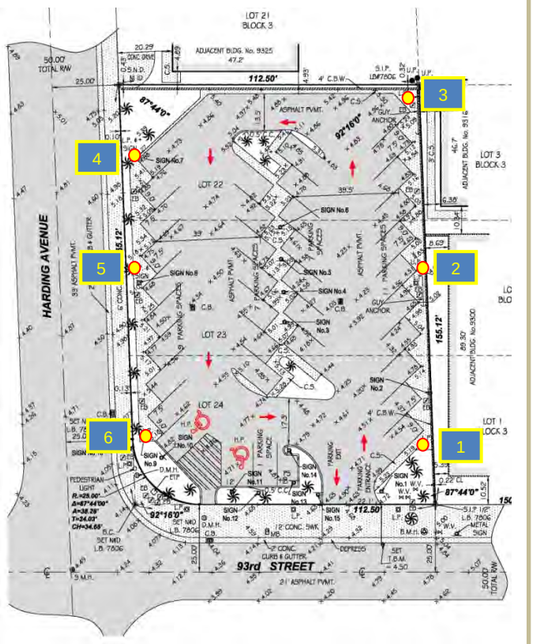
Appendix D

Lighting System Inventory



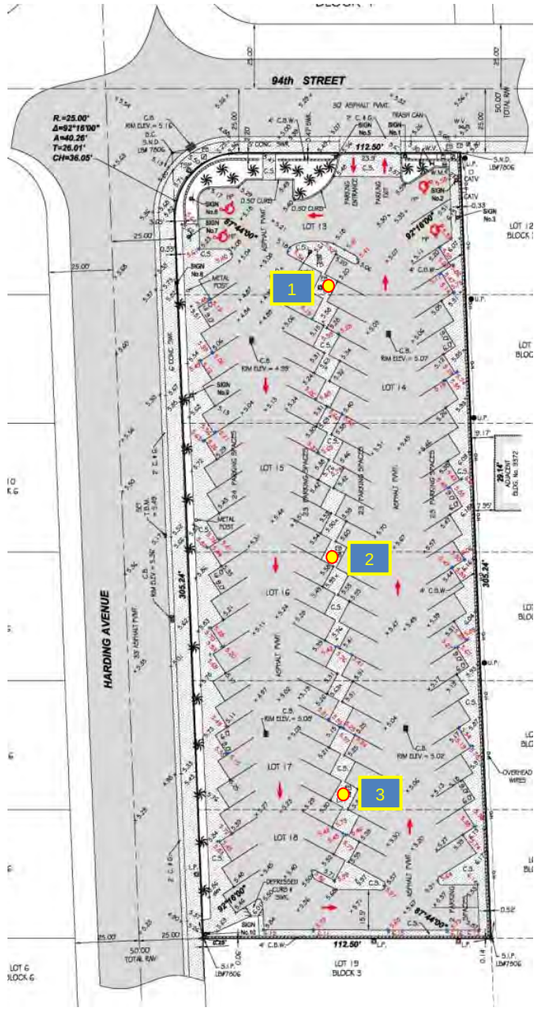
Parking Lot 1

Collins Lot at SW Corner of
93rd St & Collins Ave



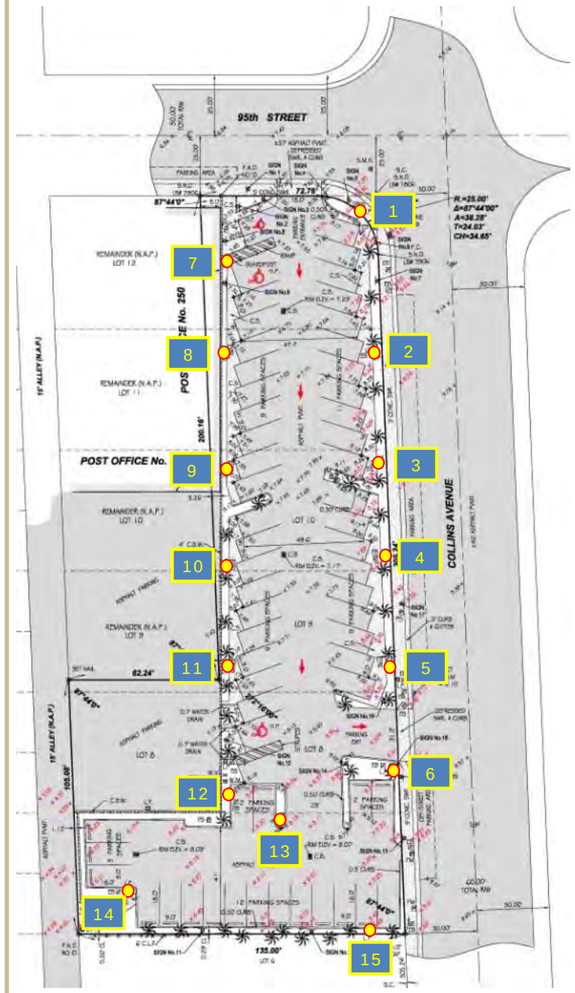
Parking Lot 2

Town Hall Lot at SW Corner of
93rd St & Harding Ave



Parking Lot 3

94th St Lot at SE Corner of
94th St & Harding Ave

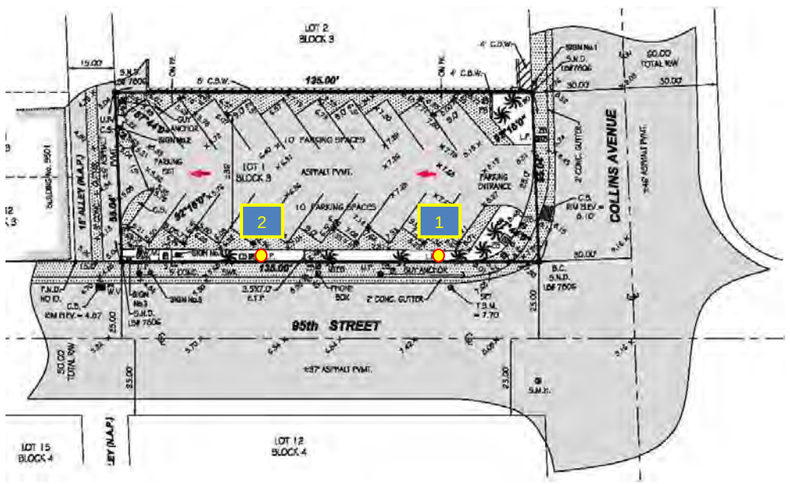


Parking Lot 4

Post Office Lot at SW Corner of
95th St & Collins Ave

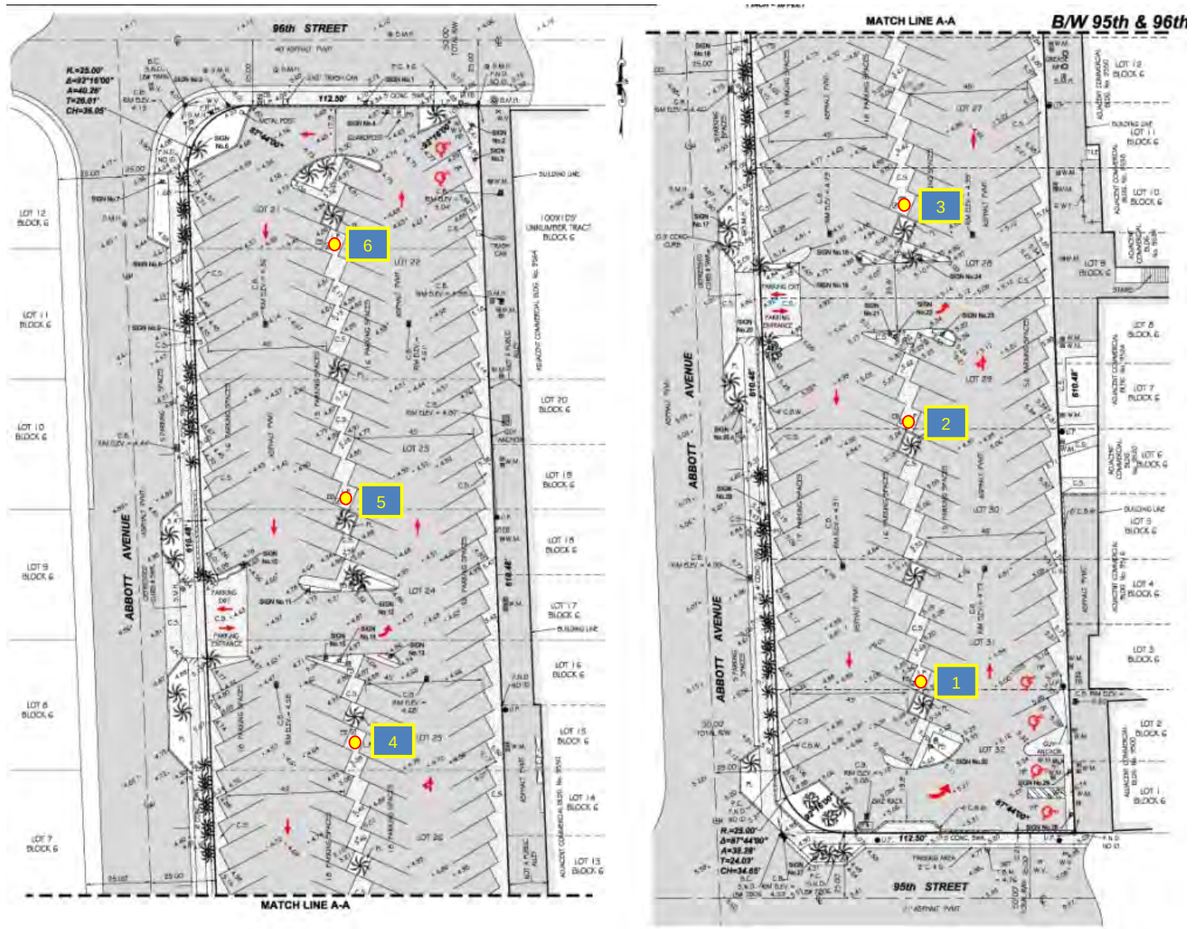
Legend

Lighting Pole # Lighting Pole Number



Parking Lot 5

Shul Lot at NW Corner of 95th St & Collins Ave



Parking Lot 6

Abbott Lot at East Side of 9500 Abbott Ave

Legend

- Lighting Pole
- # Lighting Pole Number


Parking Lot 1, #1 (17')


Parking Lot 1, #2 (17')


Parking Lot 1, #3 (17')


Parking Lot 1, #4 (17')


Parking Lot 2, #1 (19')


Parking Lot 2, #2 (19')


Parking Lot 2, #3 (19')


Parking Lot 2, #4 (19')

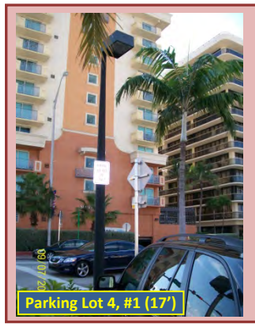

Parking Lot 2, #5 (19')

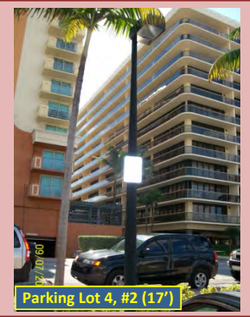

Parking Lot 2, #6 (19')

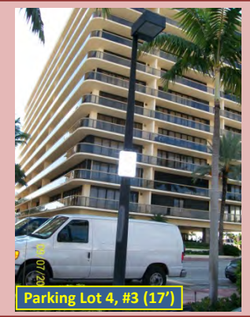

Parking Lot 3, #1 (24')

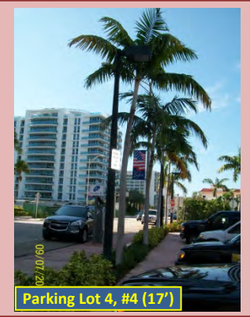

Parking Lot 3, #2 (24')

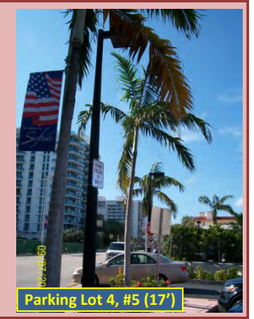

Parking Lot 3, #3 (24')


Parking Lot 4, #1 (17')


Parking Lot 4, #2 (17')


Parking Lot 4, #3 (17')


Parking Lot 4, #4 (17')


Parking Lot 4, #5 (17')

Parking Lot 4, #6 (17')


Parking Lot 4, #7 (17')


Parking Lot 4, #8 (17')

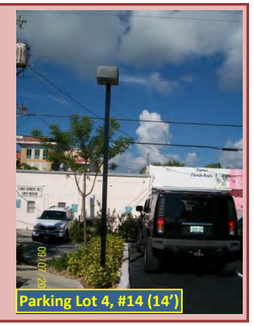

Parking Lot 4, #9 (17')


Parking Lot 4, #10 (17')


Parking Lot 4, #11 (17')


Parking Lot 4, #12 (14')


Parking Lot 4, #13 (14')


Parking Lot 4, #14 (14')


Parking Lot 4, #15 (14')


Parking Lot 5, #1 (23')

Parking Lot 5, #2 (23')


Parking Lot 6, #1 (19')


Parking Lot 6, #2 (19')


Parking Lot 6, #3 (19')


Parking Lot 6, #4 (19')


Parking Lot 6, #5 (19')


Parking Lot 6, #6 (19')

Appendix E

Topographic Surveys

777 N.W. 72nd AVENUE SUITE 3025
MIAMI, FLORIDA 33126
TELEPHONE: (305) 262-0400
FAX: (305) 262-0401

JOHN IBARRA & ASSOC.,INC.

LAND SURVEYORS

SURVEY No. 11-002040-1

DRAWN BY: D.H.

SHEET No. 1 OF 1

TOPOGRAPHIC SURVEY OF PARKING LOT

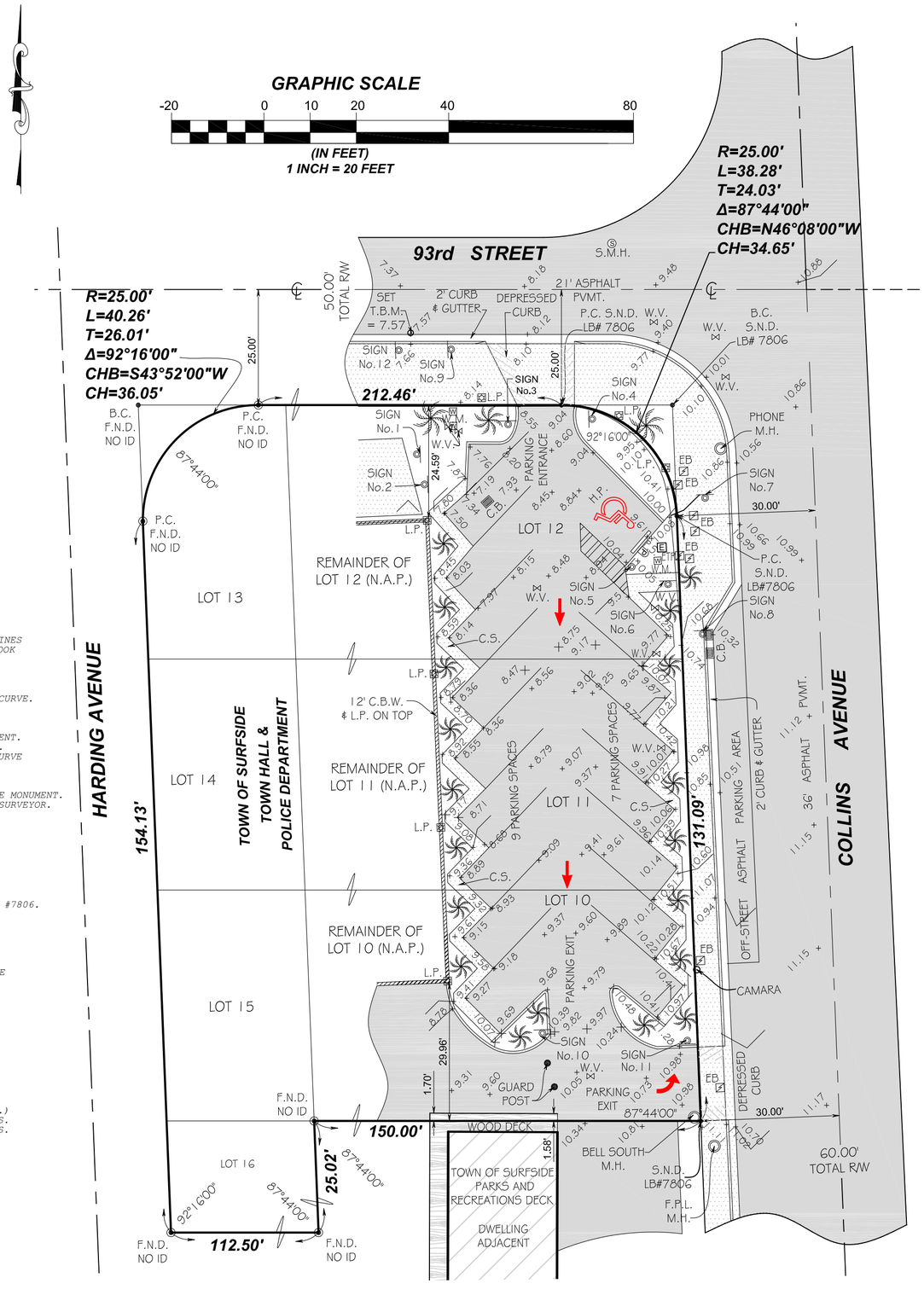
SIGNS LEGEND

SIGN #	IMAGE	TRAFFIC SIGN
No.1		RESERVE PARKING SIGN
No.2		RESERVE PARKING SIGN
No.3		TOW-AWAY SIGN
No.4		EMPLOYEE PARKING SIGN
No.5		PAY HERE SIGN
No.6		HANDICAP SIGN
No.7		PEDESTRIAN SIGN
No.8		PAY TO PARK SIGN
No.9		STOP HERE SIGN
No.10		STOP SIGN
No.11		STOP SIGN
No.12		NO PARKING SIGN

ABBREVIATIONS AND MEANINGS

A = ARC
A/C = AIR CONDITIONER PAD.
A.E.= ANCHOR EASEMENT.
A/R = ALUMINUM ROOF.
A/S = ALUMINUM SHED.
ASPH.= ASPHALT.
B.C.= BLOCK CORNER.
B.C.R.= BROWARD COUNTY RECORDS
BLDG.= BUILDING.
B.M.= BENCH MARK
B.O.B.= BASIS OF BEARINGS.
C = CALCULATED
C.B = CATCH BASIN.
C.B.S = CONCRETE BLOCK STRUCTURE.
CBW = CONCRETE BLOCK WALL.
CH.= CHORD.
CH.B.= CHORD BEARING.
CL = CLEAR
C.L.F.= CHAIN LINK FENCE.
C.M.E.= CANAL MAINTENANCE EASEMENTS.
CONC.= CONCRETE.
C.P.= CONC. PORCH.
C.S.= CONCRETE SLAB.
C.W.= CONCRETE WALK
D.E.= DRAINAGE EASEMENT .
D.M.E.= DRAINAGE MAINTENANCE EASEMENTS
DRIVE = DRIVEWAY
° = DEGREES.
E = EAST.
EB = ELECTRIC BOX
E.T.P.= ELECTRIC TRANSFORMER PAD.
ELEV.= ELEVATION.
ENCR.= ENCROACHMENT.
F.H.= FIRE HYDRANT.
F.I.P.= FOUND IRON PIPE.
F.I.R.= FOUND IRON ROD.
F.F.E.= FINISHED FLOOR ELEVATION.
F.N.D.= FOUND NAIL & DISK.
FR = FRAME.
FT = FEET.
H.P= HANDICAP PARKING
PROP. COR.= PROPERTY CORNER
FNIP.= FEDERAL NATIONAL INSURANCE
F.N.= FOUND NAIL.
H.= HIGH (HEIGHT)
IN.& EG.= INGRESS AND EGRESS EASEMENT.
L.B. = Certificate of Authorization L.B.#7806
L.P.= LIGHT POLE.
L.F.E.= LOWEST FLOOR ELEVATION.
L.M.E.= LAKE MAINTENANCE EASEMENT.
' = MINUTES.
M. = MEASURED DISTANCE.
MB = MAIL BOX
M.D.C.R.= MIAMI DADE COUNTY RECORDS
MON. = MONUMENT LINE.
M/H = MANHOLE.
M/L = MONUMENT LINE.
N.A.P. = NOT A PART OF.
NGVD = NATIONAL GEODETIC VERTICAL DATUM.
N. = NORTH.
N.T.S. = NOT TO SCALE.
#-NO. = NUMBER.
O/S = OFFSET.

O.H. = OVERHEAD
O.H.L.= OVERHEAD UTILITY LINES
O.R.B. = OFFICIAL RECORDS BOOK
OVH = OVERHANG
PVMT.= PAVEMENT.
PL.= PLANTER.
P/L = PROPERTY LINE.
P.C.C.= POINT OF COMPOUND CURVE.
P.C.= POINT OF CURVE.
P.S.= PAY STATION
PT.= POINT OF TANGENCY.
POC.= POINT OF COMMENCEMENT.
POB.= POINT OF BEGINNING.
P.R.C.= POINT OF REVERSE CURVE
P.B.= PLAT BOOK.
PG.= PAGE.
PWY. = PARKWAY.
PRM. = PERMANENT REFERENCE MONUMENT.
P.L.S.= PROFESSIONAL LAND SURVEYOR.
R. = RECORDED DISTANCE.
RR.= RAIL ROAD.
RES.= RESIDENCE.
R/W = RIGHT-OF-WAY.
R.P.= RADIUS POINT.
RGE.= RANGE.
SEC.= SECTION.
STY.= STORY.
SWK.= SIDEWALK.
S.I.P.= SET IRON PIPE L.B. #7806.
S.P. = SCREENED PORCH
S.= SOUTH.
" = SECONDS
T = TANGENT
TB = TELEPHONE BOOTH
TSB = TRAFFIC SIGNAL BOX
TSP = TRAFFIC SIGNAL POLE
TWP = TOWNSHIP.
UTIL.= UTILITY.
U.P.= UTILITY POLE.
W.M.= WATER METER.
W.F.= WOOD FENCE.
W.R.= WOOD ROOF.
W.S.= WOOD SHED.
W = WEST.
℄ = CENTER LINE.
Δ = CENTRAL ANGLE.
= WOOD FENCE.
= CHAIN LINK FENCE.
= C.B.S. WALL.(C.B.W.)
× 0.00 = EXISTING ELEVATIONS.
0.00 = PROPOSED ELEVATIONS.
= TRAFFIC FLOW
Ⓓ = DRAINAGE MH



LOCATION SKETCH SCALE N.T.S.

PLAT BOOK 8, PAGE 106- MIAMI DADE COUNTY, FLORIDA
SECTION 35, TWP. 52 SOUTH, RANGE 42 EAST

LEGAL DESCRIPTION:

SW CORNER 93rd STREET AND COLLINS AVENUE.
PARKING LOTS 10, 11 AND 12 BLOCK 4, OF ALTOS DEL MAR No.5, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8, AT PAGE 92, OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.

FOLIO No.:

14-2235-006-0490

CERTIFICATIONS:

THIS DRAWING IS CERTIFIED TO FLORIDA TRANPORTATION ENGINEERING, INC., AND THE TOWN OF SURFSIDE, MIAMI-DADE COUNTY, FLORIDA.

SURVEYOR'S NOTES:

1). IF SHOWN, BEARINGS ARE REFERRED TO AN ASSUMED MERIDIAN, BY SAID PLAT IN THE DESCRIPTION OF THE PROPERTY. IF NOT, THEN BEARINGS ARE REFERRED TO COUNTY, TOWNSHIP MAPS.
2). ALL ELEVATIONS SHOWN ARE REFERRED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 MIAMI-DADE COUNTY BENCH MARK # Z-313.LOCATOR NO. 2225 E @ 96th ST. & HARDING AVE., .ELEVATION 9.59 FEET OF N.G.V.D. OF 1929
3). THERE MAY BE EASEMENTS RECORDED IN THE PUBLIC RECORDS NOT SHOWN ON THIS SURVEY.
4). THE CLOSURE IN THE BOUNDARY SURVEY IS ABOVE 1:7500 FT.
5). L.B. = Certificate of Authorization L.B.#7806
6). NORTH BASED ON PLAT NORTH.

LEGAL NOTES TO ACCOMPANY SKETCH OF SURVEY (SURVEY):

- EXAMINATIONS OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS, IF ANY, AFFECTING THE PROPERTY.
- THIS SURVEY IS SUBJECT TO DEDICATIONS, LIMITATIONS, RESTRICTIONS, RESERVATIONS OR EASEMENTS OF RECORD.
- LEGAL DESCRIPTION PROVIDED BY CLIENT OR ATTESTING TITLE COMPANY.
- BOUNDARY SURVEY MEANS A DRAWING AND/ OR A GRAPHIC REPRESENTATION OF THE SURVEY WORK PERFORMED IN THE FIELD, COULD BE DRAWN AT A SHOWN SCALE AND OR NOT TO SCALE.
- EASEMENTS AS SHOWN ARE PER PLAT BOOK, UNLESS OTHERWISE NOTED.
- THE TERM "ENCROACHMENT" MEANS VISIBLE ON AND ABOVE GROUND ENCROACHMENT.
- ARCHITECTS SHALL VERIFY ZONING REGULATIONS, RESTRICTIONS AND SETBACKS AND THEY WILL BE RESPONSIBLE OF SUBMITTING PLOT PLANS WITH THE CORRECT INFORMATION FOR THEIR APPROVAL FOR AUTHORIZATION TO AUTHORITIES IN A NEW CONSTRUCTIONS, UNLESS OTHERWISE NOTED, THIS FIRM HAS NOT ATTEMPTED TO LOCATE FOOTING AND/OR FOUNDATIONS.
- FENCE OWNERSHIP NOT DETERMINED.
- THIS PLAN OF SURVEY, HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE ENTITIES NAMED HEREON, THE CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PARTY.
- THE SURVEYOR MAKES NO GUARANTEES AS TO THE ACCURACY OF THE INFORMATION BELOW, THE LOCAL F.E.M.A. AGENT SHOULD BE CONTACTED FOR VERIFICATION. THE FNIP FLOOD MAPS HAVE DESIGNATED THE HEREIN DESCRIBED LAND TO BE IN FLOOD ZONE "X"; THE SUBJECT PROPERTY DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA.

I HEREBY CERTIFY: THAT THIS "TOPOGRAPHIC SURVEY" OF THE PROPERTY DESCRIBED HEREON, AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION, COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO 472.027, FLORIDA STATUTES.

BY: _____ 08-01-2011

JOHN IBARRA (DATE OF FIELD WORK)
LAND SURVEYOR NO. : 5204
STATE OF FLORIDA

(VALID COPIES OF THIS SURVEY WILL BEAR THE EMBOSSED SEAL OF THE ATTESTING LAND SURVEYOR).

REVISED ON: _____

REVISED ON: _____

JOHN IBARRA CERTIFICATE NO. 5204 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR

SEAL

L.B.# 7806

777 N.W. 72nd AVENUE SUITE 3025
MIAMI, FLORIDA 33126
TELEPHONE: (305) 262-0400
FAX: (305) 262-0401

DRAWN BY: MCH

JOHN IBARRA & ASSOC.,INC.

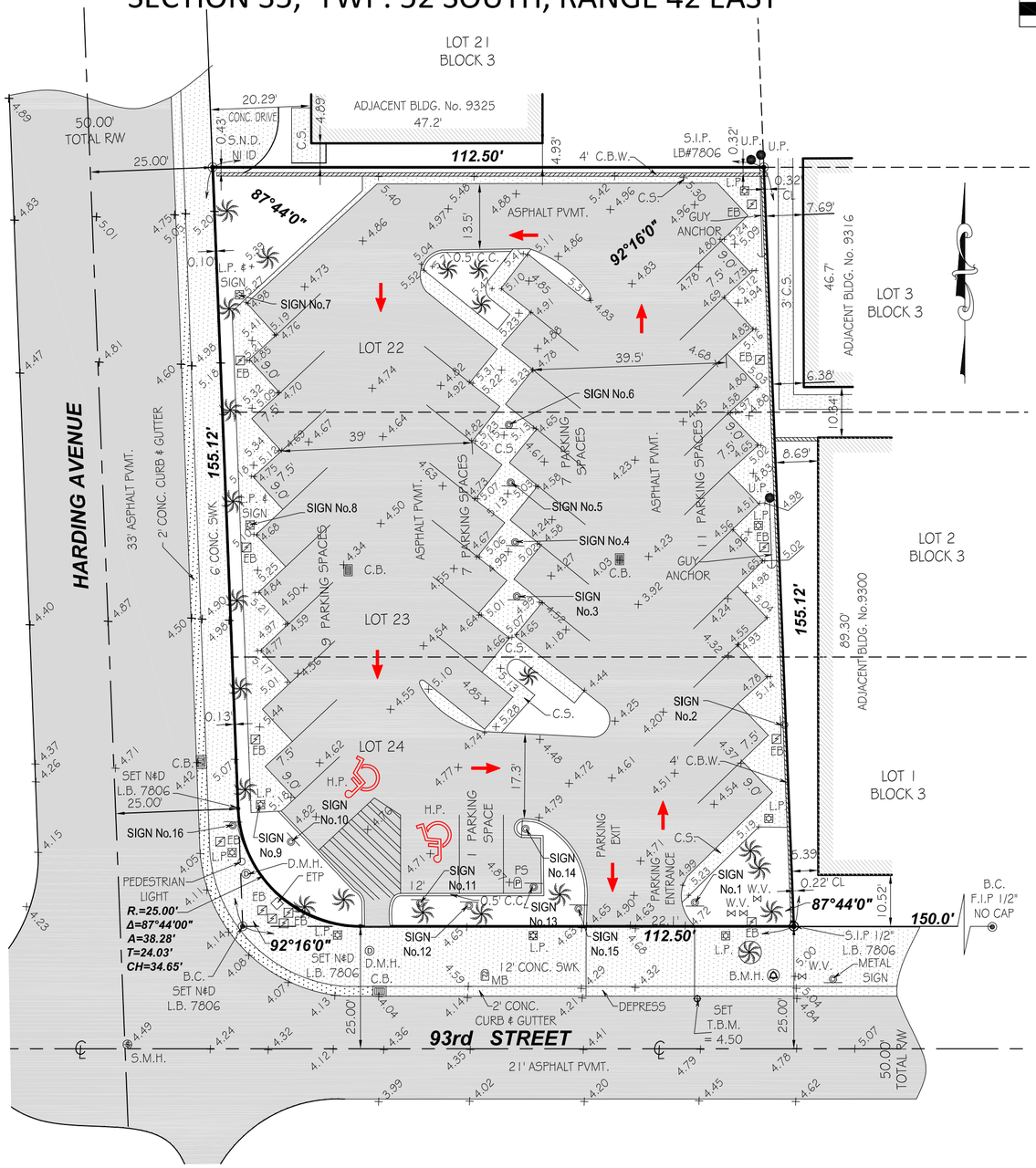
LAND SURVEYORS

SURVEY No. 11-002039-1

SHEET No. 1 OF 1

TOPOGRAPHIC SURVEY OF PARKING LOT

PLAT BOOK 8, PAGE 92 - MIAMI DADE COUNTY, FLORIDA
SECTION 35, TWP. 52 SOUTH, RANGE 42 EAST



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FEET

SIGN #	IMAGE	TRAFFIC SIGN
No.1		TOW-AWAY SIGN
No.2	HEAD IN PARKING ONLY	PARKING SIGN
No.3	TOWN HALL BUSINESS 15 MIN FREE PARKING 9AM-5PM	PARKING SIGN
No.4	TOWN HALL BUSINESS 15 MIN FREE PARKING 9AM-5PM	PARKING SIGN
No.5	TOWN HALL BUSINESS 15 MIN FREE PARKING 9AM-5PM	PARKING SIGN
No.6	TOWN HALL BUSINESS 15 MIN FREE PARKING 9AM-5PM	PARKING SIGN
No.7	HEAD IN PARKING ONLY	PARKING SIGN
No.8	HEAD IN PARKING ONLY	PARKING SIGN
No.9	HEAD IN PARKING ONLY	PARKING SIGN
No.10		PARKING SIGN
No.11		PARKING SIGN
No.12	RESERVED FOR EMPLOYEE OF THE QUARTER	PARKING SIGN
No.13	PAY HERE	PAY HERE SIGN
No.14	STOP	STOP SIGN
No.15	STOP	STOP SIGN
No.15	SPEED LIMIT 30	SPEED LIMIT SIGN

LOCATION SKETCH SCALE: N.T.S.

LEGAL DESCRIPTION:

LOT2 22 THRU 24, BLOCK 3, OF ALTOS DEL MAR No.5, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8, AT PAGE 92, OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.

FOLIO No.:

14-2235-006-0400

CERTIFICATIONS:

THIS DRAWING IS CERTIFIED TO FLORIDA TRANPORTATION ENGINEERING, INC., AND THE TOWN OF SURFSIDE, MIAMI-DADE COUNTY, FLORIDA.

SURVEYOR'S NOTES:

1). IF SHOWN, BEARINGS ARE REFERRED TO AN ASSUMED MERIDIAN, BY SAID PLAT IN THE DESCRIPTION OF THE PROPERTY. IF NOT, THEN BEARINGS ARE REFERRED TO COUNTY, TOWNSHIP MAPS.
2). ALL ELEVATIONS SHOWN ARE REFERRED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 MIAMI-DADE COUNTY BENCH MARK # Z-313.LOCATOR NO. 2225 E @ 96th ST. & HARDING AVE. .; ELEVATION 9.59 FEET OF N.G.V.D. OF 1929
3). THERE MAY BE EASEMENTS RECORDED IN THE PUBLIC RECORDS NOT SHOWN ON THIS SURVEY.
4). THE CLOSURE IN THE BOUNDARY SURVEY IS ABOVE 1:7500 FT.
5). L.B. = Certificate of Authorization L.B.#7806
6). NORTH BASED ON PLAT NORTH.

LEGAL NOTES TO ACCOMPANY SKETCH OF SURVEY (SURVEY):

- EXAMINATIONS OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS, IF ANY, AFFECTING THE PROPERTY.
- THIS SURVEY IS SUBJECT TO DEDICATIONS, LIMITATIONS, RESTRICTIONS, RESERVATIONS OR EASEMENTS OF RECORD.
- LEGAL DESCRIPTION PROVIDED BY CLIENT OR ATTESTING TITLE COMPANY.
- BOUNDARY SURVEY MEANS A DRAWING AND/ OR A GRAPHIC REPRESENTATION OF THE SURVEY WORK PERFORMED IN THE FIELD, COULD BE DRAWN AT A SHOWN SCALE AND OR NOT TO SCALE.
- EASEMENTS AS SHOWN ARE PER PLAT BOOK, UNLESS OTHERWISE NOTED.
- THE TERM "ENCROACHMENT" MEANS VISIBLE ON AND ABOVE GROUND ENCROACHMENT.
- ARCHITECTS SHALL VERIFY ZONING REGULATIONS, RESTRICTIONS AND SETBACKS AND THEY WILL BE RESPONSIBLE OF SUBMITTING PLOT PLANS WITH THE CORRECT INFORMATION FOR THEIR APPROVAL FOR AUTHORIZATION TO AUTHORITIES IN A NEW CONSTRUCTIONS, UNLESS OTHERWISE NOTED, THIS FIRM HAS NOT ATTEMPTED TO LOCATE FOOTING AND/OR FOUNDATIONS.
- FENCE OWNERSHIP NOT DETERMINED.
- THIS PLAN OF SURVEY, HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE ENTITIES NAMED HEREON, THE CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PARTY.
- THE SURVEYOR MAKES NO GUARANTEES AS TO THE ACCURACY OF THE INFORMATION BELOW, THE LOCAL F.E.M.A. AGENT SHOULD BE CONTACTED FOR VERIFICATION. THE FNIP FLOOD MAPS HAVE DESIGNATED THE HEREIN DESCRIBED LAND TO BE IN FLOOD ZONE "X"; THE SUBJECT PROPERTY DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA.

I HEREBY CERTIFY: THAT THIS "TOPOGRAPHIC SURVEY" OF THE PROPERTY DESCRIBED HEREON, AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION, COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO 472.027, FLORIDA STATUTES.

BY: _____ 08-01-2011

JOHN IBARRA (DATE OF FIELD WORK)
LAND SURVEYOR NO. : 5204
STATE OF FLORIDA

(VALID COPIES OF THIS SURVEY WILL BEAR THE EMBOSSED SEAL OF THE ATTESTING LAND SURVEYOR).

REVISED ON: _____

REVISED ON: _____

JOHN IBARRA CERTIFICATE NO. 5204 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR

SEAL

L.B.# 7806

ABBREVIATIONS AND MEANINGS

A = ARC
A/C = AIR CONDITIONER PAD.
A.E.= ANCHOR EASEMENT.
A/R = ALUMINUM ROOF.
A/S = ALUMINUM SHED.
ASPH.= ASPHALT.
B.C.= BLOCK CORNER.
B.C.R.= BROWARD COUNTY RECORDS
BLDG.= BUILDING.
B.M.= BENCH MARK
B.O.B.= BASIS OF BEARINGS.
C = CALCULATED
C.B = CATCH BASIN.
C.B.S = CONCRETE BLOCK STRUCTURE.
CBW = CONCRETE BLOCK WALL.
CH.= CHORD.
CH.B.= CHORD BEARING.
CL = CLEAR
C.L.F.= CHAIN LINK FENCE.
C.M.E.= CANAL MAINTENANCE EASEMENTS.

CONC.= CONCRETE.
C.P.= CONC. PORCH.
C.S.= CONCRETE SLAB.
C.W.= CONCRETE WALK.
D.E.= DRAINAGE EASEMENT .
D.M.E.= DRAINAGE MAINTENANCE EASEMENTS
DRIVE = DRIVEWAY
° = DEGREES.
E = EAST.
EB = ELECTRIC BOX
E.T.P.= ELECTRIC TRANSFORMER PAD.
ELEV.= ELEVATION.
ENCR.= ENCROACHMENT.
F.H.= FIRE HYDRANT.
F.I.P.= FOUND IRON PIPE.
F.I.R.= FOUND IRON ROD.
F.F.E.= FINISHED FLOOR ELEVATION.
F.N.D.= FOUND NAIL & DISK.
FR = FRAME.
FT = FEET.

PROP. COR.= PROPERTY CORNER
FNIP.= FEDERAL NATIONAL INSURANCE
F.N.= FOUND NAIL.
H.P.= HANDICAP PARKING
IN.& EG.= INGRESS AND EGRESS EASEMENT.
L.B. = Certificate of Authorization L.B.#7806
L.P.= LIGHT POLE.
L.F.E.= LOWEST FLOOR ELEVATION.
L.M.E.= LAKE MAINTENANCE EASEMENT.
' = MINUTES.
M. = MEASURED DISTANCE.
MB = MAIL BOX
M.D.C.R. = MIAMI DADE COUNTY RECORDS
MON. = MONUMENT LINE.
M/H = MANHOLE.
M/L = MONUMENT LINE.
N.A.P. = NOT A PART OF.
NGVD = NATIONAL GEODETIC VERTICAL DATUM.
N. = NORTH.
N.T.S. = NOT TO SCALE.
#-NO. = NUMBER.
O/S = OFFSET.

O.H. = OVERHEAD
O.H.L.= OVERHEAD UTILITY LINES
O.R.B. = OFFICIAL RECORDS BOOK
OVH = OVERHANG
PVMT.= PAVEMENT.
PL.= PLANTER.
P/L = PROPERTY LINE.
P.C.C.= POINT OF COMPOUND CURVE.
P.C.= POINT OF CURVE.
PT.= POINT OF TANGENCY.
POC.= POINT OF COMMENCEMENT.
POB.= POINT OF BEGINNING.
P.R.C.= POINT OF REVERSE CURVE
P.B.= PLAT BOOK.
PG.= PAGE.
PS = PAY STATION
PM = PARKING METER
PWY. = PARKWAY.
PRM. = PERMANENT REFERENCE MONUMENT.
P.L.S.= PROFESSIONAL LAND SURVEYOR.
R. = RECORDED DISTANCE.
RR.= RAIL ROAD.
RES.= RESIDENCE.

R/W = RIGHT-OF-WAY.
R.P.= RADIUS POINT.
RGE.= RANGE.
SEC.= SECTION.
STY.= STORY.
SWK.= SIDEWALK.
S.I.P.= SET IRON PIPE L.B. #7806.
S.= SOUTH.
S.P. = SCREENED PORCH
" = SECONDS
T = TANGENT.
TSB = TRAFFIC SIGNAL BOX
TSP = TRAFFIC SIGNAL POLE
TB = TELEPHONE BOOTH
TWP = TOWNSHIP.
UTIL.= UTILITY.
U.P.= UTILITY POLE.
W.M.= WATER METER.
W.F.= WOOD FENCE.
W.R.= WOOD ROOF.

W.S.= WOOD SHED.
W = WEST.
℄ = CENTER LINE.
△ = CENTRAL ANGLE.
∠ = ANGLE.
= WOOD FENCE.
= CHAIN LINK FENCE.
= C.B.S. WALL (C.B.W.)
+0.00 = EXISTING ELEVATIONS.
0.00 = PROPOSED ELEVATIONS.
= TRAFFIC FLOW
Ⓓ = DRAINAGE MH

777 N.W. 72nd AVENUE SUITE 3025
MIAMI, FLORIDA 33126
TELEPHONE: (305) 262-0400
FAX: (305) 262-0401

JOHN IBARRA & ASSOC.,INC.

LAND SURVEYORS

SURVEY No. 11-002041-1

DRAWN BY: MCH

SHEET No. 1 OF 1

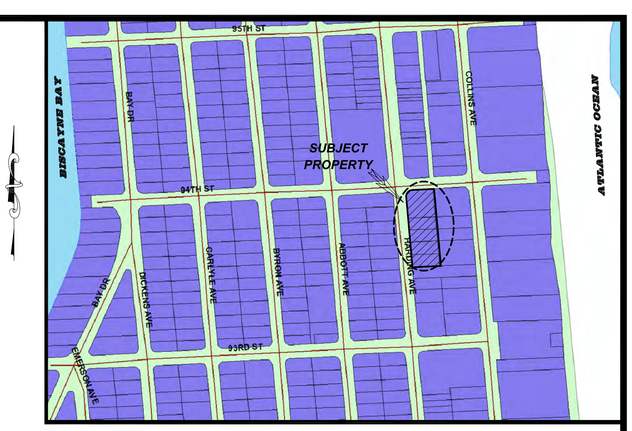
TOPOGRAPHIC SURVEY

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FEET

SIGN #	IMAGE	TRAFFIC SIGN
No.1	STOP	STOP SIGN
No.2	PARKING BY DISABLED PERMIT ONLY	PARKING SIGN
No.3	PARKING BY DISABLED PERMIT ONLY	PARKING SIGN
No.4	PAY HERE	PAY HERE SIGN
No.5	TOW-AWAY SIGN	TOW-AWAY SIGN
No.6	PARKING BY DISABLED PERMIT ONLY	PARKING SIGN
No.7	PARKING BY DISABLED PERMIT ONLY	PARKING SIGN
No.8	SPEED LIMIT 30	SPEED LIMIT SIGN
No.9	HEAD IN PARKING ONLY	PARKING SIGN
No.10	NO PARKING ANY TIME	PARKING SIGN



LOCATION SKETCH SCALE: N.T.S.

LEGAL DESCRIPTION:
LOTS 13, 14, 15, 16, 17 AND 18, BLOCK 3, OF ALTOS DEL MAR No.5, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8, AT PAGE 92, OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.

FOLIO No.:
14-2235-006-0310
14-2235-006-0330
14-2235-006-0340
14-2235-006-0350
14-2235-006-0360

CERTIFICATIONS:
THIS DRAWING IS CERTIFIED TO FLORIDA TRANPORTATION ENGINEERING, INC., AND THE TOWN OF SURFSIDE, MIAMI-DADE COUNTY, FLORIDA.

SURVEYOR'S NOTES:
1). IF SHOWN, BEARINGS ARE REFERRED TO AN ASSUMED MERIDIAN, BY SAID PLAT IN THE DESCRIPTION OF THE PROPERTY. IF NOT, THEN BEARINGS ARE REFERRED TO COUNTY, TOWNSHIP MAPS.
2). ALL ELEVATIONS SHOWN ARE REFERRED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 MIAMI-DADE COUNTY BENCH MARK # Z-313.LOCATOR NO. 2225 E @ 96th ST. & HARDING AVE..; ELEVATION 9.59 FEET OF N.G.V.D. OF 1929
3). THERE MAY BE EASEMENTS RECORDED IN THE PUBLIC RECORDS NOT SHOWN ON THIS SURVEY.
4). THE CLOSURE IN THE BOUNDARY SURVEY IS ABOVE 1:7500 FT.
5). L.B. = Certificate of Authorization L.B.#7806
6). NORTH BASED ON PLAT NORTH.

LEGAL NOTES TO ACCOMPANY SKETCH OF SURVEY (SURVEY):
- EXAMINATIONS OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS, IF ANY, AFFECTING THE PROPERTY.
- THIS SURVEY IS SUBJECT TO DEDICATIONS, LIMITATIONS, RESTRICTIONS, RESERVATIONS OR EASEMENTS OF RECORD.
- LEGAL DESCRIPTION PROVIDED BY CLIENT OR ATTESTING TITLE COMPANY.
- BOUNDARY SURVEY MEANS A DRAWING AND/ OR A GRAPHIC REPRESENTATION OF THE SURVEY WORK PERFORMED IN THE FIELD, COULD BE DRAWN AT A SHOWN SCALE AND OR NOT TO SCALE.
- EASEMENTS AS SHOWN ARE PER PLAT BOOK, UNLESS OTHERWISE NOTED.
- THE TERM "ENCROACHMENT" MEANS VISIBLE ON AND ABOVE GROUND ENCROACHMENT.
- ARCHITECTS SHALL VERIFY ZONING REGULATIONS, RESTRICTIONS AND SETBACKS AND THEY WILL BE RESPONSIBLE OF SUBMITTING PLOT PLANS WITH THE CORRECT INFORMATION FOR THEIR APPROVAL FOR AUTHORIZATION TO AUTHORITIES IN A NEW CONSTRUCTIONS, UNLESS OTHERWISE NOTED, THIS FIRM HAS NOT ATTEMPTED TO LOCATE FOOTING AND/OR FOUNDATIONS.
- FENCE OWNERSHIP NOT DETERMINED.
- THIS PLAN OF SURVEY, HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE ENTITIES NAMED HEREON, THE CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PARTY.
- THE SURVEYOR MAKES NO GUARANTEES AS TO THE ACCURACY OF THE INFORMATION BELOW, THE LOCAL F.E.M.A. AGENT SHOULD BE CONTACTED FOR VERIFICATION. THE FNIP FLOOD MAPS HAVE DESIGNATED THE HEREIN DESCRIBED LAND TO BE IN FLOOD ZONE "X"; THE SUBJECT PROPERTY DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA.

ABBREVIATIONS AND MEANINGS

A = ARC
A/C = AIR CONDITIONER PAD.
A.E. = ANCHOR EASEMENT.
A/R = ALUMINUM ROOF.
A/S = ALUMINUM SHED.
ASPH. = ASPHALT.
B.C. = BLOCK CORNER.
B.C.R. = BROWARD COUNTY RECORDS
BLDG. = BUILDING.
B.M. = BENCH MARK
B.O.B. = BASIS OF BEARINGS.
C = CALCULATED
C.B = CATCH BASIN.
C.B.S = CONCRETE BLOCK STRUCTURE.
CBW = CONCRETE BLOCK WALL.
CH = CHORD
CH.B. = CHORD BEARING.
CL = CLEAR
C.L.F. = CHAIN LINK FENCE.
C.M.E. = CANAL MAINTENANCE EASEMENTS.
CONC. = CONCRETE.
C.P. = CONC. PORCH.
C.S. = CONCRETE SLAB.
C.W. = CONCRETE WALK.
D.E. = DRAINAGE EASEMENT .
D.M.E. = DRAINAGE MAINTENANCE EASEMENTS
DRIVE = DRIVEWAY
° = DEGREES.
E = EAST.
EB = ELECTRIC BOX
E.T.P. = ELECTRIC TRANSFORMER PAD.
ELEV. = ELEVATION.
ENCR. = ENCROACHMENT.
F.H. = FIRE HYDRANT.
F.I.P. = FOUND IRON PIPE.
F.I.R. = FOUND IRON ROD.
F.F.E. = FINISHED FLOOR ELEVATION.
F.N.D. = FOUND NAIL & DISK.
FR = FRAME.
FT = FEET.
PROP. COR. = PROPERTY CORNER
FNIP. = FEDERAL NATIONAL INSURANCE
F.N. = FOUND NAIL.
H.P. = HANDICAP PARKING
IN. & EG. = INGRESS AND EGRESS EASEMENT.
L.B. = Certificate of Authorization L.B.#7806
L.P. = LIGHT POLE.
L.F.E. = LOWEST FLOOR ELEVATION.
L.M.E. = LAKE MAINTENANCE EASEMENT.
' = MINUTES.
M. = MEASURED DISTANCE.
MB = MAIL BOX
M.D.C.R. = MIAMI DADE COUNTY RECORDS
MON. = MONUMENT LINE.
M/H = MANHOLE.
M/L = MONUMENT LINE.
N.A.P. = NOT A PART OF.
NGVD = NATIONAL GEODETIC VERTICAL DATUM.
N. = NORTH.
N.T.S. = NOT TO SCALE.
#-NO. = NUMBER.
O/S = OFFSET.
O.H. = OVERHEAD
O.H.L. = OVERHEAD UTILITY LINES
O.R.B. = OFFICIAL RECORDS BOOK
OVH = OVERHANG
PVMT. = PAVEMENT.
PL. = PLANTER.
P/L = PROPERTY LINE.
P.C.C. = POINT OF COMPOUND CURVE.
P.C. = POINT OF CURVE.
PT. = POINT OF TANGENCY.
POC. = POINT OF COMMENCEMENT.
POB. = POINT OF BEGINNING.
P.R.C. = POINT OF REVERSE CURVE
P.B. = PLAT BOOK.
PG. = PAGE.
PS = PAY STATION
PM = PARKING METER
PWY. = PARKWAY.
PRM. = PERMANENT REFERENCE MONUMENT.
P.L.S. = PROFESSIONAL LAND SURVEYOR.
R. = RECORDED DISTANCE.
RR. = RAIL ROAD.
RES. = RESIDENCE.
R/W = RIGHT-OF-WAY.
R.P. = RADIUS POINT.
RGE. = RANGE.
SEC. = SECTION.
STY. = STORY.
SWK. = SIDEWALK.
S.I.P. = SET IRON PIPE L.B. #7806.
S. = SOUTH.
S.P. = SCREENED PORCH
" = SECONDS
T = TANGENT.
TSB = TRAFFIC SIGNAL BOX
TSP = TRAFFIC SIGNAL POLE
TB = TELEPHONE BOOTH
TWP = TOWNSHIP.
UTIL. = UTILITY.
U.P. = UTILITY POLE.
W.M. = WATER METER.
W.F. = WOOD FENCE.
W.R. = WOOD ROOF.
W.S. = WOOD SHED.
W = WEST.
℄ = CENTER LINE.
Δ = CENTRAL ANGLE.
∠ = ANGLE.
= WOOD FENCE.
= CHAIN LINK FENCE.
= C.B.S. WALL. (C.B.W.)
+0.00 = EXISTING ELEVATIONS.
0.00 = PROPOSED ELEVATIONS.
= TRAFFIC FLOW
Ⓓ = DRAINAGE MH

I HEREBY CERTIFY: THAT THIS "TOPOGRAPHIC SURVEY" OF THE PROPERTY DESCRIBED HEREON, AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION, COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO 472.027, FLORIDA STATUTES.

BY: _____ **08-01-2011**
JOHN IBARRA (DATE OF FIELD WORK)
LAND SURVEYOR NO. : 5204
STATE OF FLORIDA

(VALID COPIES OF THIS SURVEY WILL BEAR THE EMBOSSED SEAL OF THE ATTESTING LAND SURVEYOR).

REVISED ON: _____

REVISED ON: _____

JOHN IBARRA CERTIFICATE NO. 5204 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR

SEAL

L.B.# 7806

777 N.W. 72nd AVENUE SUITE 3025
MIAMI, FLORIDA 33126
TELEPHONE: (305) 262-0400
FAX: (305) 262-0401

JOHN IBARRA & ASSOC.,INC.

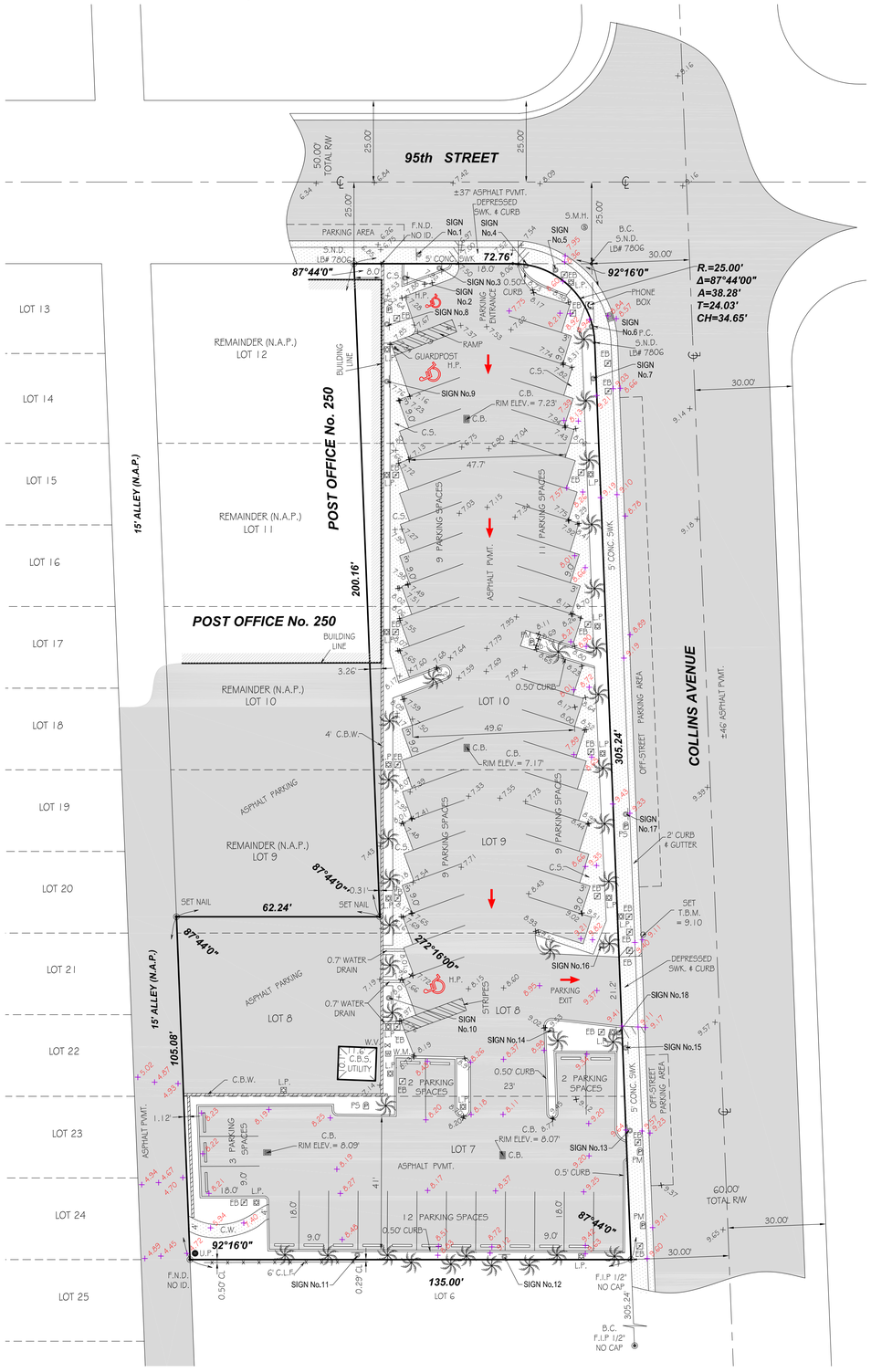
LAND SURVEYORS

SURVEY No. 11-002042-1

SHEET No. 1 OF 1

DRAWN BY: MCH

PLAT BOOK 8, PAGE 106 - MIAMI DADE COUNTY, FLORIDA
SECTION 35, TWP. 52 SOUTH, RANGE 42 EAST



TOPOGRAPHIC SURVEY

GRAPHIC SCALE

20 0 10 20 40 80

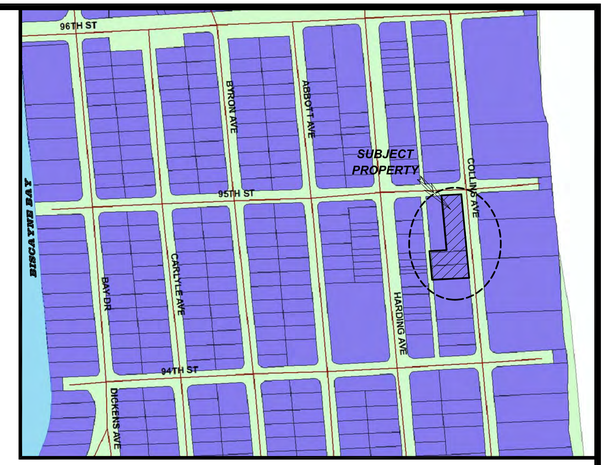
(IN FEET)
1 INCH = 20 FEET

SIGN #	IMAGE	TRAFFIC SIGN
No.1	STOP SIGN IN RED	STOP SIGN
No.2	PAY HERE	PAY HERE SIGN
No.3		TOW-AWAY SIGN
No.4	PARKING / DO NOT BLOCK INTERSECTION	PARKING SIGN
No.5		PEDESTRIAN SIGN
No.6		PEDESTRIAN SIGN
No.7	PAY TO PARK	PAY TO PARK SIGN
No.8		PARKING SIGN
No.9		PARKING SIGN
No.10		PARKING SIGN
No.11	HEAD IN PARKING ONLY	PARKING SIGN
No.12	HEAD IN PARKING ONLY	PARKING SIGN
No.13	AHEAD	PEDESTRIAN SIGN
No.14	STOP	STOP SIGN
No.15	ONE WAY / NO PARKING	PARKING SIGN
No.16	DO NOT ENTER	DO NOT ENTER SIGN
No.17	PAY HERE	PAY HERE SIGN
No.18	STOP	STOP SIGN

NOTE: ALL LIGHT POLES HAS SIGN ON TOP. HEAD IN PARKING ONLY

ABBREVIATIONS AND MEANINGS

A = ARC
A/C = AIR CONDITIONER PAD.
A.E. = ANCHOR EASEMENT.
A/R = ALUMINUM ROOF.
A/S = ALUMINUM SHED.
ASPH. = ASPHALT.
B.C. = BLOCK CORNER.
B.C.R. = BROWARD COUNTY RECORDS
BLDG. = BUILDING.
B.M. = BENCH MARK
B.O.B. = BASIS OF BEARINGS.
C = CALCULATED
C.B = CATCH BASIN
C.B.S. = CONCRETE BLOCK STRUCTURE.
CBW = CONCRETE BLOCK WALL.
CH. = CHORD.
CH.B. = CHORD BEARING.
CL. = CLEAR
C.L.F. = CHAIN LINK FENCE.
C.M.E. = CANAL MAINTENANCE EASEMENTS.
CONC. = CONCRETE.
C.P. = CONC. PORCH.
C.S. = CONCRETE SLAB.
C.W. = CONCRETE WALK.
D.E. = DRAINAGE EASEMENT .
D.M.E. = DRAINAGE MAINTENANCE EASEMENTS
DRIVE = DRIVEWAY
° = DEGREES.
E = EAST.
EB = ELECTRIC BOX
E.T.F. = ELECTRIC TRANSFORMER PAD.
ELEV. = ELEVATION.
ENCR. = ENCROACHMENT.
F.H. = FIRE HYDRANT.
F.I.P. = FOUND IRON PIPE.
F.I.R. = FOUND IRON ROD.
F.F.E. = FINISHED FLOOR ELEVATION.
F.N.D. = FOUND NAIL & DISK.
FR = FRAME.
FT = FEET.
PROP. COR. = PROPERTY CORNER
FNIP. = FEDERAL NATIONAL INSURANCE
F.N. = FOUND NAIL.
H.P. = HANDICAP PARKING
IN.& EG. = INGRESS AND EGRESS EASEMENT.
L.B. = Certificate of Authorization L.B.#7806
L.P. = LIGHT POLE
L.F.E. = LOWEST FLOOR ELEVATION.
L.M.E. = LAKE MAINTENANCE EASEMENT.
' = MINUTES.
M. = MEASURED DISTANCE.
MB = MAIL BOX
M.D.C.R. = MIAMI DADE COUNTY RECORDS
MON. = MONUMENT LINE.
M/H = MANHOLE.
M/L = MONUMENT LINE.
N.A.P. = NOT A PART OF.
NGVD = NATIONAL GEODETIC VERTICAL DATUM.
N. = NORTH.
N.T.S. = NOT TO SCALE.
#-NO. = NUMBER.
O/S = OFFSET.
O.H. = OVERHEAD
O.H.L. = OVERHEAD UTILITY LINES
O.R.B. = OFFICIAL RECORDS BOOK
OVH = OVERHANG
PVMT. = PAVEMENT.
PL. = PLANTER.
P/L = PROPERTY LINE.
P.C.C. = POINT OF COMPOUND CURVE.
P.C. = POINT OF CURVE.
PT = POINT OF TANGENCY.
POC. = POINT OF COMMENCEMENT.
POB. = POINT OF BEGINNING.
P.R.C. = POINT OF REVERSE CURVE
P.B. = PLAT BOOK.
PG. = PAGE.
PS = PAY STATION
PM = PARKING METER
PWY. = PARKWAY.
PRM. = PERMANENT REFERENCE MONUMENT.
P.L.S. = PROFESSIONAL LAND SURVEYOR.
R. = RECORDED DISTANCE.
RR. = RAIL ROAD.
RES. = RESIDENCE.
R/W = RIGHT-OF-WAY.
R.P. = RADIUS POINT.
RGE. = RANGE.
SEC. = SECTION.
STY. = STORY.
SWK. = SIDEWALK.
S.I.P. = SET IRON PIPE L.B. #7806.
S. = SOUTH.
S.P. = SCREENED PORCH
" = SECONDS
T = TANGENT.
TSB = TRAFFIC SIGNAL BOX
TSF = TRAFFIC SIGNAL POLE
TB = TELEPHONE BOOTH
TWP = TOWNSHIP.
UTIL. = UTILITY.
U.P. = UTILITY POLE.
W.M. = WATER METER.
W.F. = WOOD FENCE.
W.R. = WOOD ROOF.
W.S. = WOOD SHED.
W = WEST.
℄ = CENTER LINE.
Δ = CENTRAL ANGLE.
∠ = ANGLE.
= WOOD FENCE.
= CHAIN LINK FENCE.
= C.B.S. WALL. (C.B.W.)
0.00 = EXISTING ELEVATIONS.
0.00 = PROPOSED ELEVATIONS.
= TRAFFIC FLOW
(D) = DRAINAGE MH



LOCATION SKETCH SCALE: N.T.S.

ADDRESS:
PARKING LOT AT THE SW CORNER OF
COLLINS AVENUE AND 95 STREET

LEGAL DESCRIPTION:
THE EAST 72.70 FEET OF LOTS 9, 10, 11 AND 12 AND THE SOUTH 5.00 FEET OF THE WEST 62.30 FEET OF LOT 9, BLOCK 4 AND LOTS 7 AND 8, BLOCK 4, OF ALTOS DEL MAR No.6, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8, AT PAGE 106, OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.

FOLIO No.:
14-2235-007-0510
14-2235-007-0490

CERTIFICATIONS:
THIS DRAWING IS CERTIFIED TO FLORIDA TRANPORTATION ENGINEERING, INC., AND THE TOWN OF SURFSIDE, MIAMI-DADE COUNTY, FLORIDA.

SURVEYOR'S NOTES:
1). IF SHOWN, BEARINGS ARE REFERRED TO AN ASSUMED MERIDIAN, BY SAID PLAT IN THE DESCRIPTION OF THE PROPERTY. IF NOT, THEN BEARINGS ARE REFERRED TO COUNTY, TOWNSHIP MAPS.
2). ALL ELEVATIONS SHOWN ARE REFERRED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 MIAMI-DADE COUNTY BENCH MARK # Z-313.LOCATOR NO. 2225 E @ 96th ST. & HARDING AVE.; ELEVATION 9.59 FEET OF N.G.V.D. OF 1929
3). THERE MAY BE EASEMENTS RECORDED IN THE PUBLIC RECORDS NOT SHOWN ON THIS SURVEY.
4). THE CLOSURE IN THE BOUNDARY SURVEY IS ABOVE 1:7500 FT.
5). L.B. = Certificate of Authorization L.B.#7806
6). NORTH BASED ON PLAT NORTH.

LEGAL NOTES TO ACCOMPANY SKETCH OF SURVEY (SURVEY):
- EXAMINATIONS OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS, IF ANY, AFFECTING THE PROPERTY.
- THIS SURVEY IS SUBJECT TO DEDICATIONS, LIMITATIONS, RESTRICTIONS, RESERVATIONS OR EASEMENTS OF RECORD.
- LEGAL DESCRIPTION PROVIDED BY CLIENT OR ATTESTING TITLE COMPANY.
- BOUNDARY SURVEY MEANS A DRAWING AND/ OR A GRAPHIC REPRESENTATION OF THE SURVEY WORK PERFORMED IN THE FIELD, COULD BE DRAWN AT A SHOWN SCALE AND OR NOT TO SCALE.
- EASEMENTS AS SHOWN ARE PER PLAT BOOK, UNLESS OTHERWISE NOTED.
- THE TERM "ENCROACHMENT" MEANS VISIBLE ON AND ABOVE GROUND ENCROACHMENT.
- ARCHITECTS SHALL VERIFY ZONING REGULATIONS, RESTRICTIONS AND SETBACKS AND THEY WILL BE RESPONSIBLE OF SUBMITTING PLOT PLANS WITH THE CORRECT INFORMATION
  FOR THEIR APPROVAL FOR AUTHORIZATION TO AUTHORITIES IN A NEW CONSTRUCTIONS, UNLESS OTHERWISE NOTED, THIS FIRM HAS NOT ATTEMPTED TO LOCATE FOOTING AND/OR
  FOUNDATIONS.
- FENCE OWNERSHIP NOT DETERMINED.
- THIS PLAN OF SURVEY, HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE ENTITIES NAMED HEREON, THE CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PARTY.
- THE SURVEYOR MAKES NO GUARANTEES AS TO THE ACCURACY OF THE INFORMATION BELOW, THE LOCAL F.E.M.A. AGENT SHOULD BE CONTACTED FOR VERIFICATION. THE FNIP FLOOD MAPS HAVE DESIGNATED THE HEREIN DESCRIBED LAND TO BE IN FLOOD ZONE "X"; THE SUBJECT PROPERTY DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA.

I HEREBY CERTIFY: THAT THIS "TOPOGRAPHIC SURVEY" OF THE PROPERTY DESCRIBED HEREON, AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION, COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO 472.027, FLORIDA STATUTES.

BY: _____ 08-01-2011

JOHN IBARRA (DATE OF FIELD WORK)
LAND SURVEYOR NO. : 5204
STATE OF FLORIDA

(VALID COPIES OF THIS SURVEY WILL BEAR THE EMBOSSED SEAL OF THE ATTESTING LAND SURVEYOR).

REVISED ON: _____

REVISED ON: _____

JOHN IBARRA CERTIFICATE NO. 5204 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR

SEAL

L.B.# 7806

777 N.W. 72nd AVENUE SUITE 3025
MIAMI, FLORIDA 33126
TELEPHONE: (305) 262-0400
FAX: (305) 262-0401

DRAWN BY: MCH

JOHN IBARRA & ASSOC.,INC.
LAND SURVEYORS

SURVEY No. 11-002043-1

SHEET No. 1 OF 1

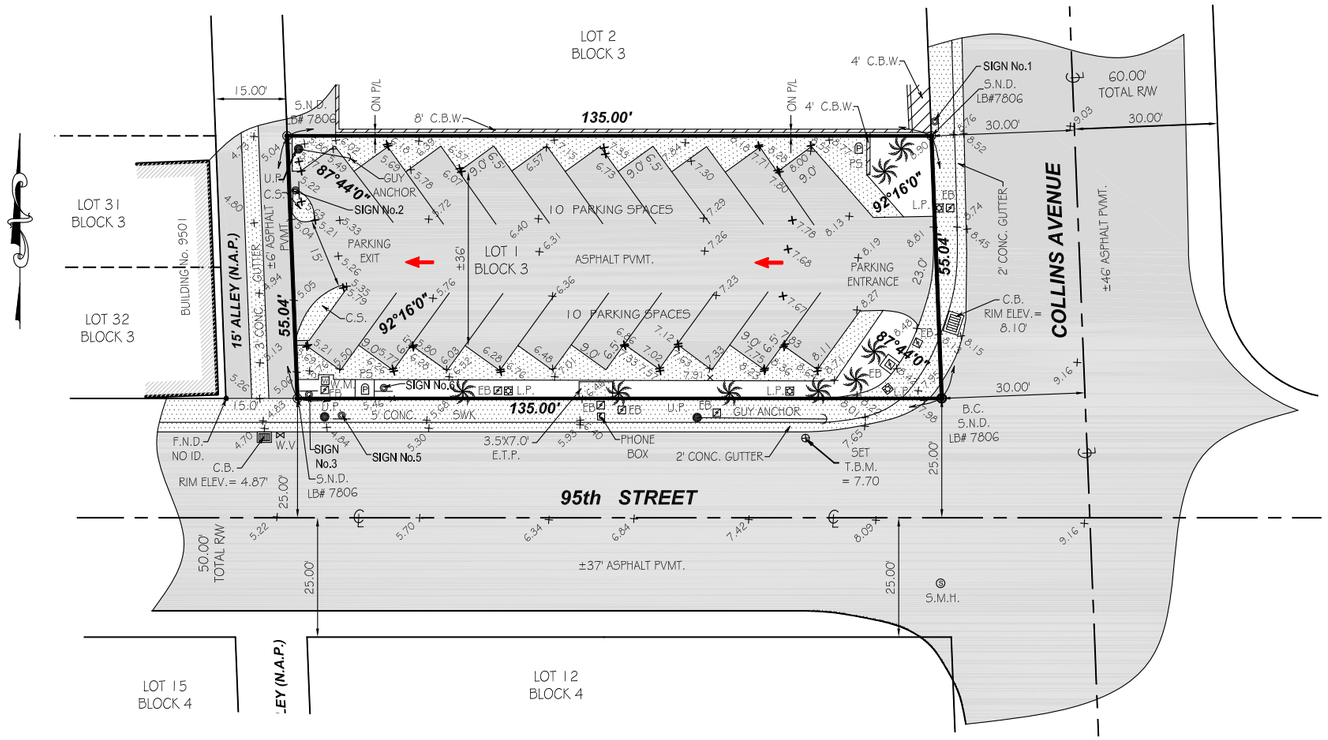
TOPOGRAPHIC SURVEY OF PARKING LOT

PLAT BOOK 8, PAGE 106 - MIAMI DADE COUNTY, FLORIDA
SECTION 35, TWP. 52 SOUTH, RANGE 42 EAST

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FEET



LOCATION SKETCH SCALE: N.T.S.

LEGAL DESCRIPTION:
LOT 1, BLOCK 3, OF ALTOS DEL MAR No.6, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8, AT PAGE 106, OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.

FOLIO No.:
14-2235-007-0190

CERTIFICATIONS:
THIS DRAWING IS CERTIFIED TO FLORIDA TRANPORTATION ENGINEERING, INC., AND THE TOWN OF SURFSIDE, MIAMI-DADE COUNTY, FLORIDA.

SURVEYOR'S NOTES:
1). IF SHOWN, BEARINGS ARE REFERRED TO AN ASSUMED MERIDIAN, BY SAID PLAT IN THE DESCRIPTION OF THE PROPERTY. IF NOT, THEN BEARINGS ARE REFERRED TO COUNTY, TOWNSHIP MAPS.
2). ALL ELEVATIONS SHOWN ARE REFERRED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 MIAMI-DADE COUNTY BENCH MARK # Z-313.LOCATOR NO. 2225 E @ 96th ST. & HARDING AVE..; ELEVATION 9.59 FEET OF N.G.V.D. OF 1929
3). THERE MAY BE EASEMENTS RECORDED IN THE PUBLIC RECORDS NOT SHOWN ON THIS SURVEY.
4). THE CLOSURE IN THE BOUNDARY SURVEY IS ABOVE 1:7500 FT.
5). L.B. = Certificate of Authorization L.B.#7806
6). NORTH BASED ON PLAT NORTH.

LEGAL NOTES TO ACCOMPANY SKETCH OF SURVEY (SURVEY):
- EXAMINATIONS OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS, IF ANY, AFFECTING THE PROPERTY.
- THIS SURVEY IS SUBJECT TO DEDICATIONS, LIMITATIONS, RESTRICTIONS, RESERVATIONS OR EASEMENTS OF RECORD.
- LEGAL DESCRIPTION PROVIDED BY CLIENT OR ATTESTING TITLE COMPANY.
- BOUNDARY SURVEY MEANS A DRAWING AND/ OR A GRAPHIC REPRESENTATION OF THE SURVEY WORK PERFORMED IN THE FIELD, COULD BE DRAWN AT A SHOWN SCALE AND OR NOT TO SCALE.
- EASEMENTS AS SHOWN ARE PER PLAT BOOK, UNLESS OTHERWISE NOTED.
- THE TERM "ENCROACHMENT" MEANS VISIBLE ON AND ABOVE GROUND ENCROACHMENT.
- ARCHITECTS SHALL VERIFY ZONING REGULATIONS, RESTRICTIONS AND SETBACKS AND THEY WILL BE RESPONSIBLE OF SUBMITTING PLOT PLANS WITH THE CORRECT INFORMATION FOR THEIR APPROVAL FOR AUTHORIZATION TO AUTHORITIES IN A NEW CONSTRUCTIONS, UNLESS OTHERWISE NOTED, THIS FIRM HAS NOT ATTEMPTED TO LOCATE FOOTING AND/OR FOUNDATIONS.
- FENCE OWNERSHIP NOT DETERMINED.
- THIS PLAN OF SURVEY, HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE ENTITIES NAMED HEREON, THE CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PARTY.
- THE SURVEYOR MAKES NO GUARANTEES AS TO THE ACCURACY OF THE INFORMATION BELOW, THE LOCAL F.E.M.A. AGENT SHOULD BE CONTACTED FOR VERIFICATION. THE FNIP FLOOD MAPS HAVE DESIGNATED THE HEREIN DESCRIBED LAND TO BE IN FLOOD ZONE "X"; THE SUBJECT PROPERTY DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA.

ABBREVIATIONS AND MEANINGS

A = ARC
A/C = AIR CONDITIONER PAD.
A.E.= ANCHOR EASEMENT.
A/R = ALUMINUM ROOF.
A/S = ALUMINUM SHED.
ASPH.= ASPHALT.
B.C.= BLOCK CORNER.
B.C.R.= BROWARD COUNTY RECORDS
BLDG.= BUILDING.
B.M.= BENCH MARK
B.O.B.= BASIS OF BEARINGS.
C = CALCULATED
C.B = CATCH BASIN.
C.B.S = CONCRETE BLOCK STRUCTURE.
CBW = CONCRETE BLOCK WALL.
CH.= CHORD.
CH.B.= CHORD BEARING.
CL = CLEAR
C.L.F.= CHAIN LINK FENCE.
C.M.E.= CANAL MAINTENANCE EASEMENTS.
CONC.= CONCRETE.
C.P.= CONC. PORCH.
C.S.= CONCRETE SLAB.
C.W.= CONCRETE WALK
D.E.= DRAINAGE EASEMENT .
D.M.E.= DRAINAGE MAINTENANCE EASEMENTS
DRIVE = DRIVEWAY
° = DEGREES.
E = EAST.
EB = ELECTRIC BOX
E.T.P.= ELECTRIC TRANSFORMER PAD.
ELEV.= ELEVATION.
ENCR.= ENCROACHMENT.
F.H.= FIRE HYDRANT.
F.I.P.= FOUND IRON PIPE.
F.I.R.= FOUND IRON ROD.
F.F.E.= FINISHED FLOOR ELEVATION.
F.N.D.= FOUND NAIL & DISK.
FR = FRAME.
FT = FEET.

PROP. COR.= PROPERTY CORNER
FNIP.= FEDERAL NATIONAL INSURANCE
F.N.= FOUND NAIL.
H.= HIGH (HEIGHT)
IN.& EG.= INGRESS AND EGRESS EASEMENT.
L.B. = Certificate of Authorization L.B.#7806
L.P.= LIGHT POLE.
L.F.E.= LOWEST FLOOR ELEVATION.
L.M.E.= LAKE MAINTENANCE EASEMENT.
' = MINUTES.
M. = MEASURED DISTANCE.
MB = MAIL BOX
M.D.C.R.= MIAMI DADE COUNTY RECORDS
MON. = MONUMENT LINE.
M/H = MANHOLE.
M/L = MONUMENT LINE.
N.A.P. = NOT A PART OF.
NGVD = NATIONAL GEODETIC VERTICAL DATUM.
N. = NORTH.
N.T.S. = NOT TO SCALE.
#=NO. = NUMBER.
O/S = OFFSET.
O.H. = OVERHEAD
O.H.L.= OVERHEAD UTILITY LINES
O.R.B. = OFFICIAL RECORDS BOOK
OVH = OVERHANG
PVMT.= PAVEMENT.
PL.= PLANTER.
P/L = PROPERTY LINE.
P.C.C.= POINT OF COMPOUND CURVE.
P.C.= POINT OF CURVE.
PT.= POINT OF TANGENCY.
POC.= POINT OF COMMENCEMENT.
POB.= POINT OF BEGINNING.
P.R.C.= POINT OF REVERSE CURVE
P.B.= PLAT BOOK.
PG.= PAGE.
PS = PAY STATION
PM = PARKING METER
PWY. = PARKWAY.
PRM. = PERMANENT REFERENCE MONUMENT.
P.L.S.= PROFESSIONAL LAND SURVEYOR.
R. = RECORDED DISTANCE.
RR.= RAIL ROAD.
RES.= RESIDENCE.

R/W = RIGHT-OF-WAY.
R.P.= RADIUS POINT.
RGE.= RANGE.
SEC.= SECTION.
STY.= STORY.
SWK.= SIDEWALK.
S.I.P.= SET IRON PIPE L.B. #7806.
S.P. = SCREENED PORCH
S.= SOUTH.
" = SECONDS
T = TANGENT
TB = TELEPHONE BOOTH
TSB = TRAFFIC SIGNAL BOX
TSP = TRAFFIC SIGNAL POLE
TWP = TOWNSHIP.
UTIL.= UTILITY.
U.P.= UTILITY POLE.
W.M.= WATER METER.
W.F.= WOOD FENCE.
W.R.= WOOD ROOF.
W.S.= WOOD SHED.
W = WEST.
℄ = CENTER LINE.
Δ = CENTRAL ANGLE.
∠ = ANGLE.
= WOOD FENCE.
= CHAIN LINK FENCE.
= C.B.S. WALL.(C.B.W.)
x 0.00 = EXISTING ELEVATIONS.
0.00 = PROPOSED ELEVATIONS.
= TRAFFIC FLOW
Ⓓ = DRAINAGE MH

SIGN #	IMAGE	TRAFFIC SIGN
No.1		PARKING SIGN
No.2		NO LEFT AND RIGHT TURN SIGN
No.3		STOP SIGN
No.4		PAY HERE SIGN
No.5		TOW AWAY ZONE SIGN
No.5		PAY HERE SIGN

I HEREBY CERTIFY: THAT THIS "TOPOGRAPHIC SURVEY" OF THE PROPERTY DESCRIBED HEREON, AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION, COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO 472.027, FLORIDA STATUTES.

BY: _____ 08-01-2011
JOHN IBARRA (DATE OF FIELD WORK)
LAND SURVEYOR NO. : 5204
STATE OF FLORIDA

(VALID COPIES OF THIS SURVEY WILL BEAR THE EMBOSSED SEAL OF THE ATTESTING LAND SURVEYOR).

REVISED ON: _____

REVISED ON: _____

JOHN IBARRA CERTIFICATE NO. 5204 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR
L.B.# 7806 SEAL

777 N.W. 72nd AVENUE SUITE 3025
MIAMI, FLORIDA 33126
TELEPHONE: (305) 262-0400
FAX: (305) 262-0401

JOHN IBARRA & ASSOC.,INC.

LAND SURVEYORS

SURVEY No. 11-002044-1

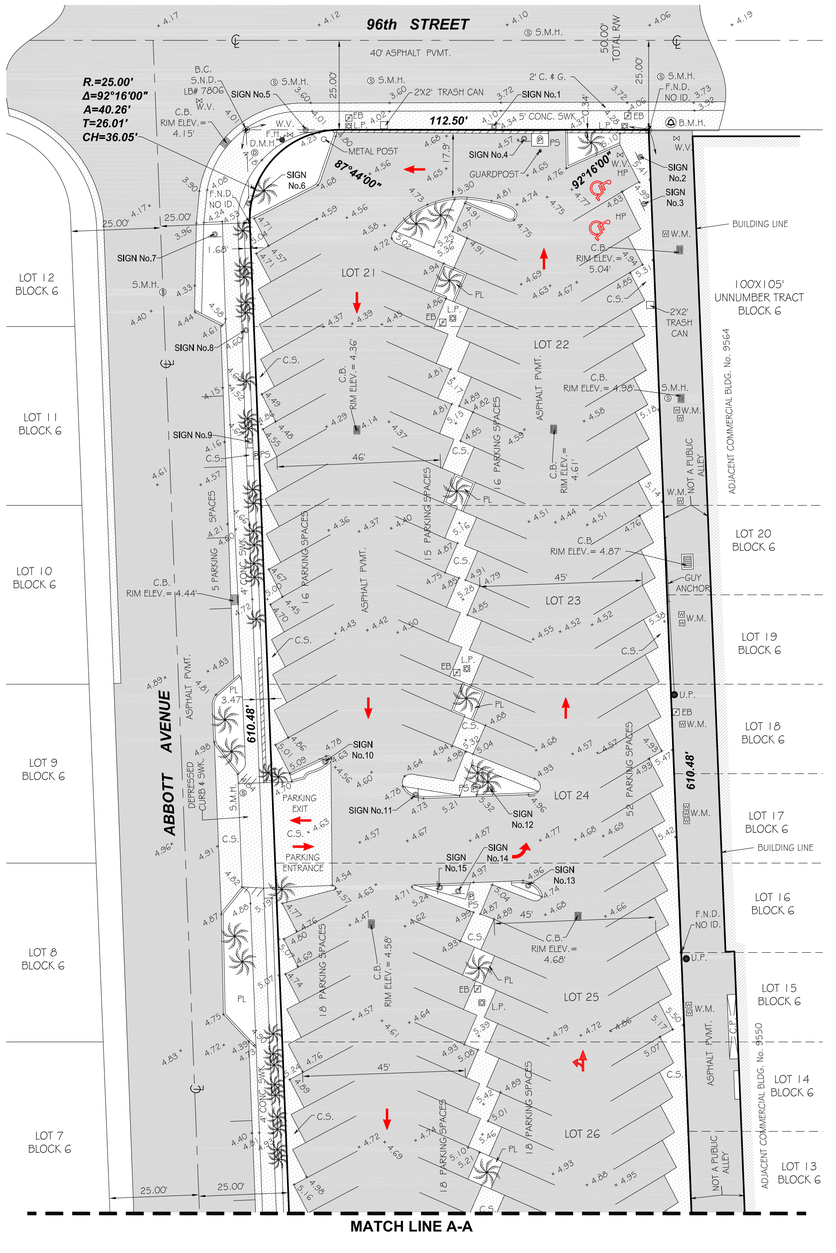
DRAWN BY: MCH

SHEET No. 1 OF 1

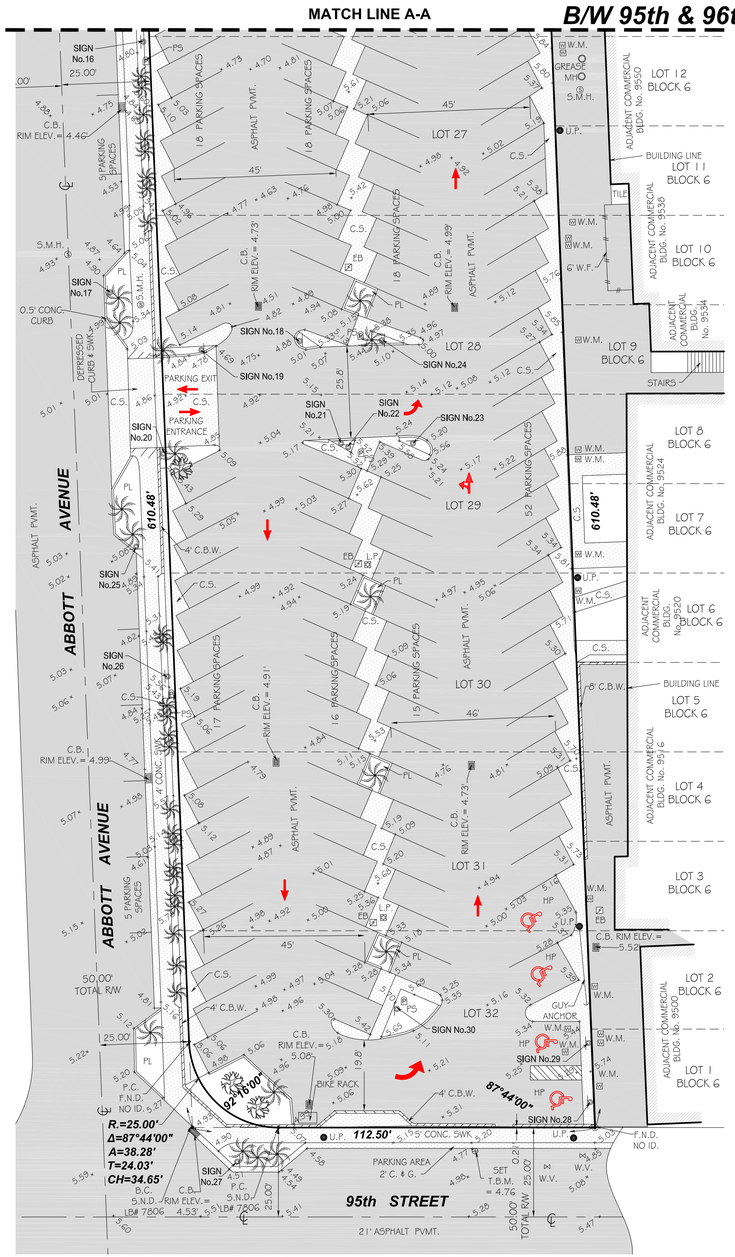
GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH = 20 FEET

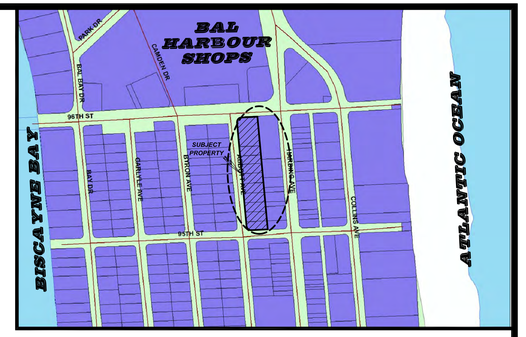
TOPOGRAPHIC SURVEY

OF PARKING LOT ON ABBOT AVENUE B/W 95th & 96th STREET



MATCH LINE A-A





LOCATION SKETCH SCALE: N.T.S.

PLAT BOOK 8, PAGE 106 - MIAMI DADE COUNTY, FLORIDA
SECTION 35, TWP. 52 SOUTH, RANGE 42 EAST

ABBREVIATIONS AND MEANINGS

A = ARC
A/C = AIR CONDITIONER PAD.
A.E. = ANCHOR EASEMENT.
A/R = ALUMINUM ROOF.
A/S = ALUMINUM SHED.
ASPH. = ASPHALT.
B.C. = BLOCK CORNER.
B.C.R. = BROWARD COUNTY RECORDS
BLDG = BUILDING.
B.M. = BENCH MARK
B.O.B. = BASIS OF BEARINGS.
C = CALCULATED
C.B = CATCH BASIN.
C.B.S = CONCRETE BLOCK STRUCTURE.
CBW = CONCRETE BLOCK WALL.
CH. = CHORD.
CH.B. = CHORD BEARING.
CL = CLEAR
C.L.F. = CHAIN LINK FENCE.
C.M.E. = CANAL MAINTENANCE EASEMENTS.
CONC. = CONCRETE.
C.P. = CONC. PORCH.
C.S. = CONCRETE SLAB.
C.W. = CONCRETE WALK.
D.E. = DRAINAGE EASEMENT
D.M.E. = DRAINAGE MAINTENANCE EASEMENTS
DRIVE = DRIVEWAY
° = DEGREES.
E = EAST.
EB = ELECTRIC BOX
E.T.P. = ELECTRIC TRANSFORMER PAD.
ELEV. = ELEVATION.
ENCR. = ENCROACHMENT.
F.H. = FIRE HYDRANT
F.I.P. = FOUND IRON PIPE.
F.I.R. = FOUND IRON ROD.
F.F.E. = FINISHED FLOOR ELEVATION.
F.N.D. = FOUND NAIL & DISK.
FR = FRAME.
FT = FEET.
PROP. COR. = PROPERTY CORNER
FNIP = FEDERAL NATIONAL INSURANCE
F.N. = FOUND NAIL.
H.P. = HANDICAP PARKING
IN. & EG. = INGRESS AND EGRESS EASEMENT.
L.B. = Certificate of Authorization L.B.#7806
L.P. = LIGHT POLE.
L.F.E. = LOWEST FLOOR ELEVATION.
L.M.E. = LAKE MAINTENANCE EASEMENT.
' = MINUTES.
M. = MEASURED DISTANCE.
MB = MAIL BOX
M.D.C.R. = MIAMI DADE COUNTY RECORDS
MON. = MONUMENT LINE.
M/H = MANHOLE.
M/L = MONUMENT LINE.
N.A.P. = NOT A PART OF.
NGVD = NATIONAL GEODETIC VERTICAL DATUM.
N. = NORTH.
N.T.S. = NOT TO SCALE.
#-NO. = NUMBER.
O/S = OFFSET.
O.H. = OVERHEAD
O.H.L. = OVERHEAD UTILITY LINES
O.R.B. = OFFICIAL RECORDS BOOK
OVH = OVERHANG
PVMT. = PAVEMENT.
PL. = PLANTER.
P/L = PROPERTY LINE.
P.C.C. = POINT OF COMPOUND CURVE.
P.C. = POINT OF CURVE.
PT = POINT OF TANGENCY.
POC. = POINT OF COMMENCEMENT.
POB = POINT OF BEGINNING.
P.R.C. = POINT OF REVERSE CURVE
P.B. = PLAT BOOK.
PG. = PAGE.
PS = PAY STATION
PM = PARKING METER
PWY. = PARKWAY.
PRM. = PERMANENT REFERENCE MONUMENT.
P.L.S. = PROFESSIONAL LAND SURVEYOR.
R. = RECORDED DISTANCE.
RR. = RAIL ROAD.
RES. = RESIDENCE.
R/W = RIGHT-OF-WAY.
R.P. = RADIUS POINT.
RGE. = RANGE.
SEC. = SECTION.
STY. = STORY.
SWK. = SIDEWALK
S.I.P. = SET IRON PIPE L.B. #7806.
S. = SOUTH.
S.P. = SCREENED PORCH
" = SECONDS
T = TANGENT.
TSB = TRAFFIC SIGNAL BOX
TSP = TRAFFIC SIGNAL POLE
TB = TELEPHONE BOOTH
TWP = TOWNSHIP.
UTIL. = UTILITY.
U.P. = UTILITY POLE.
W.M = WATER METER.
W.F. = WOOD FENCE.
W.R. = WOOD ROOF.
W.S. = WOOD SHED.
W = WEST.
℄ = CENTER LINE.
Δ = CENTRAL ANGLE.
∠ = ANGLE.
= WOOD FENCE.
= CHAIN LINK FENCE.
C.B.S. WALL (C.B.W.)
+ 0.00 = EXISTING ELEVATIONS.
0.00 = PROPOSED ELEVATIONS.
= TRAFFIC FLOW
Ⓓ = DRAINAGE MH

SIGN #	IMAGE	TRAFFIC SIGN
No.1	ONLY	TURN SIGN
No.2		PARKING SIGN
No.3		PARKING SIGN
No.4	PAY HERE	PAY HERE SIGN
No.5	RIGHT LANE MUST TURN RIGHT	TURN SIGN
No.6	96 ST - ABBO AVE.	STREET SIGN
No.7	STOP	STOP SIGN
No.8	PAY TO PARK	PAY TO PARK SIGN
No.9	PAY HERE	PAY HERE SIGN
No.10	STOP	STOP SIGN
No.11	STOP	STOP SIGN
No.12	PAY HERE	PAY HERE SIGN
No.13	STOP	STOP SIGN
No.14	PAY HERE	PAY HERE SIGN
No.15		ARROW SIGN
No.16	PAY HERE	PAY HERE SIGN
No.17	SPEED LIMIT 25 MPH	SPEED SIGN
No.18	STOP	STOP SIGN
No.19	STOP	STOP SIGN
No.20	ALL VEHICLES NOT AUTHORIZED TO PARK IN THIS PARKING AREA WILL BE TOWED AWAY	TOW-AWAY SIGN
No.21		ARROW SIGN
No.22	PAY HERE	PAY HERE SIGN
No.23	STOP	STOP SIGN
No.24	PAY HERE	PAY HERE SIGN
No.25	PAY TO PARK	PAY TO PARK SIGN
No.26	PAY HERE	PAY HERE SIGN
No.27	STOP	STOP SIGN
No.28		PARKING SIGN
No.29		PARKING SIGN
No.30	PAY HERE	PAY HERE SIGN

LEGAL DESCRIPTION:
LOTS 21 THRU 32, BLOCK 6, OF ALTOS DEL MAR No.6, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8, AT PAGE 106, OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.

FOLIO No.:
14-2235-007-0940
14-2235-007-0960
14-2235-007-0970
14-2235-007-0980
14-2235-007-0990
14-2235-007-1000
14-2235-007-1010
14-2235-007-1020
14-2235-007-1030
14-2235-007-1040

CERTIFICATIONS:
THIS DRAWING IS CERTIFIED TO FLORIDA TRANPORTATION ENGINEERING, INC., AND THE TOWN OF SURFSIDE, MIAMI-DADE COUNTY, FLORIDA.

SURVEYOR'S NOTES:
1). IF SHOWN, BEARINGS ARE REFERRED TO AN ASSUMED MERIDIAN, BY SAID PLAT IN THE DESCRIPTION OF THE PROPERTY. IF NOT, THEN BEARINGS ARE REFERRED TO COUNTY, TOWNSHIP MAPS.
2). ALL ELEVATIONS SHOWN ARE REFERRED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 MIAMI-DADE COUNTY BENCH MARK # Z-313.LOCATOR NO. 2225 E @ 96th ST. & HARDING AVE..; ELEVATION 9.59 FEET OF N.G.V.D. OF 1929
3). THERE MAY BE EASEMENTS RECORDED IN THE PUBLIC RECORDS NOT SHOWN ON THIS SURVEY.
4). THE CLOSURE IN THE BOUNDARY SURVEY IS ABOVE 1:7500 FT.
5). L.B. = Certificate of Authorization L.B.#7806
6). NORTH BASED ON PLAT NORTH.

LEGAL NOTES TO ACCOMPANY SKETCH OF SURVEY (SURVEY):
- EXAMINATIONS OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS, IF ANY, AFFECTING THE PROPERTY.
- THIS SURVEY IS SUBJECT TO DEDICATIONS, LIMITATIONS, RESTRICTIONS, RESERVATIONS OR EASEMENTS OF RECORD.
- LEGAL DESCRIPTION PROVIDED BY CLIENT OR ATTESTING TITLE COMPANY.
- BOUNDARY SURVEY MEANS A DRAWING AND/ OR A GRAPHIC REPRESENTATION OF THE SURVEY WORK PERFORMED IN THE FIELD, COULD BE DRAWN AT A SHOWN SCALE AND OR NOT TO SCALE.
- EASEMENTS AS SHOWN ARE PER PLAT BOOK, UNLESS OTHERWISE NOTED.
- THE TERM "ENCROACHMENT" MEANS VISIBLE ON AND ABOVE GROUND ENCROACHMENT.
- ARCHITECTS SHALL VERIFY ZONING REGULATIONS, RESTRICTIONS AND SETBACKS AND THEY WILL BE RESPONSIBLE OF SUBMITTING PLOT PLANS WITH THE CORRECT INFORMATION FOR THEIR APPROVAL FOR AUTHORIZATION TO AUTHORITIES IN A NEW CONSTRUCTIONS, UNLESS OTHERWISE NOTED, THIS FIRM HAS NOT ATTEMPTED TO LOCATE FOOTING AND/OR FOUNDATIONS.
- FENCE OWNERSHIP NOT DETERMINED.
- THIS PLAN OF SURVEY, HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE ENTITIES NAMED HEREON, THE CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PARTY.
- THE SURVEYOR MAKES NO GUARANTEES AS TO THE ACCURACY OF THE INFORMATION BELOW, THE LOCAL F.E.M.A. AGENT SHOULD BE CONTACTED FOR VERIFICATION. THE FNIP FLOOD MAPS HAVE DESIGNATED THE HEREIN DESCRIBED LAND TO BE IN FLOOD ZONE "X"; THE SUBJECT PROPERTY DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA.

I HEREBY CERTIFY: THAT THIS "TOPOGRAPHIC SURVEY" OF THE PROPERTY DESCRIBED HEREON, AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION, COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO 472.027, FLORIDA STATUTES.

BY: _____ 08-01-2011
JOHN IBARRA (DATE OF FIELD WORK)
LAND SURVEYOR NO. : 5204
STATE OF FLORIDA

(VALID COPIES OF THIS SURVEY WILL BEAR THE EMBOSSED SEAL OF THE ATTESTING LAND SURVEYOR).

REVISED ON: _____

JOHN IBARRA CERTIFICATE NO. 5204 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR
SEAL
L.B.# 7806

Appendix F

Geotechnical Engineering

TOWN OF SURFSIDE
PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA

REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATIONS

PREPARED FOR: FLORIDA TRANSPORTATION ENGINEERING, INC.

PREPARED BY: GEOSOL, INC.

AUGUST 25, 2011

GEOSOL, Inc.

August 25, 2011

Florida Transportation Engineering, Inc.
7955 NW 12th Street, Suite 418
Doral, Florida 33126

Attention: Mr. Juan Calderon, PE, PTOE
Vice President

Re: **Report of Subsurface Exploration and Geotechnical Engineering Evaluations**
Town of Surfside Parking Lot Improvements
Miami-Dade County, Florida
GEOSOL Project No. 211151

Dear Mr. Calderon:

Geosol, Inc. (GEOSOL) is pleased to submit this report presenting the results of our geotechnical services for the above-referenced project. The services were provided in accordance with our proposal No. P-211177 dated July 25, 2011.You provided authorization to perform our services on July 25, 2011 by means of a subconsultant agreement.

The results of our field exploration and laboratory testing programs for the proposed parking lot improvements as well as our geotechnical engineering evaluations are presented in the accompanying report.

GEOSOL appreciates the opportunity to work on this interesting project. If you have any question or need additional information, please do not hesitate to call our office.

Sincerely,

GEOSOL, INC.

Oracio Riccobono, P.E.
Senior Geotechnical Engineer
Florida License No. 49324

OR/rv

Reinaldo Villa, P.E.
Project Geotechnical Engineer
Florida License No. 72242

cc: Addressee (4)
File (1)

GEOSOL, Inc.
5795-A NW 151st Street
Miami Lakes, FL 33014
Phone (305) 828-4367; Fax (305) 828-4235
E-mail: geosolusa@bellsouth.net

TABLE OF CONTENTS

APPENDIX

INTRODUCTION

Project Information

Based on information provided by Florida Transportation Engineering, Inc. (FTE), we understand that parking lot improvements will be required, which will consist of milling and resurfacing improvements as well as drainage improvements. Parking lot improvements will be required at the following locations:

- Town Hall Lot: NE corner of 93rd Street and Harding Avenue
- Collins Lot: SW corner of 93rd Street and Collins Avenue
- 94th Street Lot: SE corner of 94th Street and Harding Avenue
- Post Office Lot: SW corner of 95th Street and Collins Avenue (eliminated from scope)
- Shul Lot: NW corner of 95th Street and Collins Avenue
- Abbott Lot: East side of 9500 Abbott Avenue

Based on discussions with Mr. Bill Evans, Town of Surfside Capital Improvements Director, we understand that improvements to the existing Post Office Lot (located on the southwest corner of 95th Street and Collins Avenue) have been eliminated. We understand that the parking lot has been recently resurfaced.

Specifically, the geotechnical services required the performance of borehole percolation testing for use in drainage evaluations and design. Additionally, pavement cores were required in order to determine the thickness, condition and composition of the existing pavement. The field exploration and laboratory testing programs were required to investigate the subsurface and groundwater conditions and to provide geotechnical engineering recommendations for the proposed parking lot improvements. The design of temporary ground support systems for the installation of drainage structures in not part of our scope of services and we are assuming it will be performed by others.

Purpose

The purpose of this study was to evaluate the underground conditions (i.e. subsurface and groundwater) in light of the proposed construction. This report presents the results of our field exploration, laboratory testing, geotechnical engineering evaluations, and considerations for the proposed construction.

SCOPE OF SERVICES

The scope of services consisted of providing the following services:

1. Performing site reconnaissance, locating and coordinating for existing utilities.

2. Obtaining eleven (11) asphalt pavement cores from the existing pavement for determination of asphalt pavement condition, thickness and composition.

3. Performing eleven (11) Standard Penetration Test (SPT) borings to depths of 2 feet below existing grades to determine the type and thickness of the base and subbase materials.

4. Performing six (6) borehole percolation tests at depths of 15 feet below existing grades for use in drainage evaluations and design.

5. Measuring groundwater levels at the boring locations.

6. Backfilling the boreholes using grout, patching the surface of the coring locations with cold-mix asphalt, and restoring the sites to their original conditions.

7. Visually examining and classifying all recovered soil samples from in the laboratory using the American Association of State Highway and Transportation Officials (AASHTO) Soil Classification System without the aid of laboratory classification testing

8. Visually examining and classifying all recovered asphalt pavement core specimens.

9. Evaluating the results of the SPT boring information.

10. Deriving hydraulic conductivity (k) values from the percolation test field data.

11. Providing discussions of critical design or construction considerations based on the subsurface and groundwater conditions developed from the results of the geotechnical investigations.

12. Preparing a geotechnical engineering report summarizing the field testing data, subsurface and groundwater conditions, geotechnical evaluations and recommendations.

SITE CONDITIONS

Our understanding of the site conditions is based on our initial field review and our observations during the performance of the field exploration program. We have appended a Site Vicinity Map that identifies the location of the study area, which is presented in Sheet 1 of the Appendix. Test location plans are presented in Sheets 2 through 5 of the Appendix of this report. The existing conditions at the site generally consist of commercial areas. The existing roadway pavement consists of a flexible asphaltic concrete structure and is in relatively poor condition with rutting and many cracks visible at the surface of the pavement.

FIELD EXPLORATION

General

The field exploration program for this study included the performance of asphalt pavement coring, Standard Penetration Test (SPT) borings and borehole percolation testing. Specifically, the asphalt pavement coring program included collecting a total of eleven (11) asphalt pavement cores (designated as "C" series) for evaluation of milling and resurfacing improvements. The asphalt pavement coring program included the performance of SPT borings at each coring location to depths of 2 feet below the asphalt to determine the type and thickness of the base and subbase materials. Also, a total of six (6) borehole percolation tests were performed at depths of 15 feet below existing grades in each location for use in drainage evaluations and design. We understand that improvements to the Post Office Lot have been eliminated; therefore, the field exploration program for this lot (i.e. core No. C-7 and percolation test P-4) was not completed. At the time we were notified that the Post Office lot had been eliminated pavement core C-8 had already been obtained at this site.

The test locations were marked in the field by a representative of GEOSOL utilizing existing landmarks and standard taping procedures. The "as-drilled" locations for each test were obtained by utilizing a hand-held Global Positioning System (GPS) device and should be considered approximate to within a few feet. The latitude and longitude coordinates obtained with the GPS device were converted to northing and easting coordinates utilizing the software "Corpscon" developed by the United States Army Corps of Engineers. The ground surface elevations at each test location have not been provided to us at this point. A summary of the approximate test locations is presented in Table 1 and in the Test Location Plan sheets presented in the Appendix of this report.

Asphalt Pavement Coring

The asphalt pavement cores were obtained using a 6-inch diameter core barrel that was attached to an AWJ diameter drilling rod and to a truck mounted drill rig. The core barrel was advanced by slowly drilling through the asphalt pavement. Water was used to aid the drilling process and to keep the core barrel cool. Upon reaching the surface of the base materials, the coring process was terminated and the pavement core was retrieved. The total thickness of the asphalt pavement was measured and recorded. Measurements of the rut depth and cross slope were measured prior to the performance of the asphalt pavement coring program. We have prepared a "Pavement Evaluation Coring and Condition Data" sheet and is presented in the Appendix along with asphalt pavement core and site photographs. The approximate location of the pavement cores is presented in Table 1 and on the Test Location Plan sheets in the Appendix of this report.

Standard Penetration Test (SPT) Borings

The SPT boring procedures were conducted in general conformance with ASTM D-1586. All SPT borings were performed utilizing a truck-mounted drill rig (Foremost Mobile B-53) using a recently calibrated automatic hammer. After seating the sampler 6 inches, the number of successive blows required to drive the sampler 12 inches into the soil constitutes the test result commonly referred to as the "N"-value. The "N"-value has been empirically correlated with various soil properties and is considered to be indicative of the relative density of cohesionless soils and the consistency of cohesive soils. The N-value information for each SPT boring is presented in the Test Boring Records that are included in the Appendix of this report.

Borehole Percolation Testing

The percolation testing was performed in general accordance with the South Florida Water Management District (SFWMD) "Usual Open-Hole" constant head method. The tests were performed to determine the hydraulic conductivity values (k) of the subsurface materials at depths 15 feet below the existing ground surface. The boreholes were drilled by means of a 4 ¾ -inch diameter tri-cone bit and water. Upon drilling each borehole, a 4-inch diameter perforated PVC pipe was inserted in the ground and used a pump for purging the well prior the start of the test. After completion of the percolation tests, the boreholes were backfilled with grout and the site was restored as required. The hydraulic conductivity values (k) were determined from the results obtained during the field testing. The hydraulic conductivity values are reported in units of cubic feet per second per square foot of seepage area per foot of head (cfs/ft^2-ft.). The test results are presented in Table 2 in the Appendix of this report.

Water Level Measurements

Water level depths were obtained during the performance of the test boring operations. They are noted on Table 2 of the Appendix of this report. In relatively pervious soils, such as sandy (granular) soils, the indicated depths are usually reliable groundwater levels. Seasonal variations, tidal conditions, temperature variations, land uses, and recent rainfall conditions may influence the depth of groundwater levels.

LABORATORY TESTING PROGRAM

General

Representative samples collected from the test borings were visually reviewed in the laboratory by a Geotechnical Engineer to confirm the field classifications. The soil samples were classified using the American Association of State Highway and Transportation Officials (AASHTO) Soil Classification System in general accordance with the American Society of Testing and Materials (ASTM) test designation D-3282, titled "Classification of Soils and Soils-Aggregate Mixtures for Highway Construction Purposes." The classification was based on visual observations without the aid of laboratory classification testing.

SITE SUBSURFACE CONDITIONS

General

The subsurface materials generally disclosed granular fill materials based on the shallow SPT borings performed at the coring locations. Detailed information is presented in the Test Boring Records and Table 2 in the Appendix of this report. The stratification is based on visual examination of the recovered soil/rock samples, laboratory testing and interpretation of the field boring logs by a Geotechnical Engineer. The boring stratification lines represent the approximate boundaries between soil types of significantly different engineering properties; however, the actual transition may be gradual. In some cases, small variations in properties not considered pertinent to our engineering evaluation may have been abbreviated for clarity. The borings present the subsurface conditions at the particular test location and slight variations do occur among the borings.

Specifically, we have identified two (2) strata along the project alignment (except the asphalt pavement) and they are described in Table "A" below.

TABLE "A" – SUMMARY OF SUBSURFACE STRATIGRAPHY

STRATUM No.	MATERIAL DESCRIPTION	AASHTO SYMBOL
0	Asphalt Pavement	N/A
1	Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (FILL; BASE)	A-1-b
2	Brown Fine to Medium SAND with Shell Fragments (SUBBASE)	A-3

Groundwater Conditions

Groundwater levels were measured in the completed boreholes during the drilling operations. Measurements made in the test locations disclosed the water table to be at depths ranging from 3.8 to 7.9 feet below the ground surface. It is to be noted that borings were performed during the start of the wet season. Therefore, during the peak of the wet season the groundwater may be 12 to 18 inches higher than the levels measured at the test boring locations.

ENGINEERING EVALUATIONS AND RECOMMENDATIONS FOR ROADWAY IMPROVEMENTS

General

As we understand it the roadway improvements will consist of milling and resurfacing of the existing five (5) parking lots pavements. The results of the field testing program indicate that the project alignment is generally suitable for the proposed roadway improvements when viewed from a geotechnical perspective. The following sections provide discussions regarding geotechnical recommendations for milling and resurfacing and roadway reconstruction alternatives.

Milling and Resurfacing Recommendations

The results of the field exploration program revealed that the asphalt pavement had thicknesses ranging from 0.8 to 3.8 inches. Based on visual inspection of the cores, all specimens obtained for this project revealed cracking of the asphalt pavement throughout the full length of the cores. It should be noted that the pavement cores obtained from this project are only representative of the locations sampled and that FTE and the Town of Surfside shall be aware that it is possible that the pavement may be cracked the full depth in other locations not explored.

We understand that milling and resurfacing of the existing parking lot pavements is being considered for the improvements. However, we are of the opinion that milling and resurfacing is not the most efficient or cost effective pavement improvement alternative for the proposed improvements since nearly all of the pavement cores revealed cracks extending throughout the full length of the cores. Furthermore, we are of the opinion that the milling and resurfacing option will serve as a temporary solution and due to the reason previously discussed, future milling and resurfacing cycles may occur more frequently. Milling of the existing pavement will leave behind cracks and over time these cracks will propagate and reflect into the new asphalt pavement overlay. For these reasons, we recommend reconstruction of the existing pavements as an alternative for roadway improvement.

If the Town of Surfside ultimately decides to implement the milling and resurfacing option, we recommend milling and resurfacing the existing roadways in accordance with the following list based on the results of our field exploration program:

- Town Hall Lot: mill and resurface 1 inch
- Collins Lot: mill and resurface 2 inches
- 94th Street Lot: mill and resurface a ½ inch
- Post Office Lot: not applicable (parking lot improvements have been eliminated)
- Shul Lot: mill and resurface a ½ inch
- Abbott Lot: mill and resurface a ½ inch

The above recommendations provide a minimum of a ½-inch thick section of existing pavement be left behind in order to avoid potentially exposing and wetting the existing base materials. However, based on the pavement cores collected for the Shul and Abbott lots, less than ½ inch pavement may be left behind. As noted previously, with milling and resurfacing alternative, it is anticipated that reflective cracking will re-appear in the near future. At this point there is no way to estimate the time at which these reflective cracking will re-appear.

Recommendations for Pavement Reconstruction

If the pavement reconstruction alternative is implemented, site preparation shall be in accordance with Sections 110 and 120 of the FDOT "Standard Specifications for Road and Bridge Construction" and FDOT Standard Indices 500 and 505.

Site Preparation

The following are our discussions regarding the utilization and the site preparation requirements of the subsurface soils.

- The material from Stratum Number 0 is the asphalt pavement.
- The materials from Strata Numbers 1 and 2 (A-1-b and A-3) are considered to be select and should be utilized in accordance with FDOT Standard Index 505.

Fill Material

The embankment fill should consist of select material, meeting the requirements of Standard Index 505 and shall be constructed in general accordance of Section 120.8 of the FDOT "Standard Specifications for Road and Bridge Construction".

Pavement Design Suggestions

Based on the results of our SPT borings, it does not appear that the existing subgrade soils have an LBR value of 40, which is typically used for pavement design. If a pavement reconstruction alternative is selected, we recommend that the flexible pavement section consist of (from top to bottom) an asphaltic concrete layer, a limerock base layer and stabilized subgrade layer having a minimum LBR Value of 40.

We recommend that after placement of the first 12 inches of new fill after final subgrade elevations have been achieved, that Limerock Bearing Ratio (LBR) tests be performed per every 10,000 square feet of subgrade. If the LBR values for the stabilized subgrade materials are less than 40, we recommend that the subgrade be stabilized to depths of 12 inches to achieve minimum Limerock Bearing Ratio (LBR) value of 40. The subgrade should be compacted to at least 95 percent of maximum dry density as determined by the Modified Proctor test (ASTM D-1557).

REPORT LIMITATIONS

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This company is not responsible for the conclusions, opinions or recommendations made by others based on these data. No other warranties are expressed or implied.

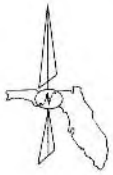
The scope of the investigation was intended to specifically evaluate subsurface conditions within the influence of the proposed parking lot improvements. The analyses and recommendations submitted in this report are based upon the data obtained from the test borings performed at the locations indicated. If any subsoil variations become evident during the course of this project, a re-evaluation of the recommendations contained in this report will be necessary after we have been informed and had an opportunity to observe the characteristics of the conditions encountered. The applicability of the report should also be reviewed in the event significant changes occur in the design.

The scope of our services does not include any environmental assessment or investigation for the presence or absence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client.

APPENDIX

Sheet 1: Site Vicinity Map
Table 1 – Summary of Test Locations
Sheets 2 through 5: Test Location Plans
Pavement Evaluation Coring and Condition Data
Asphalt Pavement and Site Photographs
Test Boring Records (Pavement Cores)
Table 2 – Summary of Borehole Percolation Test Results
Schematics of SFWMD Usual "Open-Hole" Test Procedure

SITE VICINITY MAP



COUNTY: MIAMI-DADE COUNTY, FLORIDA

REFERENCE: GOOGLE EARTH, 2011

DATE: AUGUST, 2011

SITE VICINITY MAP
TOWN OF SURFSIDE
PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA

GEOSOL, INC.

DRAWN	SCALE	PROJ. No.
RV	N.T.S.	21115I
CHECKED	DATE	
OR	AUG., 2011	SHEET 1

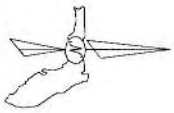
TOWN OF SURFSIDE
PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA
GEOSOL PROJECT No. 211151

TABLE 1 - SUMMARY OF TEST BORING LOCATIONS

BORING No.	LOCATION	APPROXIMATE TEST LOCATION (FEET)		GROUND SURFACE ELEVATION
		NORTHING	EASTING	
C-1/P-1	TOWN HALL LOT	563504.9	944745.6	N/A
C-2	TOWN HALL LOT	563580.1	944740.8	N/A
C-3/P-2	COLLINS LOT	563701.1	944515.3	N/A
C-4	COLLINS LOT	563782.7	944558.6	N/A
C-5/P-3	94TH ST. LOT	564025.8	944539.4	N/A
C-6	94TH ST. LOT	564210.3	944477.4	N/A
C-8	POST OFFICE LOT	564771.2	944541.3	N/A
C-9	SHUL LOT	565011.3	944599.1	N/A
C-10/P-5	SHUL LOT	565012.5	944513.4	N/A
C-11/P-6	ABBOTT LOT	564993.3	944120.2	N/A
C-12	ABBOTT LOT	565125.4	944163.8	N/A

Notes: 1) Test locations C-7 and P-4 were eliminated from this project.

TEST LOCATION PLANS



LEGEND

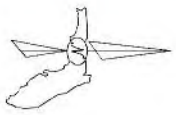
- C-1: APPROXIMATE PAVEMENT CORE LOCATION
- P-1: APPROXIMATE PERCOLATION TEST LOCATION

TEST LOCATION PLAN
TOWN OF SURFSIDE
PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA

GEOSOL, INC.

DRAWN	SCALE	PROJ. No.
RV	N.T.S.	211151
CHECKED	DATE	
OR	AUG., 2011	SHEET 2

TEST LOCATION PLANS



LEGEND

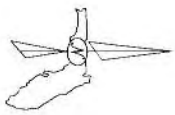
- C-1: APPROXIMATE PAVEMENT CORE LOCATION
- P-1: APPROXIMATE PERCOLATION TEST LOCATION

TEST LOCATION PLAN
TOWN OF SURFSIDE
PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA

GEOSOL, INC.

DRAWN	SCALE	PROJ. No.
RV	N.T.S.	21115I
CHECKED	DATE	
OR	AUG., 2011	SHEET 3

TEST LOCATION PLANS



LEGEND

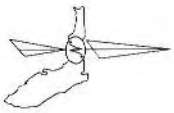
- C-1: APPROXIMATE PAVEMENT CORE LOCATION
- P-1: APPROXIMATE PERCOLATION TEST LOCATION

TEST LOCATION PLAN
TOWN OF SURFSIDE
PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA

GEOSOL, INC.

DRAWN	SCALE	PROJ. No.
RV	N.T.S.	211151
CHECKED	DATE	
OR	AUG., 2011	SHEET 4

TEST LOCATION PLANS



LEGEND

- C-1: APPROXIMATE PAVEMENT CORE LOCATION
- P-1: APPROXIMATE PERCOLATION TEST LOCATION

TEST LOCATION PLAN
TOWN OF SURFSIDE
PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA

GEOSOL, INC.

DRAWN	SCALE	PROJ. No.
RV	N.T.S.	211151
CHECKED	DATE	
OR	AUG., 2011	SHEET 5

State of Florida Department of Transportation

PAVEMENT EVALUATION AND CONDITION DATA

Cored by: GEOSOL, INC. Date: 8/12/2011 - 8/17/2011 Page: 1 OF 1 Typical Section No.:

GEOSOL Project No.: 211151 Name: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS Lanes: N/A (PARKING LOT)

County: MIAMI-DADE S.R. No.: N/A Shoulder Type & Cond. N/A

Inside: N/A

Outside: N/A

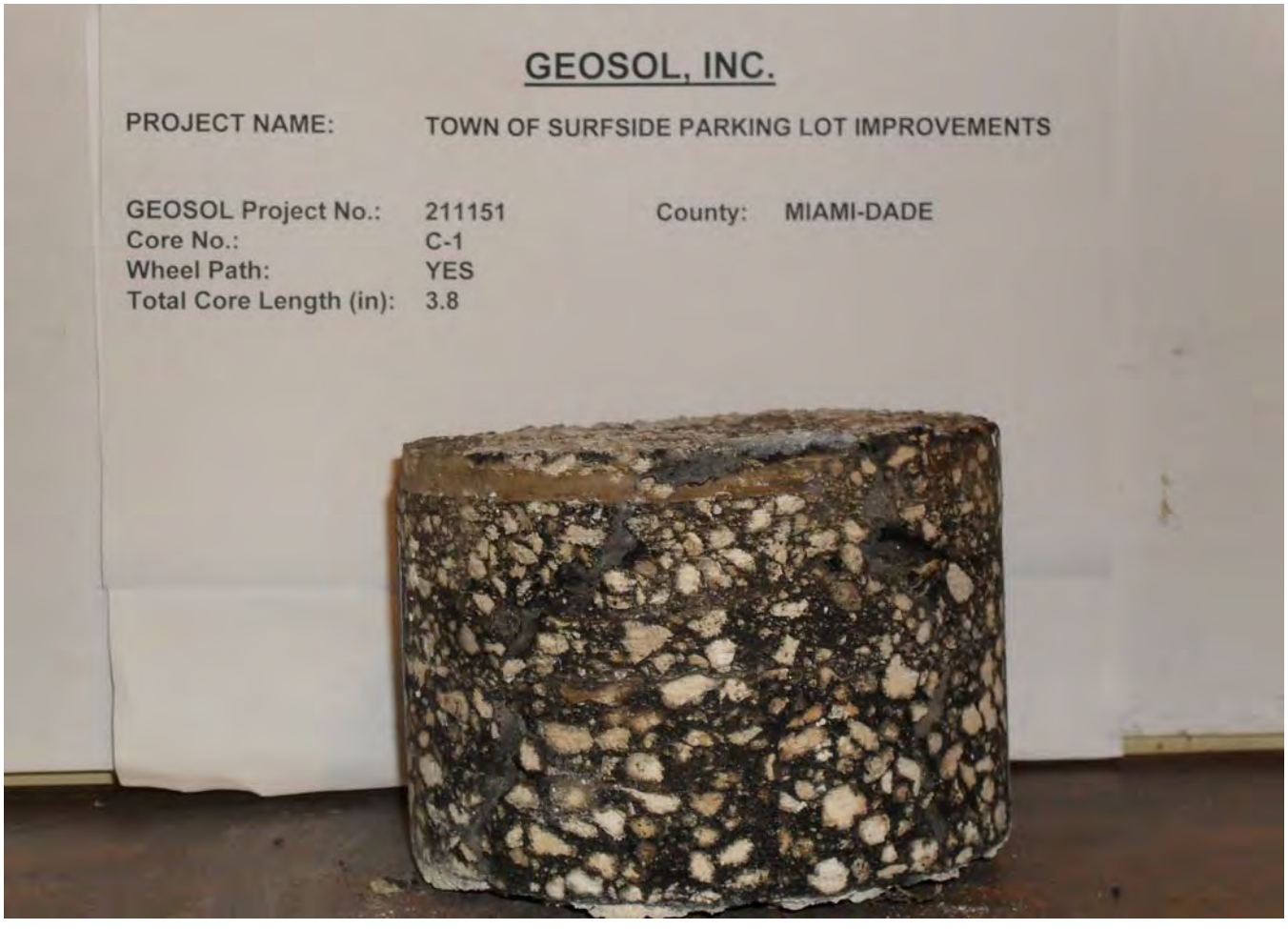
Median Curbed? N/A (NO MEDIAN) Lawn? N Other? Curb & Gutter? N

Core No.	Parking Lot Location	Wheel Path	Pavement Layer (inches) Top FC-2	FC-4	S-III	S-I	S-II	Type-I	Binder	Core Length (inches)	Base (inches)	Sub Base (inches)	Crack Depth (inches)	Type	Class	Extent	Pavement Condition	Rut Depth (in.)	Cross Slope (ft / 6 ft)	Comments
C-1	COLLINS LOT	X	-	-	-	1.0	-	2.8	-	3.8	8.2	≥15.8	3.8	-	-	-	P	1/4	0.038	
C-2		X	-	-	-	1.0	-	2.0	-	3.0	9.0	≥15	-	-	-	-	F	1/8	0.049	
C-3	TOWN HALL LOT	X	-	-	-	1.5	-	-	-	1.5	10.5	≥13.5	1.5	-	-	-	P	1/16	0.017	
C-4		X	-	-	-	1.8	-	-	-	1.8	10.2	≥13.8	1.8	-	-	-	P	1/8	0.007	
C-5	94TH ST. LOT	X	-	-	-	1.0	-	-	-	1.0	9.0	≥15	1.0	-	-	-	P	1/8	0.014	
C-6		X	-	-	-	1.3	-	-	-	1.3	10.7	≥13.3	1.3	-	-	-	P	1/16	0.003	
C-8	POST OFFICE LOT	X	-	-	-	1.0	-	1.6	-	2.6	13.0	≥11	-	-	-	-	P	1/8	0.007	
C-9	SHUL LOT	X	-	-	-	0.8	-	-	-	0.8	13.6	≥10.4	-	-	-	-	F	1/16	0.003	
C-10		X	-	-	-	1.0	-	-	-	1.0	11.0	≥13	1.0	-	-	-	P	1/8	0.007	
C-11	ABBOTT LOT	X	-	-	-	0.8	-	-	-	0.8	11.2	≥12.8	0.8	-	-	-	P	1/32	0.003	
C-12		X	-	-	-	1.0	-	-	-	1.0	17.0	≥7	1.0	-	-	-	P	1/32	0.010	

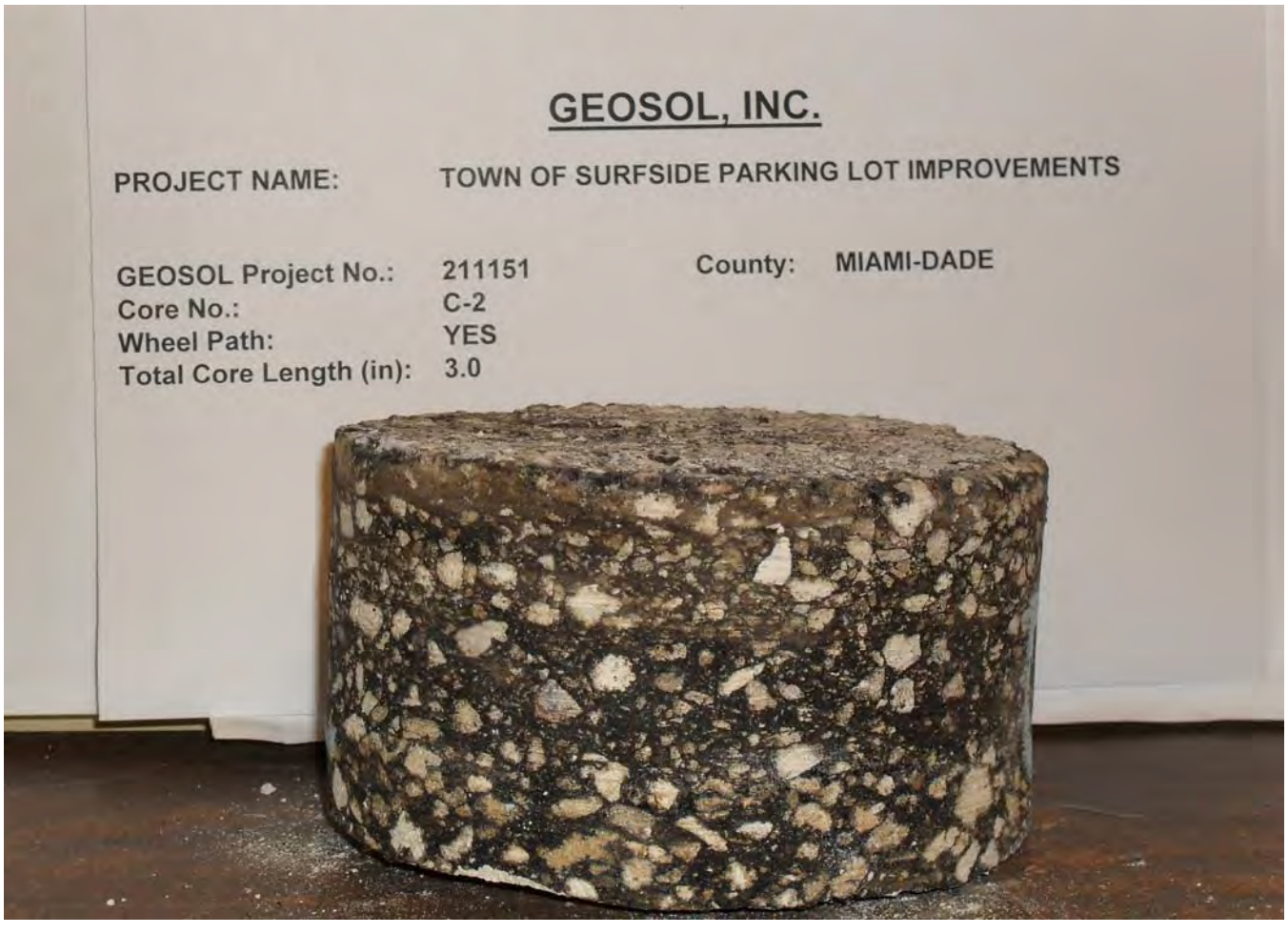
NOTES:

1) THE BASE MATERIALS CONSIST OF SLIGHTLY SILTY FINE TO MEDIUM SAND WITH SOME LIMEROCK FRAGMENTS (A-1-b).
2) THE SUBBASE MATERIALS CONSIST OF NATURAL FINE TO MEDIUM SAND WITH SHELLS (A-3)
3) CORE No. C-7 WAS ELIMINATED FROM THIS PROJECT.


C-1


GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
County: MIAMI-DADE
Core No.: C-1
Wheel Path: YES
Total Core Length (in): 3.8


C-2


GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
County: MIAMI-DADE
Core No.: C-2
Wheel Path: YES
Total Core Length (in): 3.0


C-3 1P-2

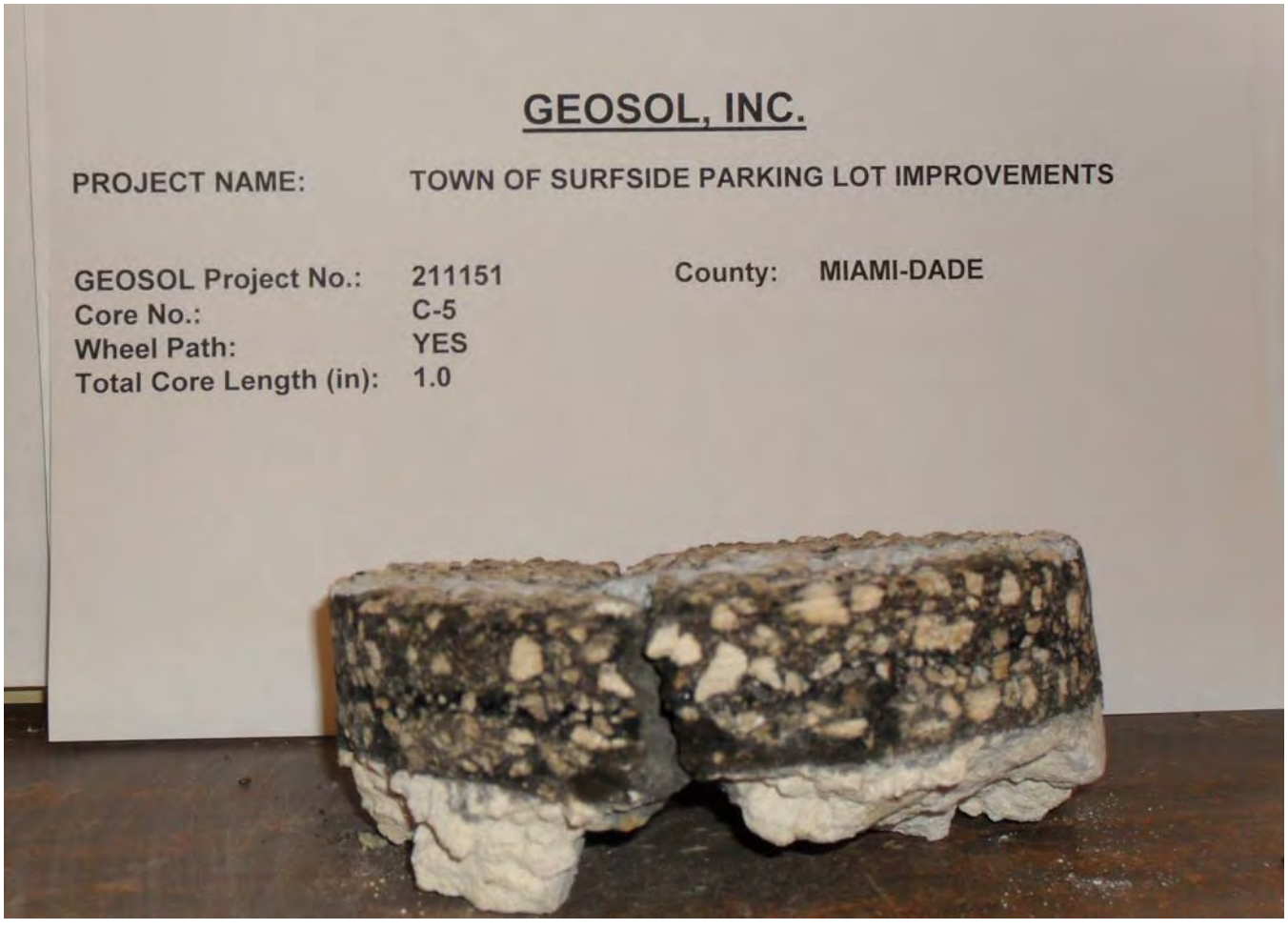

GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
County: MIAMI-DADE
Core No.: C-3
Wheel Path: YES
Total Core Length (in): 1.5

GEOSOL, INC.

PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS

GEOSOL Project No.: 211151
County: MIAMI-DADE
Core No.: C-4
Wheel Path: YES
Total Core Length (in): 1.8


C-5/R3


GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
Core No.: C-5
Wheel Path: YES
Total Core Length (in): 1.0
County: MIAMI-DADE

GEOSOL, INC.

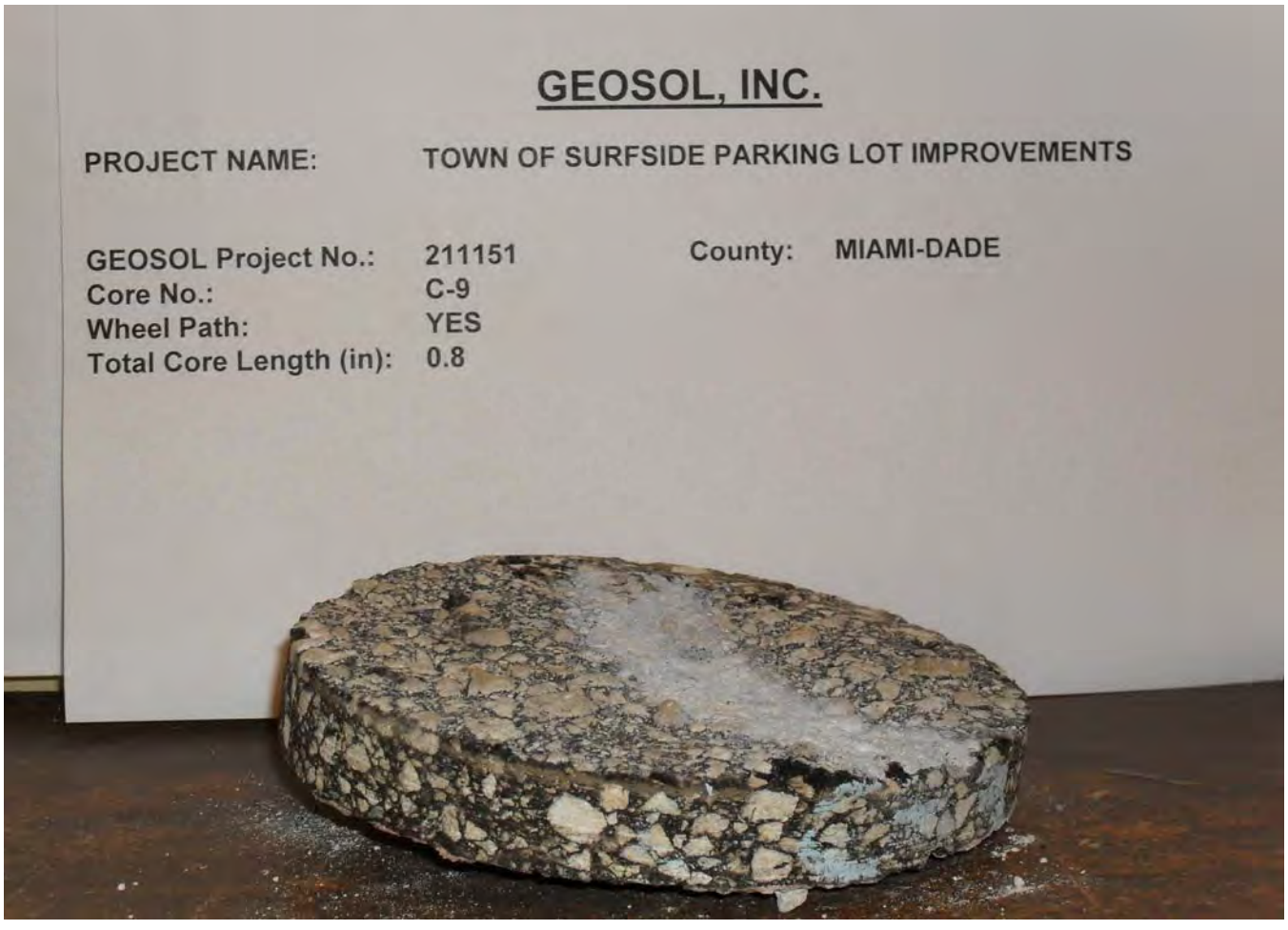
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS

GEOSOL Project No.: 211151
County: MIAMI-DADE
Core No.: C-6
Wheel Path: YES
Total Core Length (in): 1.3

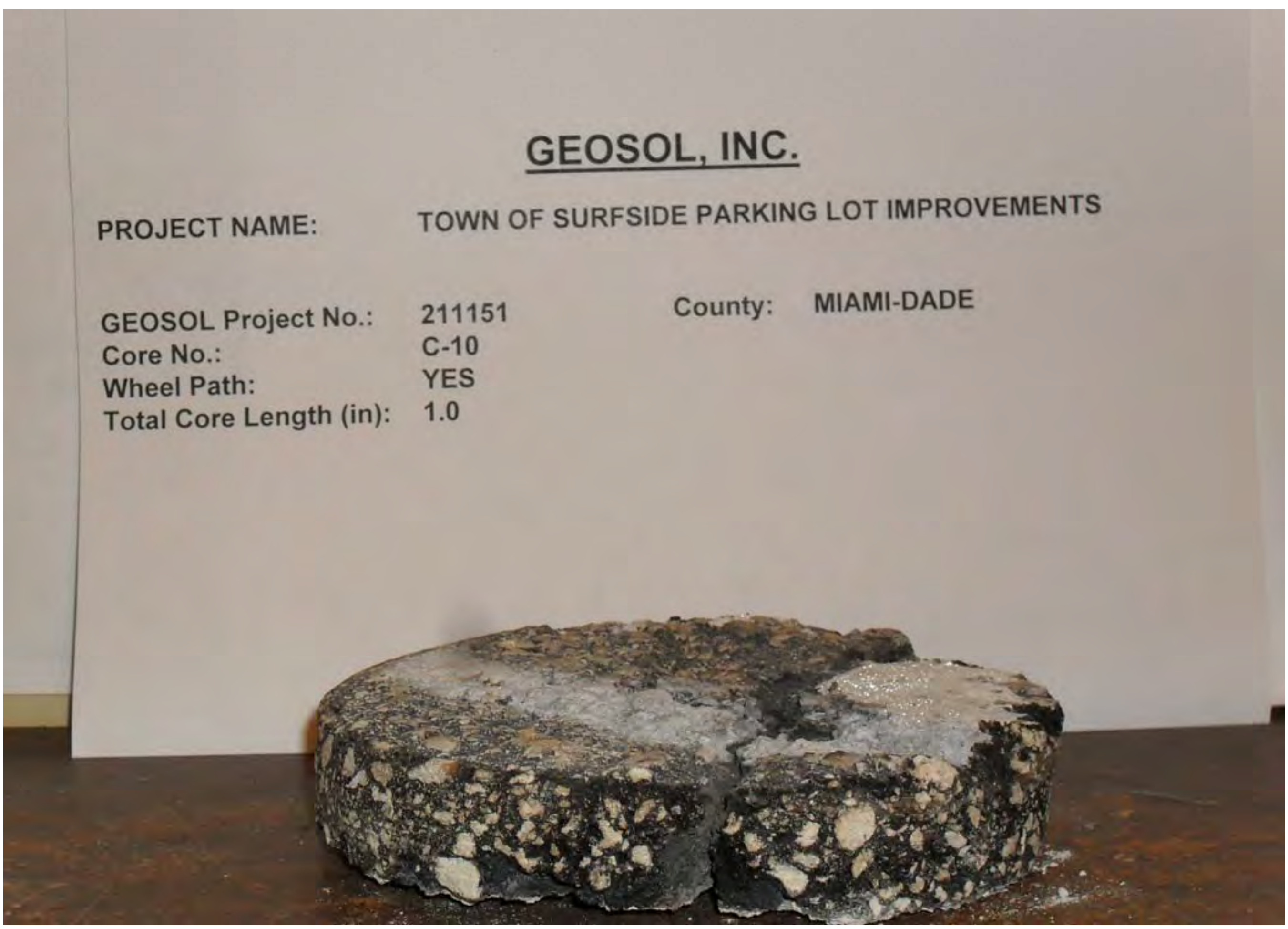

C-8


GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
County: MIAMI-DADE
Core No.: C-8
Wheel Path: YES
Total Core Length (in): 2.6


C-9


GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
Core No.: C-9
Wheel Path: YES
Total Core Length (in): 0.8
County: MIAMI-DADE


C-10/P-5

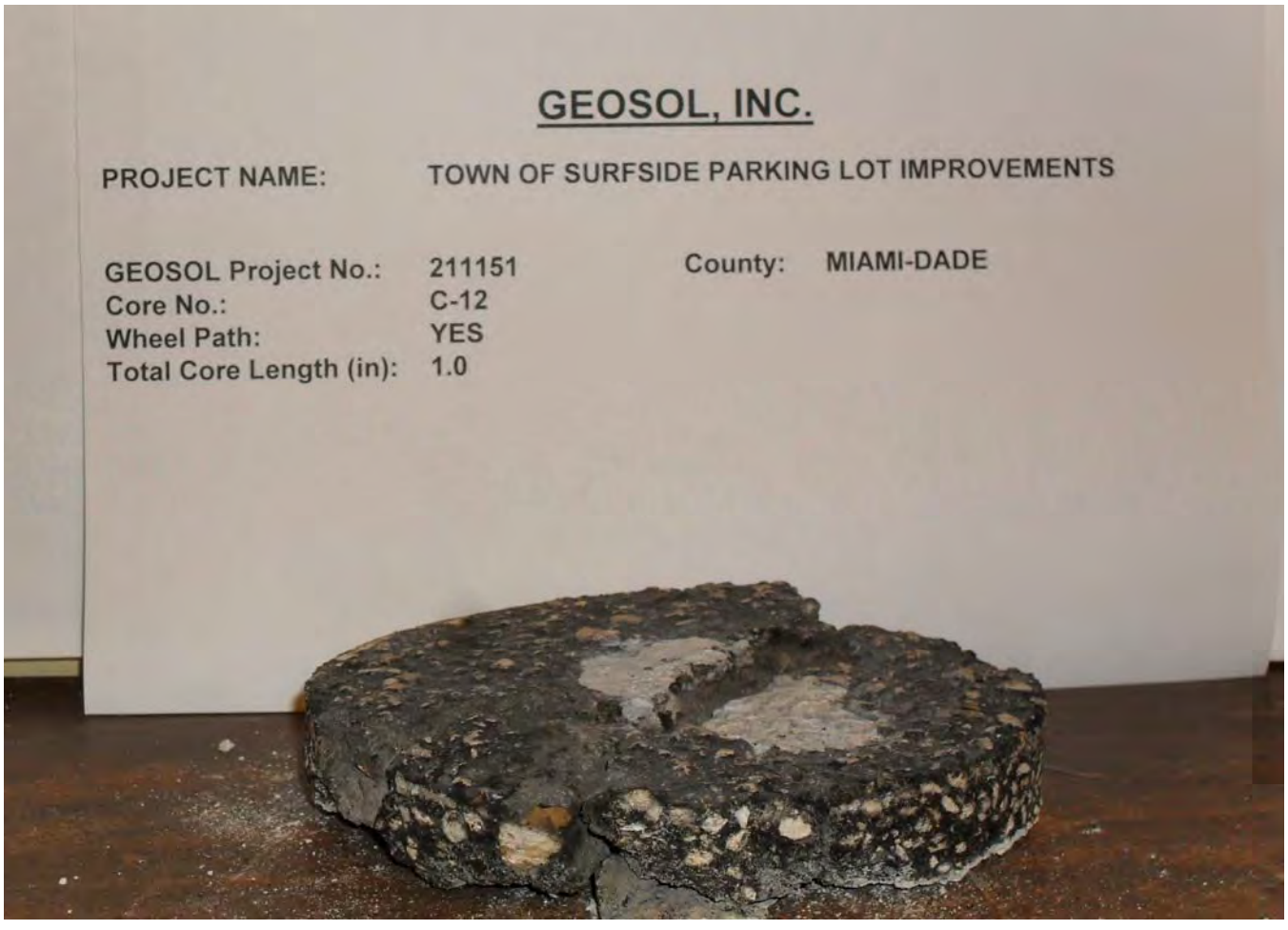

GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
County: MIAMI-DADE
Core No.: C-10
Wheel Path: YES
Total Core Length (in): 1.0

GEOSOL, INC.

PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS

GEOSOL Project No.:	211151	**County:**	MIAMI-DADE
Core No.:	C-11		
Wheel Path:	YES		
Total Core Length (in):	0.8		


C-12


GEOSOL, INC.
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
GEOSOL Project No.: 211151
Core No.: C-12
Wheel Path: YES
Total Core Length (in): 1.0
County: MIAMI-DADE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-1
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A				CASING	SAMPLE	CORE	TUBE		
DATE	TIME	DEPTH (ft)	CASING	TYPE	NW	SS			DATUM (ft): N/A
			L (ft)	DIA.(in)	3	1 - 3/8 ID			DATE START: 8/12/2011
				WT.(lbs)		140			DATE FINISH: 8/12/2011
				FALL(in)		30			DRILLER: R. Morales
									EQUIP./HAMMER: B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 3.8": Asphalt Pavement	
1			12	16		3.8" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			9 7 5			1' to 2.32': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.32 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-2
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A				CASING	SAMPLE	CORE	TUBE
DATE	TIME	DEPTH (ft)	CASING L (ft)	TYPE	NW	SS	
				DIA.(in)	3	1 - 3/8 ID	
				WT.(lbs)		140	
				FALL(in)		30	

DATUM (ft):	N/A
DATE START:	8/12/2011
DATE FINISH:	8/12/2011
DRILLER:	R. Morales
EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 3": Asphalt Pavement	
1			10	13		3" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
			7				
2			6			1' to 2.25': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.25 ft.
			4				BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-3
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A				CASING	SAMPLE	CORE	TUBE
DATE	TIME	DEPTH (ft)	CASING L (ft)	TYPE	NW	SS	
				DIA.(in)	3	1 - 3/8 ID	
				WT.(lbs)		140	
				FALL(in)		30	

DATUM (ft):	N/A
DATE START:	8/12/2011
DATE FINISH:	8/12/2011
DRILLER:	R. Morales
EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 1.5": Asphalt Pavement	
1			14	21		1.5" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			9 12 10			1' to 2.13': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.13 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT.	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-4
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A				CASING	SAMPLE	CORE	TUBE		
DATE	TIME	DEPTH (ft)	CASING L (ft)	TYPE	NW	SS			DATUM (ft): N/A
				DIA.(in)	3	1 - 3/8 ID			DATE START: 8/13/2011
				WT.(lbs)		140			DATE FINISH: 8/13/2011
				FALL(in)		30			DRILLER: R. Morales
									EQUIP./HAMMER: B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
1			-			0 to 1.8": Asphalt Pavement	
			9			1.8" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
			5	9			
2			4			1' to 2.15': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.15 ft.
			3				BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc.	TEST BORING RECORD	BORING No. C-5
MIAMI LAKES, FL	(ASTM D-1586)	

PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS — SHEET No. 1 OF 1

CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.) — GEOSOL PROJECT No. 211151

BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):

GROUNDWATER (FEET): N/A

DATE	TIME	DEPTH (ft)	CASING L (ft)

	CASING	SAMPLE	CORE	TUBE
TYPE	NW	SS		
DIA.(in)	3	1 - 3/8 ID		
WT.(lbs)		140		
FALL(in)		30		

DATUM (ft):	N/A
DATE START:	8/13/2011
DATE FINISH:	8/13/2011
DRILLER:	R. Morales
EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 1": Asphalt Pavement	
1			10	12		1" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			7 5 4			1' to 2.08': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.08 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-6
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A				CASING	SAMPLE	CORE	TUBE	DATUM (ft):	N/A
DATE	TIME	DEPTH (ft)	CASING	TYPE	NW	SS			DATE START:	8/13/2011
			L (ft)	DIA.(in)	3	1 - 3/8 ID			DATE FINISH:	8/13/2011
				WT.(lbs)		140			DRILLER:	R. Morales
				FALL(in)		30			EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft.	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 1.3": Asphalt Pavement	
1			8	10		1.3" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			6 4 3			1' to 2.11': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.11 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT.	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT.	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-8
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A				CASING	SAMPLE	CORE	TUBE
DATE	TIME	DEPTH (ft)	CASING	TYPE	NW	SS		
			L (ft)	DIA.(in)	3	1 - 3/8 ID		
				WT.(lbs)		140		
				FALL(in)		30		

DATUM (ft):	N/A
DATE START:	8/13/2011
DATE FINISH:	8/13/2011
DRILLER:	R. Morales
EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 2.6": Asphalt Pavement	
1			14 9	15		2.6" to 1.3': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			6 5			1.3' to 2.22': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.22 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-9
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A				CASING	SAMPLE	CORE	TUBE		
DATE	TIME	DEPTH (ft)	CASING	TYPE	NW	SS			DATUM (ft): N/A
			L (ft)	DIA.(in)	3	1 - 3/8 ID			DATE START: 8/15/2011
				WT.(lbs)		140			DATE FINISH: 8/15/2011
				FALL(in)		30			DRILLER: R. Morales
									EQUIP./HAMMER: B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 0.8": Asphalt Pavement	
1			10 7	11		0.8" to 1.2': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			4 3			1.2' to 2.07': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.07 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT.	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT.	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-10
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A

DATE	TIME	DEPTH (ft)	CASING L (ft)	TYPE	CASING	SAMPLE	CORE	TUBE
				DIA.(in)	NW	SS		
				WT.(lbs)	3	1 - 3/8 ID		
				FALL(in)		140		
						30		

DATUM (ft):	N/A
DATE START:	8/16/2011
DATE FINISH:	8/16/2011
DRILLER:	R. Morales
EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
1			- 9	10		0 to 1": Asphalt Pavement 1" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			6 4 4			1' to 2.08': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.08 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT.	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT.	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-11
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A

DATE	TIME	DEPTH (ft)	CASING L (ft)

	CASING	SAMPLE	CORE	TUBE
TYPE	NW	SS		
DIA.(in)	3	1 - 3/8 ID		
WT.(lbs)		140		
FALL(in)		30		

DATUM (ft):	N/A
DATE START:	8/17/2011
DATE FINISH:	8/17/2011
DRILLER:	R. Morales
EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 0.8": Asphalt Pavement	
1			13	10		0.8" to 1': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE, A-1-b)	
2			6 4 3			1' to 2.07': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.07 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

GEOSOL, Inc. MIAMI LAKES, FL	TEST BORING RECORD (ASTM D-1586)	BORING No. C-12
PROJECT NAME: TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS		SHEET No. 1 OF 1
CLIENT: FLORIDA TRANSPORTATION ENGINEERING, INC. STATION (ft.) OFFSET (ft.)		GEOSOL PROJECT No. 211151
BORING LOCATION: NORTHING: EASTING: ELEVATION (ft):		

GROUNDWATER (FEET): N/A

DATE	TIME	DEPTH (ft)	CASING L (ft)

	CASING	SAMPLE	CORE	TUBE
TYPE	NW	SS		
DIA.(in)	3	1 - 3/8 ID		
WT.(lbs)		140		
FALL(in)		30		

DATUM (ft):	N/A
DATE START:	8/13/2011
DATE FINISH:	8/13/2011
DRILLER:	R. Morales
EQUIP./HAMMER:	B-53/ AUTO.

DEPTH, ft	SAMPLE No.	STRATUM No.	BLOWS / 6"	N Value (bpf)	SYMBOL	MATERIAL DESCRIPTION	REMARKS
			-			0 to 1": Asphalt Pavement	
1			14 10	17		1" to 1.5': Brown Slightly Silty Fine to Medium SAND with Some Limerock Fragments (BASE; A-1-b)	
2			7 5			1.5' to 2.08': Brown Fine to Medium SAND with Shell Fragments (SUBBASE; A-3)	BORING TERMINATED AT DEPTH OF 2.08 ft. BOREHOLE GROUTED
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

BLOWS/FT	DENSITY
0-3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
> 40	Very Dense

BLOWS/FT	CONSISTENCY
0-1	Very Soft
1-3	Soft
3-6	Medium Stiff
6-12	Stiff
12-24	Very Stiff
> 24	Hard

SAMPLE IDENTIFICATION

- H - Hand Auger
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Pistan
- C - Diamond Core
- W - Wash Sample

- FILL
- SAND
- ORGANIC SOILS / MUCK
- SILT
- CLAY
- LIMESTONE
- SANDSTONE

TABLE 2 - SUMMARY OF CONSTANT HEAD PERCOLATION TEST RESULTS

TOWN OF SURFSIDE PARKING LOT IMPROVEMENTS
MIAMI-DADE COUNTY, FLORIDA
GEOSOL PROJECT No. 211151

Test No.	Date Performed	Diameter		Depth of Hole (Feet)	Depth to Groundwater Level Below Ground Surface (Feet)		SATURATED HOLE DEPTH Ds (Feet)	Corrected Depth of Hole (Feet)	Average Flow Rate (gpm)	K, Hydraulic Conductivity (cfs/ft^2-Ft Head)
		Casing (Inches)	Hole (Inches)		Prior to Test	During Test				
P-1	08/12/11	4	4.75	15	7.9	0.00	7.10	15.00	0.5	1.21E-05
P-2	08/12/11	4	4.75	15	3.9	0.00	11.10	15.00	0.5	2.08E-05
P-3	08/13/11	4	4.75	15	4.7	0.00	10.30	15.00	0.5	1.78E-05
P-5	08/16/11	4	4.75	15	4.9	0.00	10.10	15.00	0.5	1.72E-05
P-6	08/17/11	4	4.75	15	3.8	0.00	11.20	15.00	0.5	2.12E-05

NOTES:

(1) The above hydraulic conductivity values are for French drains installed to the same depths as the borehole tests. The values represent an ultimate value. The designer should decide on the required factor of safety.

(2) The hydraulic conductivity values were calculated based on the South Florida Water Management Districts's USUAL OPEN HOLE CONSTANT HEAD percolation test procedure as shown on the following page.

(3) The diameter of the CASING was used in the computation of the hydraulic conductivity values presented in the above table.

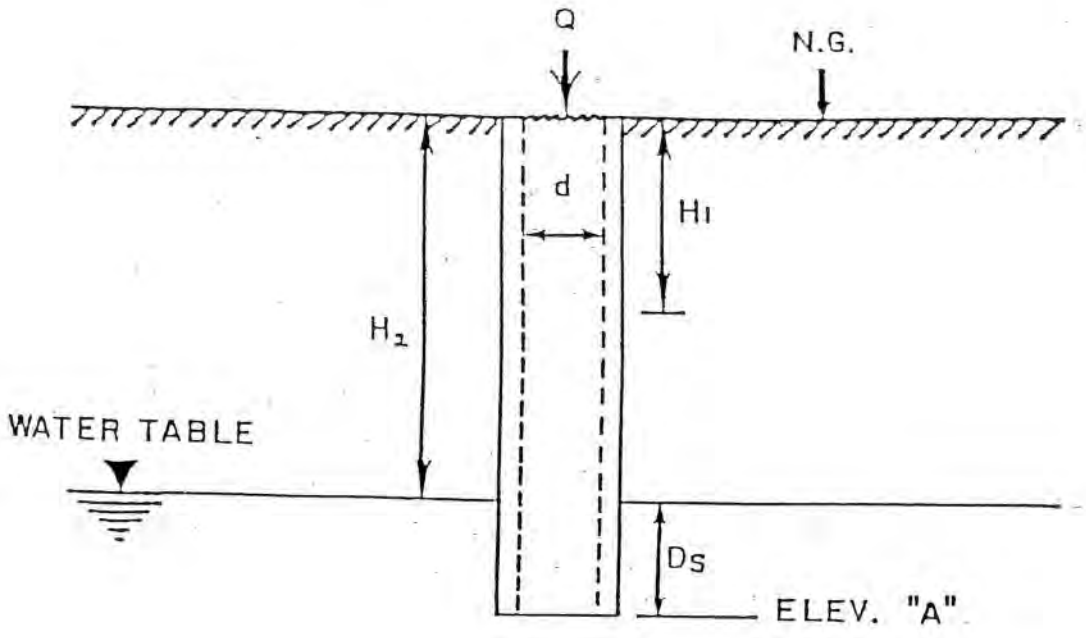
(4) No loss of circulation was encountered during the performance of the borehole percolation tests.

(5) Test location P-4 was eliminated from this project.

SUMMARY OF SUBSURFACE STRATIFICATION

Test No.	DEPTH (FEET)		GENERAL MATERIAL DESCRIPTION
	FROM	TO	
P-1	0.00	0.32	Asphalt Pavement
	0.32	1.00	Brown Slightly Silty Fine to Medium SAND with Limerock Fragments (FILL)
	1.00	15.00	Brown Fine to Medium SAND with Shell Fragments
P-2	0.00	0.13	Asphalt Pavement
	0.13	2.90	Brown Slightly Silty Fine to Medium SAND with Limerock Fragments (FILL)
	2.90	15.00	Brown Fine to Medium SAND with Shell Fragments
P-3	0.00	0.08	Asphalt Pavement
	0.08	0.83	Brown Slightly Silty Fine to Medium SAND with Limerock Fragments (FILL)
	0.83	15.00	Brown Fine to Medium SAND with Shell Fragments
P-5	0.00	0.08	Asphalt Pavement
	0.08	1.00	Brown Slightly Silty Fine to Medium SAND with Limerock Fragments (FILL)
	1.00	15.00	Brown Fine to Medium SAND with Shell Fragments
P-6	0.00	0.07	Asphalt Pavement
	0.07	4.00	Brown Slightly Silty Fine to Medium SAND with Limerock Fragments (FILL)
	4.00	15.00	Brown Fine to Medium SAND with Shell Fragments

USUAL OPEN - HOLE TEST



$$K = \frac{4Q}{\pi d(2H_2^2 + 4H_2 D_S + H_2 d)}$$

K = HYDRAULIC CONDUCTIVITY (CFS/FT.^{2} - FT. HEAD)

Q = "STABILIZED" FLOW RATE (CFS)

d = DIAMETER OF TEST HOLE (FEET)

H_2 = DEPTH TO WATER TABLE (FEET)

D_S = SATURATED HOLE DEPTH (FEET)

ELEV. "A" = PROPOSED TRENCH BOTTOM ELEV.

H_1 = AVERAGE HEAD ON UNSATURATED HOLE SURFACE (FT. HEAD)

Reference: SFWMD Management and Storage of Surface Waters
Permit Information Manual Vol. IV, Figure 3, Page 12.