



TOWN OF MELBOURNE BEACH

PLANNING & ZONING BOARD MEETING

TUESDAY, JULY 7, 2026

AGENDA PACKET

Town of Melbourne Beach

PLANNING & ZONING BOARD MEETING

TUESDAY, JULY 7, 2026 @ 6:30 PM

COMMUNITY CENTER – 509 OCEAN AVENUE

PUBLIC NOTICE AGENDA

Board Members:

Vice Chairperson Dan Harper
Member Gabor Kishegyi
Member Todd Albert
Member Jason Judge

Alternate Board Members:

Staff Members:

Town Manager A. Marie Smith
Interim Town Clerk Cyd Jones
Building Official Jeff Parsons

1. **CALL TO ORDER**
2. **ROLL CALL**
3. **APPROVAL OF MINUTES**
4. **NEW BUSINESS**
 - A. Appointment of the Chairperson - Page 3
 - B. Site Plan Approval for 1500 Pine St. – new home - Pages 4-65
5. **PUBLIC HEARINGS**
6. **OLD BUSINESS**
 - A. Discussion on the proposed Chapter 9A: Landscaping and Trees ordinance - Pages 66-98
7. **PUBLIC COMMENT**
Please limit comments to items that are not on the agenda
8. **REPORTS: TOWN MANAGER AND TOWN ATTORNEY**
9. **ITEMS TO BE ADDED TO THE AGENDA FOR FUTURE MEETINGS**
10. **ADJOURNMENT**

PURSUANT TO SECTION 286.0105, FLORIDA STATUTES, THE TOWN HEREBY ADVISES THE PUBLIC THAT: In order to appeal any decision made at this meeting, you will need a verbatim transcript of the proceedings. It will be your responsibility to ensure such a record is made. Such person must provide a method for recording the proceedings verbatim as the Town does not do so. In accordance with the Americans with Disability Act and Section 286.26, Florida Statutes, persons needing special accommodations for this meeting shall, at least 5 days prior to the meeting, contact the Office of the Town Clerk at (321) 724-5860 or Florida Relay System at 711.

Planning and Zoning Meeting

Section: New Business
Meeting Date: July 7, 2026
From: Interim Town Clerk Cyd Jones
RE: Appointment of the Chairperson

Background Information:

The Town Code of Ordinances provides that the Planning and Zoning Board shall appoint the Chairperson of the Board on a yearly basis.

Due to the resignation of Chairperson April Evans, a new Chairperson must be appointed.

Planning and Zoning Meeting

Section: New Business
Meeting Date: July 7, 2026
From: Building Department
RE: Site Plan Approval for 1500 Pine St. – New Home

Background Information:

The Town received plans for a new home at 1500 Pine St.

Recommendation:

Approve the site plan for 1500 Pine St.

Attachments:

- Town Planner Letter – Pages 5-8
- Town Engineer Letter – Page 9
- Development Application – Pages 10-12
- Warranty Deed – Pages 13-14
- Letter from Owner – Page 15
- Original Plans and Survey – Pages 16-35
- Stormwater Calculations Report – Pages 36-65



Town of Melbourne Beach

507 Ocean Ave, Melbourne Beach, FL 32951

Site Plan Review

Applicable Codes:

Town of Melbourne Beach Land Development Code

Current Florida Building Code

Date: July 7, 2026

Owner: 1500 Pine Street LLC
Owner Address: 3839 N Harbor City Blvd. Suite 101 Melbourne FL 32935

Site Address: 1500 Pine Street Melbourne, Florida 32951

Parcel ID: 28-38-07-02-30-1

Zoning: 1RS-Single-Family

Proposed Project: Demolition of all existing structures and build a new single-family home with pool, spa, deck, summer kitchen and 2-story exercise studio / storage accessory building.

References: Town of Melbourne Beach Code of Ordinances:
7A-31 Single-Family Residential District
7A-51.1, Site Plan Approval For Single-Family Residential Districts

Request: Site Plan Approval in Accordance with 7A-51.1

Staff Review: The property lies in Zoning District 1RS-Single-Family

- 1) The project includes demolishing the existing residence and constructing a new one-story home with four (4) bedrooms, four (4) full bathrooms and one (1) half-bathroom, along with a second-floor loft space; two (2) 2-car garages and a 1-car garage; living, dining, kitchen, media room, and covered porch. The project also includes a 2-story accessory structure with first-floor exercise/yoga studio and bathroom, and a second-floor storage area. The outdoor area will include a pool, spa, summer kitchen, and fire pit.
- 2) The Building Lot Zoning District requirements of min. lot area, width and depth.
Lot area is 24,856 sq. ft. (min. 12,000 sq. ft.)
Lot width is +/-150 ft. (min. 100 ft.)
Lot depth is +/-163 ft. (min. 120 ft.)

Phone: (321) 724-5860 | melbournebeachfl.org | Fax: (321) 984-8994

Brevard County's Oldest Beach Community - Established 1883



Town of Melbourne Beach

507 Ocean Ave, Melbourne Beach, FL 32951

- 3) Lot coverage has a maximum of 30% for principal structure.
 Lot coverage per plan is 29.18%
 Footprint of Primary Structure is 7,254 SF.
 Max allowed for Primary Structure is 7,456 sq. ft. for Lot Area of 12,000 sq. ft.
 Minimum pervious area per lot is 30%. Pervious area per plan is 32.67%.

- 4) Structure maximum height for zoning district is 28 ft. Per Section 7A-55, the required finished floor must be 18" above the highest street elevation and must comply with federal, state and local minimum elevations, and if the existing grades are higher than 18" above the road, the building height shall be measured from the existing grade. Existing grades include a high of 6.5' and the highest street elevation is 4.5', so the building height is measured from existing grade of 6.5'.
 Floor Zone: X & AE-4 per the survey, the Proposed FFE ranges from 7.0' to 8.5' for the primary structure and accessory studio.
 The proposed height of the principal structure as shown on Sheet A-6 is 23' 1". Measured from the existing grade, the building height is 25' 1" which complies with the maximum allowable. The accessory studio is 21' 4" which complies with the height of an accessory structure.

- Zoning District Setback requirements:
 Primary Structure Front Setback: 25' (min. 25')
 Primary Structure Rear Setback 41.4' (min. 25')
 Primary Structure North Side Setback 26.7' (min. 15')
 Primary Structure South Side Setback 15.3' (min. 15')
 Studio Accessory Structure 16.2' and 16.3' property line setback (min. 15')
 Summer Kitchen Accessory Structure 15.4' and 21.8' property line setback (min. 15')

- 5) Sediment and Erosion control measures shall be met and approved by the Building Official in accordance with the Town of Melbourne Beach Code of Ordinances, Chapter 27 Stormwater, and the current Florida Building Code.

- 6) On-site Storm water Retention Control measures shall be met, as applicable, and approved by the Building Official in accordance with the Town of Melbourne Beach Code of Ordinances, Chapter 27 Stormwater, and the current Florida Building Code.



Town of Melbourne Beach

507 Ocean Ave, Melbourne Beach, FL 32951

- 7) Town Engineer will submit a review of the drainage plan per Ordinance 2019-06. The Town Engineer will require a final inspection before a Certificate of Occupancy will be issued.
- 8) Landscape standards, as applicable, must be met at the time of building permitting. The plan shows removal of three (3) oak trees, one (1) pine tree and nineteen (19) palms. The landscape plan shows replanting of three (3) live oaks along with five (5) olive, four (4) Canary Island Date Palms, and four (4) Medjool Date Palms.

Based on the above review, the proposed site plan for the referenced property is in compliance with The Town of Melbourne Beach Code of Ordinances.

Corey W. O'Gorman
Town Planner



Town of Melbourne Beach

507 Ocean Ave, Melbourne Beach, FL 32951

1500 PINE STREET

IMPERVIOUS		PERVIOUS	
Primary Structure	7254	Open areas	8,120
Accessory structure	832		
Driveway and Pavers	8,650		
Total Paved Area		Total Pervious	8,120
Total Lot Area		Total Lot Area	24,856
% IMPERVIOUS		% PERVIOUS	32.67%



June 30, 2026

Via E-mail

Mr. Jeffrey Parsons
Town of Melbourne Beach
507 Ocean Avenue
Melbourne Beach, FL 32951
E-mail address: building@melbournebeachfl.org

**Re: 2nd Site Plan Review – 1500 Pine Street
File #11440.100.45**

Dear Jeffrey:

We have reviewed the items submitted and find that they meet the Town Code; therefore, we recommend approval of the drainage plan. The engineer's response indicated the owner/applicant was having the landscape plan revised as requested in the June 18, 2026, comment letter (excerpt below).

Please coordinate the landscape and civil plans (plantings near stormwater chambers, dry retention area, perimeter wall etc.)

I understand that the owner/contractor has sent the civil plans to the landscape architect to coordinate avoiding vegetative impacts with the storm chambers, dry retention basin and perimeter wall.

Please note, the Town will need to review the revised landscape plan, once submitted, to confirm compliance with the original June 18, 2026, comment.

Due to recent occurrences, we request that the Engineer of Record review the as-built plans for compliance prior to the applicant requesting Town Engineer sign off. This will save time and expense for the applicant as well as the Town.

Should you have any questions, feel free to contact me.

Very truly yours,

Ana Saunders, P.E.

Ana Saunders, P.E.
Vice President
B.S.E. Consultants, Inc. an LJA company

AS/as

11440.100.45.town.corr.26-as-2015.jun



TOWN OF MELBOURNE BEACH DEVELOPMENT APPLICATION

I. SUBMITTAL REQUIREMENTS:

1. Fees per current schedule.
2. Deed to property.
3. Pre-Application meeting is mandatory. Contact the Building Official or Building Clerk to submit information required and to schedule a pre-application meeting.
4. Application deadlines are determined annually by the Boards and will be provided at the pre-application meeting.
5. All applicants must complete pages 1-3 and the section(s) as applicable to the request (refer to section II. below). All materials listed in the applicable sections must be provided, and fees paid.

II. REQUEST:

- | | |
|--|--|
| ☐ Land Use Plan Amendment | ☐ Rezoning |
| ☐ Special Exception | ☐ Coastal Construction Variance |
| ☐ Variance | ☐ Appeal (Application must be filed within 30 days) |
| ☒ Site Plan Review Single Family (1RS, 2RS, 3RS) | ☐ Site Plan Review Multifamily (4RM, 5RMO) |
| ☐ Site Plan Review Commercial (6B, 7C, 8B, 9I) | ☐ Amendment to the Land Development Code |
| | ☐ Other (specify) _____ |

III. PROPERTY INFORMATION:

General Location: Pine Street

Address: 1500 Pine Street Melbourne Beach, FL 32951

Wilcox Plat of Melbourne Beach Resubd of Blks 11, 20, 21, 30 & 31

Parcel Number(s): Sub: 20 Blk: 30 Lot: 1

Area (in acreage): .46 Area (in square feet): 20037.6

Current Zoning: Residential Proposed Zoning: Residential

Current Future Land Use: Residential Proposed Future Land Use: Residential

Brief Description of Application: Demolition of all existing structures and build new single-family residence with pool

Date of Mandatory Pre-Application Meeting (attach meeting minutes if applicable): _____

IV. APPLICANT INFORMATION:

Property Owner

Name: 1500 PINE ST., LLC
Christopher Burton

Phone: 321-757-3247

Address: 3839 N Harbor City Blvd., Suite 101

Fax: _____

Melbourne, FL 32935

Email: jeri-lynn@burtonhomes.com

Applicant (if other than property owner)

Name: Christopher Burton Homes, Inc

Phone: 321-757-3247

Address: 3839 N Harbor City Blvd., Suite 101

Fax: _____

Melbourne, FL 32935

Email: jeri-lynn@burtonhomes.com

V. OWNER AUTHORIZATION:*

The undersigned hereby affirms the following:

1. That I/we are the fee simple title owner/contract purchaser (circle one) of the property described in this application.
2. That I/we have read and understands the entire application and concurs with the request.
3. That I/we have appointed the Applicant to represent the application, and empowers the Applicant to accept any and all conditions of approval imposed by the Town of Melbourne Beach.

Signature: _____

Date: 3/6/24

Print Name: 1500 PINE ST. LLC
Christopher Burton

Title: President/Owner

*Must sign in front of notary.

State of Florida

County of Brevard.

The foregoing application is acknowledged before me
this 6TH day of MARCH, 2024 by CHRISTOPHER BURTON
who is/are personally known to me, or who has/have produced _____
as identification.

Jeri-Lynn Page
Signature of Notary Public, State of Florida



VI. APPLICANT CERTIFICATION:*

I/we affirm and certify that I/we understand and will comply with the land development regulations of the Town of Melbourne Beach, Florida. I/we further certify that the application and support documents are fully complete and comply with the requirements of the land development regulations of the Town of Melbourne Beach, Florida. I/we further certify that the statements and/or diagrams made on any paper or plans submitted here with are true to the best of my/our knowledge and belief that this application, attachments and application filing fees become part of the official public record of the Town of Melbourne Beach, Florida and are not returnable or refundable.

Under penalties of perjury, I/we declare that I/we have read the foregoing application and that to the best of my/our knowledge and belief the facts stated in the application are true.

Signature: _____

Date: 6/15/26Print Name: Christopher BurtonTitle: President/Owner

*Must sign in front of notary.

State of Florida

County of Brevard.

The foregoing application is acknowledged before me
this 15th day of June, 2026, by Christopher Burton,
who is/are personally known to me, or who has/have produced _____
as identification.

Jeri-Lynn Page
Signature of Notary Public, State of Florida

**VII. PROJECT DESCRIPTION:**

Describe Application: Demolition of all existing structures and build new single-family residence with pool

Provide attachment if more space is needed.

Describe Existing Conditions: Older single family residence and property conditions

Provide attachment if more space is needed.

This Document Prepared By and Return to:
Jack B. Spira
Spira & Beadle, P.A.
5205 Babcock Street NE
Palm Bay, Florida 32905

Parcel ID Number: 28-38-07-02-30-1

Warranty Deed

This Indenture, Made this 23rd day of January, 2026 A.D., **Between**
PETER P. ZABINSKI and MARGARET A. ZABINSKI, Husband and Wife
of the County of Brevard, State of Florida, **, grantors, and**
1500 PINE STREET, LLC, a Florida limited liability company
whose address is: 3839 N. Harbor City Blvd., Suite 101, Melbourne, FL 32901
of the County of Brevard, State of Florida, **, grantee.**

Witnesseth that the GRANTORS, for and in consideration of the sum of
TEN DOLLARS (\$10)

and other good and valuable consideration to GRANTORS in hand paid by GRANTEE, the receipt whereof is hereby
acknowledged, have granted, bargained and sold to the said GRANTEE and GRANTEE'S heirs, successors and assigns
forever, the following described land, situate, lying and being in the County of Brevard,
State of Florida to wit:

Lots 1, 2 and 3, Block 30, Resubdivision of Blocks 11, 20, 21, 30 and 31 of Wilcox Plat of
Melbourne Beach, according to the plat thereof recorded in Plat Book 10, Page 51, of the Public
Records of Brevard County, Florida.

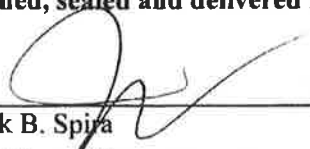
Subject to:

1. Taxes for the year 2026 and subsequent thereto.
2. Easements, Restrictions and Limitations of Record.
3. Zoning and other regulatory ordinances, if any.

and the grantors do hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons
whomsoever.

Warranty Deed - Page 2

Parcel ID Number: 28-38-07-02-30-1

In Witness Whereof, the grantors have hereunto set their hands and seals the day and year first above written.**Signed, sealed and delivered in our presence:**

Jack B. Spira

P.O. Address: 5205 Babcock Street, Palm Bay, FL 32905

Witness #1



Carla Graham

P.O. Address: 5205 Babcock Street, Palm Bay, FL 32905

Witness #2



PETER P. ZABINSKI

P.O. Address: 1500 Pine Street, Melbourne Beach, FL 32951



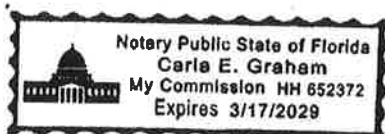
MARGARET A. ZABINSKI

P.O. Address: 1500 Pine Street, Melbourne Beach, FL 32951

State of Florida**County of Brevard**The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 23rd day of January, 2026, by PETER P. ZABINSKI and MARGARET A.

ZABINSKI

who are personally known to me or who have produced their

Florida D.L. & Florida D.L. as identification.

Printed Name: Carla Graham
Notary Public
My Commission Expires: 3-17-2029

THE

BURTON

COMPANIES

Date: June 11, 2026

To: Melbourne Beach Building Department

From: Christopher Burton, CGC / Owner, 1500 Pine St., LLC

Re: P & Z Application – Demolition and New Single-Family Residence

Property Address: 1500 Pine Street, Melbourne Beach, FL

Melbourne Beach Building Department,

This letter is submitted in support of the permit application for 1500 Pine Street, LLC. The proposed project includes the demolition of all existing structures on the property and the construction of a new single-family residence with swimming pool.

All work will be performed in accordance with the current Florida Building Code and applicable Town of Melbourne Beach regulations. Licensed contractors will complete all phases of construction, and required inspections will be scheduled as necessary.

Please refer to the accompanying plans and supporting documents for additional details.

Sincerely,

Christopher Burton
Owner/President
CGC1509976
3839 N. Harbor City Blvd., Suite 101
Melbourne, FL 32935
321-757-3247



RESIDENTIAL PLANNING & DESIGN
 1481 WEST FAIR GALLIE BLVD
 SUITE 201 MELBOURNE FL 32935
 321-745-8609
 ALEX@MITZDESIGNGROUP.COM
 MITZDESIGNGROUP.COM

JOB NO. 25-003
 DRAWN: AAM
 CHECKED: AAM
 SCALE: AS SHOWN
 DATE: 06.10.2025

REVISIONS	BY	DATE
1	AAM	05.20.25

CUSTOM DESIGN FOR:

**BURTON
 RESIDENCE**

ADDRESS:
 1500 PINE STREET
 MELBOURNE BEACH FL 32951

CONTRACTOR:

CHRISTOPHER
BURTON
 LUXURY HOMES

SHEET TITLE:

COVER SHEET



ENTRY ELEVATION



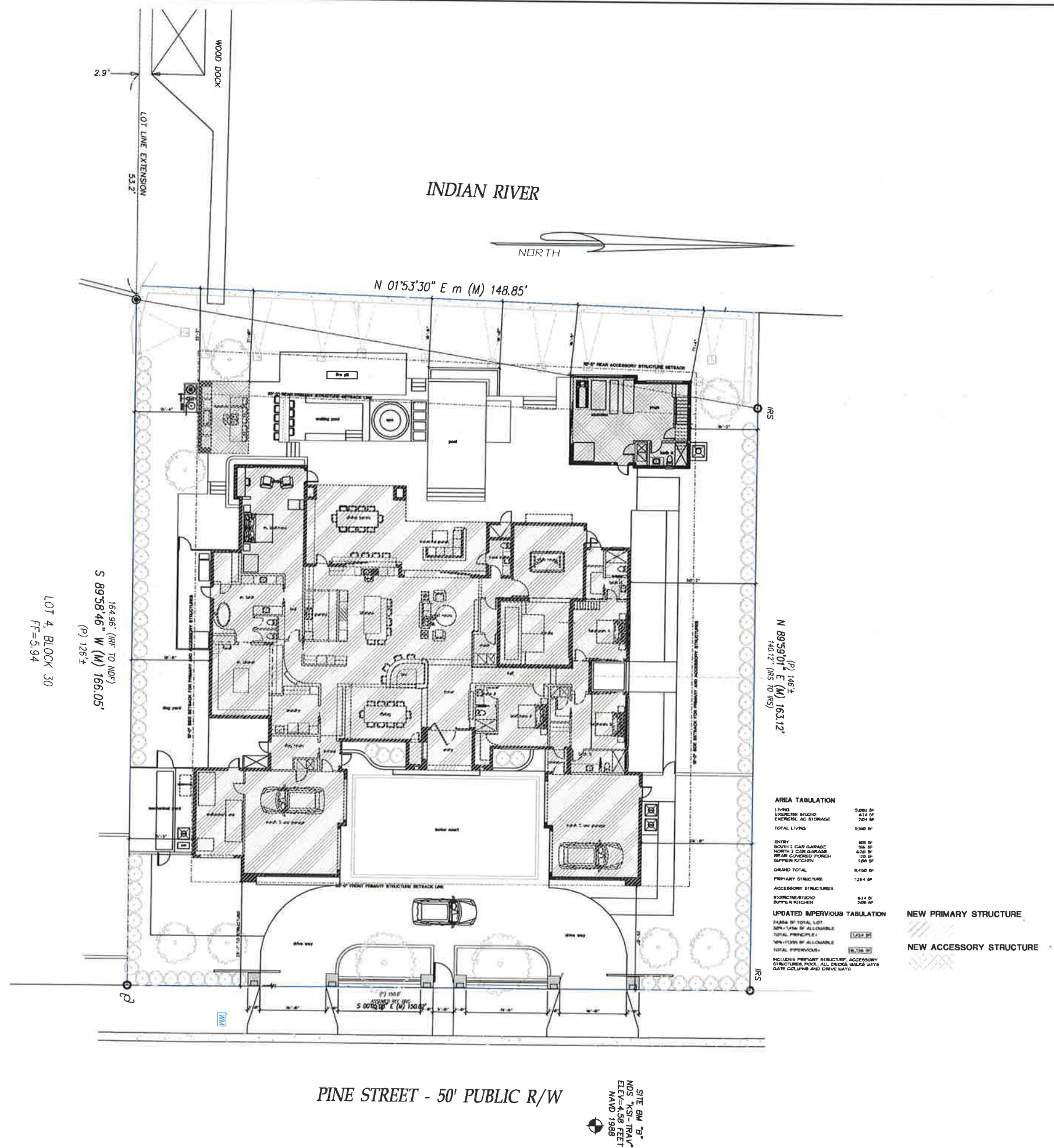
ENTRY WALL PERSPECTIVE

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ALEX MITZ, PRESIDENT DESIGNER

A1

SHEET 1





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 SUITE 201 MELBOURNE FL 32935
 321-745-8809
 ALEX@MITZDESIGNGROUP.COM
 MITZDESIGNGROUP.COM

PROJ NO: 24-002
 DESIGNER: AAM
 DRAWN: AAM
 CHECKED: AAM
 SCALE: AS SHOWN
 DATE: 06.10.2024

REVISIONS	BY	DATE
1	AAM	05.09.24

CUSTOM DESIGN FOR

BURTON RESIDENCE

ADDRESS:
 1500 PINE STREET
 MELBOURNE BEACH FL 32951

CONTRACTOR

CHRISTOPHER
BURTON
 LUXURY HOMES

SHEET TITLE

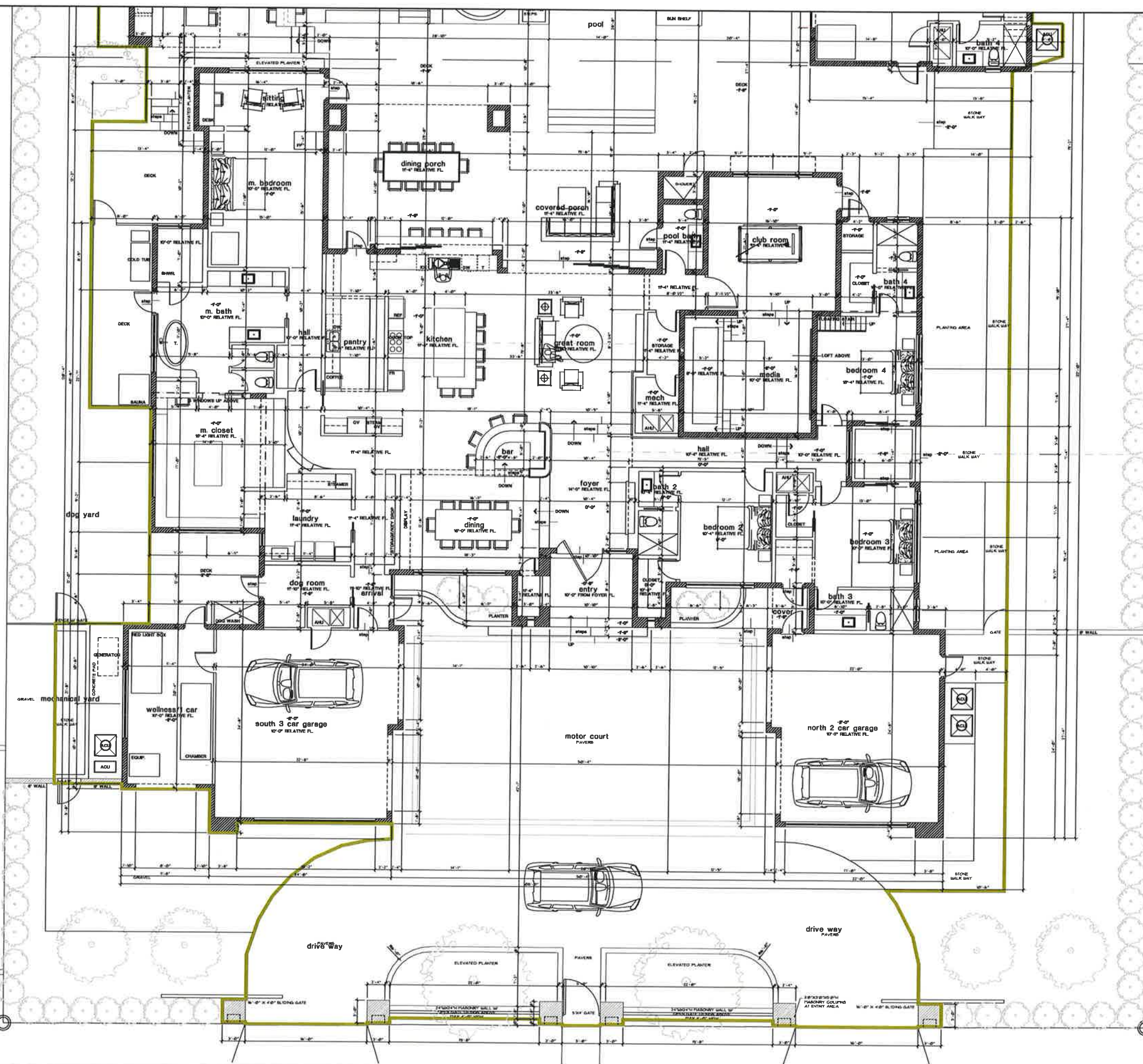
FLOOR PLAN
 SCALE: 1/4" = 1'-0"

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ALEX MITZ, PRESIDENT DESIGNER

A3

SHEET 3



AREA TABULATION

LIVING	3,280 SF
EXERCISE STUDIO	824 SF
EXERCISE AC STORAGE	264 SF
TOTAL LIVING	3,368 SF
ENTRY	108 SF
SOUTH 3 CAR GARAGE	820 SF
NORTH 2 CAR GARAGE	738 SF
REAR COVERED PORCH	788 SF
SUPPER KITCHEN	788 SF
GRAND TOTAL	8,496 SF
PRIMARY STRUCTURE	7,254 SF
ACCESSORY STRUCTURES	
EXERCISE/STUDIO	824 SF
SUPPER KITCHEN	264 SF

UPDATED IMPERVIOUS TABULATION

TABULATION TOTAL LOT	
MINIMUM SF ALLOWABLE	1,500 SF
TOTAL IMPERVIOUS	8,496 SF
10% TYPERS SF ALLOWABLE	1,500 SF
TOTAL IMPERVIOUS	8,496 SF

INCLUDES PRIMARY STRUCTURE, ACCESSORY STRUCTURES, POOL, ALL DECKS, GARAGE BAYS, GATE COLUMNS AND DRIVEWAYS



RESIDENTIAL PLANNING & DESIGN
• 587 WEST LAU GALIE BLVD •
• SUITE 201 MELBOURNE FL 32935 •
• 321-745-8609 •
• ALL@MITZDESIGNGROUP.COM •
• MITZDESIGNGROUP.COM •

JOB NO.	28-002
DESIGNED	AAM
DRAWN	AAM
CHECKED	AAM
SCALE	AS SHOWN
DATE	06.10.2016

[illegible]

CUSTOM DESIGN FOR

BURTON RESIDENCE

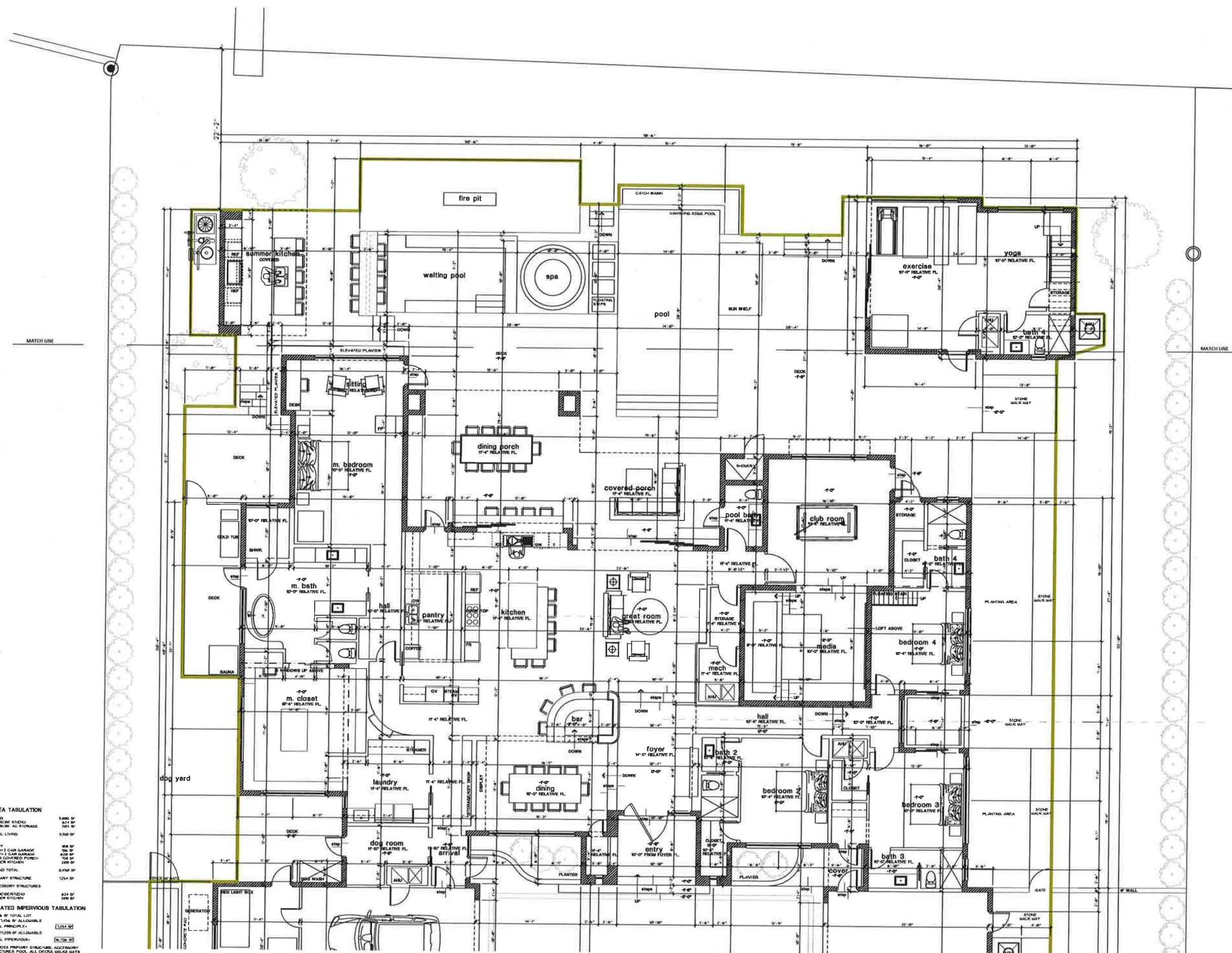
ADDRESS:
1500 PINE STREET
MELBOURNE BEACH FL 32951

CONTRACTOR

CHRISTOPHER
BURTON

SECRET TITAN

FLOOR PLAN
SCALE: 1/4"=1'-0"



AREA TABULATION

LIVING	100
EXERCISE STUDIO	100
EXERCISE AC STORAGE	100
TOTAL LIVING	300

ENTRY
SOUTH 2 CAR GARAGE
NORTH 2 CAR GARAGE
REAR COVERED PORCH
BUTTER KITCHEN
GRAND TOTAL

PRIMARY STRUCTURE
 ACCESSORY STRUCTURES
 EXERCISE/STUDY

UPDATED IMPERVIOUS TABULATION

24.80% OF TOTAL LOT
308,745% OF ALLOWABLE
TOTAL PRINCIPLE. 7,434 BF

TOTAL SUPERVISOR: 4.136 hr

INCLUDES PRIMARY STRUCTURE, ACCESSORY
STRUCTURES, POOL, ALL DECKS, WALKS &
GATE COLUMNS AND DRIVE WAYS

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ALEX MIEZ, PRESIDENT/DESIGNER

A4

581



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SUITE 201 MELBOURNE FL 32955
352-745-8695
ALEX@MITZDESIGNGROUP.COM
MITZDESIGNGROUP.COM

JOB NO.	25-003
DRAWN	AAM
CHECKED	AAM
SCALE	AS SHOWN
DATE	06.10.2025

REVISIONS	BY	DATE

CUSTOM DESIGN FOR
BURTON RESIDENCE
ADDRESS:
1500 PINE STREET
MELBOURNE BEACH FL 32951

CONTRACTOR
CHRISTOPHER BURTON
SUNSHINE HOMES

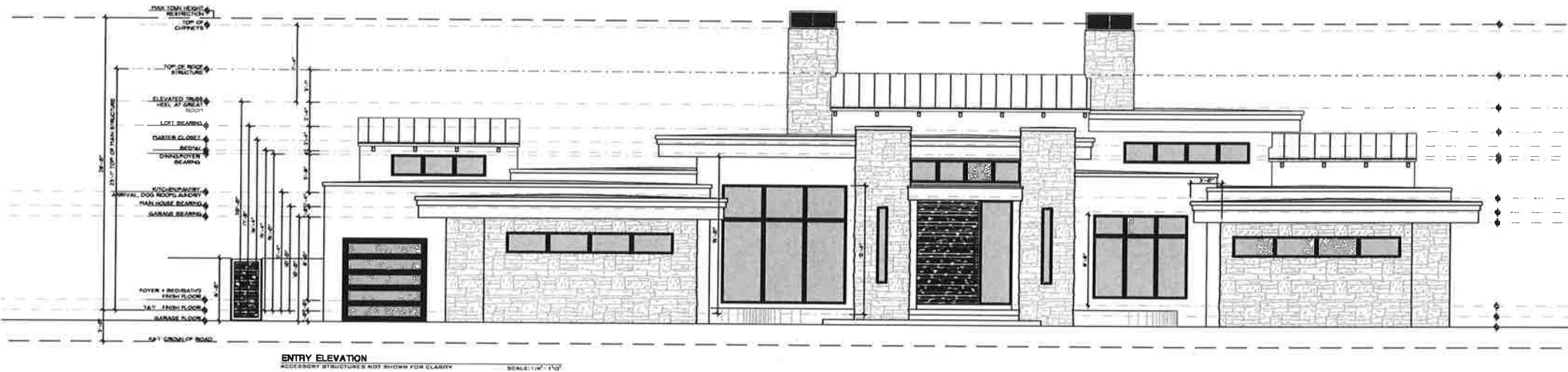
SHEET TITLE
EXTERIOR ELEVATIONS
PRIMARY STRUCTURE

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ALEX MITZ, PRESIDENT DESIGNER

A5

SHEET 5





RESIDENTIAL PLANNING & DESIGN
5407 WEST GARD GALLERY BLVD
SUITE 201 MELBOURNE FL 32935
321-745-8600
ALEX@MITZDESIGNGROUP.COM
MITZDESIGNGROUP.COM

JOB NO: 28-003
OWNER: AAM
DESIGNER: AAM
CHECKER: AAM
SCALE: AS SHOWN
DATE: 06.10.2024

REVISIONS	BY	DATE
1	AAM	06.10.2024

CUSTOM DESIGN FOR
**BURTON
RESIDENCE**

ADDRESS:
1500 PINE STREET
MELBOURNE BEACH FL 32851

CONTRACTOR
**CHRISTOPHER
BURTON
LUXURY HOMES**

SHEET TITLE

**EXTERIOR ELEVATIONS
PRIMARY STRUCTURE**

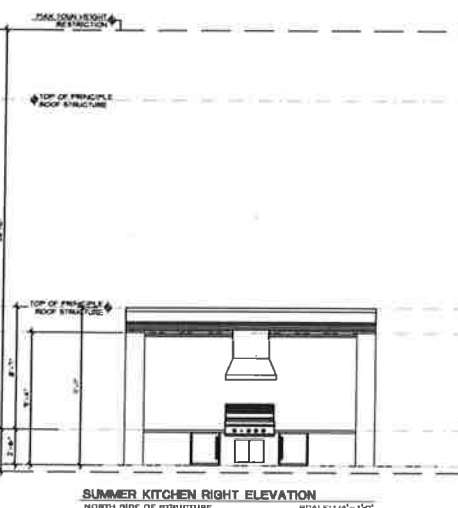
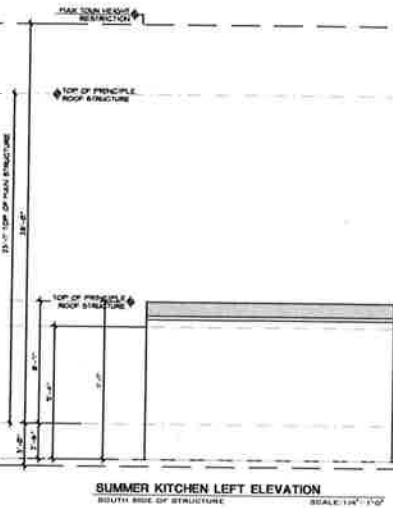
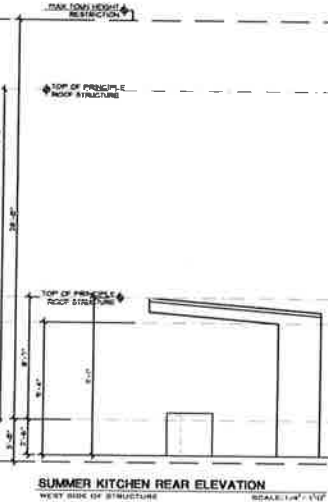
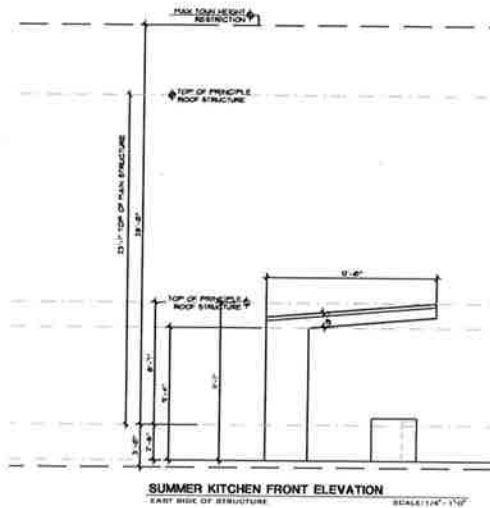
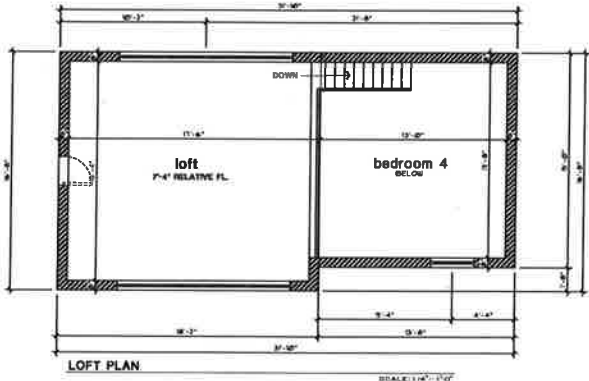
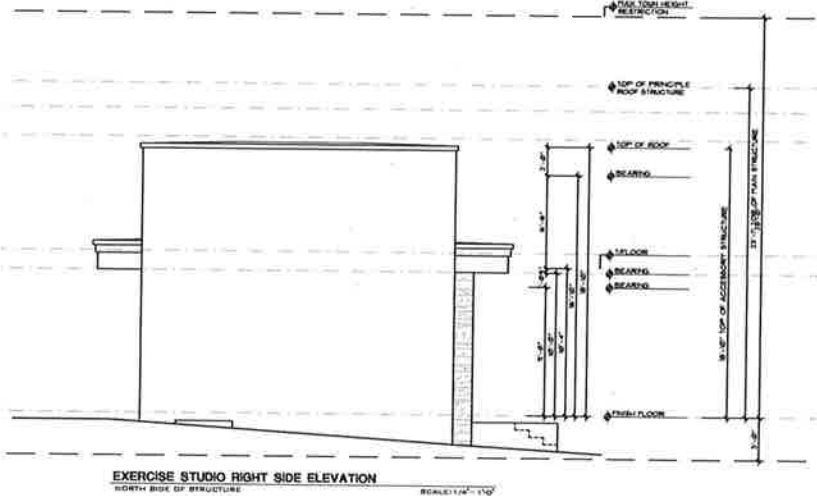
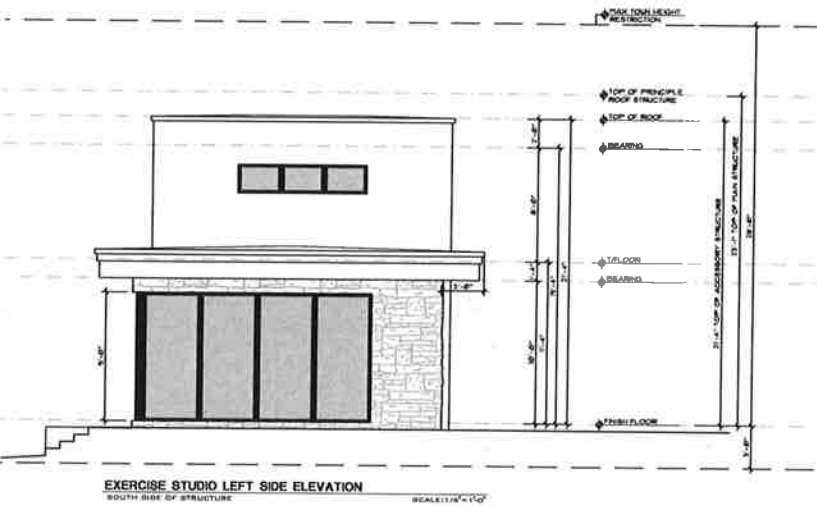
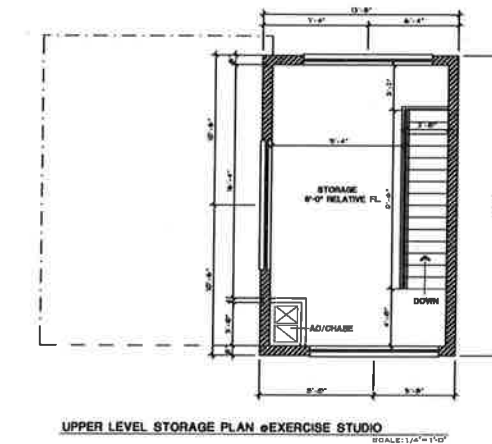
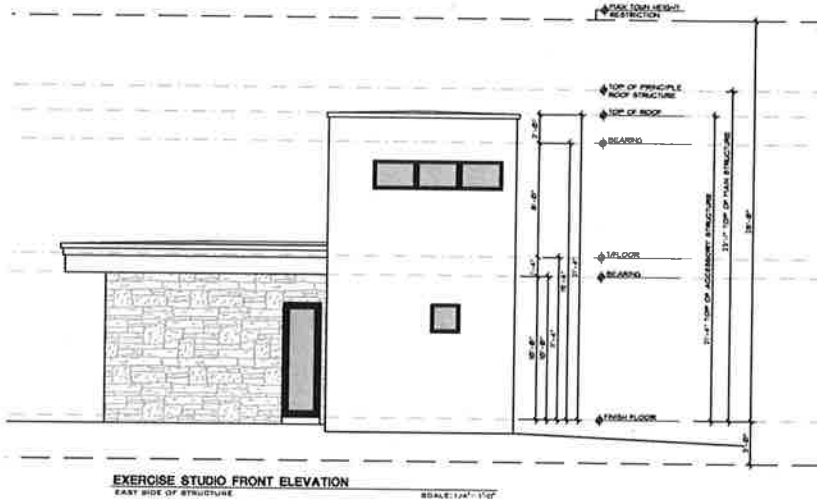
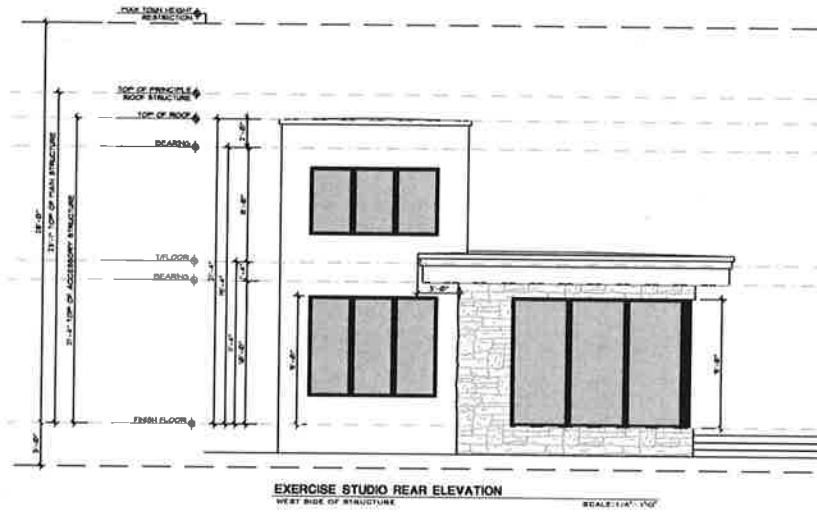


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ALEX MITZ, PRESIDENT DESIGNER

A6

SHEET 6



MITZ DESIGN

RESIDENTIAL PLANNING & DESIGN
587 WEST SAU GALLE BLVD.
SUITE 201 MELBOURNE FL 32935
321-745-8608
ALX@MITZDESIGNGROUP.COM
MITZDESIGNGROUP.COM

REV	NO.	DATE	BY	DATE
1	001	06.10.2018	AM	06.10.2018

CUSTOM DESIGN FOR
BURTON RESIDENCE
ADDRESS:
1500 PINE STREET
MELBOURNE BEACH FL 32951

CONTRACTOR
BURTON LUXURY HOMES

SHEET TITLE
**EXTERIOR ELEVATIONS
ACCESSORY STRUCTURES**

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ALIX MITZ, PRESIDENT DESIGNER

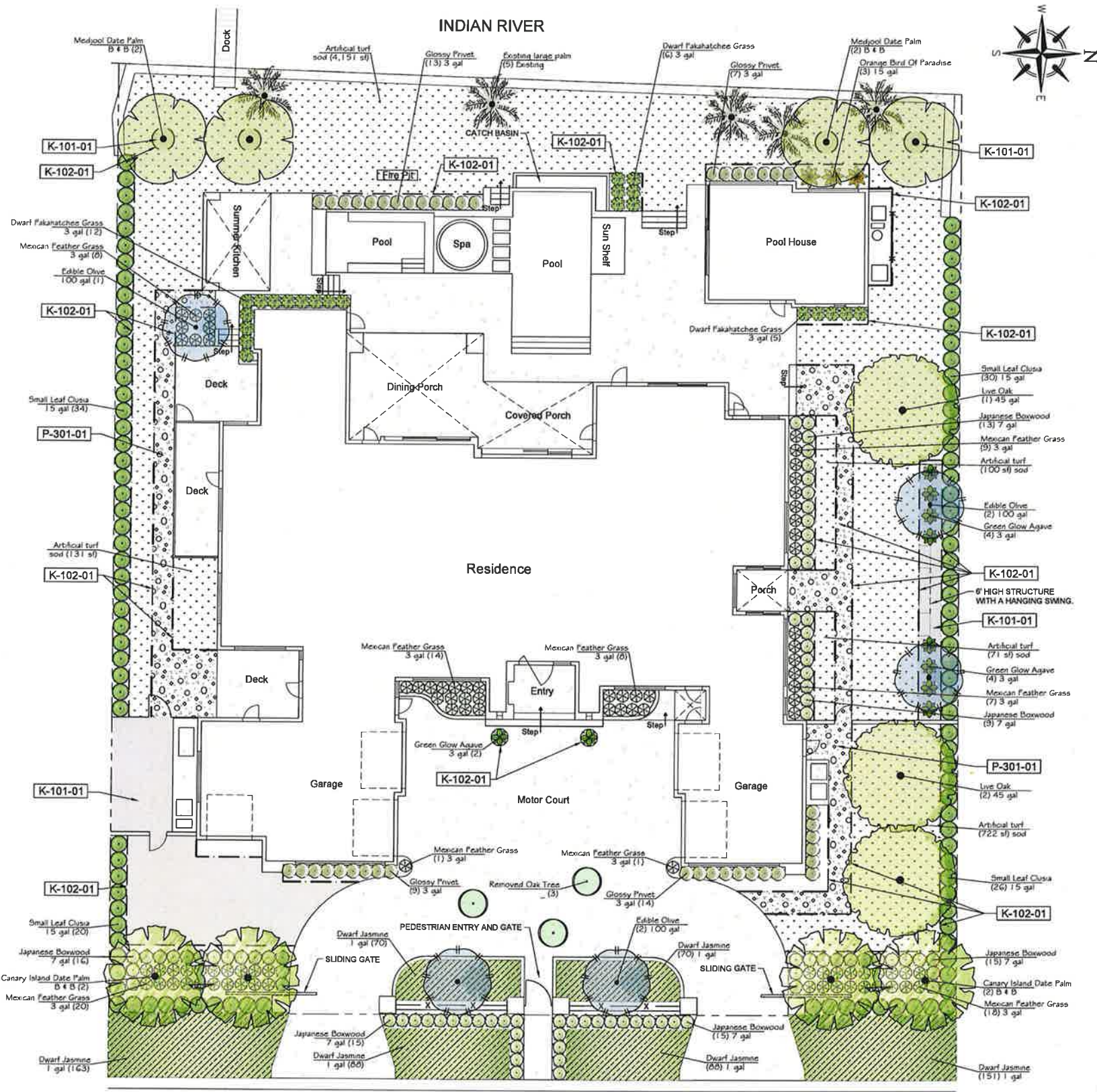
A7

SHEET 7

GENERAL LANDSCAPE NOTES

- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT SITE CONDITIONS AND QUANTITIES INDICATED ON THESE PLANS, BEFORE PRICING WORK.
- ALL PLANT MATERIAL SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS SPECIFIED IN "GRADES AND STANDARDS FOR NURSERY PLANTS PARTS I AND II" 1998 EDITION DIVISION OF PLANT INDUSTRY, FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, AND SHALL CONFORM TO CURRENT AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS FOR NURSERY STOCK. ALL SIZES SHOWN FOR PLANT MATERIAL ON THE PLAN ARE TO BE CONSIDERED MINIMUM. ALL PLANT MATERIAL MUST MEET OR EXCEED THESE MINIMUM REQUIREMENTS FOR BOTH HEIGHT AND SPREAD. ANY OTHER REQUIREMENTS FOR SPECIFIC SHAPE OR EFFECT AS NOTED ON THE PLAN SHALL ALSO BE REQUIRED FOR ACCEPTANCE. ALL TREES TO BE SINGLE TRUNKED, UNLESS OTHERWISE NOTED ON PLANS.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING THE CONDITION OF UNDERGROUND UTILITIES THAT EFFECT PLANTING PROCEDURES OR IRRIGATION SYSTEM INSTALLATION. IF ANY CONFLICTS OCCUR BETWEEN PROPOSED LOCATION OF TREES FOR ON THE DRAWING AND ANY UNDERGROUND UTILITIES OR SUBSURFACE STRUCTURES, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE DESIGNER. IF THE LANDSCAPE CONTRACTOR DAMAGES ANY STAKED OR IN PLACE UTILITIES BY HIS OWN NEGLIGENCE, THEY SHALL BE REPAIRED AT THE LANDSCAPE CONTRACTOR'S EXPENSE.
- LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE DESIGNER OR OWNER OF ANY CONDITIONS THAT WOULD PREVENT THE HEALTHY GROWTH OF PLANT SPECIES CALLED FOR ON THE DRAWINGS. THIS NOTIFICATION MUST OCCUR PRIOR TO CONTRACT AWARD.
- IF ANY DISCREPANCIES OCCUR BETWEEN QUANTITIES CALLED FOR ON THE PLANT LIST AND THOSE INDICATED ON THE DRAWINGS, THE GREATER QUANTITY SHALL GOVERN.
- PLANT MATERIAL SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE, INSECTS, EGGS, OR LARVAE, AND SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS. THEY SHALL BE FREE FROM PHYSICAL DAMAGE OR ADVERSE CONDITIONS THAT WOULD PREVENT THRIVING GROWTH.
- PLANT MATERIAL MUST BE CONTAINER GROWN OR B&B (UNLESS TRANSPLANTED) AS INDICATED IN THE PLANT LIST. ALL PALMS SHALL BE FIELD GROWN.
- PLANT MATERIAL SHALL CONFORM TO THE VARIETIES INDICATED IN THE PLANT LIST.
- SUBSTITUTION OF PLANT MATERIALS WILL NOT BE PERMITTED UNLESS AUTHORIZED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. IF PROOF IS SUBMITTED THAT ANY PLANT SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR VARIETY WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICES.
- PLANT MATERIAL LOCATIONS AND BED OUTLINES SHALL BE STAKED OR FLAGGED ON SITE BY THE LANDSCAPE CONTRACTOR AND SHALL BE ADJUSTED TO FIT ACTUAL AS-BUILT CONDITIONS ON SITE AND APPROVED BY THE LANDSCAPE DESIGNER OR OWNER PRIOR TO INSTALLATION. PROPOSED PLANTINGS SHALL NOT BE PLACED IN THE FLOWLINE OF SWALES OR LOCATED WHERE THEY WILL IMPEDE WATER FLOW.
- A CRISP LINE, EITHER STRAIGHT OR CURVING, SHALL SEPARATE PLANT BEDS FROM SODDED OR SEEDED AREAS. ALL PLANTING BED AREAS TO HAVE 6" OF DARK, FRIABLE TOP SOIL OR BED MIX CHURNED INTO EXISTING SOIL.
- LANDSCAPE CONTRACTOR SHALL EXCAVATE PLANT PITS ACCORDING TO THE DRAWINGS.
- BACKFILL AROUND PLANT MATERIAL SHALL BE WORKED FIRMLY, TAMPED AND WATERED-IN UNDER AND AROUND THE ROOT BALL TO FILL VOIDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING PLANT MATERIAL A MINIMUM OF THIRTY (30) DAYS AFTER INSTALLATION UNLESS OTHERWISE INSTRUCTED BY LANDSCAPE DESIGNER OR OWNER.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HOISTING EQUIPMENT NECESSARY FOR THE PLACEMENT OF PLANT MATERIAL. NEW PLANT MATERIAL TO BE INSTALLED WILL BE FIELD ADJUSTED TO ACCOMMODATE EXISTING PLANT MATERIAL SUCH AS OVERHEAD CANOPY TREES, UNDERSTORY TREES AND SHRUBS OR GROUND COVER. THIS WILL INSURE EXISTING PLANT MATERIAL TO REMAIN IN ITS NATURAL STATE. THEREFORE, NO EXISTING PLANT MATERIAL WILL BE ALTERED BY REMOVING, CUTTING, TRIMMING OR DESTROYING IN ORDER TO INSTALL NEW PLANT MATERIAL.
- LANDSCAPE CONTRACTOR SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS. ANY DISCREPANCY IN THE DRAWINGS, OBSTRUCTION ON THE SITE, OR PRIOR WORK DONE BY ANOTHER PARTY WHICH THE LANDSCAPE CONTRACTOR FEELS PRECLUDES ESTABLISHING PROPER DRAINAGE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE DESIGNER OR OWNER. THE FINAL GRADE AND SOIL (THE LAST 6") SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR.
- AFTER PLANT MATERIAL HAS BEEN INSTALLED AND APPROVED, PLANTING BEDS SHALL BE RAKED TO AN EVEN GRADE TO CONFORM TO PRE-MULCHING FINISH GRADES. PLANTING BEDS AND PLANT SAUCERS SHALL THEN BE UNIFORMLY COVERED WITH A MINIMUM 3 INCH LAYER OF PINE BARK NUGGETS.
- PLANT MATERIAL BACKFILL MIXTURE SHALL BE THOROUGHLY MIXED AND DISTRIBUTED EVENLY THROUGHOUT THE PROPOSED PLANTING BED AREAS.
- ALL TREE STAKING TO BE DONE AS DETAILED. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES THAT OCCUR AS THE RESULT OF THE FAILURE TO STAKE TREES THAT ARE NOT AN ACT OF GOD AND THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR STRAIGHTENING TREES DURING THE GUARANTEE PERIOD.
- IN NEW PLANTED AREAS, GRADES SHALL BE ESTABLISHED BY THE LANDSCAPE CONTRACTOR AT APPROXIMATELY 3 INCHES BELOW CURBS, SIDEWALKS, HARDSCAPE AMENITIES, MOWING STRIPS, AND ADJUTMENTS TO ALLOW FOR MULCH.
- THE LANDSCAPE CONTRACTOR SHALL COORDINATE CONSTRUCTION OF PLANTING AREAS WITH INSTALLATION OF IRRIGATION SYSTEM AND HARDSCAPE WORK.
- INCLUDING PERMITS TO WORK IN RIGHTS-OF-WAY.
- INSTALLED PLANT MATERIAL SHALL BE FERTILIZED WITH THE FOLLOWING APPLICATIONS:
LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPLICABLE PERMITS BEFORE COMMENCING CONSTRUCTION, TREES AND SHRUBS:
SHRUBS/GROUND COVER - 1/3 LB. PER 3-GALLON POT, 1/4 LB. PER 1-GALLON POT
TREES AND SHRUBS (OVER 5 FT. HT.) - 1 LB. PER 1 INCH OF TRUNK DIAMETER
(15-4-8) COMMERCIAL FERTILIZER - 10 LBS. PER 1,000 SQ. FT.
(12-4-12) COMMERCIAL FERTILIZER - 1 LB. PER 1 INCH OF TRUNK DIAMETER
- THE LANDSCAPE CONTRACTOR SHALL MAINTAIN FULLY, PLANT MATERIAL ON SITE DURING AND BEFORE PLANTING, UNTIL THE WORK IS ACCEPTED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE.
- PLANTS SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR TO BE HEALTHY PLANTS AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR ONE (1) YEAR FROM FINAL INSPECTION AND ACCEPTANCE.
- THE OWNER AND/OR OWNER'S REPRESENTATIVE HAS THE RIGHT TO REJECT ANY AND ALL WORK WHICH IN HIS OPINION DOES NOT MEET WITH THE REQUIREMENTS OF THE SPECIFICATIONS AT ANY STAGE OF THE PROJECT.
- IN GENERAL, THE WORK SHALL PROCEED AS RAPIDLY AS THE SITE BECOMES AVAILABLE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE CLEANUP OF PREMISES AND REMOVAL OF DISCARDED AND SURPLUS MATERIALS AND RUBBISH.
- SOD SHALL BE INSTALLED IN THE AREAS AS INDICATED ON THE PLAN. VERIFY EXACT LOCATION AND AMOUNT OF SOD AS SHOWN TO FIT CONDITIONS.
- SOD SHALL BE LAID END-TO-END AND SIDE-TO-SIDE IN A STAGGERED LINE TO FORM A UNIFORM LAYER. UNEVEN EDGES SHALL BE SQUARELY TRIMMED TO ALLOW CLOSE AND FIRM FITTING OF EACH PIECE.
- AFTER SODDING IS COMPLETED, THE ENTIRE SOD AREAS SHALL BE ROLLED AND WATERED BY HAND OR IRRIGATION SYSTEM EACH DAY FOR TWO WEEKS. SODDED AREAS SHALL THEN BE TOP-DRESSED WITH A COMMERCIAL FERTILIZER AS DIRECTED BELOW IN AN EVENLY BROADCAST PATTERN.
- LANDSCAPE CONTRACTOR TO PROVIDE PHOTOS OR SAMPLES OF ALL PLANT MATERIAL NOTED ON PLANT LIST TO LANDSCAPE DESIGNER FOR APPROVAL PRIOR TO INSTALLATION.
- LANDSCAPE CONTRACTOR TO NOTIFY THE LANDSCAPE DESIGNER PRIOR TO COMMENCING ANY LANDSCAPE WORK IF HIGH SALT CONTENT IS DISCOVERED ONCE THE IRRIGATION WELL IS ESTABLISHED AND TESTED, AND/OR IF HE/SHE HAS CONCERNS THAT THE SPECIFIED LANDSCAPE MATERIAL WILL NOT TOLLERATE THE PROJECT SITE CONDITIONS.
- LANDSCAPE CONTRACTOR TO NOTIFY ALL AREAS WHERE PLANTINGS HAVE BE SHOWN IS ASSUMED TO BE WELL DRAINED. CONTRACTOR TO NOTIFY ENVIRONMENTAL DESIGN SERVICES PRIOR TO INSTALLING PLANT MATERIAL IN AREAS WHERE STANDING WATER OR EXCESSIVELY WET AREAS ARE IDENTIFIED.

SOD:
PALMS:
SHRUBS/GROUND COVER - 1/3 LB. PER 3-GALLON POT, 1/4 LB. PER 1-GALLON POT
TREES AND SHRUBS (OVER 5 FT. HT.) - 1 LB. PER 1 INCH OF TRUNK DIAMETER
(15-4-8) COMMERCIAL FERTILIZER - 10 LBS. PER 1,000 SQ. FT.
(12-4-12) COMMERCIAL FERTILIZER - 1 LB. PER 1 INCH OF TRUNK DIAMETER



PINE STREET

GRAPHIC SCALE



Original Drawing
Issue Date: 6-4-26

By	Description
1	
2	
3	
4	
5	
6	
7	

Project:
Burton Residence
Location:
1500 Pine St.
Melbourne Beach

Landscape Plan

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Sheet #:
L-1

Project No. 00-0000
Drawn By: BKA
Designed By: BKA
Checked By: BKA
Drawing Scale: 1"=10'

Sheet 1 of 2



CERTIFIED PROFESSIONAL
FNGLA Certified
Landscape Designer

Brian K. Alderfer
D24936
Certification valid through 9/30/2027



CERTIFIED PROFESSIONAL
FNGLA Certified
Horticulture Professional

Brian K. Alderfer
H02184
Certification valid through 9/30/2027



PLANT SCHEDULE

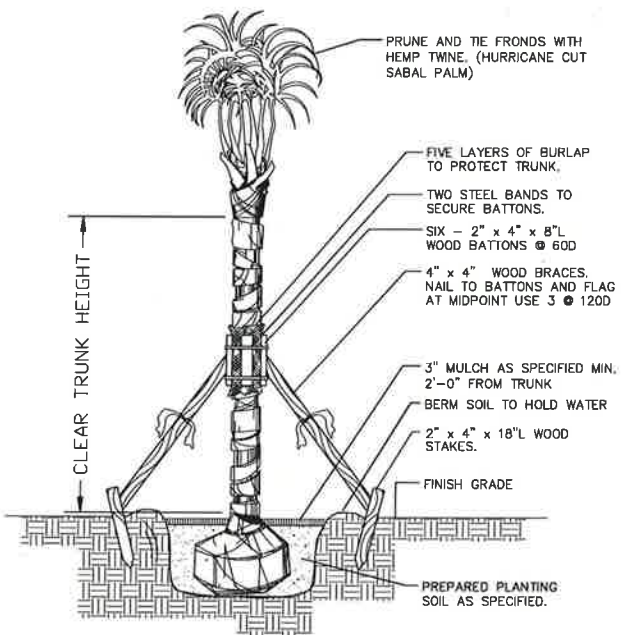
SYMBOL	COMMON / BOTANICAL NAME	CONT	CAL	SIZE	QTY	REMARKS
TREES						
	Edible Olive / <i>Olea europaea</i>	100 gal	Multi-trunk	12'-14'H x 5'-6"W	5	
MITIGATION TREES						
	Live Oak / <i>Quercus virginiana</i>	45 gal	2" DBH	12' ht. x 5' sprd.	3	
PALM TREES						
	Canary Island Date Palm / <i>Phoenix canariensis</i>	B & B	Heavy	8' C.T.	4	Specimen
	Medjool Date Palm / <i>Phoenix dactylifera</i> 'Medjool'	B & B	Heavy	8' C.T.	4	Specimen
SHRUBS						
	Green Glow Agave / <i>Agave</i> x 'Green Glow'	3 gal			10	
	Japanese Boxwood / <i>Buxus microphylla japonica</i>	7 gal			83	28"-30"
	Small Leaf Clusia / <i>Clusia rosea</i> 'hana'	15 gal			110	48"
	Glossy Privet / <i>Ligustrum lucidum</i>	3 gal			43	36"-42"
	Mexican Feather Grass / <i>Nassella tenuisima</i>	3 gal			86	18"-24"
	Orange Bird Of Paradise / <i>Strelitzia reginae</i>	15 gal			3	24"-24"
	Dwarf Fakahatchee Grass / <i>Tripsacum floridana</i>	3 gal			23	18"-24"
GROUND COVERS						
	Dwarf Jasmine / <i>Trachelospermum asiaticum</i> 'Minima'	1 gal			630	Full
SOD/SEED						
	Artificial turf /	sod			5,175 sf	

REFERENCE NOTES SCHEDULE

SYMBOL	CODE	DESCRIPTION	QTY	DETAIL
ROCK				
	K-101-01	Stone, type to be determined	1,000 sf	
	K-102-01	Aluminum edging, color: silver	421 lf	
PAVING				
	P-301-01	Stepping stone and gravel walkway. Details by others.	428 sf	

Landscape Bid Notes

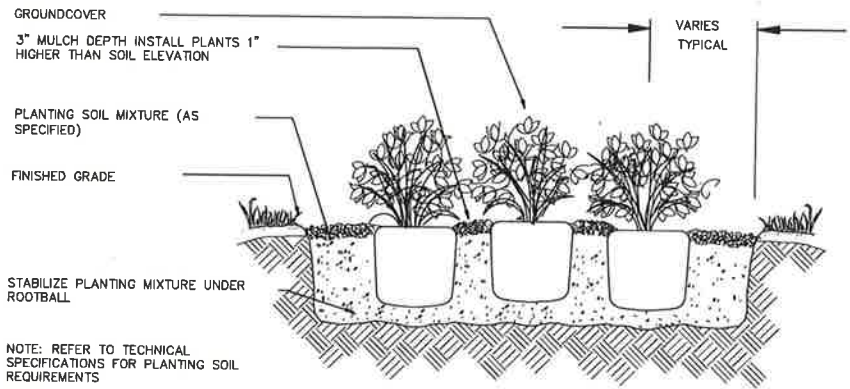
1. ANY DISCREPANCIES CONCERNING THE MATERIALS OR CONDITIONS OF THE SITE THAT SHALL INHIBIT THE INSTALLATION AS DRAWN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVES. ISSUES FOUND PRIOR TO BID WILL BECOME A CONDITION OF THE BID AFTER THE AWARD OF THE CONTRACT.
2. AFTER THE AWARD OF THE CONTRACT, ANY DISCREPANCIES IN THE PLANS OR ADDITIONAL MATERIALS AND COSTS BECAUSE OF PRE-EXISTING CONDITIONS AT THE SITE SHALL NOT BE A REASON FOR ANY ADDITIONAL CHARGES TO THE OWNERS.
3. THESE BID CONDITIONS ARE NOT TO BE CONSIDERED ALL INCLUSIVE. THERE MAY BE ADDITIONAL CONDITIONS INCLUDED IN OTHER DOCUMENTS OF THE CONSTRUCTION AGREEMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE HIMSELF AND HIS SUBCONTRACTORS AWARE OF ANY OTHER SUCH CONDITIONS.
4. THE QUANTITIES ON THE MATERIALS SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND NOT TO BE CONSIDERED AS THE FINAL QUANTITY FOR BID AND INSTALLATION. THE CALLOUTS AND ENTITIES DRAWN ON THE PLANS TAKE PRECEDENCE OVER THE PLANT LIST.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN TAKEOFFS OF THE PLANTINGS AS DRAWN.
6. THE CONTRACTOR SHALL BE EXPECTED TO VISIT THE SITE PRIOR TO BID. THE CONTRACTOR SHALL HAVE AN UNDERSTANDING OF THE ON SITE CONDITIONS TO PREPARE HIS BID. CONDITIONS EXISTING PRIOR TO BID WILL BECOME A CONDITION OF THE BID AFTER THE BID IS ACCEPTED BY THE CLIENT.



- NOTES:
1. SABAL PALMS W/ BOOTS REMOVED
 2. SEE PLANS AND SPECS. FOR PALMS W/ BOOTS TO REMAIN ON TRUNK.
 3. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY LANDSCAPE DESIGNER.
 4. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

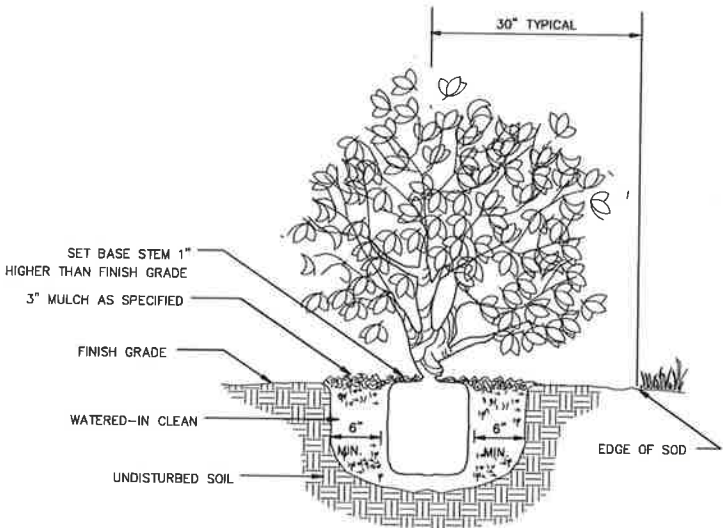
PALM TREE PLANTING/STAKING DETAIL

SCALE: N.T.S.



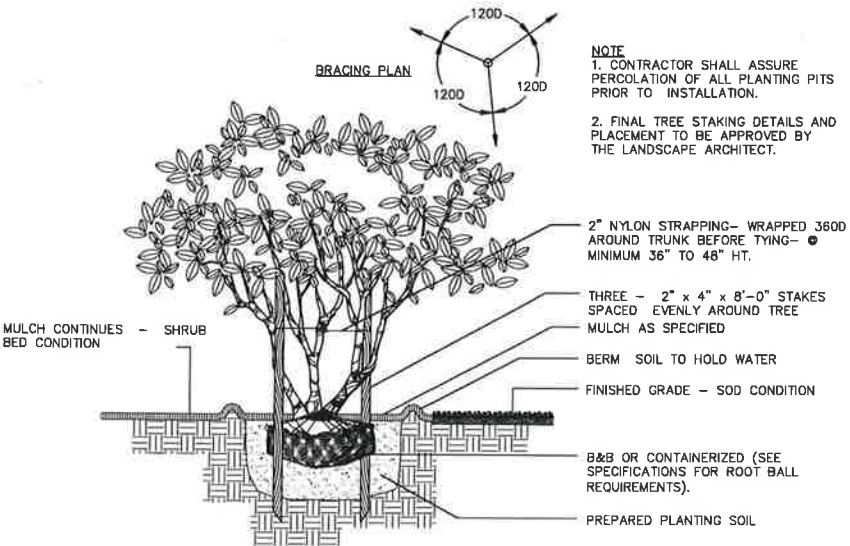
GROUND COVER PLANTING DETAIL

SCALE: N.T.S.



SHRUB PLANTING DETAIL

SCALE: N.T.S.



MULT-TRUNK TREE PLANTING/STAKING DETAIL

SCALE: N.T.S.



Original Drawing
Issue Date: 6-4-26

By	
Description	
REVISIONS:	
No.	Date
1	
2	
3	
4	
5	
6	
7	

Project:
Burton Residence

Location:
**1500 Pine St.
Melbourne Beach**

Landscape Plan

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Sheet #:
L-2

Project No. 00-0000
Drawn By: BKA
Designed By: BKA
Checked By: BKA
Drawing Scale: none

TREES



Edible Olive

MITIGATION TREES



Live Oak

PALM TREES



Canary Island Date Palm



Medjool Date Palm

SHRUBS



Green Glow Agave



Japanese Boxwood



Small Leaf Clusia



Glossy Privet



Mexican Feather Grass



Orange Bird Of Paradise



Dwarf Fakahatchee Grass

GROUND COVERS



Dwarf Jasmine

SOD/SEED



Artificial turf

Environmental Design Services
Landscape and Irrigation Design and Consulting
141 East Dover Street
Satellite Beach, FL 32957
Phone: (321) 288-6143
Fax: (321) 779-9953

Original Drawing
Issue Date: 6-4-26

REVISIONS:		
No.	Date	Description
1		
2		
3		
4		
5		
6		
7		

Project:
Burton Residence
Location:
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Melbourne Beach

Plant Photos

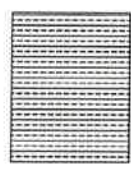
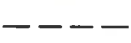
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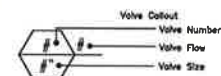
Project No. 00-0000
Drawn By: BKA
Designed By: BKA
Checked By: BKA
Drawing Scale: none

Sheet 1 of 1

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	Bubbler Flood Bubbler, 1/2" FIPT.	6	30
	Hunter PROS-V-PR530-00-M5BN Multi-Stream Bubbler, fixed riser, 25±.25 gpm, 50±0.5 gpm.	17	30
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	Hunter ICZ-101-40 (2) Drip Control Zone Kit. 1in. ICV Globe Valve with 1in. HY100 filter system. Pressure Regulation: 40psi. Flow Range: 2 GPM to 20 GPM. 150 mesh stainless steel screen.	3	
	Area to Receive Dripline Hunter HDL-09-12-COP HDL-09-12-COP: Copper oxide-infused Hunter Dripline with 0.9 GPM flow. Light brown tubing with black striping. Emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern. Install with Hunter PLD barbed or PLD-LOG fittings.	4,036 lf	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	Hunter P2C-400 Light Commercial & Residential Controller, 1 4-station base module controller, 120 VAC, Outdoor/Indoor model		
	Hunter WR-CLIK Rain Sensor, install within 1000 ft of controller, in line of sight. 22-28 VAC/VDC 100 mA power from timer transformer. Mount as noted.	1	
	Pump and well Pump and well able to produce flow rates of 25 gpm at an operating pressure of 45 psi		
	Irrigation Lateral Line: PVC Class 160 SDR 26	1,017 lf	
	Irrigation Mainline: PVC Class 200 SDR 21	174.2 lf	

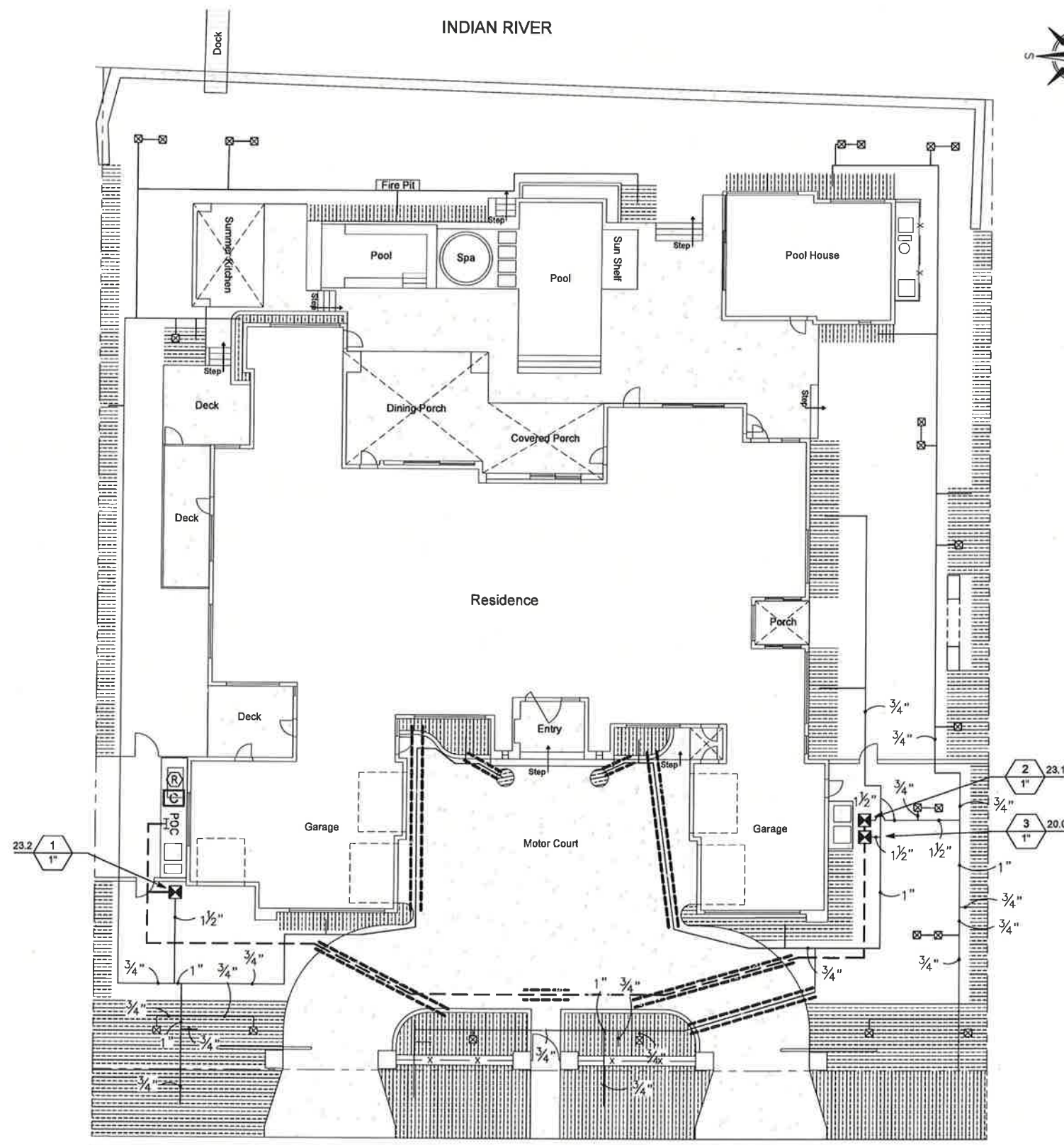
Pipe Sleeve: PVC schedule 40 sleeving
To be sized 2 times larger than lateral or
mainline pipes.



IRRIGATION NOTES

1. Verify all conditions and dimensions shown on the plans at the site prior to commencement of work under this contract.
2. All Irrigation installation shall conform to local codes.
3. Piping on plans is diagrammatically routed for clarity. Route to avoid conflict with specimen plants, utilities and structures not shown on the plans. All piping should be installed outside of Right of Ways unless at Right of Ways usage permit has been received. Design modifications may be made only as necessary to meet field conditions and only as acceptable to Irrigation Designer.
4. Adjust sprinkler's arc and radius to assure 100% coverage. Use variable arc nozzles where necessary to prevent overspray onto hard surfaces.
5. Main line shall be class 200 PVC. Laterals shall be Class 160 PVC.
6. Where mains and/or laterals are covered by paving, schedule 40 PVC sleeve shall be used. Installer shall coordinate placement of sleeves with general contractor.
7. All mains shall be buried a minimum of 16" below grade.
8. All laterals shall be buried a minimum of 12" below grade.
9. All valves shall be installed in AMETEK VP-10 valve boxes.
10. Use special glue on heavy walled flexible PVC pipe connections. NOTE: barbed fittings and poly pipe are an acceptable alternative. (i.e. Toro "Funny Pipe" or RainBird "Flex Pipe". Submit shop drawings for review and approval.
11. The system requires 20-25 g.p.m. at a minimum of 45 p.s.i. at the point of connection. Verify that required flows and pressures are available prior to ordering materials and/or commencing with the installation. Report any discrepancies to the Irrigation consultant.
12. Irrigation heads installed along roadways and sidewalks shall be installed and adjusted as to prevent water from spraying onto the pavement surfaces.

GRAPHIC SCALE



PINE STREET

FNGLA
CERTIFIED PROFESSIONAL
FNGLA Certified
Landscape Designer
Brian K. Alderfer
D24936
Certification valid through 9/30/2027

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Landscape and Irrigation Design and Consulting
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Phone: (321) 288-6143
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Original Drawing
Issue Date: 6-4-26

By _____
Description _____

REVISIONS:
No. Date

Project:
Burton Residence

Location:
**1500 Pine St.
Melbourne Beach**

Irrigation Plan

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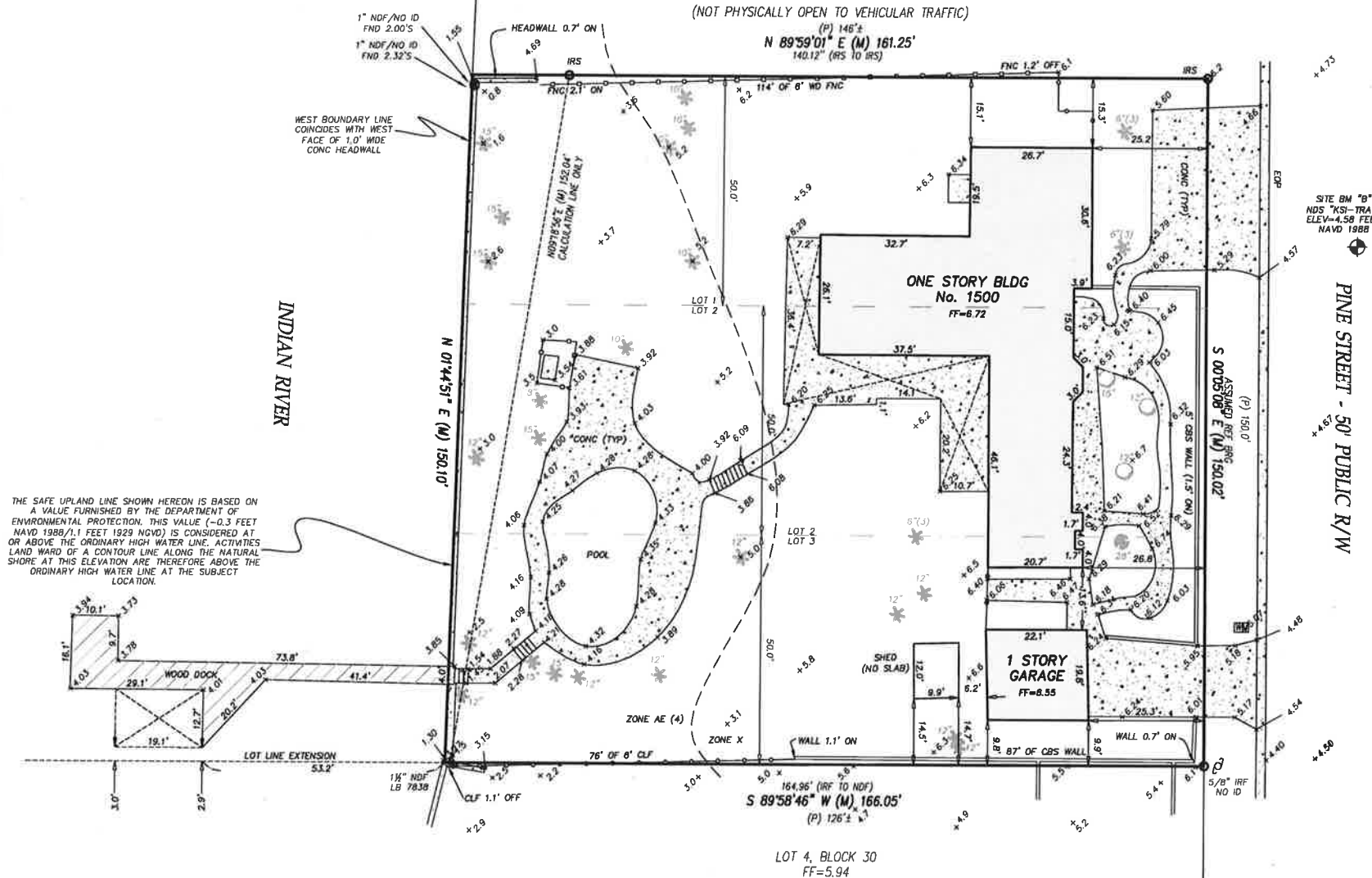
Sheet #:
IR-1

Project No. 00-0000
Drawn By: BKA
Designed By: BKA
Checked By: BKA
Drawing Scale: 1"=10'

Sheet 1 of 1

MAP OF BOUNDARY & TOPOGRAPHIC SURVEY

FIFTH AVENUE - 50' PUBLIC R/W
(NOT PHYSICALLY OPEN TO VEHICULAR TRAFFIC)



LEGAL DESCRIPTION:

LOTS 1, 2 & 3, BLOCK 30, RESUBDIVISION OF BLOCKS 11, 20, 21, 30 AND 31, OF WILCOX PLAT OF MELBOURNE BEACH, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 10, PAGE 51, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

A/C = AIR CONDITIONER
BFE = BASE FLOOD ELEVATION
BLDG = BUILDING
BLK = BLOCK
BM = BENCHMARK
BRG = BEARING
C = CALCULATED
C/L = CENTERLINE
CBS = CONCRETE BLOCK STRUCTURE
CLF = CHAIN LINK FENCE
CMF = CONCRETE MONUMENT FOUND
CONC = CONCRETE
COR = CORNER
ELED = ELECTRIC
ELEV = ELEVATION
EOP = EDGE OF PAVEMENT
ESMT = EASEMENT
FB = FIELD BOOK
FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY
FF = FINISHED FLOOR
FNC = FENCE
FND = FOUND
FL&L = FLORIDA POWER & LIGHT COMPANY
ID = IDENTIFICATION
IPF = IRON PIPE FOUND
IRC = IRON ROD & CAP FOUND
IRF = IRON ROD FOUND
IRS = 5/8" IRON ROD SET "L8 7838"
L8 = LICENSED BUSINESS NUMBER
LS = (RLS) or (PLS) REGISTERED OR
PROFESSIONAL LAND SURVEYOR
(M) = MEASURED
NAVJ = NORTH AMERICAN VERTICAL DATUM
NVD = NAL & DISK FOUND
NVD = 1/4" NAL & DISK SET "L8 7838"
NVD = NATIONAL GEODETIC VERTICAL DATUM
NO = NUMBER
O/H = OVERHEAD
ORB = OFFICIAL RECORDS BOOK
O/S = OFFSET
(P) = PLAT
PB = PLAT BOOK
PLS = PROFESSIONAL LAND SURVEYOR
PSM = PROFESSIONAL SURVEYOR AND MAPPER
PUE = PUBLIC UTILITY EASEMENT
RET = REFERENCE
RNG = RANGE
R/W = RIGHT OF WAY
SEC = SECTION
SFHA = SPECIAL FLOOD HAZARD AREAS
TEL = TELEPHONE RISER
TWP = TOWNSHIP
TYP = TYPICAL
UP = UTILITY POLE
WD = WOOD
WIT-COR = 5/8" IRON ROD SET WITH CAP "WITNESS"
WM = WATER METER
XCF = CROSS CUT FOUND

12"  INDICATES A PALM TREE & DIAMETER
12"  INDICATES AN OAK TREE & DIAMETER
28"  INDICATES A PINE TREE & DIAMETER

CERTIFIED TO: CHRIS BURTON

NOTES:

1. BEARINGS BASED ON THE WEST R/W BEING 50°05'08"E AS PER ASSUMED DATUM (SEE SKEW)
2. ELEVATIONS BASED ON BREVARD COUNTY BENCHMARK 7080A41RM2 BEING AN ELEVATION OF 9.95 FEET NAVD 1988
3. FLOOD ZONE "X" & "AE", MAP No. 12009C0604H COMMUNITY No. 125128, MARCH 17, 2014. FLOOD ZONE INFORMATION DETEMED HEREON IS APPROXIMATE. FEMA RETAINS SOLE AUTHORITY REGARDING BOUNDARY AND EXTENT OF SPHA.
4. HORIZONTAL CLOSURE MEETS OR EXCEEDS THE ACCURACY REQUIREMENTS FOR SUBURBAN LAND AS PER FLORIDA STATUTE 5J-17-6.003
5. BEARINGS, DISTANCES OR ANGLES SHOWN ARE THE SAME AS PLAT, DEED OR RECORD UNLESS SHOWN OTHERWISE.
6. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. ACTIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY.
7. THE SURVEYOR HAS NOT LOCATED NOR ATTEMPTED TO LOCATE ANY UNDERGROUND UTILITIES, FOUNDATIONS, OR STRUCTURES OTHER THAN THOSE THAT MAY BE SHOWN HEREON.
8. ON A BOUNDARY CORNER MONUMENT AS SHOWN HEREON ARE TO BE USED FOR THE LOCATION AND CONSTRUCTION OF IMPROVEMENTS.
9. UNLESS OTHERWISE INDICATED THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE SEARCH OR ATTORNEY'S TITLE OPINION.

BOUNDARY & TOPOGRAPHIC SURVEY	DATE: 1/13/26
-------------------------------	---------------

Kane Surveying, Inc.
FLORIDA LICENSED BUSINESS No. LB 7838
505 DISTRIBUTION DRIVE
MELBOURNE, FLORIDA 32904
(321) 878-0427 FAX (321) 984-1448



CERTIFICATION:

CERTIFICATION:
I HEREBY CERTIFY: THAT THE ATTACHED SURVEY WAS DONE UNDER MY DIRECTION AND MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

Joel A. Seymour *Disunity signed by Joel A. Seymour*

JOEL A. SEYMOUR PROFESSIONAL LAND SURVEYOR AND MAPPER
STATE OF FLORIDA No. 6133

DRAWN BY: JAS

SCALE 1 INCH = 20 FEET

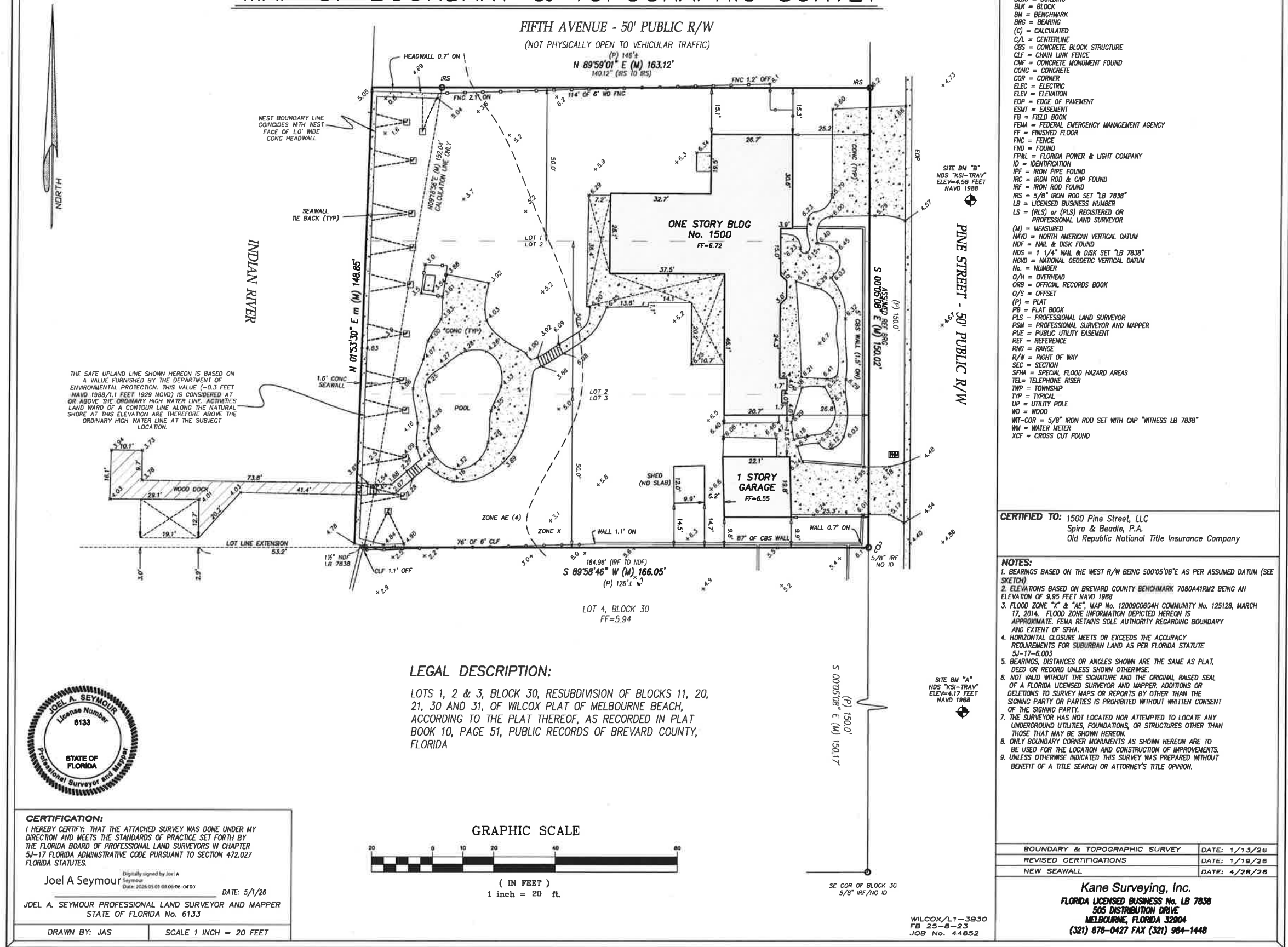
WILCOX/L1-3830
FB 25-8-23
JOB No. 44652

MAP OF BOUNDARY & TOPOGRAPHIC SURVEY

FIFTH AVENUE - 50' PUBLIC R/W

(NOT PHYSICALLY OPEN TO VEHICULAR TRAFFIC)

N 89°59'01" E (M) 163.12'
140.12' (RS TO IRS)

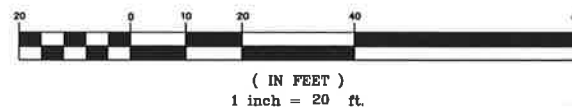


THE SAFE UPLAND LINE SHOWN HEREON IS BASED ON A VALUE FURNISHED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. THIS VALUE (-0.3 FEET NAVD 1988/1.1 FEET 1929 NAVD) IS CONSIDERED AT OR ABOVE THE ORDINARY HIGH WATER LINE. ACTIVITIES LAND WARD OF A CONTOUR LINE ALONG THE NATURAL SHORE AT THIS ELEVATION ARE THEREFORE ABOVE THE ORDINARY HIGH WATER LINE AT THE SUBJECT LOCATION.

LEGAL DESCRIPTION:

LOTS 1, 2 & 3, BLOCK 30, RESUBDIVISION OF BLOCKS 11, 20, 21, 30 AND 31, OF WILCOX PLAT OF MELBOURNE BEACH, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 10, PAGE 51, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA

GRAPHIC SCALE



CERTIFICATION:

I HEREBY CERTIFY: THAT THE ATTACHED SURVEY WAS DONE UNDER MY DIRECTION AND MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER SJ-17 FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

Digitally signed by Joel A Seymour
Date: 2025.05.01 08:06:06 -04:00

DATE: 5/1/26

JOEL A. SEYMOUR PROFESSIONAL LAND SURVEYOR AND MAPPER
STATE OF FLORIDA No. 6133

DRAWN BY: JAS

SCALE 1 INCH = 20 FEET

LEGEND

A/C = AIR CONDITIONER
BFE = BASE FLOOD ELEVATION
BLDG = BUILDING
BLK = BLOCK
BM = BENCHMARK
BRG = BEARING
(C) = CALCULATED
C/L = CENTERLINE
CBS = CONCRETE BLOCK STRUCTURE
CLF = CHAIN LINK FENCE
CMF = CONCRETE MONUMENT FOUND
CONC = CONCRETE
COR = CORNER
ELEC = ELECTRIC
ELEV = ELEVATION
EOP = EDGE OF PAVEMENT
ESMIT = EASEMENT
FB = FIELD BOOK
FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY
FF = FINISHED FLOOR
FNC = FENCE
FND = FOUND
FPLB = FLORIDA POWER & LIGHT COMPANY
ID = IDENTIFICATION
IPF = IRON PIPE FOUND
IRC = IRON ROD & CAP FOUND
IRF = IRON ROD FOUND
IRS = 5/8" IRON ROD SET "LB 7838"
LB = LICENSED BUSINESS NUMBER
LS = (RLS) or (PLS) REGISTERED OR
"PROFESSIONAL LAND SURVEYOR"
(M) = MEASURED
NAVD = NORTH AMERICAN VERTICAL DATUM
NDF = NAIL & DISK FOUND
NDS = 1 1/4" NAIL & DISK SET "LB 7838"
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WIT-COR = 5/8" IRON ROD SET WITH CAP "WITNESS LB 7838"
WM = WATER METER
XCF = CROSS CUT FOUND

CERTIFIED TO: 1500 Pine Street, LLC
Spira & Beadle, P.A.
Old Republic National Title Insurance Company

NOTES:

- BEARINGS BASED ON THE WEST R/W BEING 500°05'08"E AS PER ASSUMED DATUM (SEE SKETCH)
- ELEVATIONS BASED ON BREVARD COUNTY BENCHMARK 7080A41RM2 BEING AN ELEVATION OF 9.95 FEET NAVD 1988
- FLOOD ZONE "X" & "AE", MAP No. 12008C0604H COMMUNITY No. 125128, MARCH 17, 2014. FLOOD ZONE INFORMATION DEPICTED HEREON IS APPROXIMATE. FEMA RETAINS SOLE AUTHORITY REGARDING BOUNDARY AND EXTENT OF SFHA.
- HORIZONTAL CLOSURE MEETS OR EXCEEDS THE ACCURACY REQUIREMENTS FOR SUBURBAN LAND AS PER FLORIDA STATUTE SJ-17-6.003
- BEARINGS, DISTANCES OR ANGLES SHOWN ARE THE SAME AS PLAT, DEED OR RECORD UNLESS SHOWN OTHERWISE.
- NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY.
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BOUNDARY & TOPOGRAPHIC SURVEY	DATE: 1/13/26
REVISED CERTIFICATIONS	DATE: 1/19/26
NEW SEAWALL	DATE: 4/28/26

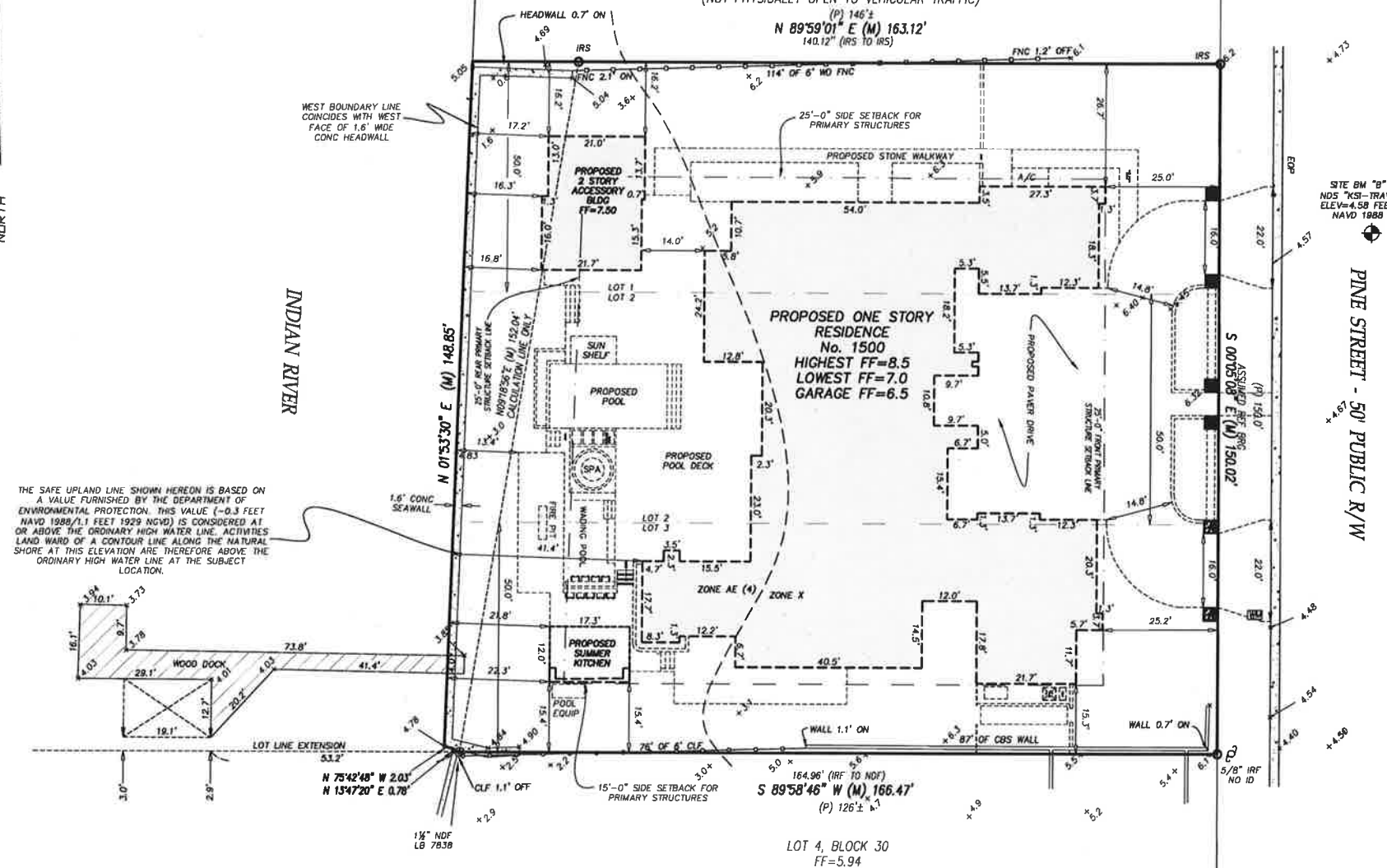
Kane Surveying, Inc.
FLORIDA LICENSED BUSINESS No. LB 7838
505 DISTRIBUTION DRIVE
MELBOURNE, FLORIDA 32904
(321) 678-0427 FAX (321) 984-1448

WILCOX/L1-3B30
FB 25-8-23
JOB No. 44652

MAP OF BOUNDARY & TOPOGRAPHIC SURVEY

FIFTH AVENUE - 50' PUBLIC R/W

(NOT PHYSICALLY OPEN TO VEHICULAR TRAFFIC)



THE SAFE UPLAND LINE SHOWN HEREON IS BASED ON A VALUE FURNISHED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. THIS VALUE (-0.3 FEET NAVD 1988/1.1 FEET 1929 NGVD) IS CONSIDERED AT OR ABOVE THE ORDINARY HIGH WATER LINE. ACTIVITIES LAND WARD OF A CONTOUR LINE ALONG THE NATURAL SHORE AT THIS ELEVATION ARE THEREFORE ABOVE THE ORDINARY HIGH WATER LINE AT THE SUBJECT LOCATION.



CERTIFICATION:

I HEREBY CERTIFY THAT THE ATTACHED SURVEY WAS DONE UNDER MY DIRECTION AND MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

Joel A. Seymour
 Digitally signed by Joel A. Seymour
 Date: 2026.06.10 12:18:35 -04'00'
 DATE: 6/10/26
 JOEL A. SEYMOUR PROFESSIONAL LAND SURVEYOR AND MAPPER
 STATE OF FLORIDA No. 6133

DRAWN BY: JAS

SCALE 1 INCH = 20 FEET

LEGAL DESCRIPTION:

LOTS 1, 2 & 3, BLOCK 30, RESUBDIVISION OF BLOCKS 11, 20, 21, 30 AND 31, OF WILCOX PLAT OF MELBOURNE BEACH, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 10, PAGE 51, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA

GRAPHIC SCALE



(IN FEET)
 1 inch = 20 ft.

LEGEND

A/C = AIR CONDITIONER
 BFE = BASE FLOOD ELEVATION
 BLDG = BUILDING
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 WM = WATER METER
 XCF = CROSS CUT FOUND

CERTIFIED TO: 1500 Pine Street, LLC
 Spira & Beadle, P.A.
 Old Republic National Title Insurance Company

NOTES:

1. BEARINGS BASED ON THE WEST R/W BEING S00T0S'08"E AS PER ASSUMED DATUM (SEE SKETCH)
2. ELEVATIONS BASED ON BREVARD COUNTY BENCHMARK 7080A1RM2 BEING AN ELEVATION OF 9.95 FEET NAVD 1988
3. FLOOD ZONE "X" & "AE", MAP No. 12009C0804H COMMUNITY No. 125128, MARCH 17, 2014. FLOOD ZONE INFORMATION DEPICTED HEREON IS APPROXIMATE. FEMA RETAINS SOLE AUTHORITY REGARDING BOUNDARY AND EXTENT OF SFHA.
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9. UNLESS OTHERWISE INDICATED THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE SEARCH OR ATTORNEY'S TITLE OPINION.

BOUNDARY & TOPOGRAPHIC SURVEY	DATE: 1/13/26
REVISED CERTIFICATIONS	DATE: 1/19/26
NEW SEAWALL	DATE: 4/28/26
PLOT PLAN	DATE: 6/4/26
ADDED A/C PAD	DATE: 6/10/26

Kane Surveying, Inc.
 FLORIDA LICENSED BUSINESS No. LB 7838
 505 DISTRIBUTION DRIVE
 MELBOURNE, FLORIDA 32904
 (321) 676-0427 FAX (321) 984-1448

WILCOX/L1-3830
 FB 25-B-23
 JOB No. 44852

AREA OF ALTERATION
= 0.57 ACRES

NO FILL OR CONSTRUCTION
MATERIALS MAY BE
PLACED OUTSIDE OF THE
SILT FENCING.

ARTIFICIAL TURF INSTALLED
ON THE SUBJECT SITE
SHALL BE PERMEABLE AND
INSTALLED PER THE
DETAILS ON SHEET C-2

ALL EQUIPMENT PADS SHALL
BE CONSTRUCTED AT OR
ABOVE ELEVATION OF 5' NAVD
(1' ABOVE THE FEMA BASE
FLOOD ELEVATION OF 4')



MINIMUM FINISHED FLOOR ELEVATION:

TOWN:
MINIMUM OF 18" ABOVE THE CROWN OF ROAD
CROWN OF ROAD = 4.73'
MINIMUM FFE = 4.73' + 1.5' = 6.23'
FEMA:
FLOOD ZONE "AE(4.0)", THE LOWEST FINISHED FLOOR ELEVATION
SHALL BE A MINIMUM OF 1' ABOVE THE BASE FLOOD ELEVATION.
LOWEST FINISHED FLOOR = 4+1'-5.0' (NAVD)

GRADING NOTES:

1. IMPERVIOUS PAVEMENT ADJACENT TO THE BUILDING SHALL SLOPE AWAY FROM THE BUILDING A MINIMUM OF 2% FOR THE FIRST 10 FEET.
2. THE FINISHED PAVEMENT GRADE ADJACENT TO THE GARAGE DOOR(S) SHALL BE SET 1/2" BELOW THE ADJACENT GARAGE SLAB ELEVATION AND BE SLOPED AWAY FROM THE GARAGE AT A MINIMUM OF A 2% SLOPE FOR 10 FEET.
3. FINISHED EARTH GRADES ADJACENT TO THE BUILDING SHALL BE A MINIMUM OF 6" BELOW THE FINISHED FLOOR ELEVATION AND THE GRADE SHALL FALL AWAY FROM THE BUILDING A MINIMUM OF 6 INCHES WITHIN THE FIRST 10 FEET.

EROSION NOTES:

BEST MANAGEMENT PRACTICES SHALL BE UTILIZED TO MINIMIZE ANY ON SITE EROSIONS. IN ADDITION TO BEST MANAGEMENT PRACTICES, AS A MINIMUM, SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE DEVELOPMENT AREA TO MINIMIZE SEDIMENTATION FROM LEAVING THE SITE.



TOWNSHIP 28S, RANGE 38E, SECTION 07

VICINITY MAP
NTS

GENERAL STATEMENT:

THIS LOT DRAINAGE PLAN HAS BEEN PREPARED FOR THE DEVELOPMENT OF A SINGLE-FAMILY RESIDENCE AND ASSOCIATED SITE IMPROVEMENTS ON THE SUBJECT LOT.

OWNER:

1500 PINE STREET LLC
3839 N HARBOR CITY BLVD, UNIT 101
MELBOURNE, FL 32935

ENGINEER:

BENNETT ENGINEERING & CONSULTING, LLC
4940 RANCHLAND ROAD
MELBOURNE, FLORIDA 32934
(321) 622-4462

SURVEYOR:

KANE SURVEYING, INC.
505 DISTRIBUTION DRIVE,
MELBOURNE, FL 32904
(321) 676-0427

SITE ADDRESS:

1500 PINE ST
MELBOURNE BEACH, FL 32951

PARCEL ID: 28-38-07-02-30-1

ACCOUNT NO: 2847696

SITE AREA: SITE AREA = ±0.57 (±24,858)

NATIONAL FLOOD INSURANCE INFORMATION:

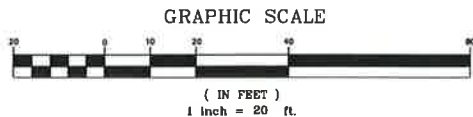
(AS PROVIDED ON THE SURVEY)
MAP NO. 1200SC0604H
FIRM INDEX DATE: MARCH 17, 2014
FLOOD ZONES: "X" & "AE"
LEGAL DESCRIPTION:
LOTS 1, 2 & 3, BLOCK 30, RESUBDIVISION OF BLOCKS 11, 20, 21, 30 AND 31, OF WILCOX PLAT OF MELBOURNE BEACH, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 10, PAGE 51, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA

Digitally signed by Clayton A Bennett
Date: 2026.06.11 09:20:20 -04'00'

This item has been digitally signed and sealed by Clayton A. Bennett, PE on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

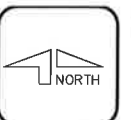


"PRELIMINARY"
JUNE 11, 2026



SHEET INDEX:

C-1 LOT DRAINAGE PLAN
C-2 LOT DRAINAGE DETAILS



SCALE: 1"=20'

1500 PINE STREET LLC
3839 N HARBOR CITY BLVD, UNIT 101
MELBOURNE, FL 32935

1500 PINE STREET LLC

NO.	DATE	REVISION
1		
2		
3		
4		
5		
6		
7		

BEC Bennett Engineering & Consulting

4940 RANCHLAND ROAD
MELBOURNE, FL 32934
(321) 622-4462
FAX (321) 622-4462
CA# 28236

CLAYTON A. BENNETT
P.E. NO. 53129

DATE: _____
© 2026 BENNETT ENGINEERING & CONSULTING, LLC.

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED HERE:

DATE: _____

DESIGNED BY: CAB	DATE: 06/05/2026
DRAWN BY: CAB	DATE: 06/05/2026
CHECKED:	
APPROVED:	
ACAD CODE: 26010M01.DWG	
PROJECT NO: 28.010	

LOT DRAINAGE PLAN

C-1
SHEET 1 OF 1

GENERAL NOTES:

1. PROPOSED BUILDING ENVELOPE INDICATES MAXIMUM EXTERIOR WALL DIMENSIONS ONLY.
2. BOUNDARY, TOPOGRAPHIC INFORMATION WAS PROVIDED BY KANE SURVEYING, INC. JOB NO. 44652, DATED 08/04/26.
3. ELEVATIONS ARE BASED ON NAVD, 1988 DATUM.
4. CONTOURS ARE APPROXIMATE ONLY.
5. THE SOLID WASTE WITHIN THE PROJECT SITE WILL BE PICKED UP BY CURBSIDE PICKUP.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED WITHIN ROAD AND DRAINAGE RIGHT-OF-WAY AS A DIRECT RESULT OF NEW CONSTRUCTION.
7. THE CONTRACTOR SHALL CONTACT SUNSHINE ONE (1-800-432-4770) AND ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND DOCUMENT THE ACTUAL LOCATION AND EXTENT OF ALL EXISTING UTILITIES WHICH MAY AFFECT CONSTRUCTION. EXISTING UTILITIES SHOWN ARE BASED UPON THE BEST AVAILABLE INFORMATION SUPPLIED TO THE OWNER/ENGINEER AND IS SHOWN FOR INFORMATIONAL PURPOSE ONLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE UTILITY OWNER.

StormTech® SC-310 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

Nominal Chamber Specifications (not to scale)

Size (L x W x H)
85.4" x 34" x 16"
2170 mm x 864 mm x 405 mm

Chamber Storage

14.7 ft³ (0.42 m³)

Min. Installed Storage*

29.3 ft³ (0.83 m³)

Weight

37.0 lbs (16.8 kg)

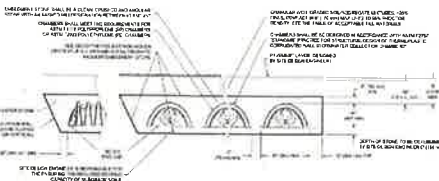
Shipping

55 Chambers/pallet

108 end caps/pallet

18 pallets/truck

*Assumes 6" (150 mm) stone above and below chambers and 40% stone porosity.



STORM CHAMBER DETAILS:
NTS

StormTech SC-310 Specifications

Cumulative Storage Volumes Per Chamber
Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (150 mm) Stone Base Under Chambers.

Depth of Water in Chamber (ft)	Cumulative Storage Volume (ft³)	Total System Storage Volume (ft³)
0.1	1.47	1.47
0.2	2.93	2.93
0.3	4.39	4.39
0.4	5.86	5.86
0.5	7.32	7.32
0.6	8.79	8.79
0.7	10.25	10.25
0.8	11.72	11.72
0.9	13.18	13.18
1.0	14.65	14.65
1.1	16.11	16.11
1.2	17.58	17.58
1.3	19.04	19.04
1.4	20.51	20.51
1.5	21.97	21.97
1.6	23.44	23.44
1.7	24.90	24.90
1.8	26.37	26.37
1.9	27.83	27.83
2.0	29.30	29.30

Note: Add 0.73 ft³ (0.021 m³) of storage for each additional inch (25 mm) of stone foundation.

ADS StormTech products, manufactured in accordance with ASTM F2418 or ASTM F2922, comply with all requirements in the Build America, Buy America (BABA) Act.

Working on a project?
Visit us at adsplpe.com and utilize the Design Tool



adsplpe.com
800 821-6710

Storage Volume Per Chamber ft³ (m³)

Chamber Size (ft)	Storage Volume (ft³)	Storage Volume (m³)
SC-310 Chamber	14.70 (0.42)	29.30 (0.83)

Note: Assumes 6" (150 mm) stone above chambers, 3" (76 mm) row spacing and 40% stone porosity.

Amount of Stone Per Chamber

English Tons (yd³)	Stone Foundation Depth (ft)	Stone Foundation Depth (m)
SC-310	8.0 (0.40)	2.50 (0.76)

Note: Assumes 6" (150 mm) of row separation and 6" (150 mm) of stone above the chambers and 16" (400 mm) of cover. The volume of excavation will vary as depth of cover increases.

Volume Excavation Per Chamber yd³ (m³)

Excavation Depth (ft)	Excavation Volume (yd³)	Excavation Volume (m³)
SC-310	2.62 (0.80)	18.12 (0.51)

Note: Assumes 6" (150 mm) of row separation and 6" (150 mm) of stone above the chambers and 16" (400 mm) of cover. The volume of excavation will vary as depth of cover increases.

STORM CHAMBERS SHALL BE INSTALLED PER THE MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS

BASE AND DRAINAGE SYSTEM

The installed turf system utilizes a permeable aggregate foundation consisting of open-graded materials intended to promote vertical infiltration and subsurface drainage.

The base assembly consists of:

- Approximately 2 inches compacted #57 stone as the primary drainage layer
- Approximately 1 inch compacted #89 stone as the leveling layer
- A minimal finish grading layer (dusted) of concrete screenings used solely for surface smoothing purposes

The aggregate system is installed to:

- Promote infiltration through the turf profile
- Reduce surface runoff concentration
- Minimize erosion potential
- Provide structural stability while maintaining permeability

The screenings layer is limited to finish grading only and is not intended to function as an impermeable barrier.

SYNTHETIC TURF SYSTEM

The installed synthetic turf product includes:

- Permeable backing designed for exterior landscape applications
- UV-resistant turf fibers
- Infill material distributed throughout the turf system in accordance with manufacturer recommendations

The turf system is installed as a permeable surface assembly intended to allow water to pass vertically through the turf and aggregate base layers.

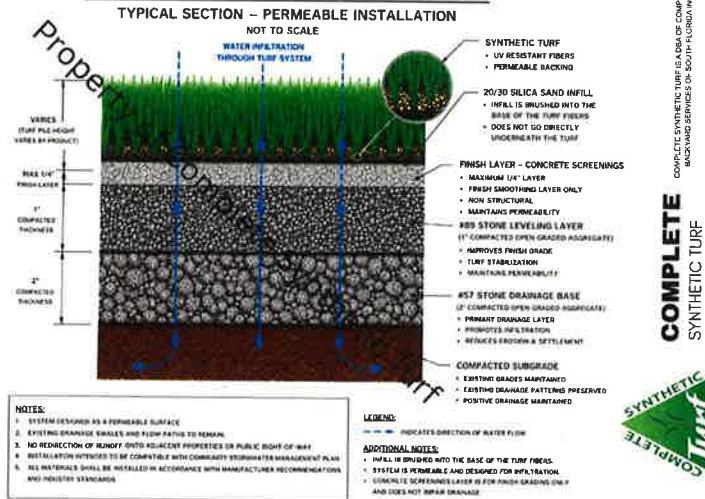
EDGE RESTRAINT

Existing landscape edging and border restraints are maintained where applicable.

Additional perimeter restraint materials are installed as necessary to:

- Secure the turf perimeter
- Maintain edge stability
- Minimize movement or displacement of the turf system

COMPLETE SYNTHETIC TURF



NOTES:
1. SYSTEM DESIGNED AS A PERMEABLE SURFACE.
2. EXISTING DRAINAGE SLOPES AND FLOW PATHS TO REMAIN.
3. NO REDUCTION OF RUNOFF DUE TO EXISTING PROPERTIES OR PUBLIC RIGHT OF WAY.
4. INSTALLATION INTENDED TO BE COMPLETED WITH CONSULTANT'S RECOMMENDATIONS.
5. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND RELEVANT STANDARDS.

LEGEND:
- INDICATES DIRECTION OF WATER FLOW
ADDITIONAL NOTES:
1. INFILL IS BROADCAST INTO THE BASE OF THE TURF FIBERS.
2. SYSTEM IS PERMEABLE AND DESIGNED FOR INFILTRATION.
3. CONCRETE SCREENINGS LAYER IS FOR FINISH GRADING ONLY AND DOES NOT IMPAIR DRAINAGE.

ARTIFICIAL TURF DETAILS:
NTS

ARTIFICIAL TURF SHALL BE INSTALLED PER THE MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS

TESTING INFORMATION PROVIDED FOR INFORMATIONAL PURPOSES ONLY - NOT INCLUDED IN ENGINEER'S CERTIFICATION

TESTING SERVICES

LABORATORY TEST SUMMARY

Report # 81158
Lab Test Number 3410-0597
Report Date January 15, 2024

ASTM F1551, DIN 18 033 Part 6: Water Permeability
www.testingservices.us • (706) 226-1400
office@testingservices.us

Client: City of USA
Address: 1000 N. 1st Street, Boca Raton, FL 33431

Test Method: Testing Services Inc. was instructed by the client to test for the following:
- Water Permeability of Synthetic Turf System
- Permeability of Synthetic Turf System and Permeable Base

TESTING METHOD REQUESTED:
- Water Permeability of Synthetic Turf System
- Permeability of Synthetic Turf System and Permeable Base

SAMPLES PLANNED:
- 12/10/2023

DEVIATION FROM TEST METHOD:
- State reason for any deviation from Addendum to or Exclusions from Test Method.
None

PROCEDURE:
This test method determines the overall average capacity (permeability) of the playing surface. Test data values represent drainage rates vertically into the turf with 100 mm of water applied and held for 15 minutes. The permeability of the playing surface is determined by the average of the drainage rates. The drainage rate is determined by the volume of water that has infiltrated the playing surface divided by the area of the playing surface. The drainage rate is determined by the volume of water that has infiltrated the playing surface divided by the area of the playing surface. The drainage rate is determined by the volume of water that has infiltrated the playing surface divided by the area of the playing surface.

Specimen #	Drainage Rate #1 (Seconds)	Drainage Rate #2 (Seconds)	Drainage Rate #3 (Seconds)	Total Average Drainage (Seconds)	Average Drainage Rate (inches per hour)	Drainage Capacity (inches per hour)
1	17.52	17.52	17.52	17.52	1.38	1.38
2	17.52	17.52	17.52	17.52	1.38	1.38
3	17.52	17.52	17.52	17.52	1.38	1.38
4	17.52	17.52	17.52	17.52	1.38	1.38
5	17.52	17.52	17.52	17.52	1.38	1.38
6	17.52	17.52	17.52	17.52	1.38	1.38
7	17.52	17.52	17.52	17.52	1.38	1.38
8	17.52	17.52	17.52	17.52	1.38	1.38
9	17.52	17.52	17.52	17.52	1.38	1.38
10	17.52	17.52	17.52	17.52	1.38	1.38
11	17.52	17.52	17.52	17.52	1.38	1.38
12	17.52	17.52	17.52	17.52	1.38	1.38

TEST SUMMARY:
The drainage rate of the synthetic turf system was determined to be 1.38 inches per hour. This value is within the range of 1.0 to 2.0 inches per hour as required by the specification.

1500 PINE STREET LLC

SCALE: NTS

1500 PINE STREET LLC
3839 N HARBOR CITY BLVD, UNIT 101
MELBOURNE, FL 32935

NO.	DATE	REVISION
1		
2		
3		
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5		
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7		

BEC Bennett Engineering & Consulting

4940 BANCROFT ROAD
MELBOURNE, FL 32934
(321) 622-4462
FAX (321) 622-4462
CA# 28236

CLAYTON A. BENNETT
P.E. NO. 53729

DATE

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DATE

DESIGNED: CAB

DRAWN BY: CAB

CHECKED:

APPROVED:

ACAD CODE: 25010M01.DWG

PROJECT NO: 26.010

DATE: 06/05/2026

LOT DRAINAGE DETAILS

C-2

SHEET 2 OF 2

GENERAL LANDSCAPE NOTES

1. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT SITE CONDITIONS AND QUANTITIES INDICATED ON THESE PLANS, BEFORE PRICING WORK.

2. ALL PLANT MATERIAL SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS SPECIFIED IN "GRADES AND STANDARDS FOR NURSERY PLANTS PARTS I AND II" 1998 EDITION DIVISION OF PLANT INDUSTRY, FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, AND SHALL CONFORM TO CURRENT AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS FOR NURSERY STOCK. ALL SIZES SHOWN FOR PLANT MATERIAL ON THE PLAN ARE TO BE CONSIDERED MINIMUM. ALL PLANT MATERIAL MUST MEET OR EXCEED THESE MINIMUM REQUIREMENTS FOR BOTH HEIGHT AND SPREAD. ANY OTHER REQUIREMENTS FOR SPECIFIC SHAPE OR EFFECT AS NOTED ON THE PLAN SHALL ALSO BE REQUIRED FOR ACCEPTANCE. ALL TREES TO BE SINGLE TRUNKED, UNLESS OTHERWISE NOTED ON PLANS.

3. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING THE CONDITION OF UNDERGROUND UTILITIES THAT EFFECT PLANTING PROCEDURES OR IRRIGATION SYSTEM INSTALLATION. IF ANY CONFLICTS OCCUR BETWEEN PROPOSED LOCATION OF TREES FOR ON THE DRAWING AND ANY UNDERGROUND UTILITIES OR SUBSURFACE STRUCTURES, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE DESIGNER. IF THE LANDSCAPE CONTRACTOR DAMAGES ANY STAKED OR IN PLACE UTILITIES BY HIS OWN NEGLIGENCE, THEY SHALL BE REPAIRED AT THE LANDSCAPE CONTRACTOR'S EXPENSE.

4. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE DESIGNER OR OWNER OF ANY CONDITIONS THAT WOULD PREVENT THE HEALTHY GROWTH OF PLANT SPECIES CALLED FOR ON THE DRAWINGS. THIS NOTIFICATION MUST OCCUR PRIOR TO CONTRACT AWARD.

5. IF ANY DISCREPANCIES OCCUR BETWEEN QUANTITIES CALLED FOR ON THE PLANT LIST AND THOSE INDICATED ON THE DRAWINGS, THE GREATER QUANTITY SHALL GOVERN.

6. PLANT MATERIAL SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE, INSECTS, EGGS, OR LARVAE, AND SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS. THEY SHALL BE FREE FROM PHYSICAL DAMAGE OR ADVERSE CONDITIONS THAT WOULD PREVENT THRIVING GROWTH.

7. PLANT MATERIAL MUST BE CONTAINER GROWN OR B&B (UNLESS TRANSPLANTED) AS INDICATED IN THE PLANT LIST. ALL PALMS SHALL BE FIELD GROWN

8. PLANT MATERIAL SHALL CONFORM TO THE VARIETIES INDICATED IN THE PLANT LIST.

9. SUBSTITUTION OF PLANT MATERIALS WILL NOT BE PERMITTED UNLESS AUTHORIZED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. IF PROOF IS SUBMITTED THAT ANY PLANT SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR VARIETY WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICES.

10. PLANT MATERIAL LOCATIONS AND BED OUTLINES SHALL BE STAKED OR FLAGGED ON SITE BY THE LANDSCAPE CONTRACTOR AND SHALL FIT CONDITIONS TO FIT ACTUAL AS NOTED ON SITE AND APPROVED BY THE LANDSCAPE CONTRACTOR DESIGNER OR OWNER PRIOR TO INSTALLATION. PROPOSED PLANTINGS SHALL NOT BE PLACED IN THE FLOWLINE OF SWALES OR LOCATED WHERE THEY WILL IMPEDE WATER FLOW.

11. A CRISP LINE, EITHER STRAIGHT OR CURVING, SHALL SEPARATE PLANT BEDS FROM SODDED OR SEEDED AREAS. ALL PLANTING BED AREAS TO HAVE 6" OF DARK, FRIABLE TOP SOIL OR BED MIX CHURNED INTO EXISTING SOIL.

12. LANDSCAPE CONTRACTOR SHALL EXCAVATE PLANT PITS ACCORDING TO THE DRAWINGS.

13. BACKFILL AROUND PLANT MATERIAL SHALL BE WORKED FIRMLY, TAMPED AND WATERED-IN UNDER AND AROUND THE ROOT BALL TO FILL VOIDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING PLANT MATERIAL A MINIMUM OF THIRTY (30) DAYS AFTER INSTALLATION UNLESS OTHERWISE INSTRUCTED BY LANDSCAPE DESIGNER OR OWNER.

14. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HOISTING EQUIPMENT NECESSARY FOR THE PLACEMENT OF PLANT MATERIAL. NEW PLANT MATERIAL TO BE INSTALLED WILL BE FIELD ADJUSTED TO ACCOMMODATE EXISTING PLANT MATERIAL SUCH AS OVERHEAD CANOPY TREES, UNDERSTORY TREES AND SHRUBS OR GROUND COVER. THIS WILL INSURE EXISTING PLANT MATERIAL TO REMAIN IN ITS NATURAL STATE. THEREFORE, NO EXISTING PLANT MATERIAL WILL BE ALTERED BY REMOVING, CUTTING, TRIMMING OR DESTROYING IN ORDER TO INSTALL NEW PLANT MATERIAL.

15. LANDSCAPE CONTRACTOR SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS. ANY DISCREPANCY IN THE DRAWINGS, OBSTRUCTION ON THE SITE, OR PRIOR WORK DONE BY ANOTHER PARTY WHICH THE LANDSCAPE CONTRACTOR FEELS PRECLUDES ESTABLISHING PROPER DRAINAGE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE DESIGNER OR OWNER. THE FINAL GRADE AND SOIL (THE LAST 6") SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR.

16. AFTER PLANT MATERIAL HAS BEEN INSTALLED AND APPROVED, PLANTING BEDS SHALL BE RAKED TO AN EVEN GRADE TO CONFORM TO PRE-MULCHING FINISH GRADES. PLANTING BEDS AND PLANT SAUCERS SHALL THEN BE UNIFORMLY COVERED WITH A MINIMUM 3 INCH LAYER OF PINE BARK NUGGETS.

17. PLANT MATERIAL BACKFILL MIXTURE SHALL BE THOROUGHLY MIXED AND DISTRIBUTED EVENLY THROUGHOUT THE PROPOSED PLANTING BED AREAS.

18. ALL TREE STAKING TO BE DONE AS DETAILED. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES THAT OCCUR AS THE RESULT OF THE FAILURE TO STAKE TREES THAT ARE NOT AN ACT OF GOD AND THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR STRAIGHTENING TREES DURING THE GUARANTEE PERIOD.

19. IN NEW PLANTED AREAS, GRADES SHALL BE ESTABLISHED BY THE LANDSCAPE CONTRACTOR AT APPROXIMATELY 3 INCHES BELOW CURBS, SIDEWALKS, HARDSCAPE AMENITIES, MOWING STRIPS, AND ABUTMENTS TO ALLOW FOR MULCH.

20. THE LANDSCAPE CONTRACTOR SHALL COORDINATE CONSTRUCTION OF PLANTING AREAS WITH INSTALLATION OF IRRIGATION SYSTEM AND HARDSCAPE WORK.

21. INCLUDING PERMITS TO WORK IN RIGHTS-OF-WAY.

22. INSTALLED PLANT MATERIAL SHALL BE FERTILIZED WITH THE FOLLOWING APPLICATIONS:
LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPLICABLE PERMITS BEFORE COMMENCING CONSTRUCTION.
TREES AND SHRUBS: OSMOCOTE (14-14-14)
SHRUBS/GROUND COVER - 1/3 LB. PER 3-GALLON POT, 1/4 LB. PER 1-GALLON POT
TREES AND SHRUBS (OVER 5 FT. HT.) - 1 LB. PER 1 INCH OF TRUNK DIAMETER
(16-4-8) COMMERCIAL FERTILIZER - 18 LBS. PER 1,000 SQ. FT.
PALMS: (12-4-12) COMMERCIAL FERTILIZER - 1 LB. PER 1 INCH OF TRUNK DIAMETER

23. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN FULLY PLANT MATERIAL ON SITE DURING AND BEFORE PLANTING, UNTIL THE WORK IS ACCEPTED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE.

24. PLANTS SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR TO BE HEALTHY PLANTS AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR ONE (1) YEAR FROM FINAL INSPECTION AND ACCEPTANCE.

25. THE OWNER AND/OR OWNER'S REPRESENTATIVE HAS THE RIGHT TO REJECT ANY AND ALL WORK WHICH IN HIS OPINION DOES NOT MEET WITH THE REQUIREMENTS OF THE SPECIFICATIONS AT ANY STAGE OF THE PROJECT.

26. IN GENERAL, THE WORK SHALL PROCEED AS RAPIDLY AS THE SITE BECOMES AVAILABLE.

27. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE CLEANUP OF PREMISES AND REMOVAL OF DISCARDED AND SURPLUS MATERIALS AND RUBBISH.

28. SOLID SOD SHALL BE INSTALLED IN THE AREAS AS INDICATED ON THE PLAN. VERIFY EXACT LOCATION AND AMOUNT OF SOD AS SHOWN TO FIT CONDITIONS.

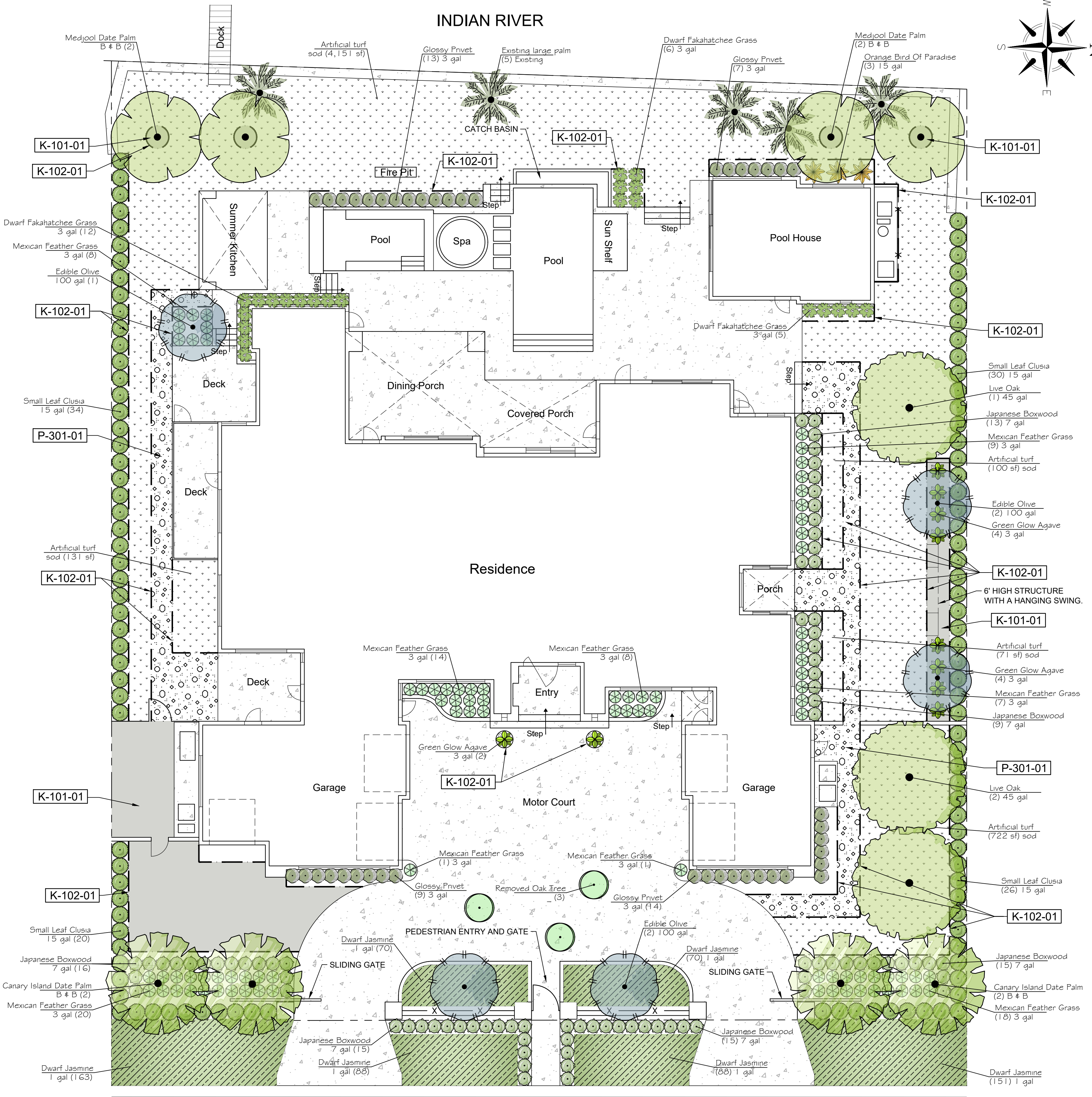
29. SOD SHALL BE LAID END-TO-END AND SIDE-TO-SIDE IN A STAGGERED LINE TO FORM A UNIFORM LAYER. UNEVEN EDGES SHALL BE SQUARELY TRIMMED TO ALLOW CLOSE AND FIRM FITTING OF EACH PIECE.

30. AFTER SODDING IS COMPLETED, THE ENTIRE SOD AREAS SHALL BE ROLLED AND WATERED BY HAND OR IRRIGATION SYSTEM EACH DAY FOR TWO WEEKS. SODDED AREAS SHALL THEN BE TOP-DRESSED WITH A COMMERCIAL FERTILIZER AS DIRECTED BELOW IN AN EVENLY BROADCAST PATTERN.

31. LANDSCAPE CONTRACTOR TO PROVIDE PHOTOS OR SAMPLES OF ALL PLANT MATERIAL NOTED ON PLANT LIST TO LANDSCAPE DESIGNER FOR APPROVAL PRIOR TO INSTALLATION.

32. LANDSCAPE CONTRACTOR TO NOTIFY THE LANDSCAPE DESIGNER PRIOR TO COMMENCING ANY LANDSCAPE WORK IF HIGH SALT CONTENT IS DISCOVERED ONCE THE IRRIGATION WELL IS ESTABLISHED AND TESTED, AND/OR IF HE/SHE HAS CONCERNS THAT THE SPECIFIED LANDSCAPE MATERIAL WILL NOT TOLLERATE THE PROJECT SITE CONDITIONS.

33. LANDSCAPE CONTRACTOR TO NOTIFY ALL AREAS WHERE PLANTINGS HAVE BE SHOWN IS ASSUMED TO BE WELL DRAINED. CONTRACTOR TO NOTIFY ENVIRONMENTAL DESIGN SERVICES PRIOR TO INSTALLING PLANT MATERIAL IN AREAS WHERE STANDING WATER OR EXCESSIVELY WET AREAS ARE IDENTIFIED.



Brian K. Alderfer
D24936

Certification valid through 9/30/2027

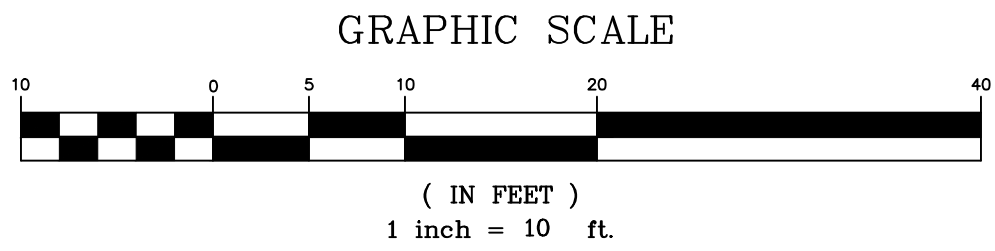


Brian K. Alderfer
H02184

Certification valid through 9/30/2027



PINE STREET



Original Drawing
Issue Date: 6-4-26

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Project:
**Burton
Residence**

Location:
**1500 Pine St.
Melbourne Beach**

**Landscape
Plan**

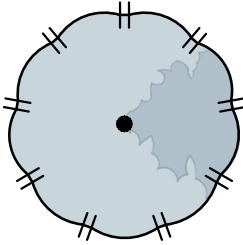
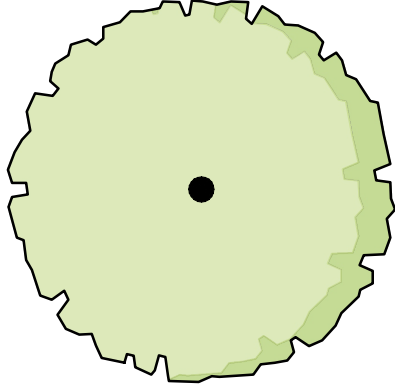
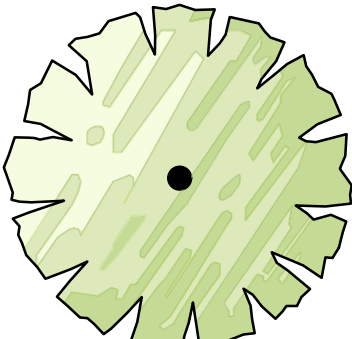
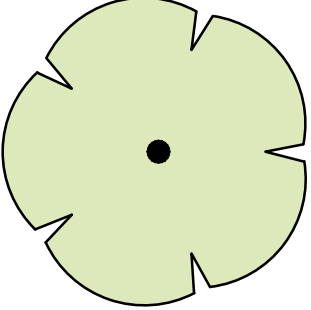
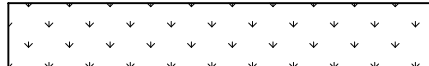
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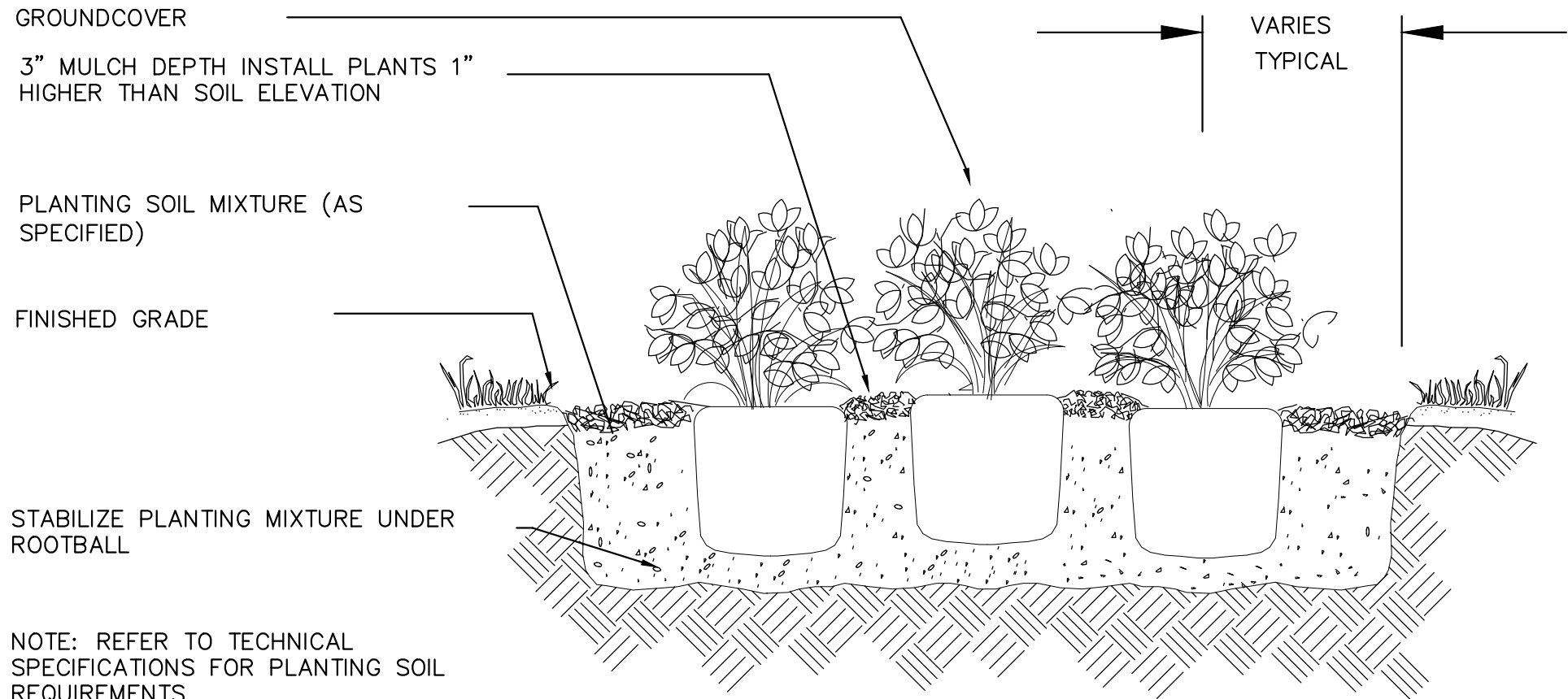
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Project No. 00-0000
Drawn By: BKA
Designed By: BKA
Checked By: BKA
Drawing Scale: 1"=10'

Sheet 1 of 2

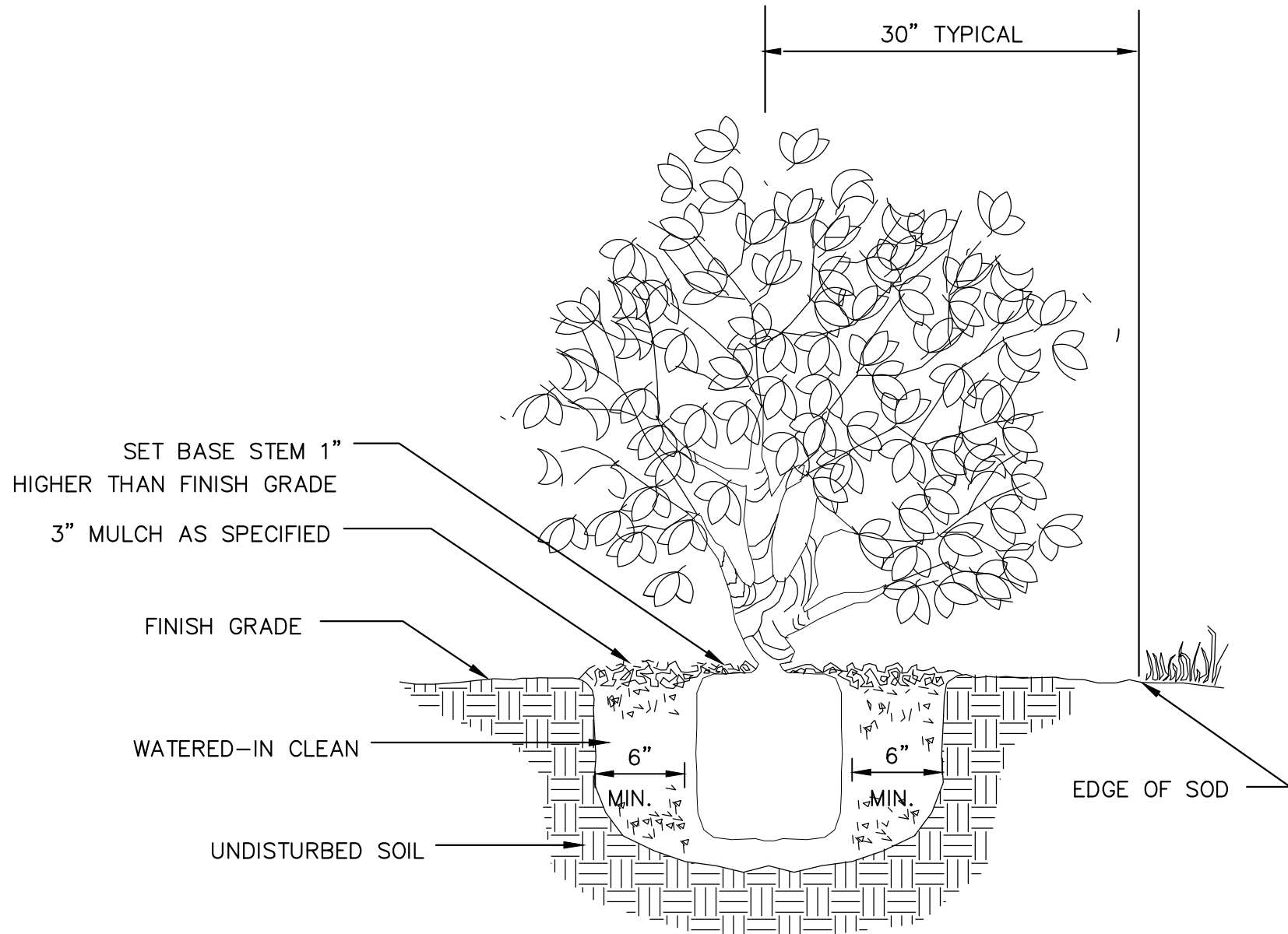
PLANT SCHEDULE

SYMBOL	COMMON / BOTANICAL NAME	CONT	CAL	SIZE	QTY	REMARKS
TREES						
	Edible Olive / <i>Olea europaea</i>	100 gal	Multi-trunk	12'-14'H x 5'-6'W	5	
MITIGATION TREES						
	Live Oak / <i>Quercus virginiana</i>	45 gal	2" DBH	12' ht. x 5' sprd.	3	
PALM TREES						
	Canary Island Date Palm / <i>Phoenix canariensis</i>	B & B	Heavy	8' C.T.	4	Specimen
	Medjool Date Palm / <i>Phoenix dactylifera</i> 'Medjool'	B & B	Heavy	8' C.T.	4	Specimen
SYMBOL	COMMON / BOTANICAL NAME	SIZE	:	:	QTY	REMARKS
SHRUBS						
	Green Glow Agave / <i>Agave</i> x 'Green Glow'	3 gal			10	
	Japanese Boxwood / <i>Buxus microphylla japonica</i>	7 gal			83	28"-30"
	Small Leaf Clusia / <i>Clusia rosea</i> 'hana'	15 gal			110	48"
	Glossy Privet / <i>Ligustrum lucidum</i>	3 gal			43	36"-42"
	Mexican Feather Grass / <i>Nassella tenuissima</i>	3 gal			86	18"-24"
	Orange Bird Of Paradise / <i>Strelitzia reginae</i>	15 gal			3	24"-24"
	Dwarf Fakahatchee Grass / <i>Tripsacum floridana</i>	3 gal			23	18"-24"
SYMBOL	COMMON / BOTANICAL NAME	CONT	:	:	QTY	REMARKS
GROUND COVERS						
	Dwarf Jasmine / <i>Trachelospermum asiaticum</i> 'Minima'	1 gal			630	Full
SOD/SEED						
	Artificial turf /	sod			5,175 sf	



GROUND COVER PLANTING DETAIL

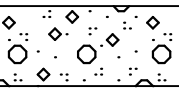
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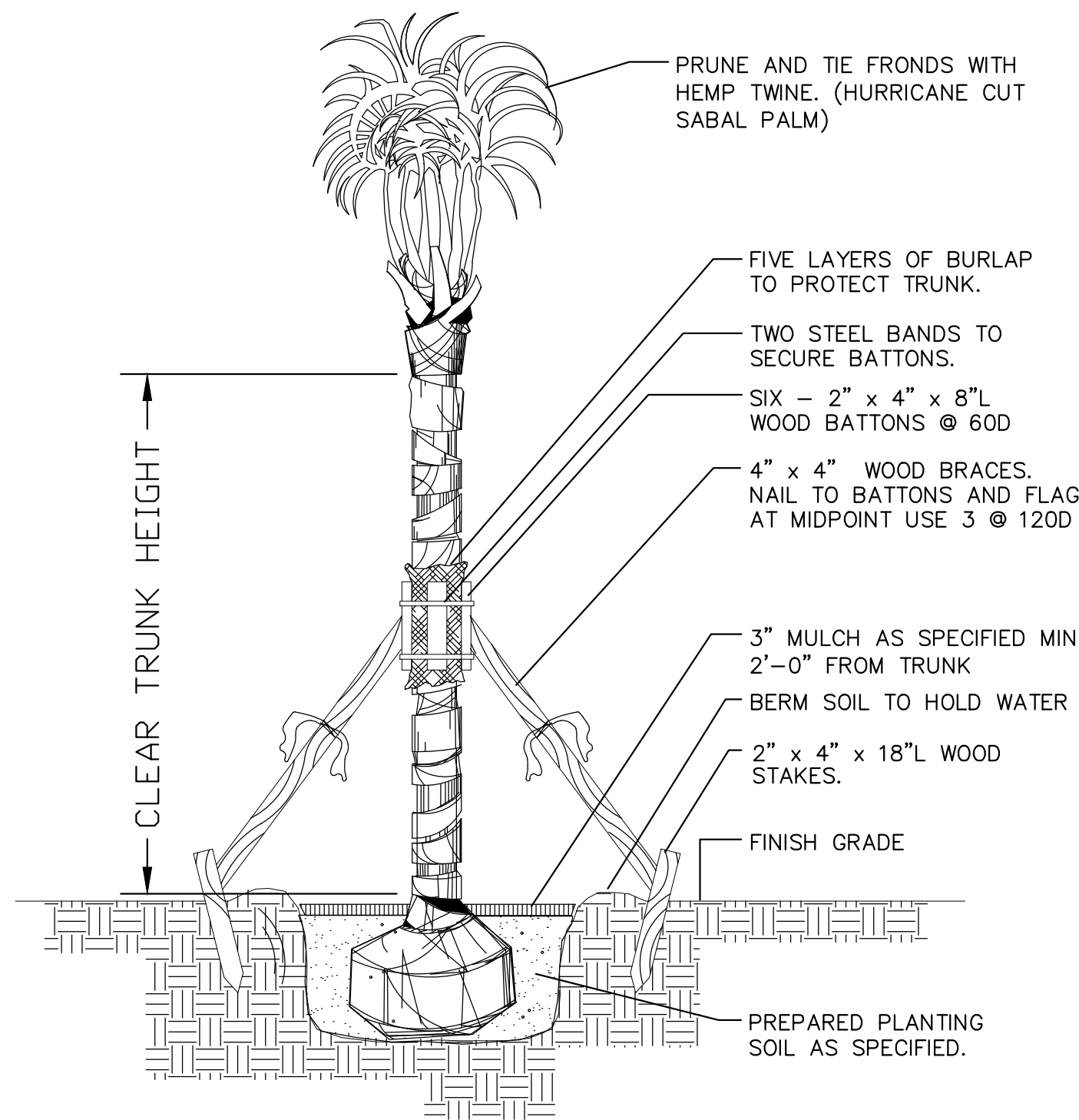


SHRUB PLANTING DETAIL

SCALE: N.T.S.

REFERENCE NOTES SCHEDULE

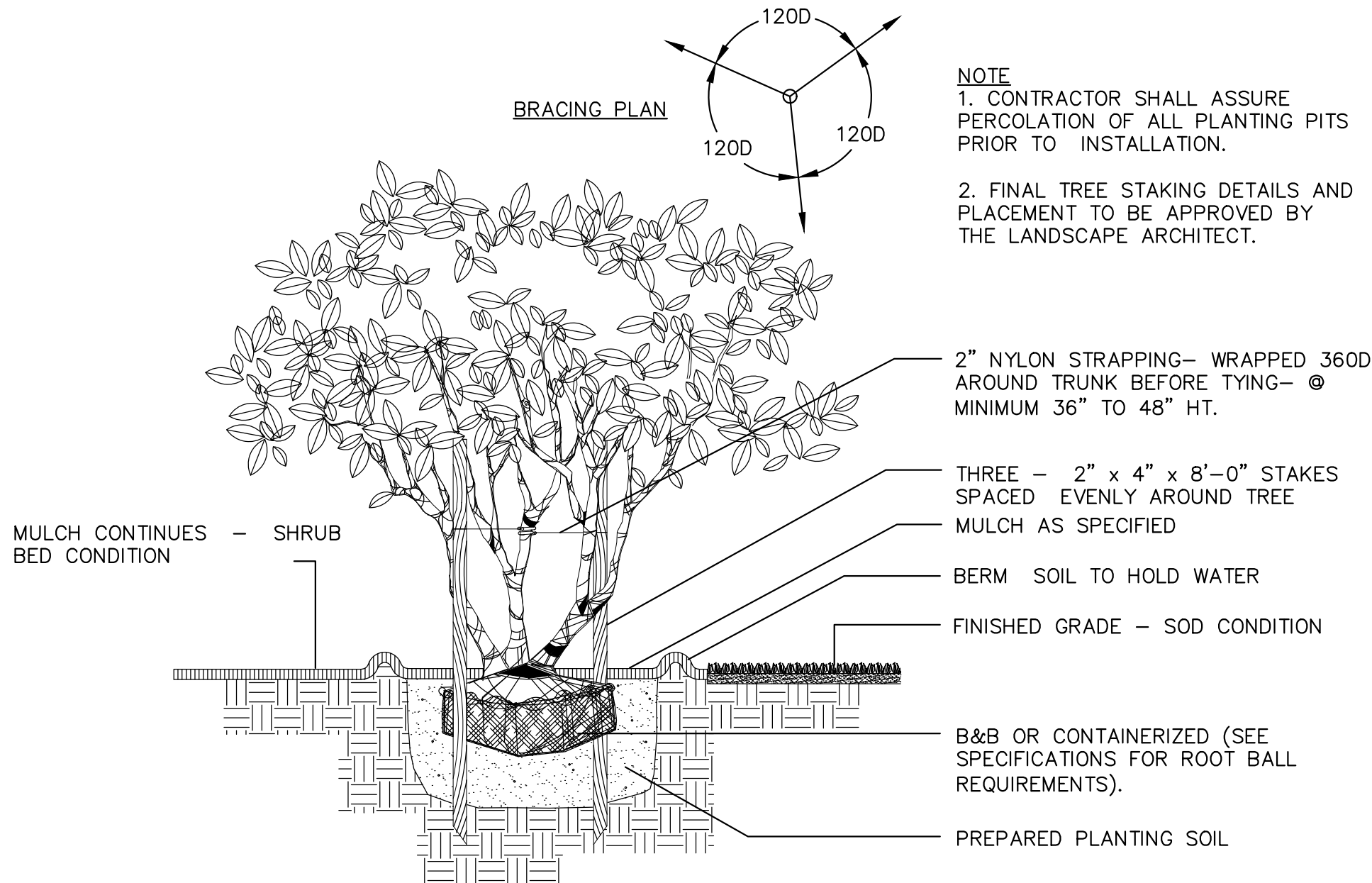
SYMBOL	CODE	DESCRIPTION	QTY	DETAIL
ROCK				
	K-101-01	Stone, type to be determined	1,000 sf	
	K-102-01	Aluminum edging, color: silver	921 lf	
PAVING				
	P-301-01	Stepping stone and gravel walkway. Details by others.	928 sf	



- NOTES:
- SABAL PALMS W/ BOOTS REMOVED
 - SEE PLANS AND SPECS. FOR PALMS W/ BOOTS TO REMAIN ON TRUNK.
 - FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY LANDSCAPE DESIGNER.
 - CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

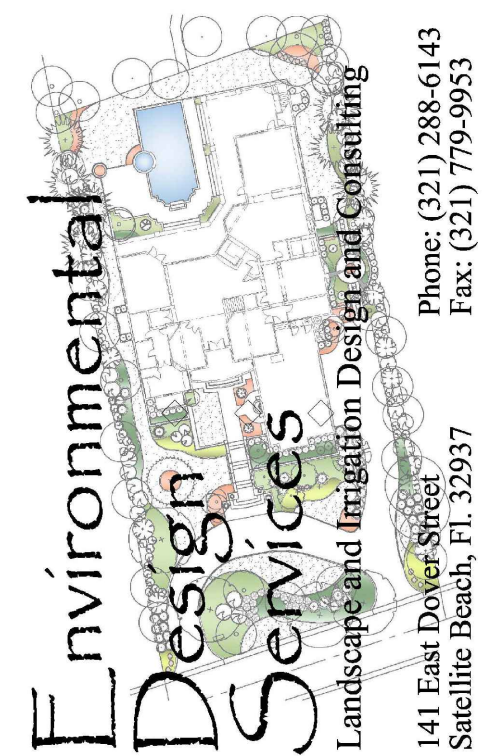
PALM TREE PLANTING/STAKING DETAIL

SCALE: N.T.S.



MULT-TRUNK TREE PLANTING/STAKING DETAIL

SCALE: N.T.S.



Original Drawing
Issue Date: 6-4-26

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Description							
REVISIONS:	No.	Date					
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	7.						

Project:

Burton
Residence

Location:

1500 Pine St.
Melbourne Beach

Landscape
Plan

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Sheet #:

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Project No.	00-0000
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Designed By:	BKA
Checked By:	BKA
Drawing Scale:	none

Sheet 2 of 2

TREES



Edible Olive

MITIGATION TREES



Live Oak

PALM TREES



Canary Island Date Palm



Medjool Date Palm

SHRUBS



Green Glow Agave



Japanese Boxwood



Small Leaf Clusia



Glossy Privet



Mexican Feather Grass



Orange Bird Of Paradise



Dwarf Fakahatchee Grass

GROUND COVERS



Dwarf Jasmine

SOD/SEED



Artificial turf

Environmental
Design
Services

Landscaping and Irrigation Design and Consulting
141 East Dover Street
Satellite Beach, FL 32937
Phone: (321) 288-6143
Fax: (321) 779-9953

Original Drawing
Issue Date: 6-4-26

REVISIONS:	No.	Date	Description	By
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Project:
**Burton
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Plant
Photos

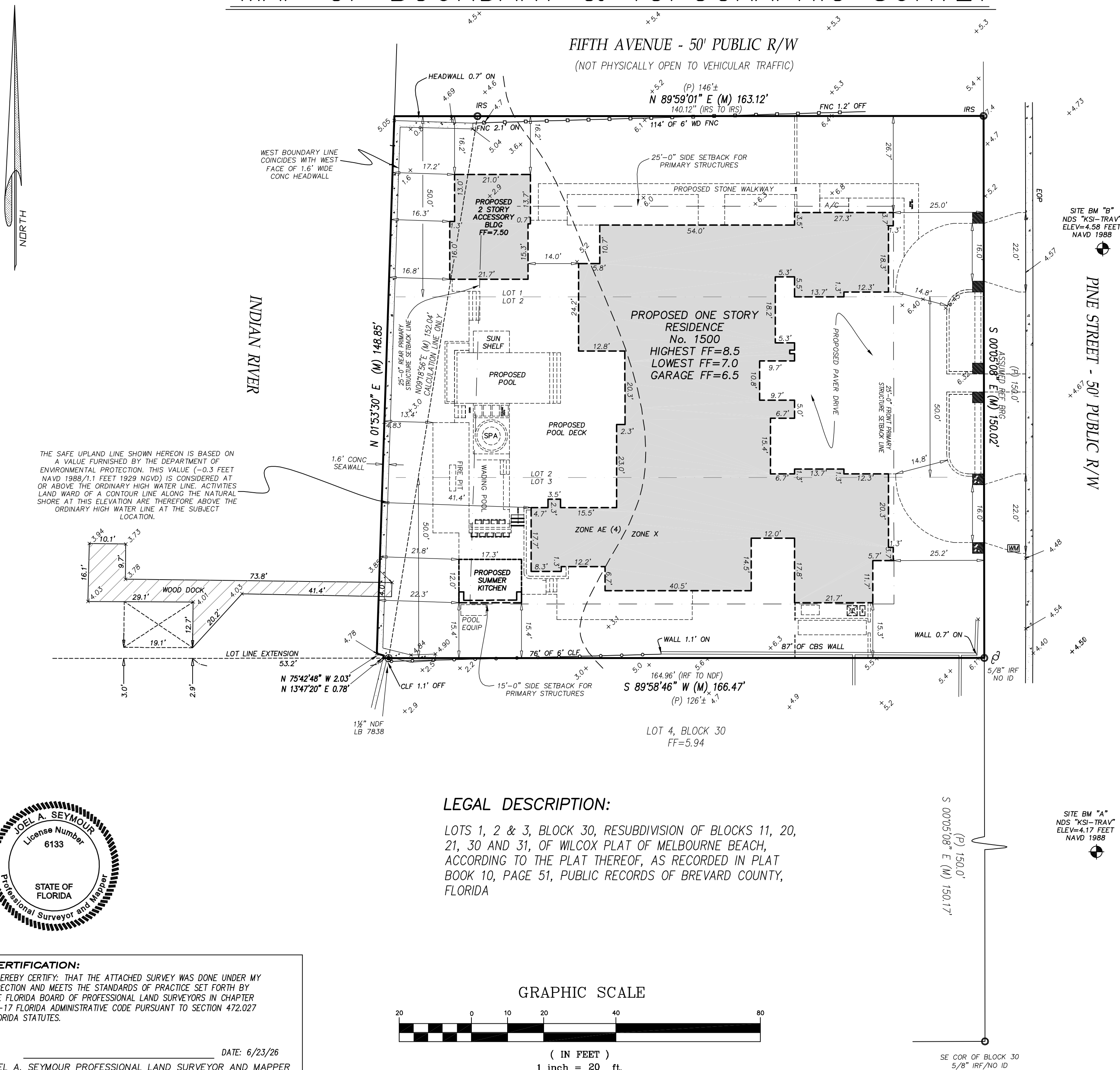
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LP-1

Project No.	00-0000
Drawn By:	BAK
Designed By:	BAK
Checked By:	BAK
Drawing Scale:	none

MAP OF BOUNDARY & TOPOGRAPHIC SURVEY

FIFTH AVENUE - 50' PUBLIC R/W
(NOT PHYSICALLY OPEN TO VEHICULAR TRAFFIC)

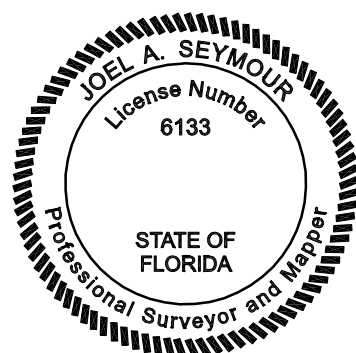


- LEGEND**
- A/C = AIR CONDITIONER
 - BFE = BASE FLOOD ELEVATION
 - BLDG = BUILDING
 - BLK = BLOCK
 - BM = BENCHMARK
 - BRG = BEARING
 - (C) = CALCULATED
 - C/L = CENTERLINE
 - CBS = CONCRETE BLOCK STRUCTURE
 - CLF = CHAIN LINK FENCE
 - CMF = CONCRETE MONUMENT FOUND
 - CONC = CONCRETE
 - COR = CORNER
 - ELEC = ELECTRIC
 - ELEV = ELEVATION
 - EOP = EDGE OF PAVEMENT
 - ESMT = EASEMENT
 - FB = FIELD BOOK
 - FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY
 - FF = FINISHED FLOOR
 - FNC = FENCE
 - FND = FOUND
 - FP&L = FLORIDA POWER & LIGHT COMPANY
 - ID = IDENTIFICATION
 - IPF = IRON PIPE FOUND
 - IRC = IRON ROD & CAP FOUND
 - IRF = IRON ROD FOUND
 - IRS = 5/8" IRON ROD SET "LB 7838"
 - LB = LICENSED BUSINESS NUMBER
 - LS = (RLS) or (PLS) REGISTERED OR PROFESSIONAL LAND SURVEYOR
 - (M) = MEASURED
 - NAVD = NORTH AMERICAN VERTICAL DATUM
 - NDF = NAIL & DISK FOUND
 - NDS = 1 1/4" NAIL & DISK SET "LB 7838"
 - NGVD = NATIONAL GEODETIC VERTICAL DATUM
 - No. = NUMBER
 - O/H = OVERHEAD
 - ORB = OFFICIAL RECORDS BOOK
 - O/S = OFFSET
 - (P) = PLAT
 - PB = PLAT BOOK
 - PLS = PROFESSIONAL LAND SURVEYOR
 - PSM = PROFESSIONAL SURVEYOR AND MAPPER
 - PUE = PUBLIC UTILITY EASEMENT
 - REF = REFERENCE
 - RNG = RANGE
 - R/W = RIGHT OF WAY
 - SEC = SECTION
 - SFHA = SPECIAL FLOOD HAZARD AREAS
 - TEL = TELEPHONE RISER
 - TWP = TOWNSHIP
 - TYP = TYPICAL
 - UP = UTILITY POLE
 - WD = WOOD
 - WIT-COR = 5/8" IRON ROD SET WITH CAP "WITNESS LB 7838"
 - WM = WATER METER
 - XCF = CROSS CUT FOUND

CERTIFIED TO: 1500 Pine Street, LLC
Spira & Beadle, P.A.
Old Republic National Title Insurance Company

- NOTES:**
- BEARINGS BASED ON THE WEST R/W BEING S00°05'08"E AS PER ASSUMED DATUM (SEE SKETCH)
 - ELEVATIONS BASED ON BREVARD COUNTY BENCHMARK 7080A41RM2 BEING AN ELEVATION OF 9.95 FEET NAVD 1988
 - FLOOD ZONE "X" & "AE", MAP No. 12009C0604H COMMUNITY No. 125128, MARCH 17, 2014. FLOOD ZONE INFORMATION DEPICTED HEREON IS APPROXIMATE. FEMA RETAINS SOLE AUTHORITY REGARDING BOUNDARY AND EXTENT OF SFHA.
 - HORIZONTAL CLOSURE MEETS OR EXCEEDS THE ACCURACY REQUIREMENTS FOR SUBURBAN LAND AS PER FLORIDA STATUTE 5J-17-6.003
 - BEARINGS, DISTANCES OR ANGLES SHOWN ARE THE SAME AS PLAT, DEED OR RECORD UNLESS SHOWN OTHERWISE.
 - NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY.
 - THE SURVEYOR HAS NOT LOCATED NOR ATTEMPTED TO LOCATE ANY UNDERGROUND UTILITIES, FOUNDATIONS, OR STRUCTURES OTHER THAN THOSE THAT MAY BE SHOWN HEREON.
 - ONLY BOUNDARY CORNER MONUMENTS AS SHOWN HEREON ARE TO BE USED FOR THE LOCATION AND CONSTRUCTION OF IMPROVEMENTS.
 - UNLESS OTHERWISE INDICATED THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE SEARCH OR ATTORNEY'S TITLE OPINION.

BOUNDARY & TOPOGRAPHIC SURVEY	DATE: 1/13/26
REVISED CERTIFICATIONS	DATE: 1/19/26
NEW SEAWALL	DATE: 4/28/26
PLOT PLAN	DATE: 6/4/26
ADDED A/C PAD	DATE: 6/10/26
ADDED ELEVATIONS (N R/W)	DATE: 6/22/26



CERTIFICATION:
I HEREBY CERTIFY: THAT THE ATTACHED SURVEY WAS DONE UNDER MY DIRECTION AND MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

DATE: 6/23/26
JOEL A. SEYMOUR PROFESSIONAL LAND SURVEYOR AND MAPPER
STATE OF FLORIDA No. 6133

DRAWN BY: JAS

SCALE 1 INCH = 20 FEET

LEGAL DESCRIPTION:

LOTS 1, 2 & 3, BLOCK 30, RESUBDIVISION OF BLOCKS 11, 20, 21, 30 AND 31, OF WILCOX PLAT OF MELBOURNE BEACH, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 10, PAGE 51, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

WILCOX/L1-3B30
FB 25-8-23
JOB No. 44652

Kane Surveying, Inc.
FLORIDA LICENSED BUSINESS No. LB 7838
505 DISTRIBUTION DRIVE
MELBOURNE, FLORIDA 32904
(321) 676-0427 FAX (321) 984-1448

SURFACE WATER MANAGEMENT REPORT

TO

TOWN OF MELBOURNE BEACH

FOR

**1500 Pine Street
Melbourne Beach, FL 32951**

OWNERS:

1500 Pine Street LLC
3839 N Harbor City Blvd, Unit 101
Melbourne, FL 32935

PREPARED BY:

Bennett Engineering & Consulting, LLC.
4940 Ranchland Road
Melbourne, Florida 32934
Tel/Fax (321) 622-4462
CA # 28236

BEC No. 26.010

This item has been digitally signed and sealed
by Clayton A. Bennett, PE on the date adjacent
to the seal.

Printed copies of this document are not
considered signed and sealed and the signature
must be verified on any electronic copies.

June 10, 2026

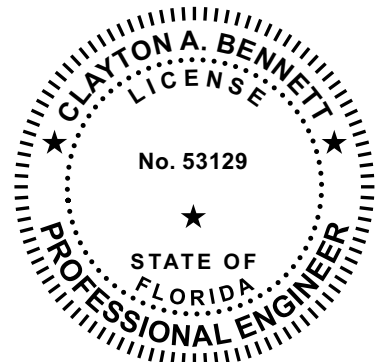


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ENGINEER'S CERTIFICATION

The following drainage calculations for 1500 Pine Street, Melbourne Beach were prepared by me or under my direct supervision.

Clayton A. Bennett, P.E.
Fla. Reg. 53129

Date: _____

I. PROJECT OVERVIEW

A. Existing Conditions

The proposed project is located at 1500 Pine St in the Town of Melbourne Beach, Florida. The overall site boundary contains ± 0.57 acres, more or less. The site is currently developed as a single-family residence.

B. Proposed Conditions

The proposed project consists of the demolition of the existing residence and construction of a new single-family residence with associated improvements. A stormwater management system has been proposed to retain the runoff from the 10-year/24-hour storm event, consisting of 8-inches of rainfall, from the site in accordance with the Town Criteria (Section 3A-30). The proposed improvements fall below the permit requirement thresholds of the SJRWMD Applicants Handbook Sec. 3.2.2 (a).

II. SOILS INFORMATION

Pursuant to the UES Limited Subsurface Exploration for the subject site (UES No. A26146.00651.000, dated June 5, 2026), the site soils consist of Welka sand (We) which is nearly level, well drained sandy soil. The said soil has a reported typical Ksat of 20 to 50 in/hr per the NRCS soil survey.

UES performed two soil borings on the site. Boring #1 was performed near the northeast corner of the site using a truck mounted rig, while Boring #2 was performed using a hand augur. The upper 4-feet of the soil encountered in Boring #2 was in "fill". Since underground chambers are proposed and the soil beneath the chamber will be excavated until native soil is encountered, the soil permeability for Boring #1 was used for the design calculations, after a factor of safety of 2 was applied. This resulted in a design soil permeability of 7.7 inches per hour.

The existing grade elevation near soil boring #1 is approximately 5.6 feet. Subtracting 4.9 feet resulted in an encountered ground water elevation of 0.7 feet. UES estimated that the Seasonal High Groundwater would be approximately 2 feet above the observed elevation. This resulted in an estimated seasonal high groundwater elevation of 2.7 feet. The bottom of the underground chambers was set at elevation 3.7 feet which is one foot above the estimate seasonal high groundwater level.

III. STORMWATER MANAGEMENT PLAN

A. Existing Conditions

The rate of runoff was not computed as the Town requires the retention of the 10-year/24-hour storm event.

B. Proposed Conditions

Underground storm chambers are proposed to retain and percolate the runoff from the 10-year/24-hour storm event consisting of 8-inches of rainfall. The house roof gutters

and downspouts will be connected to the proposed underground chambers via storm pipes.

1. Area information

Basin 1 = ±24,858 sf

2. Stormwater Attenuation

The proposed stormwater management system is designed to retain the runoff from the 10-yr/24-hr storm event site area using the computer model HydroCAD. The results of the HydroCAD model are provided in Appendix B. The following summarizes the results of the HydroCAD analysis for the 10-yr/-24hr storm event:

<u>Basin</u>	<u>Peak Stage</u>	<u>Top of Swale El.</u>	<u>Pre-Dev. Discharge</u>	<u>Post Dev. Discharge</u>
Basin 1	4.80 ft	4.85 ft	N/A	0.0

IV. STORMWATER MANAGEMENT SYSTEM MAINTENANCE PLAN

The stormwater management system for this project consists of normally dry retention basins. This system has been designed within the restrictions of the site and with the intent of satisfying the stormwater treatment requirements of the Town of Melbourne Beach stormwater management code. In order for the system to function properly, it must be maintained. The following maintenance and monitoring program shall be followed:

- Storm water retention basin, trench drain, and underground storm chambers shall be maintained and free of sand build up and debris, which could cause clogging and a reduction of storage volume.
- Bare earth conditions shall be avoided as the bare earth could result in erosion.
- The storm pipe(s) shall be maintained and free of obstruction.

APPENDIX A

STORMWATER MANAGEMENT PLAN

AREA OF ALTERATION
= 0.57 ACRES

NO FILL OR CONSTRUCTION
MATERIALS MAY BE
PLACED OUTSIDE OF THE
SILT FENCING.

ARTIFICIAL TURF INSTALLED
ON THE SUBJECT SITE
SHALL BE PERMEABLE AND
INSTALLED PER THE
DETAILS ON SHEET C-2

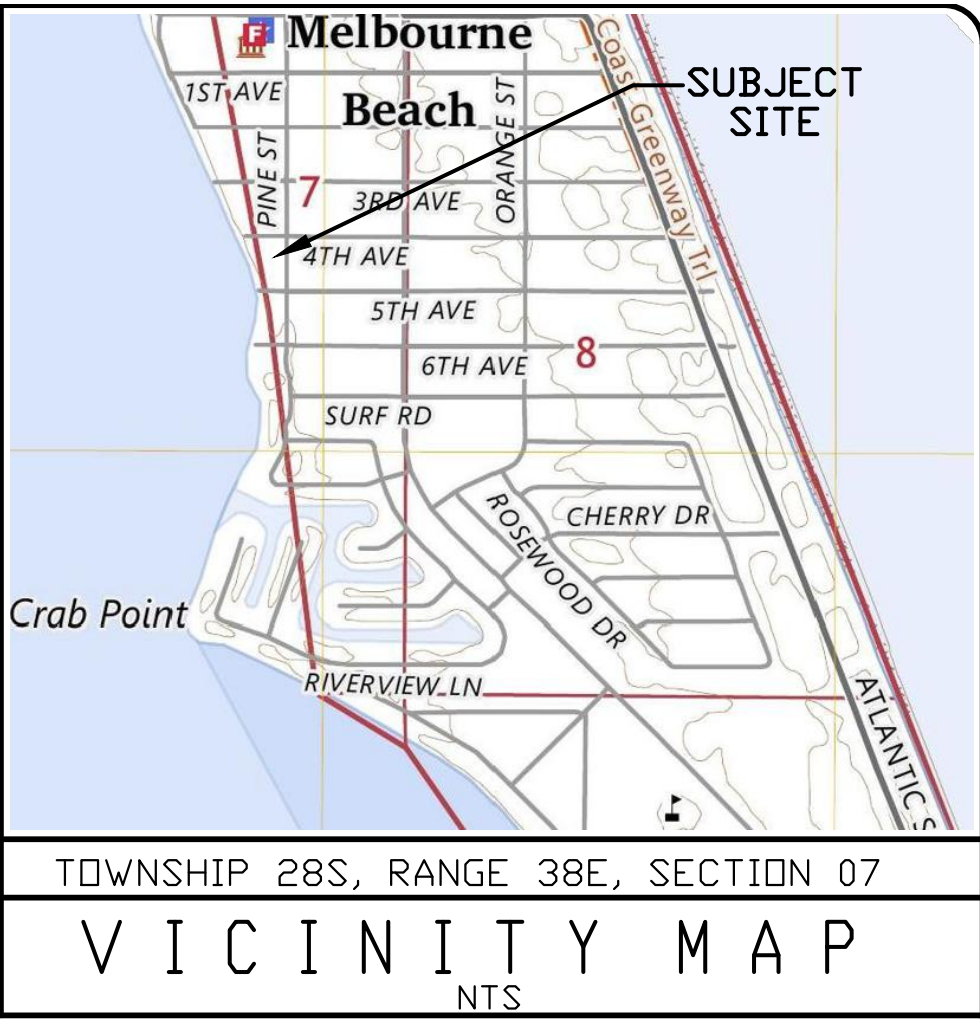
ALL EQUIPMENT PADS SHALL
BE CONSTRUCTED AT OR
ABOVE ELEVATION OF 5' NAVD
(1' ABOVE THE FEMA BASE
FLOOD ELEVATION OF 4')



MINIMUM FINISHED FLOOR ELEVATION:
TOWN:
MINIMUM OF 18" ABOVE THE CROWN OF ROAD
CROWN OF ROAD = 4.73'
MINIMUM FFE = 4.73' + 1.5' = 6.23'
FEMA:
FLOOD ZONE "AE(4.0)", THE LOWEST FINISHED FLOOR ELEVATION
SHALL BE A MINIMUM OF 1' ABOVE THE BASE FLOOD ELEVATION.
LOWEST FINISHED FLOOR = 4+1'=5.0' (NAVD)

GRADING NOTES
1. IMPERVIOUS PAVEMENT ADJACENT TO THE BUILDING SHALL SLOPE AWAY FROM THE BUILDING A MINIMUM OF 2% FOR THE FIRST 10 FEET.
2. THE FINISHED PAVEMENT GRADE ADJACENT TO THE GARAGE DOOR(S) SHALL BE SET 1/8" BELOW THE ADJACENT GARAGE SLAB ELEVATION AND BE SLOPED AWAY FROM THE GARAGE AT A MINIMUM OF A 2% SLOPE FOR 10 FEET.
3. FINISHED EARTH GRADES ADJACENT TO THE BUILDING SHALL BE A MINIMUM OF 6" BELOW THE FINISHED FLOOR ELEVATION AND THE GRADE SHALL FALL AWAY FROM THE BUILDING A MINIMUM OF 6 INCHES WITHIN THE FIRST 10 FEET.

EROSION NOTES:
BEST MANAGEMENT PRACTICES SHALL BE UTILIZED TO MINIMIZE ANY ON SITE EROSIONS. IN ADDITION TO BEST MANAGEMENT PRACTICES, AS A MINIMUM, SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE DEVELOPMENT AREA TO MINIMIZE SEDIMENTATION FROM LEAVING THE SITE.



GENERAL STATEMENT:
THIS LOT DRAINAGE PLAN HAS BEEN PREPARE FOR THE DEVELOPMENT OF A SINGLE-FAMILY RESIDENCE AND ASSOCIATED SITE IMPROVEMENTS ON THE SUBJECT LOT.

OWNER:
1500 PINE STREET LLC
3839 N HARBOR CITY BLVD, UNIT 101
MELBOURNE, FL 32935

ENGINEER:
BENNETT ENGINEERING & CONSULTING, LLC
4940 RANCHLAND ROAD
MELBOURNE, FLORIDA 32934
(321) 622-4462

SURVEYOR:
KANE SURVEYING, INC.
505 DISTRIBUTION DRIVE,
MELBOURNE, FL 32904
(321) 676-0427

SITE ADDRESS:
1500 PINE ST
MELBOURNE BEACH, FL 32951

PARCEL ID: 28-38-07-02-30-1

ACCOUNT NO: 2847696

SITE AREA: SITE AREA = ±0.57 (±24,858)

NATIONAL FLOOD INSURANCE INFORMATION:
(AS PROVIDED ON THE SURVEY)
MAP NO. 1200902604H
FIRM INDEX DATE: MARCH 17, 2014
FLOOD ZONES: "X" & "AE"

LEGAL DESCRIPTION:
LOTS 1, 2 & 3, BLOCK 30, RESUBDIVISION OF BLOCKS 11, 20, 21, 30 AND 31, OF WILCOX PLAT OF MELBOURNE BEACH, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 10, PAGE 51, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA

SCALE: 1"=20'

1500 PINE STREET LLC
3839 N HARBOR CITY BLVD, UNIT 101
MELBOURNE, FL 32935

1500 PINE STREET LLC

NO.	DATE	REVISION
1		
2		
3		
4		
5		
6		
7		

Bennett Engineering & Consulting

4940 RANCHLAND ROAD
MELBOURNE, FL 32934
CLAYTON A. BENNETT
P.E. NO. 53129

(321) 622-4462
(321) 622-4462
FAX (321) 622-4462
CA# 28236

DATE

© 2026 BENNETT ENGINEERING & CONSULTING, LLC.

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED HERE:

DATE

DESIGNED: CAB	DATE 06/05/2026
DRAWN BY: CAB	06/05/2026
CHECKED:	
APPROVED:	
ACAD CODE: 26010M01.DWG	
PROJECT NO: 26.010	

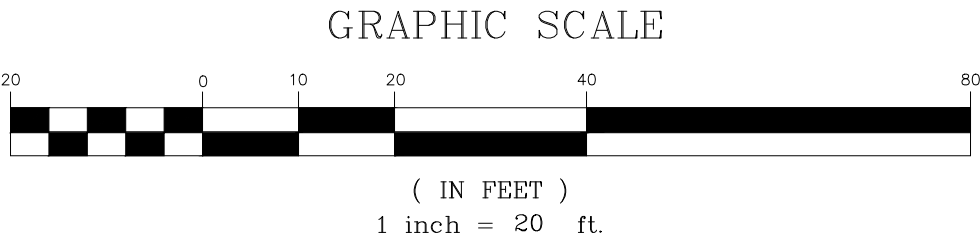
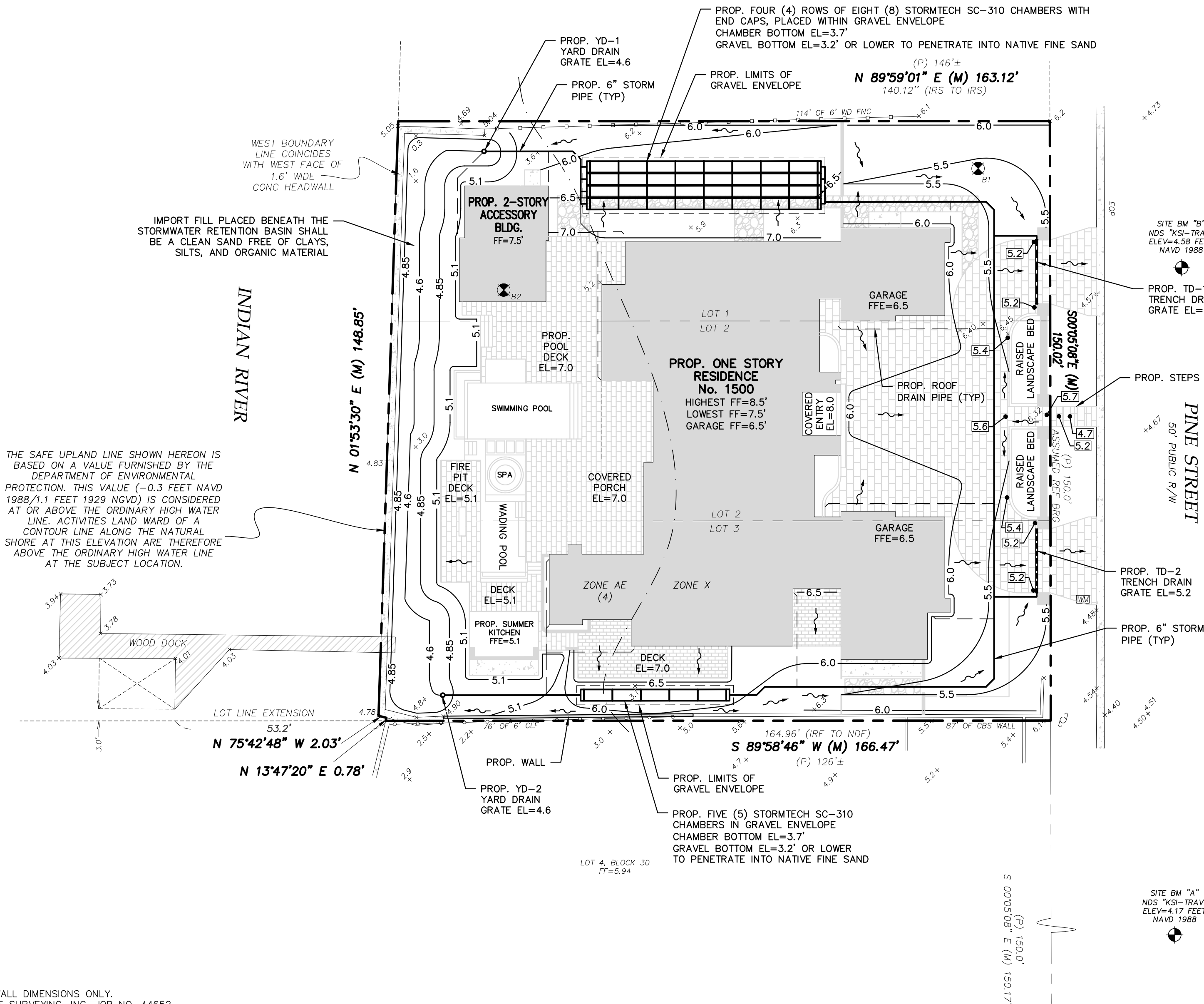
LOT DRAINAGE PLAN

C-1

SHEET 1 OF 1

GENERAL NOTES
1. PROPOSED BUILDING ENVELOPE INDICATES MAXIMUM EXTERIOR WALL DIMENSIONS ONLY.
2. BOUNDARY, TOPOGRAPHIC INFORMATION WAS PROVIDED BY KANE SURVEYING, INC. JOB NO. 44652, DATED 06/04/26.
3. ELEVATIONS ARE BASED ON NAVD, 1988 DATUM.
4. CONTOURS ARE APPROXIMATE ONLY.
5. THE SOLID WASTE WITHIN THE PROJECT SITE WILL BE PICKED UP BY CURBSIDE PICKUP.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED WITHIN ROAD AND DRAINAGE RIGHT-OF-WAY AS A DIRECT RESULT OF NEW CONSTRUCTION.
7. THE CONTRACTOR SHALL CONTACT SUNSHINE ONE (1-800-432-4770) AND ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND DOCUMENT THE ACTUAL LOCATION AND EXTENT OF ALL EXISTING UTILITIES WHICH MAY AFFECT CONSTRUCTION. EXISTING UTILITIES SHOWN ARE BASED UPON THE BEST AVAILABLE INFORMATION SUPPLIED TO THE OWNER/ENGINEER AND IS SHOWN FOR INFORMATIONAL PURPOSE ONLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE UTILITY OWNER.

FIFTH AVENUE
50' PUBLIC R/W
(NOT PHYSICALLY OPEN TO VEHICULAR TRAFFIC)



SHEET INDEX:
C-1 LOT DRAINAGE PLAN
C-2 LOT DRAINAGE DETAILS

"PRELIMINARY"
JUNE 10, 2026

StormTech® SC-310 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

Nominal Chamber Specifications (not to scale)

Size (L x W x H)
85.4" x 34" x 16"
2170 mm x 864 mm x 406 mm

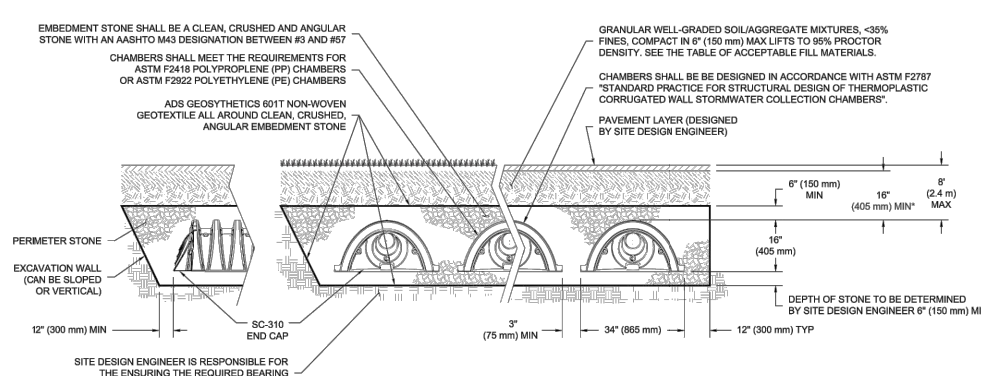
Chamber Storage
14.7 ft³ (0.42 m³)

Min. Installed Storage*
29.3 ft³ (0.83 m³)

Weight
37.0 lbs (16.8 kg)

Shipping
55 chambers/pallet
108 end caps/pallet
18 pallets/truck

*Assumes 6" (150 mm) stone above and below chambers and 40% stone porosity.



ADS StormTech

STORM CHAMBER DETAILS:
NTS

StormTech SC-310 Specifications

Cumulative Storage Volumes Per Chamber
Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (150 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft ³ (m ³)	Total System Cumulative Storage ft ³ (m ³)
28 (711)	14.70 (0.416)	29.34 (0.831)
27 (686)	14.70 (0.416)	28.60 (0.810)
26 (660)	14.70 (0.416)	27.87 (0.789)
25 (635)	14.70 (0.416)	27.14 (0.769)
24 (610)	14.70 (0.416)	26.41 (0.748)
23 (584)	14.70 (0.416)	25.68 (0.727)
22 (559)	14.70 (0.416)	24.95 (0.707)
21 (533)	14.64 (0.415)	24.18 (0.685)
20 (508)	14.49 (0.410)	23.36 (0.661)
19 (483)	14.22 (0.403)	22.47 (0.636)
18 (457)	13.68 (0.387)	21.41 (0.606)
17 (432)	12.99 (0.368)	20.25 (0.573)
16 (406)	12.17 (0.345)	19.03 (0.539)
15 (381)	11.25 (0.319)	17.74 (0.502)
14 (356)	10.23 (0.290)	16.40 (0.464)
13 (330)	9.15 (0.260)	15.01 (0.425)
12 (305)	7.99 (0.227)	13.59 (0.385)
11 (279)	6.78 (0.192)	12.13 (0.343)
10 (254)	5.51 (0.156)	10.63 (0.301)
9 (229)	4.19 (0.118)	9.11 (0.258)
8 (203)	2.83 (0.081)	7.56 (0.214)
7 (178)	1.43 (0.041)	5.98 (0.169)
6 (153)	0	4.39 (0.124)
5 (127)	0	3.66 (0.104)
4 (102)	Stone Foundation	2.93 (0.083)
3 (76)	0	2.19 (0.062)
2 (51)	0	1.46 (0.041)
1 (25)	0	0.73 (0.021)

Note: Add 0.73 ft³ (0.021 m³) of storage for each additional inch (25 mm) of stone foundation.

ADS StormTech products, manufactured in accordance with ASTM F2418 or ASTM F2922, comply with all requirements in the Build America, Buy America (BABA) Act.

Working on a project?
Visit us at adspipe.com and utilize the Design Tool

ADS StormTech

adspipe.com
800-821-6710

Storage Volume Per Chamber ft³ (m³)

	Bare Chamber Storage ft ³ (m ³)	Chamber and Stone Foundation Depth in. (mm)		
		6 (150)	12 (300)	18 (450)
SC-310 Chamber	14.7 (0.42)	29.30 (0.83)	33.7 (0.95)	38.1 (1.08)

Note: Assumes 6" (150 mm) stone above chambers, 3" (76 mm) row spacing and 40% stone porosity.

Amount of Stone Per Chamber

English Tons (yds³)	Stone Foundation Depth		
	6"	12"	18"
SC-310	1.9 (1.4)	2.5 (1.8)	3.1 (2.2)
Metric Kilograms (m³)	150 mm	300 mm	450 mm

Metric Kilograms (m³) 150 mm 300 mm 450 mm

Note: Assumes 6" (150 mm) of stone above and 3" (76 mm) between chambers.

Volume Excavation Per Chamber yd³ (m³)

	Stone Foundation Depth		
	6 (150)	12 (300)	18 (450)

Note: Assumes 3" (76 mm) of row separation and 6" (150 mm) of stone above the chambers and 16" (400 mm) of cover. The volume of excavation will vary as depth of cover increases.

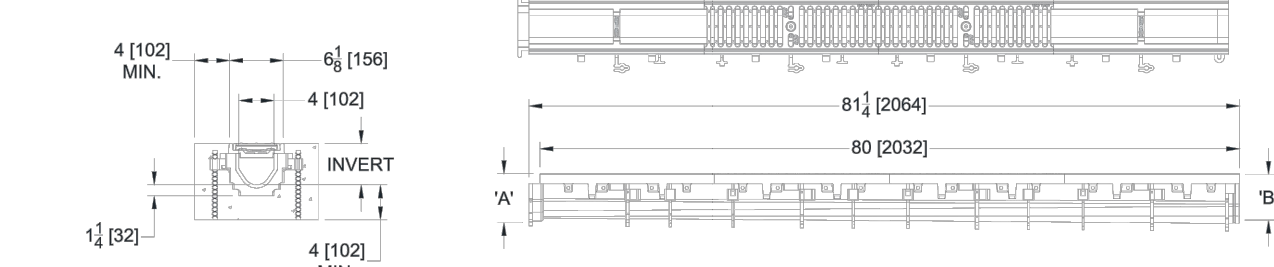
STORM CHAMBERS SHALL BE INSTALLED PER THE MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS

ZURN

Z886-DI
6-1/4 [159] WIDE REVEAL TRENCH DRAIN SYSTEM WITH CAST DUCTILE IRON FRAME

SPECIFICATION SHEET
TAG _____

Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice
SPECIFYING ENGINEER IS RESPONSIBLE FOR CONCRETE ENCASEMENT AND REINFORCING BASED UPON APPLICATION AND LOCAL CODES



ENGINEERING SPECIFICATION: ZURN Z886-DI Channels are 80" [2032 mm] long, 6-1/8" [156 mm] wide reveal and have a 4" [102 mm] throat. Modular channel sections are made of 0% water absorbent High Density Polyethylene (HDPE). Channels have a positive mechanical connection between channel sections that will not separate during the installation and mechanically lock into the concrete surround every 10" [254 mm]. Channels weigh less than 2.31 lbs [1.05kg] per linear foot, have a smooth, 1-1/2" [38 mm] radius self cleaning bottom with a Manning's coefficient of .009 and .75% or neutral 0% built in slope. Channels have rebar clips standard to secure trench in its final location. Channels provided with standard DGC grates that lock down to frame. Zurn 5-3/8" [137 mm] wide reveal Ductile Iron Slotted Grate conforming to ASTM specification A536-84, Grade 80-55-06. Ductile iron grate is rated class C per the DIN EN1433 top load classifications. Supplied in 20' [508 mm] nominal lengths with 1/2" [13 mm] wide slots, and 3/4" [19 mm] bearing depth. Grate has an open area of 28.1 in² [f. 59.5 cm²]. Channel shall be supplied with Cast Ductile Iron Frame which conforms to ASTM specification A536-84, Grade 80-45-10. Supplied in 20' [508 mm] nominal lengths with 4 concrete anchors per section. Grate lockdown bars are to be integral to the frame. Frame supplied with a powder coated finish. System is rated DIN Class F per standard EN1433.

PREFIX OPTIONS (Check/specify appropriate options)
— Z Six-foot, Eight-inch High Density Polyethylene (HDPE)

SUFFIX OPTIONS (Check/specify appropriate options)

Outlet Adapters Add/Each
—E1 Closed End Cap
—E2 2 [51] No-Hub End Outlet
—E3 3 [76] No-Hub End Outlet
—E4 4 [102] No-Hub End Outlet
—E6 6 [152] No-Hub End Outlet

USA Miscellaneous Options
—DB Bottom Dome Strainer
—SW Sidewall Extension - 9 [229] High
—SW2 Sidewall Extension - 18 [457] High

Miscellaneous Options
—BL High Density Polyethylene (HDPE) System with 5% Carbon Black Additive
—JC Joint Connector
—VP Vandal-Proof Lockdown

Frame and Grate Options on Page 2

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

ADVERTENCIA: Cáncer y daño reproductivo - www.P65Warnings.ca.gov

AVERTISSEMENT: Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

Zurn Industries, LLC | Specification Drainage Operation
1501 Pittsburgh Avenue, Erie, PA 16502, Ph. 855-565-1897

In Canada | Zurn Industries Limited
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 877.892.5216

www.zurn.com

Rev: A
Date: 06/10/25
C.N. No. 146570
Patent zurn.com/patents
Prod. [Dwg. No. Z886-DI]

Page 1 of 2

TRENCH DRAIN DETAILS:
NTS

BASE AND DRAINAGE SYSTEM

The installed turf system utilizes a permeable aggregate foundation consisting of open-graded materials intended to promote vertical infiltration and subsurface drainage.

The base assembly consists of:

- Approximately 2 inches compacted #57 stone as the primary drainage layer
- Approximately 1 inch compacted #89 stone as the leveling layer
- A minimal finish grading layer (dusted) of concrete screenings used solely for surface smoothing purposes

The aggregate system is installed to:

- Promote infiltration through the turf profile
- Reduce surface runoff concentration
- Minimize erosion potential
- Provide structural stability while maintaining permeability

The screenings layer is limited to finish grading only and is not intended to function as an impermeable barrier.

SYNTHETIC TURF SYSTEM

The installed synthetic turf product includes:

- Permeable backing designed for exterior landscape applications
- UV-resistant turf fibers
- Infill material distributed throughout the turf system in accordance with manufacturer recommendations

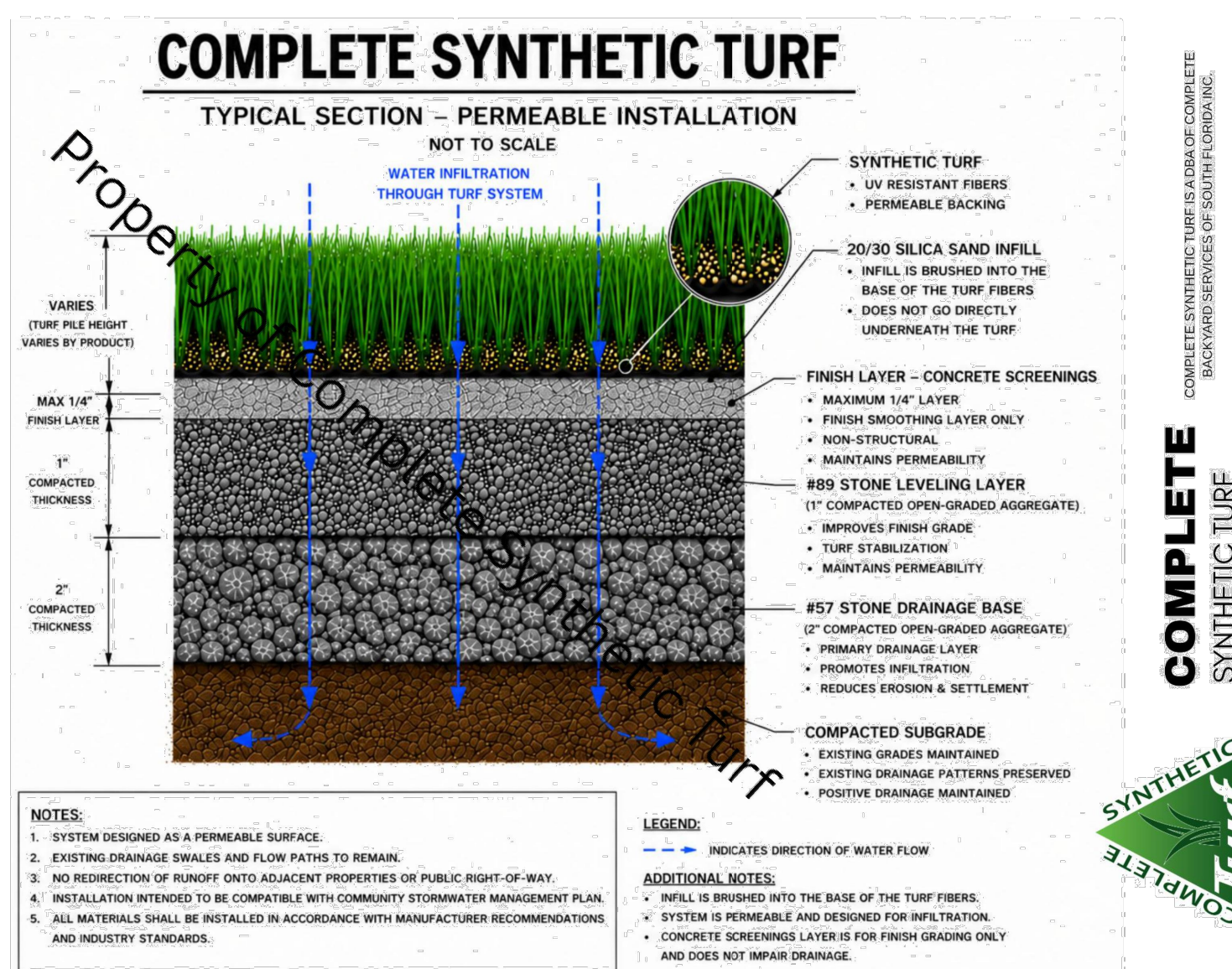
The turf system is installed as a permeable surface assembly intended to allow water to pass vertically through the turf and aggregate base layers.

EDGE RESTRAINT

Existing landscape edging and border restraints are maintained where applicable.

Additional perimeter restraint materials are installed as necessary to:

- Secure the turf perimeter
- Maintain edge stability
- Minimize movement or displacement of the turf system



NOTES:
1. SYSTEM DESIGNED AS A PERMEABLE SURFACE.
2. EXISTING DRAINAGE SWALES AND FLOW PATHS TO REMAIN.
3. NO REDIRECTION OF RUNOFF ONTO ADJACENT PROPERTIES OF PUBLIC RIGHT-OF-WAY.
4. INSTALLATION INTENDED TO BE COMPATIBLE WITH COMMUNITY STORMWATER MANAGEMENT PLAN.
5. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND INDUSTRY STANDARDS.

LEGEND:
— INDICATES DIRECTION OF WATER FLOW

ADDITIONAL NOTES:
• INFILL IS BRUSHED INTO THE BASE OF THE TURF FIBERS.
• SYSTEM IS PERMEABLE AND DESIGNED FOR INFILTRATION.
• CONCRETE SCREENINGS LAYER IS FOR FINISH GRADING ONLY AND DOES NOT IMPAIR DRAINAGE.

ARTIFICIAL TURF SHALL BE INSTALLED PER THE MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS



LABORATORY TEST SUMMARY

Report # 93152
Lab Test Number: 3419-6-097
Report Date: January 15, 2024

ASTM F1551, DIN 18-035 Part 6; Water Permeability
www.testingservices.us • (706)226-1400
office@testingservices.us

Client:
Company: Turf USA
Address: 546 NW 77th Street
Boca Raton, FL 33487

Test Material:
Date Material Received: December 27, 2023
Material Type: Synthetic Turf Yam
Material Condition: Excellent, New
Yam Identification: Landscapes

TESTING METHODS REQUESTED:
Standard: ASTM F1551 Test Method: Testing Services Inc. was instructed by the client to test for the following...
Standard Test Methods for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials: Suffix-DIN 18-035, Part 6: Water Permeability of Synthetic Turf Systems and Permeable Bases

SAMPLING PLAN:
Sampling Date: 12/27/2023
• Specimen sampling is performed in the sampling department at TS.
• The sampling plan is prepared in accordance with the test method requirements.
• In the event a specific sampling site is not suitable for a determination will be made based on previous testing experience, and approved for use by an authorized manager.
• All specimens are subjected to the same environmental conditions of temperature and relative humidity.
• Specific testing equipment appears to be certified and maintained in accordance with the test method, and used in the department in which they are tested.

DEVIATION FROM TEST METHOD:
State reason for any Deviation from, Additions to, or Exclusions From Test Method.
None

PROCEDURE:
This test method determines the rainfall drainage capacity (permeability) of the playing surface. Test data values represent drainage rates vertically thru the turf with infill listed above, and do not take into account the permeability properties of a pad and/or an underlying sub base. Three specimens, 11.5" diameter, were cut from the 15" turf roll, side-center-side manner. Each turf specimen was securely fastened to the permeability tube using mechanical flanges, ensuring vertical water flow thru the product. Water was pumped into the tube faster than could exit, until the water level reached 8". The water source was shut off, allowing the accumulated 8" water level to recede. The recede was timed via stopwatch until the water level exited the turf. The flow time was recorded in seconds. This procedure was repeated a total of 4 times where, the first pass was for conditioning, with passes 2,3,4 used for averaging. This process was repeated on the remaining specimens.

Specimen #	Drainage Pass #2 (Seconds)	Drainage Pass #3 (Seconds)	Drainage Pass #4 (Seconds)	Total Average Drainage (Seconds)	Average g/min/ft ²	Rainfall Capacity Inches/hour
Left	67.52	67.06	69.04	67.90	29.80	91.3
Center	65.35	63.25	67.40	65.30	30.90	94.9
Right	85.37	85.52	86.83	85.90	23.50	72.10
Final Averages				73.8	28.1	84.5

Disclaimer:
We warrant all assignments for our clients on a best effort basis. Our findings and judgments are based on the information to us using the latest test methods available.

TS can only ensure the test results for the specific items tested.
Unless otherwise noted in the deviation sections of this report, all tests are performed in compliance with stated test method.

Test Report Approval:

Edna Mena, N. Lab Director Testing Services TSB LLC

TS Accreditation:

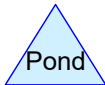
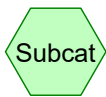
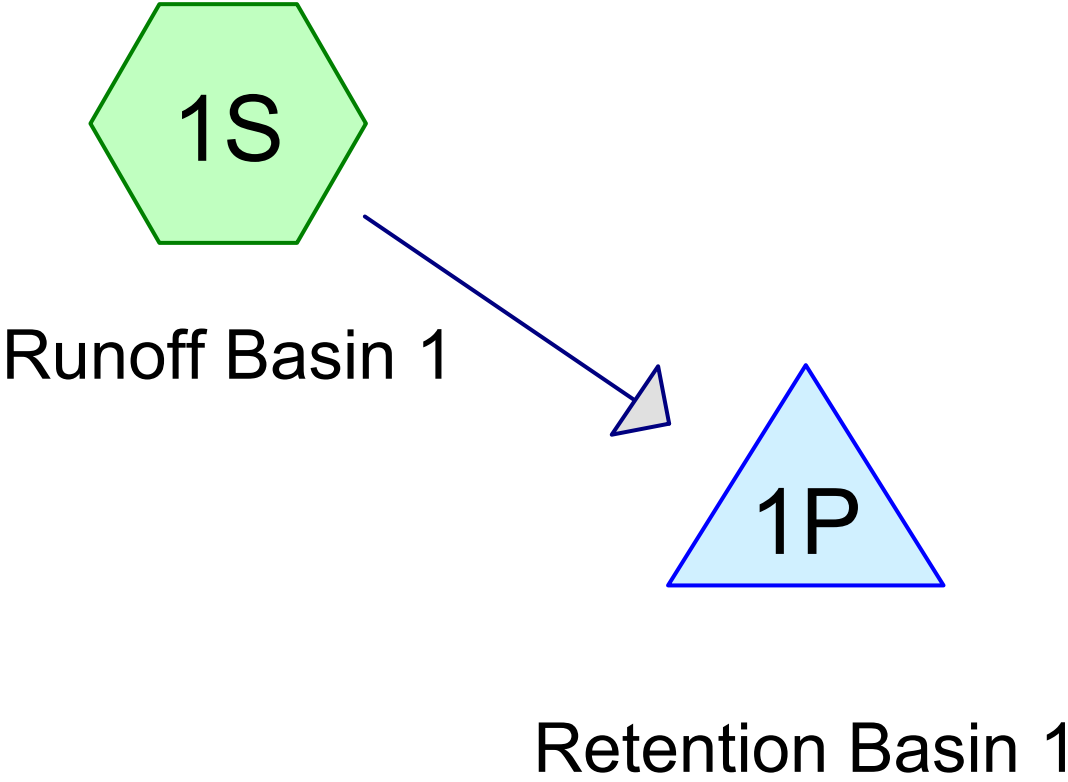
Our laboratory is accredited by the ISO 17025:2017, Competence, National Institute of Standards and Technology (NIST) 17025:2017. Our code # is: NTLAP 100108-0. TS is an Organizational Member of ASTM (American Society for Testing and Materials). TS is a certified independent testing laboratory by the STC (Synthetic Turf Council).



Testing Services (TS) LLC
817 Showalter Avenue
PO Box 1343
Dalton, GA 30721

APPENDIX B

POST DEVELOPMENT STORMWATER CALCULATIONS



Routing Diagram for Post-01
Prepared by Bennett Engineering & Consulting, LLC, Printed 6/10/2026
HydroCAD® 10.10-4b s/n 08593 © 2020 HydroCAD Software Solutions LLC

Post-01

Prepared by Bennett Engineering & Consulting, LLC

Printed 6/10/2026

HydroCAD® 10.10-4b s/n 08593 © 2020 HydroCAD Software Solutions LLC

Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	10y-24h	Type II FL 24-hr		Default	24.00	1	8.00	2

Summary for Subcatchment 1S: Runoff Basin 1

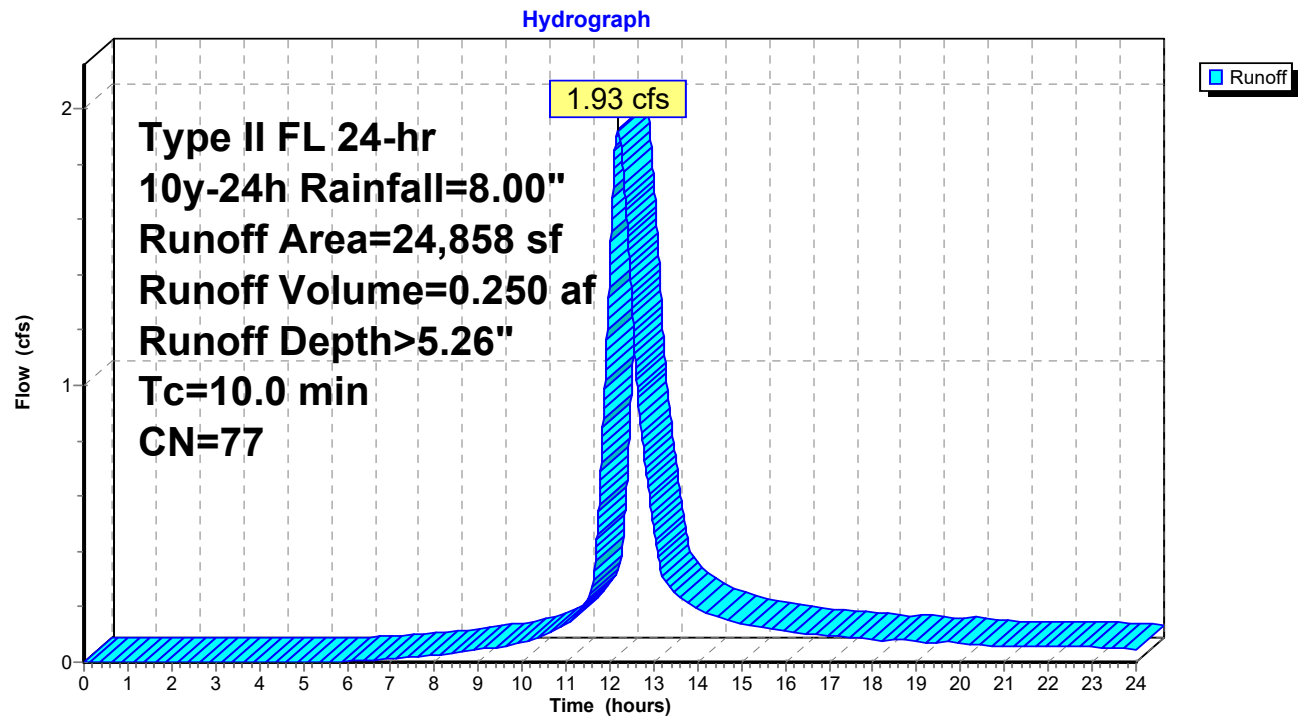
Runoff = 1.93 cfs @ 12.17 hrs, Volume= 0.250 af, Depth> 5.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II FL 24-hr 10y-24h Rainfall=8.00"

	Area (sf)	CN	Description
*	1,438	100	Retention Swale
*	6,689	98	Roof, Paved parking, HSG A
*	620	98	Accessory Bldg
*	208	98	Summer Kitchen
*	2,960	98	Driveway
*	4,013	98	Pool and Decks
*	173	98	Equipment pads
	8,757	39	>75% Grass cover, Good, HSG A
	24,858	77	Weighted Average
	8,757		35.23% Pervious Area
	16,101		64.77% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
10.0					Direct Entry,

Subcatchment 1S: Runoff Basin 1



Post-01

Type II FL 24-hr 10y-24h Rainfall=8.00"

Prepared by Bennett Engineering & Consulting, LLC

Printed 6/10/2026

HydroCAD® 10.10-4b s/n 08593 © 2020 HydroCAD Software Solutions LLC

Page 4

Summary for Pond 1P: Retention Basin 1

Inflow Area = 0.571 ac, 64.77% Impervious, Inflow Depth > 5.26" for 10y-24h event
 Inflow = 1.93 cfs @ 12.17 hrs, Volume= 0.250 af
 Outflow = 1.86 cfs @ 12.26 hrs, Volume= 0.250 af, Atten= 4%, Lag= 5.0 min
 Discarded = 1.86 cfs @ 12.26 hrs, Volume= 0.250 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 4.80' @ 12.26 hrs Surf.Area= 1,942 sf Storage= 1,043 cf

Plug-Flow detention time= 7.7 min calculated for 0.250 af (100% of inflow)
 Center-of-Mass det. time= 7.6 min (833.7 - 826.1)

Volume	Invert	Avail.Storage	Storage Description
#1	4.60'	120 cf	Custom Stage Data (Irregular) Listed below (Recalc)
#2	3.20'	608 cf	14.10'W x 60.60'L x 2.33'H Prismatic 1,991 cf Overall - 472 cf Embedded = 1,519 cf x 40.0% Voids
#3	3.20'	146 cf	4.80'W x 39.30'L x 2.33'H Prismatic 440 cf Overall - 74 cf Embedded = 366 cf x 40.0% Voids
#4	3.70'	472 cf	ADS_StormTech SC-310 +Cap x 32 Inside #2 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 4 Rows
#5	3.70'	74 cf	ADS_StormTech SC-310 +Cap x 5 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap
1,419 cf			Total Available Storage

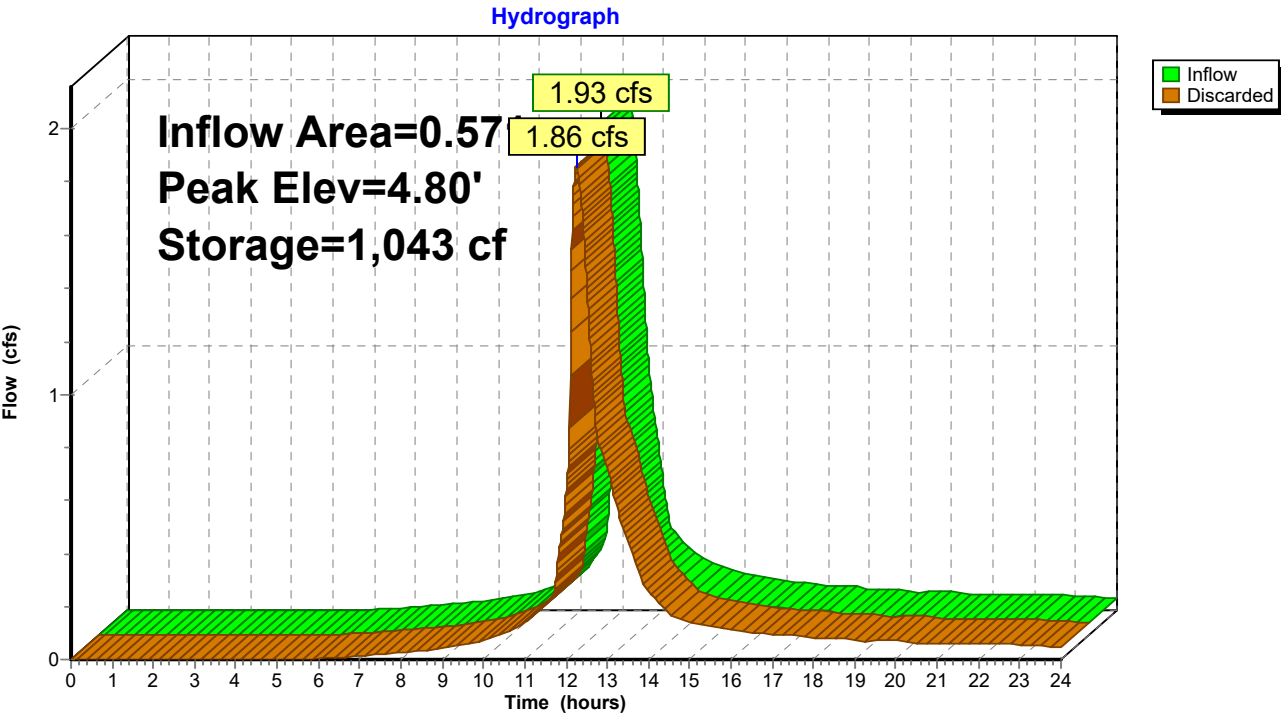
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
4.60	0	152.0	0	0	0
4.85	1,438	334.0	120	120	7,039

Device	Routing	Invert	Outlet Devices
#1	Discarded	3.20'	7.700 in/hr Exfiltration over Wetted area Conductivity to Groundwater Elevation = 2.70'

Discarded OutFlow Max=1.86 cfs @ 12.26 hrs HW=4.80' (Free Discharge)

↑1=Exfiltration (Controls 1.86 cfs)

Pond 1P: Retention Basin 1



APPENDIX C

Soils Report

Prepared by: UES

*Soils report included for informational purposes only and
Not part of the Engineer's Certification*

June 5, 2026

1500 Pine St. LLC
3839 N Harbor City Boulevard, Unit 101
Melbourne, Florida

Attention: Ms. Jeri Page

Reference: **Limited Subsurface Exploration**
Proposed Retention
1500 Pine Street
Melbourne Beach, Florida
UES Project No. A26146.00651.000

Dear Ms. Jeri Page:

UES Professional Solutions, LLC (UES) has completed a limited subsurface exploration at the above referenced site in Brevard County, Florida. Our exploration was authorized by Mr. Christopher Burton and was conducted as outlined in UES's Proposal. This exploration was performed in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

UES understands from review of the information provided by the client that the project consists of the construction of a retention basin located in the rear yard of the existing residence located at 1500 Pine Street in Melbourne Beach, Florida. At the time of our subsurface exploration the rear yard of the existing residence was inaccessible to our truck-mounted drill rig.

If any of the above information is incorrect or changes prior to construction, please contact UES immediately so that we may revise the recommendations contained in this report, as necessary. In order to verify that our recommendations are properly interpreted and implemented, UES should be allowed to review the final design and specifications prior to the start of construction.

SOIL SURVEY

The majority of the site soils is mapped as 72 – Welka sand (We) according the Brevard County Soil Survey (BCSS), (updated using USDA-NCSS SSURGO and STATSGO Soil Survey). Welka sand (We) is nearly level, well drained sandy soil on moderately broad ridges interspersed with long narrow sloughs. A copy of the relevant portion of the BCSS map is included as Figure No. 1

TOPOGRAPHY

According to information obtained from the United States Geologic Survey (USGS) Melbourne East, Florida quadrangle map dated 2024, the average ground surface elevation (pre-developmental) within the building area is approximately +5 to +10 feet North American Vertical Datum (NAVD). A copy of a portion of the USGS Map is included in Figure No. 2.

FIELD METHODOLOGIES

One Standard Penetration Test (SPT) boring, designated B1 on the attached Figure No. 3 was performed in general accordance with the procedures of ASTM D 1586 (Standard Method for Penetration Test and Split-Barrel Sampling of Soils). The SPT drilling technique involves driving a standard split-barrel sampler into the soil by a 140 pound hammer, free falling 30 inches. The number of blows required to drive the sampler 1 foot, after an initial seating of 6 inches, is designated the penetration resistance, or N-value, an index to soil strength and consistency. The soil samples recovered from the split-barrel sampler were visually inspected and classified in general accordance with the guidelines of ASTM D 2487 (Standard Classification of Soils for Engineering Purposes [Unified Soil Classification System]).

In addition to the SPT boring, one auger boring, designated B2 on the attached Figure No. 3, was drilled in general accordance with the procedures of ASTM D 1452 (Standard Practice for Soil Investigation and Sampling by Auger Borings). The auger drilling technique involves advancing a slender, solid-stem, bucket auger into the soil to the required depth. The soil types encountered were also evaluated by visually classifying the cuttings recovered from the auger bucket in accordance with ASTM D 2487 guidelines.

The SPT soil boring was performed with a CME 45 truck-mounted drilling rig. The shallower auger boring was performed by experienced field technicians using hand equipment. The boring locations were determined in the field using a hand held GPS receiver. No survey control was provided on-site, and our boring locations should be considered only as accurate as implied by the methods of measurement used. The approximate boring locations are shown on the attached Figure No. 3.

LABORATORY TESTING

We completed #200 sieve particle size analyses on three (3) representative soil samples. These samples were tested according to the procedures listed in ASTM D 1140 (Standard Test Method for Amount of Material in Soils Finer than the No. 200 Sieve). In part, ASTM D 1140 requires thorough mixing of the sample with water and flushing it through a No. 200 sieve until all of the particles smaller than the sieve size leave the sample. The percentage of the material finer than the No. 200 sieve helps determine the textural nature of the soil sample and aids in evaluating its engineering characteristics.

The percentage of soil particles passing the #200 sieve in each sample that was tested is shown on the appropriate attached boring log.

In addition, constant head permeability tests were performed on representative bulk samples taken at the borings by measuring the water flow through the sample for time versus flow volume. This data was used to calculate the coefficient of permeability (K) of the soils. Results of these tests are found in this report.

SOIL STRATIGRAPHY AND GROUNDWATER

At boring location B1, fine sand [SP] was encountered to a depth of approximately 16 feet below existing ground surface (bls). At this depth fine sand with occasional cemented rock layers [SP] was encountered to the termination depth of this boring at 15 feet bls. At boring location B2, fill consisting of fine sand and fine sand with silt [SP], [SP-SM] with varying amounts of limestone fragments and broken shell was encountered to an approximate depth of 4 feet bls. At this depth fine sand to fine sand with broken shell [SP] was encountered to the termination depth of this boring at 6 feet bls.

We measured the water level in the borings on May 29, 2026. Groundwater was encountered at a depth of approximately 3.3 feet bls at boring location B2 and at 4.9 feet bls at boring location B1. Fluctuations in groundwater levels should be anticipated throughout the year, primarily due to seasonal variations in rainfall, surface runoff, and other factors that may vary from the time the borings were conducted.

Based on the groundwater level encountered and review of available rainfall data, we estimate that the typical wet season high groundwater levels at the boring locations will be approximately 2 feet above the existing measured levels. Please note, however, that peak stage elevations, immediately following various intense storm events, may be somewhat higher than the estimated typical wet season high levels.

Due to variations in the silt and clay content of the near surface soils at this site predominantly at boring location B2, we strongly suspect there may be occasional isolated pockets of "perched" groundwater within the project area, particularly after periods of prolonged wet weather. Such temporary perched water table levels may be significantly higher than the estimated wet season high groundwater levels indicated above.

PERMEABILITY TEST RESULTS

Soil permeability is a measure of the soil's ability to allow water flow through it under saturated conditions. Permeability is a function of the grain size and sorting of the entire soil mass. According to the National Soil Survey Handbook, 1993 Edition, published by the U.S. Department of Agriculture, permeability rates can be expressed in the following classes:

Permeability Class	Permeability K (in/hr)
Extremely Slow	0.0 – 0.01
Very Slow	0.01 – 0.06
Slow	0.06 – 0.2
Moderately Slow	0.2 – 0.6
Moderate	0.6 – 2.0
Moderately Rapid	2.0 – 6.0
Rapid	6.0 – 20.0
Very Rapid	> 20.0

Most "clean" fine sands [SP] typically exhibit moderately rapid to very rapid permeabilities. Fine sands with silt or clay [SP-SM or SP-SC] can usually be considered to have slow to moderately slow permeabilities; while silty sand [SM], clayey sands [SC], silts [ML] and clays [CL] are typically within the extremely slow to slow class.

The results obtained from our laboratory permeability tests, where K is the coefficient of permeability, are displayed in the following Table:

PERMEABILITY TEST RESULTS

Boring Location	Soil Type	Sample Depth (feet)	Permeability Rate K (in/hr)	Permeability Class
B1	Fine Sand [SP]	Remolded @ 6	15.4	Rapid
B2	Fine Sand with silt [SP-SM]	Remolded @ 1	4.9	Moderately Rapid
B2	Fine Sand [SP]	Remolded @ 4	5.8	Moderately Rapid

It should be noted that the coefficient of permeability is not an infiltration rate. The actual infiltration rate is influenced by the coefficient of permeability as well as several factors, including the elevation of the pond bottom, water level in the pond, the elevation of the wet season water table, and the confining layer.

The hydraulic capacity of stormwater retention areas is principally a function of the ability of the surface soil to receive and percolate the storm water runoff. Upon reaching the groundwater table or a restrictive layer, the stormwater runoff begins to mound. The amount and rate of rise in the recharge mound depends on several factors, including the thickness and permeability of the receiving stratum, the elevation of the groundwater table, and the geometry of the loaded area.

The actual infiltration rate of pond subsoils is influenced by the coefficient of permeability as well as several factors, including the elevation of the pond bottom, water level in the pond, the elevation of the wet season high water table, and the confining layer. These factors must be accounted for in an appropriate groundwater model to determine the infiltration rate of a given soil stratum. We recommend the designer use a commercial software program such as "Ponds" or "Modret" in order to evaluate this pond.

We estimate that the site surficial sands (above the groundwater table) would exhibit a fillable porosity of approximately $N = 25\%$. For dry retention systems to be used at this project, we recommend that the site be filled/contoured to allow a pond bottom level of at least 1 foot above the estimated seasonal high groundwater level.

Please note that the action of earthmoving equipment tends to densify the subsoils at the bottom of pond levels during retention pond construction somewhat reducing their permeability rate. Hence, we recommend that the permeability rates of the existing surficial sands [SP] listed in Table be reduced by at least 25% in the actual pond design.

After configuration of the proposed retention pond(s) are better defined, UES should be allowed to review the proposed plans, so that recommendations for any necessary additional borings and/or laboratory testing can be formulated.

We appreciate the opportunity to be working with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Sincerely yours,

UES PROFESSIONAL SOLUTIONS, LLC.

Certificate of Authorization No. 549



Adam Dubaz, P.G.
Project Manager
Florida Registration No. PG3322

Robert Smith, P.E. Geotechnical
Department Manager Florida
Professional Engineer No. 78130

Attachments

Brevard County Soil Survey
USGS Topographic Map
Boring Location Plan
Boring Logs
GBA Document

1 – Client (by e-mail)



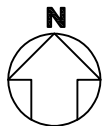
FIGURES



**Source: USDA Soil Survey of Brevard County, Florida (1990).
Aerial Photo from Google Earth Pro.**

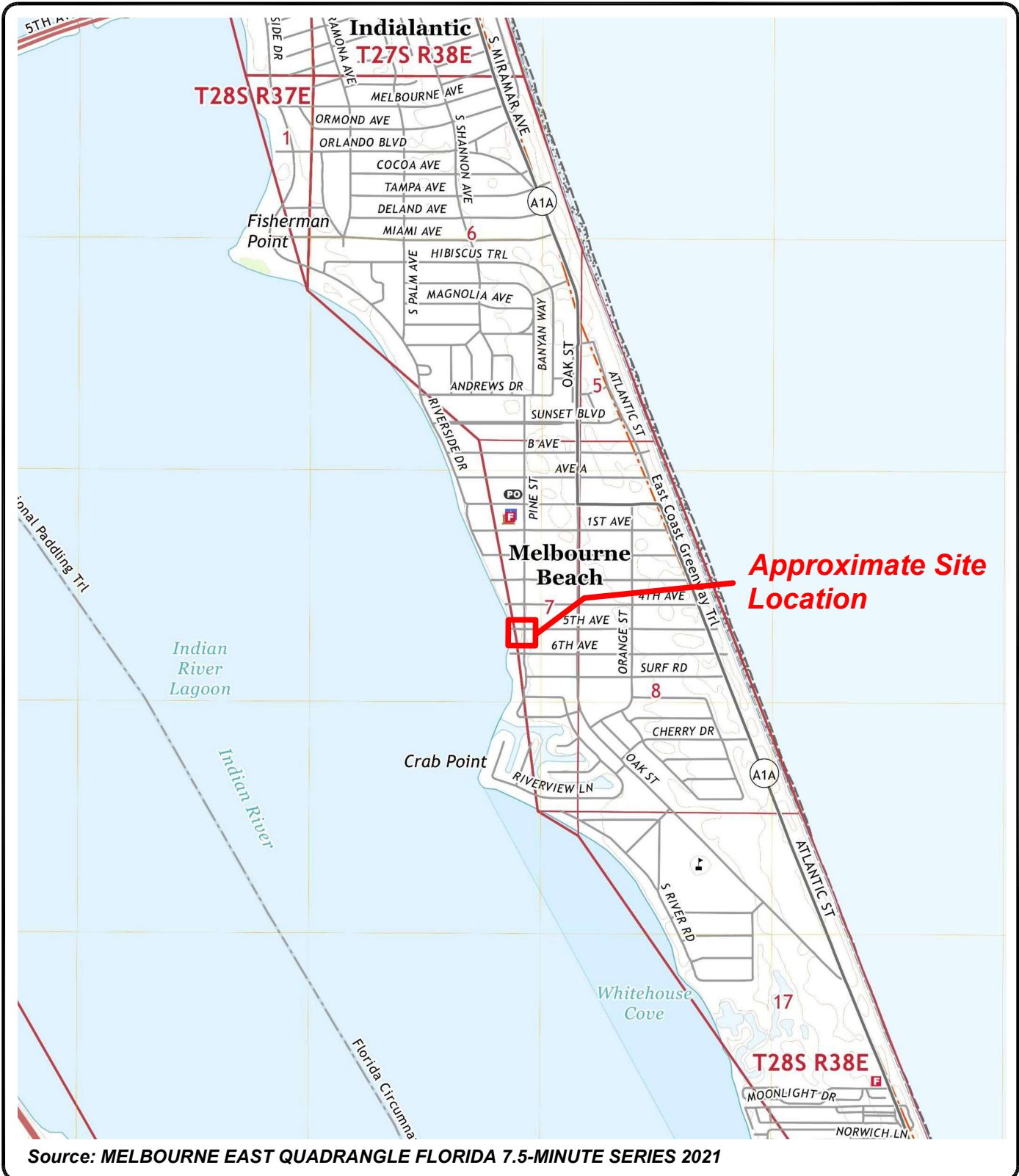


**1500 PINE ST. LLC.
1500 PINE STREET
MELBOURNE BEACH, FLORIDA**

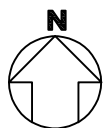


BREVARD COUNTY SOIL SURVEY

DRAWN BY: AD	DATE: 6/5/2026	CHECKED BY: RLS	DATE: 6/5/2026
SCALE: NTS	PROJECT NO: A26146.00651.000	PAGE NO: FIGURE 1	



**1500 PINE ST. LLC.
1500 PINE STREET
MELBOURNE BEACH, FLORIDA**



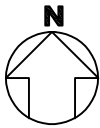
USGS TOPOGRAPHIC MAP

DRAWN BY: AD	DATE: 6/5/2026	CHECKED BY: RLS	DATE: 6/5/2026
SCALE: 1" = 2000'	PROJECT NO: A26146.00651.000	PAGE NO: FIGURE 2	



APPROXIMATE BORING LOCATION

FIGURE IS BASED UPON A GOOGLE EARTH AERIAL PHOTOGRAPH



**1500 PINE ST. LLC.
1500 PINE STREET
MELBOURNE BEACH, FLORIDA**

BORING LOCATION PLAN

DRAWN BY: AD	DATE: 6/3/2026	CHECKED BY: RS	DATE: 6/3/2026
SCALE: 1" = 50'	PROJECT NO: A26146.00651.000	PAGE NO: FIGURE 3	



APPENDIX A



UES PROFESSIONAL SOLUTIONS BORING LOG

PROJECT NO.: A26146.00651.000
REPORT NO.:
APPENDIX: A

PROJECT: 1500 PINE STREET LLC.
1500 PINE STREET
MELBOURNE BEACH, FLORIDA

BORING DESIGNATION: **B1**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT:
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 4.9
DATE OF READING: 5/29/2026
EST. W.S.W.T. (ft):
DATE STARTED: 5/29/26
DATE FINISHED: 5/29/26
DRILLED BY: JH, JL
TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND, grey, [SP]						
		1-2-2	4									
		2-2-3	5			fine SAND, brown, [SP]						
		3-2-4	6									
5												
		3-3-6	9				2	15				
		7-11-14	25									
		14-15-15	30									
10												
		8-18-20	38			fine SAND with occasional cemented rock layers, brown, [SP]						
15						BORING TERMINATED AT 15'						
20												

BL3 2



UES PROFESSIONAL SOLUTIONS BORING LOG

PROJECT NO.: A26146.00651.000⁶¹

REPORT NO.:

APPENDIX: A

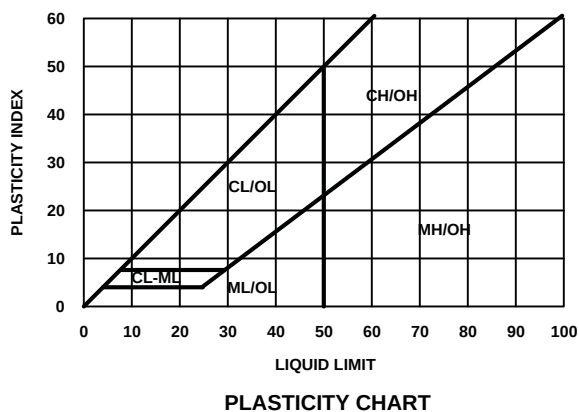
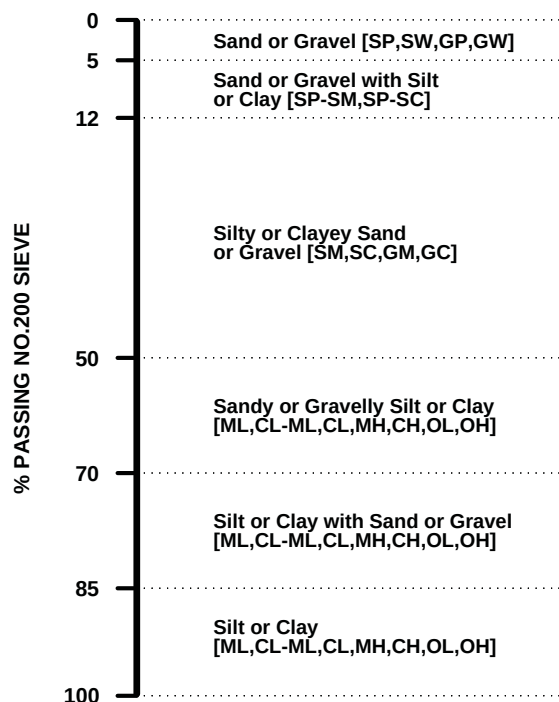
PROJECT: 1500 PINE STREET LLC.
1500 PINE STREET
MELBOURNE BEACH, FLORIDABORING DESIGNATION: **B2**
SECTION: TOWNSHIP:SHEET: **1 of 1**
RANGE:CLIENT:
LOCATION: SEE BORING LOCATION PLAN
REMARKS:G.S. ELEVATION (ft):
WATER TABLE (ft): 3.3
DATE STARTED: 5/29/26
DATE FINISHED: 5/29/26
DATE OF READING: 5/29/2026
EST. W.S.W.T. (ft):
DRILLED BY: JH, JL
TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND with silt and gravel, dark brown, [SP-SM] (fill)						
						fine SAND with gravel, grey, [SP] (fill)	1	5				
						fine SAND with silt, rock, trace of broken shell, dark brown, [SP-SM] (fill)						
						fine SAND, trace of roots, grey, [SP]	1	27				
5						fine SAND, trace of broken shell, grey, [SP]						
						BORING TERMINATED AT 6'						
10												
15												
20												

BL3 2

KEY TO BORING LOGS

SOIL CLASSIFICATION CHART*



GROUP NAME AND SYMBOL

COARSE GRAINED SOILS



WELL-GRADED
SANDS [SW]



POORLY-GRADED
SANDS [SP]



POORLY-GRADED
SANDS WITH SILT
[SP-SM]



POORLY-GRADED
SANDS WITH CLAY
[SP-SC]



SILTY SANDS
[SM]



CLAYEY SANDS
[SC]



SILTY CLAYEY SANDS
[SC-SM]



WELL-GRADED
GRAVELS [GW]



POORLY-GRADED
GRAVELS [GP]



POORLY-GRADED
GRAVELS WITH SILT
[GP-GM]



POORLY-GRADED
GRAVELS WITH CLAY
[GP-GC]



SILTY GRAVELS
[GM]



CLAYEY GRAVELS
[GC]

FINE GRAINED SOILS



INORGANIC SILTS
SLIGHT PLASTICITY
[ML]



INORGANIC SILTY CLAY
LOW PLASTICITY
[CL-ML]



INORGANIC CLAYS
LOW TO MEDIUM
PLASTICITY [CL]



INORGANIC SILTS HIGH
PLASTICITY [MH]



INORGANIC CLAYS HIGH
PLASTICITY [CH]

HIGHLY ORGANIC SOILS



ORGANIC SILTS/CLAYS
LOW PLASTICITY [OL]**



ORGANIC SILTS/CLAYS
MEDIUM TO HIGH
PLASTICITY [OH]**



PEAT, HUMUS, SWAMP SOILS
WITH HIGH ORGANIC
CONTENTS [PT]**

RELATIVE DENSITY

(SAND AND GRAVEL)

VERY LOOSE - 0 to 4 Blows/ft.
LOOSE - 5 to 10 Blows/ft.
MEDIUM DENSE - 11 to 30 Blows/ft.
DENSE - 31 to 50 Blows/ft.
VERY DENSE - more than 50 Blows/ft.

CONSISTENCY

(SILT AND CLAY)

VERY SOFT - 0 to 2 Blows/ft.
SOFT - 3 to 4 Blows/ft.
FIRM - 5 to 8 Blows/ft.
STIFF - 9 to 16 Blows/ft.
VERY STIFF - 17 to 30 Blows/ft.
HARD - more than 30 Blows/ft.

NOTES:

8* - DENOTES DYNAMIC CONE PENETROMETER (DCP) VALUE
R - DENOTES REFUSAL TO PENETRATION
P - DENOTES PENETRATION WITH ONLY WEIGHT OF DRIVE HAMMER
N/E - DENOTES GROUNDWATER TABLE NOT ENCOUNTERED

IN ACCORDANCE WITH ASTM D 2487 - UNIFIED SOIL

* CLASSIFICATION SYSTEM.

** LOCALLY MAY BE KNOWN AS MUCK.

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

APPENDIX A.1



EXHIBIT 1

Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be, and, in general, if you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying it.* A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may

perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old*.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration*. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists*.



**GEOPROFESSIONAL
BUSINESS
ASSOCIATION**

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Planning and Zoning Meeting

Section: Old Business

Meeting Date: July 7, 2026

From: Building Department

RE: Discussion on the proposed Chapter 9A: Landscaping and Trees ordinance

Background Information:

The Planning & Zoning Board was tasked with reviewing the landscaping and trees ordinance.

Recommendation:

Continue discussion of changes to the ordinance.

Attachments:

- Existing vs. Proposed Document with tracked changes from last meeting – Pages 67-84
- Practical Considerations for 9A-7 Minimum Tree Plantings – Pages 85-98

CHAPTER 9A: LANDSCAPING AND TREES

Section

Article I. Landscaping

9A-1 Definition

9A-2 Intent

9A-3 Applicability

9A-4 Permit required for cutting down tree

9A-5 Application for permit; review of application

9A-6 On-site inspection

9A-7 Minimum tree plantings

9A-8 Tree protection

9A-9 Trees on public lands

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9A-11 Reserved

9A-12 Penalty

9A-13 – 9A-99 Reserved

ARTICLE I. LANDSCAPING

EXISTING

§ 9A-1. DEFINITION.

For the purpose of this article the following definitions shall apply unless the context clearly indicates or requires a different meaning.

YARD AREA. The front, side and rear yard areas as established and required by Chapter 7A.

(75 Code, § 22-17) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17)

PROPOSED

§ 9A-1. DEFINITION.

For the purpose of this article the following definitions shall apply unless the context clearly indicates or requires a different meaning.

~~**TREE.** A Florida native tree species with a trunk diameter of four inches (4") diameter at breast height (dbh) or greater, and a native palm with a minimum clear trunk height of eight feet (8').~~

YARD AREA. The front, side and rear yard areas as established and required by Chapter 1A.

(75 Code, § 22-17) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17)

§ 9A-2. INTENT.

The intent of this article is to preserve trees whenever and wherever they exist and to provide trees wherever they are sparse or do not exist, thus enhancing the health, welfare and beautification of the Town. The intent of the article also includes the encouragement of “Florida Friendly Landscaping” as defined by § 375.185(b), Fl. Stat. and “Florida Native Landscaping” as defined by the University of Florida’s Institute of Food and Agricultural Sciences (IFAS).

(‘75 Code, § 22-16) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17)

PROPOSED

§ 9A-2. INTENT.

The intent of this article is to define Florida native and invasive plant species, establish provisions for the preservation and replacement of native species and removal of invasive species, and to provide a procedure for Town review and approval of tree removal applications and landscape development applications.

The intent of this article is also to preserve Florida native & Florida friendly trees whenever and wherever they exist and to provide trees wherever they are sparse or do not exist, when possible and reasonable, thus enhancing the health, welfare and beautification of the Town. The intent of the article also includes the encouragement of “Florida Friendly Landscaping” as defined by § 375.185(b), Fl. Stat. and “Florida Native Landscaping” as defined by the University of Florida’s *Institute of Food and Agricultural Sciences (IFAS)*.

Landscaping and trees benefit the Town by performing the following functions:

- Improve air quality through the absorption of carbon dioxide and release of oxygen to the atmosphere.
- Remove dust and other particulates from the air.
- Provide wildlife habitat, particularly for birds which, in turn, help control insects.
- Provide soil stabilization, which reduces erosion and mitigates the effect of flooding.
- Provide shade to conserve energy, reduce glare, modulate temperature and reduce heat island effects.
- Provide barrier to ground-level wind speeds during tropical storms and hurricanes
- Enhance the Town's attractiveness.
- Provide attractive buffering between different land uses.
- Reduce noise and surface water runoff.
- Maintain preservation of native ecosystems for future generations.

(‘75 Code, § 22-16) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17)

§ 9A-3. APPLICABILITY.

The terms and provisions of this article shall apply to all real property in all zoning districts.

(`75 Code, § 22-18) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2017-05, adopted 12-20-17)

EXISTING**§ 9A-4. PERMIT REQUIRED FOR CUTTING DOWN TREE.**

No person, organization, society, association or corporation, or any agent or representative thereof, directly or indirectly, shall cut down, destroy, remove, move or effectively destroy through damaging any tree situated on property in any zoning district without first obtaining a permit as herein provided. Tree removal on any property in any zoning district shall be in accordance with the standards mandated in the most recent edition of the *Best Management Practices - Tree Risk Assessment* published by the International Society of Arboriculture or a certification from an arborist certified by the International Society of Arboriculture or a Florida licensed landscape architect as to substantial compliance with such standards. Any tree which poses an unacceptable risk may qualify for removal without a permit pursuant to Fla. Stat. § 163.045 or as such section may be amended

(`75 Code, § 22-19(a)) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17; Ord. 2023-01, adopted 3-15-23)

PROPOSED**§ 9A-4. PERMIT REQUIRED FOR ~~CUTTING DOWN~~ TREE REMOVAL.**

No person, organization, society, association or corporation, or any agent or representative thereof, directly or indirectly, shall cut down, destroy, remove, move or effectively destroy through damaging any native Tree or cluster of Trees including palm trees, scrub oak or sand live oak of any size, as defined herein, situated on property in any zoning district without first obtaining a permit as herein provided. Tree removal on any property in any zoning district shall be in accordance with the standards mandated in the most recent edition of the *Best Management Practices - Tree Risk Assessment* published by the International Society of Arboriculture or a certification from an arborist certified by the International Society of Arboriculture or a Florida licensed landscape architect as to substantial compliance with such standards. Any tree which poses an unacceptable risk may qualify for removal without a permit pursuant to Fla. Stat. § 163.045 or as such section may be amended

(`75 Code, § 22-19(a)) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17; Ord. 2023-01, adopted 3-15-23)

§ 9A-5. APPLICATION FOR PERMIT; REVIEW OF APPLICATION.

(a) Application. Permits for removal, relocation, or replacement of trees covered herein, shall be obtained by making application for a permit to the Building Official. The application shall be accompanied by a written statement indicating the reason for removal, relocation, or replacement of trees and two copies of a legible site plan drawn to a minimum scale of one inch equals 20 feet, indicating the following:

(1) Location of all existing or proposed structures, improvements, and sites used, properly dimensioned and referenced to property lines, setback, and yard requirements;

(2) Location of existing or proposed utility services, when known;

(3) The location of all trees on the site designating the trees to be retained, removed, relocated, or replaced. Groups of trees in close proximity may be designated as clumps of trees with the predominant type and estimated number and average diameter noted. Only those trees to be removed, relocated, or replaced must be named (common or botanical name) on the site plan;

(4) The tree information required above shall be summarized in legend form on the plan and shall include the reason for the proposed removal, relocation, or replacement; and

(5) An application involving developed properties may be based on drawings showing only that portion of the site directly involved, and adjacent structures and landscaping or natural growth incidental thereto.

(b) Application review. Upon receipt of a proper application, the Building Official shall review the application, which will include a field check of the site and referral of the application to others concerned as necessary, to determine any adverse effect upon the general public welfare, adjacent properties, or Town services and facilities.

(` 75 Code, § 22-19(b), (c)) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23) Penalty, see § 9A-12

PROPOSED

§ 9A-5. APPLICATION FOR PERMIT; REVIEW OF APPLICATION.

(a) Application. Permits for removal, relocation, or replacement of trees covered herein, shall be obtained by making application for a permit to the Building Official. The application shall be accompanied by a written statement indicating the reason for removal, relocation, or replacement of trees and two copies of a legible site plan drawn to a minimum scale of one inch (1") equals 20 twenty feet (20'), indicating the following and including a tree survey accurately locating the trees in relationship to other improvements and including a legend identifying the type and size of trees:

(1) Location of all existing or proposed structures, improvements, and sites used, properly dimensioned and referenced to property lines, setback, and yard requirements;

(2) Location of existing or proposed utility services and drainage plan;

(3) The location of all trees on the site designating the trees to be retained, removed, relocated, or replaced. Groups of trees in close proximity may be designated as clumps of trees with the predominant type and estimated number and average diameter noted. Only those trees to be removed, relocated, or replaced must be named (common or botanical name) on the site plan;

(4) The tree information required above shall be summarized in legend form on the plan and shall include the reason for the proposed removal, relocation, or replacement; and

(5) An application involving developed properties may be based on drawings showing only that portion of the site directly involved, and adjacent structures and landscaping or natural growth incidental thereto.

(b) Application review. Upon receipt of a ~~proper~~ complete application, the Building Official shall review the application, which will include a field check of the site and referral of the application to ~~others concerned~~ other departments including planning and engineering as necessary, to determine any adverse effect upon the general public welfare, adjacent properties, or Town services and facilities.

(` 75 Code, § 22-19(b), (c)) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23) Penalty, see § 9A-12

§ 9A-6. ON-SITE INSPECTION.

(a) On-site inspection. Prior to the issuance of a permit for tree removal or relocation, the Building Official or his agent shall conduct an on-site inspection to determine whether or not such a removal or relocation conforms to the requirements of this chapter.

(b) Issuance.

(1) Removal. No permit shall be issued for tree removal unless one of the following conditions exists:

a. The tree is located in a buildable area or yard where a structure or improvements may be placed where inability to remove the tree would unreasonably restrict the permitted use of the property and the tree removal has been authorized by the Town as part of a site plan review;

b. The tree cannot be relocated on or off the site because of age, type, or size of tree;

c. The tree is diseased, dead, injured, in danger of falling, too close to existing or proposed structures, interferes with utility service, creates unsafe vision clearance, or conflicts with other ordinances or regulations; or

d. It is in the welfare of the general public that the tree be removed for a reason other than set forth above.

(2) Relocation or replacement. As a condition to the granting of a permit, the applicant may be required, where practical, to relocate the tree being removed or be required to replace the tree being removed with a tree somewhere within the site of the type that will attain an overall height of at least twelve feet (12') and have a trunk caliper of at two inches (2") at planting, measured four and one-half feet (4.5') above grade. The green areas left after all building and parking lot requirements have been met shall contain a tree density equal to or greater than that existing on the overall site before the beginning of construction.

(75 Code, § 22-19(d)) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23) Penalty, see § 9A-12

§ 9A-6. ~~ON-SITE INSPECTION~~ CRITERIA FOR TREE REMOVAL PERMITTING.

(a) On-site inspection. Prior to the issuance of a permit for tree removal or relocation (and prior to issuance of a certificate of occupancy in the case of new construction), the Building Official or his agent shall conduct an on-site inspection to determine whether or not such a removal or relocation conforms to the requirements of this chapter.

(b) Issuance.

(1) Removal. No permit shall be issued for tree removal unless one of the following conditions exists:

a. The tree is located in a buildable area or yard of the property where a structure or improvements may be placed and where inability to remove the tree would unreasonably restrict the permitted use of the property and the tree removal has been authorized by the Town as part of a site plan review;

b. The tree cannot be relocated on or off the site because of age, type, or size of tree;

c. The tree is diseased, dead, injured, in danger of falling, too close to existing or proposed structures, interferes with utility service, creates unsafe vision clearance at intersections or road entries, or conflicts with other ordinances or regulations; or

d. It is in the welfare of the general public that the tree be removed for a reason other than set forth above and in accordance with Florida Statute 163.045 Tree pruning, trimming, or removal on residential property.

e. (a) Mangroves can only be trimmed per state code. 1996 Mangrove Trimming and Preservation Act (sections 403.9321-403.9333, F.S.)

(2) Relocation or replacement. As a condition to the granting of a permit, the applicant ~~may~~ will be required, where practical, to relocate the tree being removed or be required to replace the tree being removed with a tree ~~somewhere within the site~~ on the property of the same or similar species type that will attain an overall height of at least twelve feet (12') and have a trunk caliper of at least four ~~two~~ inches (24) dbh at planting for canopy trees; , and a measured four and one-half feet (4.5') above grade minimum clear trunk height of eight feet (8') for Palms. ~~The green areas left after all building and parking lot requirements have been met shall contain a tree density equal to or greater than that what was existing on the overall site before the beginning of construction.~~ A permit to relocate a tree will be granted only if there is a reasonable expectation that the tree will survive the relocation and thrive in the new location. The Town may require a recommendation from a Department of Agriculture Forester or a Certified Arborist to determine and assure that the tree is of a species which can be successfully moved at its current size and that all conditions for its survival are being met in the plan to relocate.

(`75 Code, § 22-19(d)) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23) Penalty, see § 9A-12

EXISTING

§ 9A-7. MINIMUM TREE PLANTINGS.

(a) Trees in residential zoning districts. Trees planted must be of a variety which is compatible with the existing soil and drainage-conditions and must be provided with adequate water and food materials to encourage growth. Trees shall be planted in locations so as not to cause danger to nor interference with existing structures at the time of maturity.

(b) Buffer and tree planting requirements for all non-residential and multiple family residential uses.

(1) A landscape buffer with a minimum of ten feet in width shall be provided between any residentially zoned property and a property utilized for a non-residential or multiple family residential use. Responsibility for providing a landscape buffer shall be upon the nonresidential or multifamily use. The landscape buffer shall include a minimum of one canopy tree for every 40 linear feet, or fraction thereof. In addition one ornamental tree or palm shall be planted for each 50 linear feet, or fraction thereof.

(2) A landscape buffer with a minimum of ten feet in width shall be provided along all road frontage of the site. The landscape buffer shall include a minimum of one canopy tree for every 25 feet of frontage, or fraction thereof.

(3) A continuous hedge shall be planted in all perimeter landscape buffer areas.

(4) Parking areas shall be designed so that there is a minimum of 200 square feet of open space, not including perimeter landscape buffer areas, at the end of each row of parking. In addition a minimum of 200 square feet of open space shall be provided in the interior of the parking lot for each ten parking spaces, or fraction thereof. These open spaces shall be distributed throughout the parking lot in a manner that no more than ten parking spaces in a row shall be allowed without an intervening landscaped area.

(5) Minimum specifications for trees and hedge material shall be as follows:

a. Canopy trees at the time of planting shall have a trunk diameter of two inches measured four and one-half feet above grade. The trees shall be a minimum of eight feet in height and have a minimum spread of five feet. The trees are not required to be spaced evenly along property lines.

b. Ornamental trees at the time of planting shall have a trunk diameter of one and one-half inches measured four and one-half feet above grade. The trees shall be a minimum of six feet in height and have a minimum spread of four feet.

c. Palms at the time of planting shall have a minimum clear trunk of eight feet.

d. Hedge material at the time of planting shall be a minimum of 18 inches in height when planted. Individual plants shall be planted a maximum of 24 inches on center.

(6) All plant material shall be Florida Number 1 in quality and shall be planted according to sound landscape installation standards.

(7) All landscaping shall be maintained to present a neat and orderly appearance. Dead, deteriorating or missing landscape material shall be replaced with substantially equivalent landscaping as permitted by the Land Development Code. Replacement of landscaping material shall occur within 60 days, unless said time is extended by the Town Manager for good cause shown.

(8) Exceptions shall be considered on an individual basis when obstacles such as overhead power lines or other conditions inhibit the ability to comply.

(9) Canopy trees shall be those that develop a crown spread of 25 feet or greater at maturity. Trees with less than 25 feet of crown spread at maturity shall be considered ornamental trees.

(10) Clusters of three palms shall be an acceptable substitute for up to 50% of the required canopy trees⁷⁴ and 50% of the required ornamental trees.

(11) Landscape material should be drought tolerant to the extent practical and feasible. A water source shall be available to ensure the plant material can be watered while it is being established and during drought occurrence. Automatic irrigation systems may be utilized.

(12) Currently developed sites that do not meet the landscape requirements will not be considered non-conforming. Landscaping consistent with the regulations shall be installed at these sites, to the extent practical, as redevelopment occurs. Unless complete reconstruction or rehabilitation that results in closure of a building or buildings for a period of over six months occurs, full compliance with this section shall not be required.

(c) Minimum replacement standards for new construction. Any trees that are removed for new construction shall be replaced by the same or similar species. Specifically for mature oak trees, replacement of one (1) similar species for each tree removed shall be required which at a minimum will attain an overall height of at least twelve feet (12') and have a trunk caliper of at least two inches (2") at planting, measured four and one-half feet (4.5') above grade.

(d) Maintenance of trees and landscaping. If the removal of any tree or landscaping from any lot causes the number of remaining trees or vegetative species to fall below the minimum standards required by this section or as reflected on any approved site plan or landscaping plan for said lot, replacement trees or vegetative species meeting the requirements of this section or any approved site plan or landscaping plan shall be re-planted on the lot within thirty (30) days after removal.

(75 Code, § 22-20) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2008-08, adopted 9-3-08; Am. Ord. 2009-03, adopted 4-15-09; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23) Penalty, see § 9A-12

§ 9A-7. MINIMUM TREE PLANTINGS. LANDSCAPE PLANS

(a) Landscaping in all zoning districts.

(1) All lots to be developed or re-developed shall be landscaped in accordance with this chapter prior to the issuance of a final building inspection or certificate of occupancy.

(2) Landscaping plans are encouraged to incorporate Florida-Friendly Landscaping and Florida Native Landscaping principles consistent with the guidelines, including the use of drought-tolerant native plants, efficient irrigation systems, and soil amendments that promote water retention. Landscaping plans shall be comprised of 50% native plants selected from the current edition of the Florida Native Plant Society's list of native plants, as applicable to the East Central Florida Region.

(3) Plants in the Florida Invasive Species Council's most current list of invasive species shall be removed from a property during development or redevelopment and shall not be planted as part of the approved landscape plan.

(4) Minimum replacement standards for new construction /development or re-development under the guidelines of the Land Development Code: Any trees that are removed for new construction or reconstruction shall be replaced by the same or similar species. Specifically for mature oak trees replacement of one (1) similar species for each tree removed shall be required which at a minimum will attain an overall height of at least twelve feet (12') and have a trunk caliper of at least two four (4) inches dbh(2") at planting, measured four and one-half feet (4.5') above grade.

~~(a) Trees in residential zoning districts. Trees planted must be of a variety which is compatible with the existing soil and drainage conditions and must be provided with adequate water and food materials to encourage growth. Trees shall be planted in locations so as not to cause danger to nor interference with existing structures at the time of maturity.~~

(5) Minimum specifications for trees and hedge material shall be as follows:

a. Canopy trees at the time of planting shall have a trunk diameter of four (4) inches dbh. The trees shall be a minimum of eight feet in height and have a minimum spread of five feet. The trees are not required to be spaced evenly along property lines.

b. Trees smaller than canopy trees shall at the time of planting have a trunk diameter of one and one-half inches measured four and one-half feet above grade. The trees shall be a minimum of six feet in height and have a minimum spread of four feet.

c. Palms at the time of planting shall have a minimum clear trunk of eight feet.

d. Hedge material at the time of planting shall be a minimum of eighteen (18) inches in height when planted. Individual plants shall be planted a maximum of 24 inches on center.

(6) All plant material shall be Florida Number 1 in quality and shall be planted according to sound landscape installation standards.

(7) All landscaping shall be maintained to present a neat and orderly appearance. Dead, deteriorating or missing landscape material shall be replaced with landscaping as permitted in 9A-7(a). Replacement of landscaping material shall occur within sixty (60) days of loss, unless said time is extended by the Town Manager for good cause shown.

(8) Exceptions shall be considered on an individual basis based upon demonstrated unique characteristics of the site in question Any such reduction or relocation shall comply with the intent of this chapter.

~~(9) Canopy trees shall be those that develop a crown spread of 25 feet or greater at maturity. Trees with less than twenty-five (25) feet of crown spread at maturity shall be considered ornamental trees or small trees.~~

~~(10) Clusters of three palms shall be an acceptable substitute for up to 50% of the required canopy trees and 50% of the required ornamental trees.~~

~~(11) Landscape material should be drought tolerant to the extent practical and feasible. A water source shall be available to ensure the plant material can be watered while it is being established and during drought occurrence. Automatic irrigation systems may be utilized.~~

~~(12) Currently developed sites that do not meet the landscape requirements will not be considered non-conforming. Landscaping consistent with the regulations shall be installed at these sites, to the extent practical, as redevelopment occurs. If over six months occurs, full compliance with this section shall not be required.~~

(b) Buffer and tree planting requirements for all non-residential and multiple family residential uses in addition to (5) above.

(1) A landscape buffer with a minimum of ten feet in width shall be provided between any residentially zoned property and a property utilized for a non-residential or multiple family residential use. Responsibility for providing a landscape buffer shall be upon the nonresidential or multifamily use. The landscape buffer shall include a minimum of one native canopy tree for every 40 linear feet, or fraction thereof. In addition, one ~~ornamental-smaller~~ tree or palm shall be planted for each 50 linear feet, or fraction thereof.

(2) A landscape buffer with a minimum of ten feet in width shall be provided along all road frontage of the site. The landscape buffer shall include a minimum of one canopy tree for every 25 feet of frontage, or fraction thereof.

(3) A continuous hedge shall be planted in all perimeter landscape buffer areas.

(4) Parking areas shall be designed so that there is a minimum of two hundred (200) square feet of open space, not including perimeter landscape buffer areas, at the end of each row of parking. In addition, a minimum of two hundred (200) square feet of open permeable green space shall be provided in the interior of the parking lot for each ten parking spaces, or fraction thereof. These open spaces shall be distributed throughout the parking lot in a manner that no more than ten parking spaces in a row shall be allowed without an intervening landscaped area.

~~(5) Minimum specifications for trees and hedge material shall be as follows:~~

~~a. Canopy trees at the time of planting shall have a trunk diameter of two four (4) inches dbh measured four and one-half feet above grade. The trees shall be a minimum of eight feet in height and have a minimum spread of five feet. The trees are not required to be spaced evenly along property lines.~~

~~b. Ornamental tTrees smaller than canopy trees at the time of planting shall at the time of planting have a trunk diameter of one and one-half inches measured four and one-half feet above grade. The trees shall be a minimum of six feet in height and have a minimum spread of four feet.~~

~~c. Palms at the time of planting shall have a minimum clear trunk of eight feet.~~

~~d. Hedge material at the time of planting shall be a minimum of eighteen (18) inches in height when planted. Individual plants shall be planted a maximum of 24 inches on-center.~~

~~(6) All plant material shall be Florida Number 1 in quality and shall be planted according to sound landscape installation standards.~~

~~(7) All landscaping shall be maintained to present a neat and orderly appearance. Dead, deteriorating or missing landscape material shall be replaced with substantially equivalent landscaping as permitted by the Land Development Code in 9A-7(a). Replacement of landscaping material shall occur within sixty (60) days of loss, unless said time is extended by the Town Manager for good cause shown.~~

~~(8) Exceptions shall be considered on an individual basis based upon demonstrated unique characteristics of the site in question. Any such reduction or relocation shall comply with the intent of this chapter when obstacles such as overhead power lines or other conditions inhibit the ability to comply.~~

~~(9) Canopy trees shall be those that develop a crown spread of 25 feet or greater at maturity. Trees with less than twenty five (25) feet of crown spread at maturity shall be considered ornamental trees.~~

~~(10) Clusters of three palms shall be an acceptable substitute for up to 50% of the required canopy trees and 50% of the required ornamental trees.~~

~~(11) Landscape material should be drought tolerant to the extent practical and feasible. A water source shall be available to ensure the plant material can be watered while it is being established and during drought occurrence. Automatic irrigation systems may be utilized.~~

~~(12) Currently developed sites that do not meet the landscape requirements will not be considered non-conforming. Landscaping consistent with the regulations shall be installed at these sites, to the extent practical, as redevelopment occurs. Unless complete reconstruction or rehabilitation that results in closure of a building or buildings for a period of over six months occurs, full compliance with this section shall not be required.~~

~~(c) Minimum replacement standards for new construction development or re-development under the guidelines of the Land Development Code. Any trees that are removed for new construction shall be replaced by the same or similar species. Specifically for mature oak trees 10 years old or more, replacement of one (1) two for one similar species for each tree removed shall be required which at a minimum will attain an overall height of at least twelve feet (12') and have a trunk caliper of at least two four (4) inches dbh (2") at planting, measured four and one-half feet (4.5') above grade. The two for one oak replacement is required until the minimum number of canopy trees required has been met.~~

~~(ac) Trees in residential zoning districts. Trees planted must be of a variety which is compatible with the existing soil and drainage conditions and must be provided with adequate water and food materials to encourage growth. Trees shall be planted in locations so as not to cause danger to nor interference with existing structures at the time of maturity.~~

~~(d) Maintenance of trees and landscaping. If the removal of any tree or landscaping from any lot causes the number of remaining trees or vegetative species to fall below the minimum standards required by this section or as reflected on any approved site plan or landscaping plan for said lot, replacement trees or vegetative species meeting the requirements of this chapter section or any approved site plan or landscaping plan shall be re-planted on the lot within thirty (30) days after removal.~~

~~(75 Code, § 22-20) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2008-08, adopted 9-3-08; Am. Ord. 2009-03, adopted 4-15-09; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23) Penalty, see § 9A-12~~

§ 9A-8. TREE PROTECTION.

(a) Protection of trees during land-clearing.

(1) Trees that are retained during land-clearing can be applied toward total tree requirements for the property. Prior to land-clearing, on-site protection must be initiated by constructing suitable protective barricades around trees to prevent mechanical damage. Barriers should be constructed around individual trees or groups of trees that are susceptible to mechanical damage. Prior to any land-clearing activity, a visual inspection of the site will be made by the Building Official before a land-clearing permit is issued. The land-clearing permit must be posted on-site. Only land-clearing is permitted within the drip line of the tree to be protected.

(2) On-site protection of trees may be barriers consisting of two-by four-inch lumber or flag rope and stakes visible to workers and equipment operators, but far enough from the tree to prevent sail compaction and large enough to include the area within the drip line of the tree (drip line refers to the outer edges of tree limbs and branches).

(3) Should a deep filling around a tree be necessary, a dry well, retaining wall or terracing may be required. Procedures for these are available in the site planning and tree protection regulations available at the County Extension Office.

(b) Attachments to tree. No attachments or wires other than those of a protective nature shall be attached to any tree.

(c) Tree survival. Trees must survive on-site in a viable condition. Trees failing to meet this survival requirement must be replaced within 45 days after a written notification is received by the property owner from the town.

(d) Landscaping prohibition. Plants included on the current Florida Noxious Weed list – Rule 5B-57.007 in Florida Administrative Code.

(`75 Code, § 22-21) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2017-05, adopted 12-20-17)

§ 9A-8. TREE PROTECTION.

(a) Protection of trees during land-clearing.

(1) Trees ~~that are~~ retained during land-clearing of an approved development or re-development project can be applied toward total tree requirements for the property. Prior to land-clearing, on-site protection must be initiated by constructing suitable protective barricades around trees to prevent mechanical damage. Barriers should be constructed around individual trees or groups of trees that are susceptible to mechanical damage. Protective barriers shall be placed around all trees to be retained on the site in accordance with the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) "Tree Preservation During Land Development" 1 guidance to prevent the destruction or damaging of the trees. No disturbance or addition of soil will be made within the umbrella or drip line of retained trees. Any clearing within the umbrella or drip line of such trees shall be done with utmost care and avoid the use of heavy machinery. Prior to any land-clearing activity, a visual inspection of the site will be made by the Building Official ~~and the Landscape Officer~~ before a land-clearing permit is issued. The land-clearing permit must be posted on-site. Only land-clearing is permitted ~~within~~ outside the drip line of the tree to be protected.

(2) On-site protection of trees may be barriers consisting of two-by four-inch lumber or flag rope and stakes visible to workers and equipment operators, but far enough from the tree to prevent soil compaction and large enough to include the area within the drip line of the tree ~~(drip line refers to the outer edges of tree limbs and branches).~~

(3) Should a deep filling around a tree be necessary, a dry well, retaining wall or terracing may be required. Procedures for these are available in the site planning and tree protection regulations available at the County Extension Office.

(b) Attachments to tree. No attachments or wires other than those of a protective nature shall be attached to any tree.

(c) Tree survival. Trees must survive on-site in a viable condition for a minimum of three (3) years after the final building inspection or certificate of occupancy is issued, or after a permit is granted for any tree replacement otherwise. Trees failing to meet this survival requirement must be replaced within 45 days after a written notification of code violation is ~~received by the property owner from the town~~ issued by the Town. Replacement trees must be tagged or indicated on the as built plans on file with the Town and reinspected for continued viability annually for three (3) years by Code Enforcement.

(d) Landscaping prohibition. Plants included on the current Florida Noxious Weed list – Rule 5B-57.007 in Florida Administrative Code.

(75 Code, § 22-21) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2017-05, adopted 12-20-17)

EXISTING – No Changes

§ 9A-9. TREES ON PUBLIC LANDS.

No tree shall be removed from any public park or public right-of-way except under the provisions of this article.

(75 Code, § 22-23) (Ord. 75-3, passed 5-27-75; Am. Ord. 2017-05, adopted 12-20-17)

§ 9A-10. EXCEPTIONS.

(a) In the event that any tree shall be determined to pose an unacceptable risk as provided for in § 9A-4 or to be in a hazardous or dangerous condition so as to endanger the public health, welfare or safety and requires immediate removal without delay such tree may be removed without first obtaining a written permit as herein required.

(b) During a period of emergency, such as a hurricane, tropical storm, flood, or any other act of God, the requirements of this Article may be waived by the Town Commission.

(c) All licensed plant or tree nurseries shall be exempt from the terms and provisions of this Article only in relation to those trees planted and growing on the premises of the licensee, which are so planted and growing for sale or intended sale to the general public in the ordinary course of the licensee's business.

(d) The types of trees included on the current Florida Noxious Weed List and Florida Exotic Pest Council's List of Invasive Plant Species shall be exempt from the terms and provisions of this article and shall not be used to meet any replacement or planting requirements.

(`75 Code, § 22-22) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23)

PROPOSED

§ 9A-10. VARIATIONS TO LANDSCAPE REQUIREMENTS ~~EXCEPTIONS~~.

(a) In the event that any tree shall be determined to pose an unacceptable risk as provided for in § 9A-4 or to be in a hazardous or dangerous condition so as to endanger the public health, welfare or safety and requires immediate removal without delay such tree may be removed without first obtaining a written permit as herein required.

(b) During a period of emergency, such as a hurricane, tropical storm, flood, or any other act of God, the requirements of this Article may be waived by the Town Commission.

(c) All licensed plant or tree nurseries shall be exempt from the terms and provisions of this Article only in relation to those trees planted and growing on the premises of the licensee, which are so planted and growing for sale or intended sale to the general public in the ordinary course of the licensee's business.

(d) The types of trees included on the current Florida Noxious Weed List and Florida Exotic Pest Council's List of Invasive Plant Species shall be exempt from the terms and provisions of this article and shall not be used to meet any replacement or planting requirements. A copy of the Florida Invasive Species Council List of Invasive Plant Species will be available from the Town.

(`75 Code, § 22-22) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23)

§ 9A-11. RESERVED.

§ 9A-12. PENALTY.

The improper removal of each tree shall constitute a separate offense under this chapter. Violation of this chapter and imposition of the penalty shall be determined and imposed by the Code Enforcement Special Magistrate or by a court of proper jurisdiction.

Removal of any mature oak or similar trees without first obtaining a permit from the Town as required in § 9A-4 shall constitute prima facie evidence of a violation which is irreparable or irreversible in nature for the purposes of enhanced fine assessment provided for in § 11-21(b)(1) or as otherwise amended.

(75 Code, § 22-25) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23)

§§ 9A-13.–9A-99. RESERVED.

PROPOSED

§ 9A-11. RESERVED.

~~(a) Mangroves can only be trimmed per state code. 1996 Mangrove Trimming and Preservation Act (sections 403.9321-403.9333, F.S.)~~

§ 9A-12. PENALTY.

The improper removal of each tree shall constitute a separate offense under this chapter. Violation of this chapter and imposition of the penalty shall be determined and imposed by the Code Enforcement Special Magistrate or by a court of proper jurisdiction.

Removal of any mature oak or similar trees without first obtaining a permit from the Town as required in § 9A-4 shall constitute prima facie evidence of a violation which is irreparable or irreversible in nature for the purposes of enhanced fine assessment provided for in § 11-21(b)(1) or as otherwise amended. Photography (either ground, areal aerial, or geospatial) or other applicable data may be used as prima-facia evidence of the existence of trees on a site prior to any unapproved removal.

(75 Code, § 22-25) (Ord. 75-3, passed 5-27-75; Am. Ord. 87-13, passed 9-22-87; Am. Ord. 2017-05, adopted 12-20-17; Am. Ord. 2023-01, adopted 3-15-23)

~~§§ 9A-13.–9A-99. RESERVED.~~

§ 9A-13. NUISANCE TREES.

The following trees are considered non-native, noxious, invasive species. Property owners are encouraged to remove all such trees from the properties they own within the Town consistent with this chapter Contact the Town's Environmental Advisory Board for free site visits to identify these species.

- Brazilian pepper (Schinus terebinthifolius)
- Melaleuca (Melaleuca quinquenervia)
- Australian pine (Causarina equisetifolia)
- Carrotwood (Cupaniopsis anacardioides (A. Rich.) Radlk)
- Schefflera (Schefflera digitata)

§§ 9A-14.–9A-99. RESERVED.

CHAPTER 11A: ENVIRONMENTALLY SENSITIVE LANDS

Section

Article I. Wetlands Protection

11A-1 Purpose and intent

11A-2 General provisions.

11A-3 Permitted uses in wetlands

11A-4 Prohibited uses in wetlands

11A-5 –11A-99 Reserved

ARTICLE I. WETLANDS PROTECTION

EXISTING – No Changes

§ 11A-1. PURPOSE AND INTENT.

The purpose of this chapter is to protect, preserve and enhance the natural functions of wetlands and other environmentally sensitive areas. It is also the intent of this article to apply the following standards for development in and adjacent to wetlands.

(Am. Ord. 2017-05, adopted 12-20-17)

EXISTING

§ 11A-2. GENERAL PROVISIONS.

(a) During the review of a site plan or any other plan for development, the Town Manager shall use the Natural Wetlands Inventory maps, the Brevard County Soil Survey, the Town Comprehensive Plan, aerial photography or other applicable data in order to determine the potential existence of wetlands on or adjacent to the site.

(b) If a review of the above documents indicates that wetlands may exist on or adjacent to the site, an inspection will be performed by the Town Manager.

(c) Based on the assessment of the above site visit, the Town Manager may require the developer to have the site inspected by a representative from the St. Johns River Water Management District for a determination of jurisdictional limits of the site. This may require the involvement of the Army Corps of Engineers, the Department of Environmental Regulation and the Department of Natural Resources.

(d) No building permit will be issued by the Town until either the site plan has been approved or an exemption letter has been issued by the applicable environmental agency.

(e) All proposed development adjacent to canals, the Indian River and east of State Road A1A will automatically be reviewed under the above process.

(Am. Ord. 2017-05, adopted 12-20-17)

PROPOSED

§ 11A-2. GENERAL PROVISIONS.

(a) During the review of a site plan or any other plan for development, the Town Manager shall use the Natural Wetlands Inventory maps, the Brevard County Soil Survey, the Town Comprehensive Plan, aerial photography or other applicable data in order to determine the potential existence of wetlands on or adjacent to the site.

(b) If a review of the above documents indicates that wetlands may exist on or adjacent to the site, the Town manager or designee shall contact the property owner appropriate authorities listed in section 11A-2(c) to perform verification of wetland determination and provide guidance on and follow wetlands permitting requirements. ~~an inspection will be performed by the Town Manager.~~

(c) Based on the assessment of the above site visit, the ~~Town Manager may require the developer to~~ property owner shall have the site inspected by a representative from the St. Johns River Water Management District for a determination of jurisdictional limits of the site. This may require the involvement of the Army Corps of Engineers, the Department of Environmental Regulation and the Department of Natural Resources.

(d) No building permit will be issued by the Town until either the site plan has been approved or an exemption letter has been issued by the applicable environmental agency.

(e) All proposed development adjacent to canals, the Indian River and east of State Road A1A will automatically be reviewed under the above process.

(Am. Ord. 2017-05, adopted 12-20-17)

EXISTING – No Changes

§ 11A-3. PERMITTED USES IN WETLANDS.

The following uses shall be permitted in wetlands provided that they are approved by the St. Johns River Water Management District or the applicable environmental agency:

- (1) Open space;
- (2) Fish and wildlife management;
- (3) Recreation; or

(4) Any other use deemed appropriate by the St. Johns River Water Management District or the Department of Natural Resources.

(Am. Ord. 2017-05, adopted 12-20-17)

§ 11A-4. PROHIBITED USES IN WETLANDS.

The following uses are specifically prohibited in wetlands:

- (1) Residential, commercial, industrial and institutional uses, except as provided for in § 1A-3;
- (2) Disposal of solid or liquid wastes, and the application or storage of pesticides and herbicides; and
- (3) Any activity which impairs the function of the wetlands.

(Am. Ord. 2017-05, adopted 12-20-17)

§§ 11A-5. – 11A-99. RESERVED.

URBAN CANOPY RETENTION IN MELBOURNE BEACH

Some practical considerations for Section 9A-7 Minimum Tree Plantings



Subject: Tree cutting & replacement ordinance

Issue—current ordinance calls for a tree for tree replacement on the house tear-down and rebuild lots (Sec. 9A-7(c). This has proven to be impractical given the substantial increase in footprint of the new home along with the extensive on-site stormwater swale mandate. Maintaining the same tree density before and after construction was also deemed impractical for the same reasons.

History—Chapter 9A: Landscape and Trees was modified in March of 2023 as it relates to tree retention. The before and after of this modification is as follows.

Before; (1) minimum of three trees must exist (9A-7 (a)).

(2) tree density after construction must be equal or greater than pre-construction (9A-6 (b)(2)).

After; (1) minimum of three trees was deleted.

(2) any tree removed must be replaced, tree for tree requirement (9A-7 (c)).

Community Survey--A drive by of new homes built on tear down lots prior to the March modifications demonstrated no lack of tree retention. The post construction landscapes' all have tree densities consistent with their neighboring homes and added to the goal of preserving and enhancing property values. See list below with tree estimates:

	<u>Number of Trees</u>
• 401 A1A	6+
• 404 Atlantic	8+
• 400 Banyan	10+
• 422 Sunset	12+
• 527 Sunset	13+
• 507 Sunset	13+
• 520 Sunset	7+
• 524 Sunset	15+
• 303 Riverside	10+
• 901 Riverside	9+
• 509 Third	16+
• 419 Ave B	16+
• 418 Ave B	25+
• 404 Ave B	17+
• 307 Ave B	16+
• 401 Ave A	10+
• 522 Ave A	14+
• 225 Fourth	14+
• 208 Second	5+
• 202 Second	12+
• 304 First	8+

Melbourne Beach Tree Planting Constraints

- **Lot sizes**—Zoning section 3RS (Sunset to Sixth) contains the majority of the old housing stock that is subject to the tear down and rebuilds. This zone contains many smaller sized lots. Some only 60 to 70 feet wide.
- **Expanded footprint**—custom homes being constructed on these 3RS lots are much larger than the existing house torn down and usually include expansive decks and pools.
- **Extensive swales required**—any new house constructed must meet the extensive on-site swale requirements of section 3A-80. These swales in general eliminate any tree planting area on the side lots and severely limit planting in most back yards.
- **Utility easements**—Melbourne Beach has in some cases overhead power lines either along the front or back of a lot. Florida Statue 163.3209 prohibits a local government from adopting an ordinance that requires planting a tree under or near an established electric utility right-of-way.
- **Live Oak Planting**—Live Oaks have aggressive expansive root systems. Planting constrains include the following (see attached report of Certified Arborist, dated September 25, 2025)
 1. Distance from slab foundation 15-20 ft.
 2. Distance from driveways & streets 8-10 ft from driveway, 4 ft from street.
 3. Distance from pool 15-20 ft.
 4. Minimum of 20-30 lateral ft from utility easement
 5. No planting directly in swales

Live Oaks with their size, vigor and structural needs make them difficult to accommodate on residential lots. Where setbacks are narrow and infrastructure is tightly packed, the decision to plant a Live Oak should be made carefully, based on the specific layout and constraints of the property. The arborist concluded as follows:

*“Mandating Live Oaks on every parcel is **not advisable**. A more effective approach is to encourage planting where feasible and offer species alternatives where conditions are not suitable. Homeowners should be supported with clear guidance and flexible options rather than rigid requirements”.*

Best Practices for Planting Live Oaks in Melbourne Beach, FL



Prepared For: Town of Melbourne Beach Planning & Zoning Board

Prepared by: Jeffery Washeck, ISA Certified Arborist / Sigma Tree Consulting LLC

Date: September 25, 2025

Overview and Objective

This report provides professional arboricultural guidance to the Town of Melbourne Beach regarding best practices for the planting of *Quercus virginiana* (Southern Live Oak) on residential properties. The Town's Comprehensive Plan encourages the inclusion of canopy trees, and this report aims to support Planning & Zoning (P&Z) as it evaluates whether live oak planting should be **mandated or merely encouraged** on newly constructed homes.

Due to the spatial constraints of typical residential lots, including narrow side setbacks, mandated stormwater swales, and overhead utility conflicts, careful planning is essential. This report outlines site-appropriate planting recommendations to help prevent future structural conflicts and ensure the long-term viability of live oak specimens in an urban coastal environment.

Lot Characteristics & Planning Constraints

Typical lot dimensions and constraints include:

- **Average lot size:** 90' x 150' (some as narrow as 60' wide)
- **Setbacks:** 15' side setbacks (used entirely for swales), 25' front and rear
- **Stormwater swales:** Located on both sides and at rear fence line
- **Utilities:** Overhead power lines in front yards (some lots)
- **Structures:** Custom homes often built to maximum setback limits

These constraints significantly limit viable planting space, especially on side yards. Tree placement must therefore be strategic, accounting for root development, canopy spread, and potential future conflicts.

Species Overview: Southern Live Oak

The Southern Live Oak (*Quercus virginiana*) is one of the most iconic and durable native tree species in the southeastern United States. Known for its broad, spreading canopy and dense evergreen foliage, it is capable of providing exceptional shade and landscape value when planted in appropriate settings. In favorable conditions, live oaks can grow to over 60 feet tall with a canopy spread exceeding 80 feet, often rivaling or surpassing their height in lateral reach.

Live oaks are exceptionally wind resistant and long-lived, making them a preferred species in coastal communities prone to hurricanes and tropical storms. However, their size and vigor can present challenges in urban environments. Root systems are notoriously aggressive and expansive. The species requires ample lateral space to develop properly and can cause significant damage to nearby homes, driveways, sidewalks, or overhead utilities if planted too close. When planted in the wrong location, long-term maintenance costs and infrastructure conflicts can be significant.

Best Practices & Recommendations for Live Oak Planting

Below are responses to the Town's specific inquiries, integrated with broader arboricultural best practices:

1. Recommended Distance from Slab Foundation

→ Minimum: 15–20 feet

Live oaks have aggressive, expansive root systems. Planting closer than 15 feet to a slab foundation increases the risk of root encroachment over time, especially if soil moisture gradients or irrigation attract roots toward the home. A 20-foot buffer is ideal for long-term separation.

2. Distance from Driveways & Streets

→ Minimum: 8–10 feet from driveways / ~ 4+ feet from street edge

Live oak roots are more likely to impact concrete driveways than streets, especially when planted too close to paved surfaces. Maintaining an 8–10 foot buffer from driveways helps avoid structural damage and reduces the need for invasive root pruning. Streets are of lesser concern. While minor lifting of asphalt can occur near street edges, it's relatively uncommon. Live oaks generally perform well as street or median trees when adequate soil volume is available.

3. Distance from Pools

→ Minimum: 15–20 feet

Live oak roots typically remain in the first 2–4 feet of soil (much closer to 2 feet due to Florida's loose sandy soils) and are much less likely to grow downward or intrude directly into pool walls. However, their sheer size and vigor can create pressure on pool shells or decking if planted too close. Leaf drop and debris are also a nuisance in pool zones. A 15–20 foot buffer helps minimize encroachment, reduces cleanup needs, and avoids potential conflicts with underground infrastructure or future hardscape maintenance. Spacing can be adjusted based on soil conditions and yard layout.

4. Should Live Oaks Be Planted to Avoid Growing Over Roofs?

→ Ideally, yes—but not mandatory

Overhanging limbs can drop large volumes of leaf litter and acorns, and may potentially pose a

branch-fall risk in storms. While trained canopy growth over roofs can be managed with proper pruning, it's best avoided near two-story homes or steep rooflines.

5. Distance from Overhead Power Lines

➔ **Minimum: 20–30 feet lateral spacing**

Live oaks grow very tall and wide, and they are absolutely not recommended for utility easements. Planting directly under or adjacent to overhead power lines guarantees future clearance conflicts and aggressive pruning. Trees should be placed well outside utility easements to preserve natural form and avoid infrastructure issues.

6. Can a Live Oak Be Planted in a Stormwater Swale?

➔ **No, planting directly in swales is not recommended**

Swales are engineered drainage features. Tree roots can impede flow, destabilize grading, or lead to erosion. Waterlogging may also stress young trees or promote root rot. Older established trees will develop aggressive surface roots within the swale in search of oxygen.

7. Can a Live Oak Be Planted on the Side of a Swale?

➔ **Possibly, if sufficient elevation and distance is maintained**

Trees may be planted atop the swale berm or shoulder if:

- Drainage grades are not compromised
 - Root flare is positioned above expected waterline
 - Adequate spacing from structures is still maintained
- This can be a workable compromise, especially for rear yard planting.

8. How Far Apart Should Live Oaks Be Planted?

➔ **Minimum: 20–30 feet apart**

Live oaks develop massive horizontal canopies, extending up to 80 feet across (though this is admittedly much less common in coastal regions). Still, to prevent crown competition, limb interlock, and overcrowding, it is recommended to maintain generous spacing between specimens. Cluster planting is not recommended on narrow lots.

9. Best Size for Planting

➔ **Container-grown, 30–65 gallon stock (~1.5–2.5" caliper)**

Smaller, container-grown trees transplant more successfully, establish faster, and develop stronger root architecture. Larger field-grown specimens may look impressive but often suffer transplant shock and require more intensive aftercare. A 30–65 gallon live oak strikes the right balance for establishing a long-term canopy tree without overwhelming the site or irrigation needs.

Additional Notes and Policy Guidance

- **Avoid rigid mandates.** Due to narrow setbacks, overhead lines, and stormwater infrastructure, mandating live oaks on every lot may cause unintended design conflicts or resentment from homeowners. Consider a **recommended placement matrix** tied to lot width, power line presence, and yard orientation.
- **Offer species flexibility.** Where live oaks aren't viable, consider approved alternative canopy trees with less aggressive root systems and narrower growth habits.
- **Incentivize preferred planting.** Instead of mandates, offer incentives (e.g., reduced fees, fast-tracked reviews) for lots that voluntarily incorporate canopy trees per guidelines.

Conclusion

Live oaks are among the most iconic and valuable canopy trees in Florida, offering substantial ecological, aesthetic, and shade benefits. However, their size, vigor, and structural needs make them difficult to accommodate on all residential lots. Where setbacks are narrow and infrastructure is tightly packed, the decision to plant a live oak should be made carefully, based on the specific layout and constraints of the property.

Mandating live oaks on every parcel is not advisable. A more effective approach is to encourage planting where feasible and offer species alternatives where conditions are not suitable. Homeowners should be supported with clear guidance and flexible options rather than rigid requirements.

In neighborhoods where private lots lack space, live oaks can still play a valuable role as public trees. When used in medians or along wider rights-of-way, they provide long-term canopy coverage without conflicting with private structures or utilities. With thoughtful planning and routine maintenance, live oaks can be integrated into the urban landscape in ways that balance homeowner needs with the town's canopy goals.

Arborist Disclosure Statement

ISA certified arborists are tree care specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the health and beauty of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within the trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, the efficacy of any remedial treatments, such as pruning, fertilization, or medicine, also cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Disclaimer and Acknowledgment of FL Statute 163.045

My observations made at the site were true and factual to the best of my ability. The methodologies used were in accordance with the code of ethics and tree assessment guidelines laid out by the International Society of Arboriculture (ISA) as well as the ANSI A300 standards. Arboriculture is not a perfect science, and subjectivity is inevitable as different arborists will often have different opinions based on their own personal experiences. My opinions and recommendations are based purely on my education and over a decade of experience actively climbing and working in trees.

Trees can be managed but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to remove all trees. There are no certainties when ascertaining the structural integrity of trees, only qualitative likelihoods. The tree owner's personal risk tolerance is, and always should be, the ultimate deciding factor when moving forward with any recommended procedures.



Proposed Mandated Native plant requirements for new home construction



Melbourne Beach Native Plant Facts and Considerations

Comprehensive Plan for Melbourne Beach:

Chapter 2, Policy 14.1; Periodically review, analyze and amend, as determined necessary, the tree preservation and landscape ordinances to ensure that minimum standards are **consistent with the desires of the community**, are easily understood and enforceable.

Desires of the Melbourne Beach community, per below, are for traditional landscapes not mandated native plant landscapes.

- Only 1 out of 15 surrounding cities/counties mandate any number of native plants on new house construction
(See attached exhibit 1)
- Survey to determine what percentage of existing residents have adopted native plant landscapes. Conclusion 20% adopted native plants and 80% choose traditional landscaped yards.
(Streets included in survey; Surf Road, 3rd Ave. 2nd Ave, Ash, Birch, and Cherry; 214 homesites).
- Survey of 26 recent new houses constructed in Melbourne Beach resulted in only 1 out of 26 adopting a native plant landscape. 96% Choose traditional non-native landscapes.

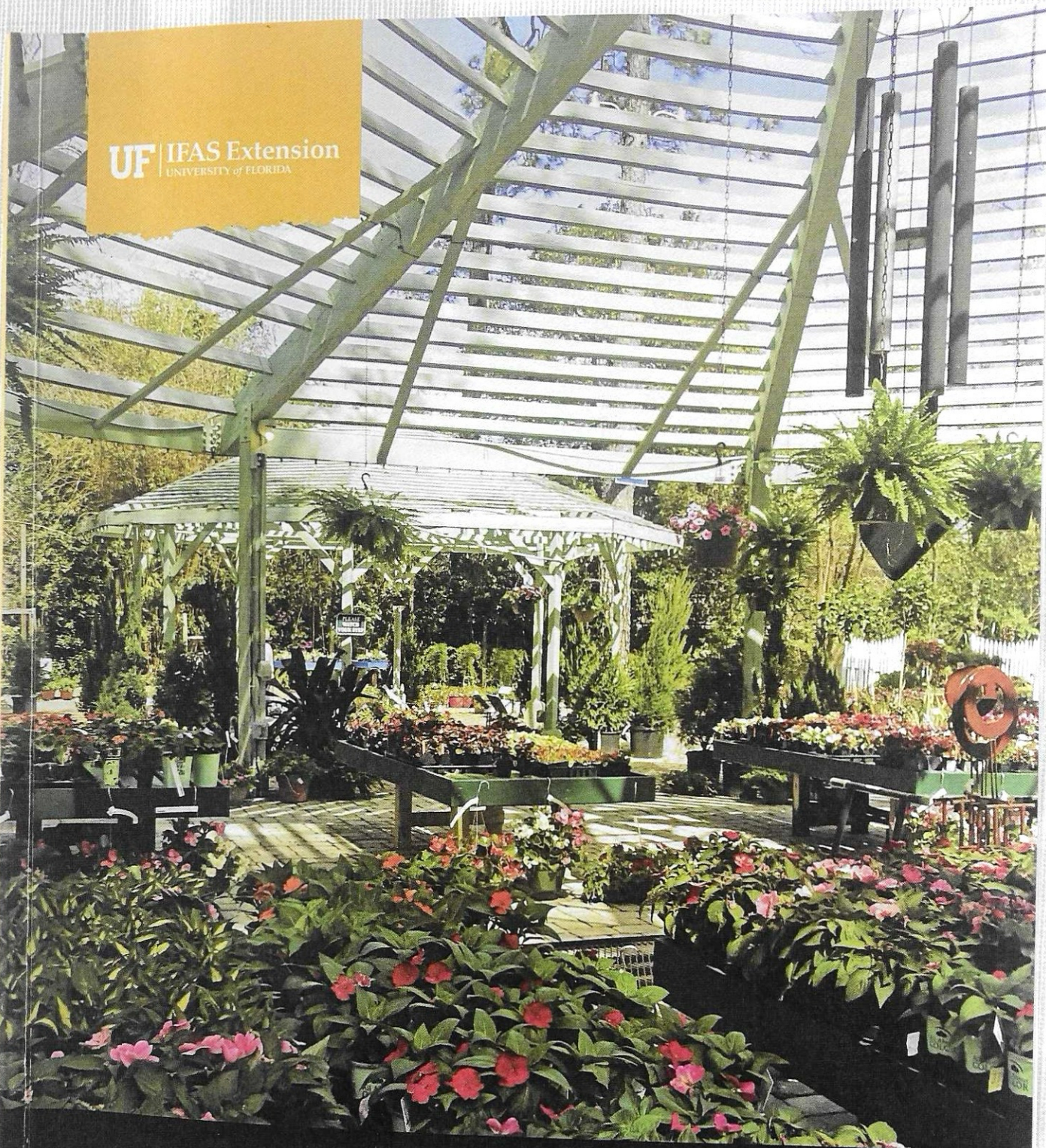
Division of Environmental Contributions

- New homes being constructed already carry a disproportional share of the environmental requirements (stormwater swales) that the entire community benefits from.

EXHIBIT 1

City/County	Ordinance Reference	Requires Native Plants In Single Family Residence		Comments
		NO	YES	
BEACHSIDE/NEIGHBORING CITIES				
1 Vero Beach	Title II, Sec. 72.13 (a)	NO		
2 Indian Harbour Beach	Sec. 107-2	NO		
3 Indiatlantic	Article VII Landscaping	NO		
4 Cocoa Beach	Sec. 3-51, 3-52	NO		
5 West Melbourne	Sec. 71-116	NO		
6 Melbourne	Sec. 9.273	NO		
7 Rockledge	Sec. 108.163, 164,165	NO		
8 Palm Bay	Sec. 175.021, 175.027	NO		
9 Titusville	Chapter 30, Division 2	NO		
10 Sebastian	Article XIV, Section 54	NO		
11 Ft Pierce	Article II, Sec. 123.36	NO		
12 Brevard County	Sec. 62-4341	NO		
13 City of Cocoa	Email from City	NO		
14 Indian River County	Sec. 926-15 Appendix A	NO		

15 Satellite Beach	Sec. 30-702		YES	Requires 50% native, but Most are minimalist landscape design Example new subdivision; the View
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UF IFAS Extension
UNIVERSITY of FLORIDA

Florida-Friendly Landscaping™
Guide to Plant Selection &
Landscape Design

Florida-Friendly
Landscaping™ PROGRAM 

Florida Friendly Landscape Recommendations

- Florida Friendly Landscaping Guide to Plant Selection & Landscape Design, published by the University of Florida/IFAS Extension Service, includes numerous non-native trees and plants in their recommended Florida-Friendly Landscape Plant List.

Large shrubs—recommendations include over 50 non-native shrubs.

Small shrubs—75% of the recommended small shrubs were non-native.

Vines—50% of the recommended vines were non-native.

Ground covers—54% of the recommended ground covers were non-native.

Grasses—23% of the recommended grasses were non-native.

Palms and Palm Like Plants—70% of the recommended Palms were non-native.

Ferns—40% of recommended Ferns were non-native.

Perennial Plants—77% of recommended Perennials were non-native.

Annual Plants—85% of recommended Annual Plants were non-native.