CHARLOTTE COUNTY
FLORIDA

MEMORANDUM

Date: 10-14-2025

To: Honorable Board of County Commissioners

From: Eileen Mastney, Zoning Coordinator
(Exhibit 1 - Professional Qualifications)

Subject: FP-19-06-08 Biscayne Landing North Bond Release

Request:

Lennar Homes, LLC, is requesting a Bond Release of the approved surety provided under Letter of Credit No. FGAC-22413, issued by Fidelity Guaranty and Acceptance Corp., in the amount of $128,936.50 for the completion of the remaining second lift of asphalt for the subdivision named, Biscayne Landing North.

The subdivision, consisting of 141 lots was granted Final Plat approval by the Board of County Commissioners on September 23, 2022. The site contains 70.91± acres and is located east of Biscayne Drive, north of El Jobean Road, west of the Flamingo Waterway, south of Crofton Springs Way, and in Commission District IV.

At the time of Final Plat application, the applicant was granted approval of a Developer's Agreement (See Attachment 1) and surety in the amount of $1,725,648.47, to ensure the completion of the plat infrastructure. On May 15, 2024, the applicant requested a bond reduction and First Amendment to the Developer's Agreement, which was approved on September 10, 2024, and recorded on September 12, 2024, to reduce the amount of the Security from $1,725,648.47 to $128,936.50, which was in place at time of this bond release request.

The Project Engineer has submitted this request for a bond release (See Attachment 2) and letter of substantial completion (See Attachment 3), along with the FDEP potable water clearance (See Attachment 4), and FDEP wastewater clearance (See Attachment 5) as-built certification and request for conversion to operation phase (See Attachment 6) and record drawings (See Attachment 7). The Public Works Department has inspected the site, finding that the construction has been completed and is in substantial compliance with previously approved plans. The County Engineer agrees with the Bond Release (See Attachment 8).

If approved, Letter of Credit No. FGAC-22413, issued by Fidelity Guaranty and Acceptance Corp., will be released to the applicant.

Recommendation:

Community Development recommends approval of the requested Bond Release under Petition **FP-19-06-08**.

Exhibit 1

Professional Qualifications

Qualifications of Eileen Mastney

Eileen Mastney

Position: Zoning Coordinator

Time with Charlotte County: 3 months

Qualifications of Eileen Mastney Position: Zoning Coordinator Time with Charlotte County: 3 months. Position Summary & Experience:

I have worked as a Zoning Coordinator for Charlotte County Planning and Zoning Departments for 3months. My duties include administrative tasks, customer service, data entry, reviewing and processing projects, Vacations and Land Splits for compliance with Charlotte County Land Development regulations. Furthermore, I coordinate and compile the comments and conditions of the reviewing departments and agencies into the final recommendation to the Planning and Zoning Board and the Board of County Commissioners for the above applications. Exhibit 1

Attachment 1

Recorded First Amendment

Document prepared under the supervision of:
Charlotte County Attorney
18500 Murdock Circle
Port Charlotte, FL 33948

ROGER D. EATON, CHARLOTTE COUNTY CLERK OF CIRCUIT COURT
PAGE: 5
INSTR #: 3448795 Doc Type: AGR
Recorded: 09/12/2024 at 11:37 AM
Rec. Fee: RECORDING $44.00

Charles Mann
Pavese Law Firm
1833 Hendry Street
Fort Myers, FL 33901

FIRST AMENDMENT TO DEVELOPMENT AGREEMENT

THIS FIRST AMENDMENT TO DEVELOPMENT AGREEMENT ("Amendment") is made this 10 day of September, 2024, by and between CHARLOTTE COUNTY, a political subdivision of the State of Florida, herein called "County", and LENNAR HOMES, LLC, a Florida limited liability company, with an address of 10481 Six Mile Cypress Parkway, Fort Myers, Florida 33966, herein called "Developer", and collectively referred to as "Parties."

W I T N E S S E T H

WHEREAS, Developer previously subdivided certain property which includes the Property pursuant to that certain Plat of Biscayne Landing North, according to the plat thereof recorded in Plat Book 26, Pages 4A through 4I of the Public Records of Charlotte County, Florida, defined in the Development Agreement as the "Plat"; and

WHEREAS, in connection with the Plat, County and Developer entered into that certain Development Agreement recorded September 26, 2022 in Official Records Book 5052, Page 1765 of the Public Records of Charlotte County, Florida (the "Development Agreement"), pursuant to which Developer provided a letter of credit in an amount up to but not exceeding the aggregate amount of One Million Seven Hundred Twenty-Five Thousand Six Hundred Forty-Eight and 47/100 Dollars ($1,725,648.47), defined in the Development Agreement as the "Security," to ensure completion of those subdivision improvements depicted on the Plans (the "Improvements"); and

WHEREAS, Developer asserts that construction of the Improvements has been substantially completed except for the second lift of asphalt; and

WHEREAS, the County has confirmed Developer's assertions regarding the status of the Improvements; and

WHEREAS, based on the above, Developer and County wish to amend the terms of the Development Agreement to reduce the amount of Security and extend the completion date of the Improvements, as further set forth herein; and

WHEREAS, the intent of the Development Agreement and this Amendment thereto is to provide the required financial assurances pursuant to the provisions of Section 3-7-65 of the Charlotte County Code of Laws and Ordinances, which is not intended to be construed as a development agreement under Chapter 163.3221, Florida Statutes.

NOW THEREFORE, in consideration of their respective undertakings hereunder, County and Developer agree as follows:

1. Recitals; Definitions. The foregoing recitals are true and correct and incorporated herein by this reference. Capitalized terms not defined herein shall have the meaning ascribed thereto in the Development Agreement.

2. Bond Requirement. Notwithstanding anything in the Development Agreement to the contrary, Developer shall provide a bond or letter of credit in the amount of One Hundred Twenty-Eight Thousand Nine Hundred Thirty-Six and 50/100 Dollars ($128,936.50) to ensure completion of the Improvements. Said security shall remain in effect until final approval of the Improvements by the County. Upon certification by a licensed engineer that the Improvements have been completed in substantial compliance with the plans previously approved by the County, County shall release the Security and the Development Agreement shall terminate.

3. Completion Date. All Improvements as shown on the approved construction plans shall be completed per the approved construction plans to the reasonable satisfaction of the County engineer by December 31, 2024.

4. Satisfactory Completion. In the event that the Improvements are not satisfactorily completed within the specified time period in Section 3, or in the event that the County receives notification from the institution issuing the financial assurance that the Security will expire prior to the specified time period, it is expressly understood and acknowledged by the Parties that:

    i. Notwithstanding any notice and cure requirement in the Development Agreement or this First Amendment, the County, may at its sole and absolute discretion, request and/or utilize the full amount of the bond.

    ii. In the event of litigation, no party, including, but not limited to, Developer, future lot owners, and successors and assigns, is entitled to an offset of damages in an amount equal to the posted Security funds.

    iii. There are no intended third-party beneficiaries to the Agreement, and therefore, no third parties can or should rely on the Agreement and/or Security, including, but not limited to, future lot owners, and

successors and assigns.

iv. Nothing herein shall be construed to create an obligation upon the County under Section 177.081, Florida Statutes, to voluntarily assume an obligation to perform any act of construction or maintenance under the Agreement and/or the Security.

5. Miscellaneous. This First Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. It shall not be necessary for every party to sign each counterpart but only that each party shall sign at least one such counterpart. Except as modified hereby, the terms and conditions of the Development Agreement shall remain in full force and affect. In the event of a conflict between the terms and provisions of this First Amendment and the Development Agreement, the terms and provisions of this First Amendment shall control and be given effect.

[Signature pages to follow]

IN WITNESS WHEREOF, County and Developer have executed this First Amendment to Development Agreement on the date first above written.

CHARLOTTE COUNTY, a Political Subdivision of the State of Florida

By: William G. Truex
William G. Truex, Chairman

ATTEST:
Roger D. Eaton, Clerk of the Circuit Court and Ex-officio Clerk of the Board of County Commissioners

By: Kimberly Welch
Deputy Clerk AAGR2022-105

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

By: Janette S. Knowlton
Janette S. Knowlton, County Attorney
LR2024-0532 KMW

1st Witness Signature

1st Witness Printed Name

2nd Witness Signature

2nd Witness Printed Name

LENNAR HOMES, LLC
a Florida limited liability company
10481 Six Mile Cypress Pkwy.
Fort Myers, Florida 33966

By: _____
Authorized Signature

Scott Edwards
Printed Name

Vice President
Title

ACKNOWLEDGEMENT

State of FL
County of Lee

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 8th day of August, 2024 by Scott Edwards, Vice President, who [☒] is personally known to me or [ ] has produced _____ as identification and did/did not take an oath.

My commission expires:

(Notary Seal)

JENNIFER M. SHEPPARD
MY COMMISSION # HH 154622
EXPIRES: November 16, 2025
Bonded Thru Notary Public Underwriters

Notary Public

Jennifer M. Sheppard
Printed name of Notary Public

Serial or commission number

Attachment 2

Request for a Bond Release

BANKS ENGINEERING

Professional Engineers, Planners & Land Surveyors

October 13, 2025

Ms. Tara Prince
Charlotte County Land Development
18400 Murdock Circle
Port Charlotte, Florida 33948

RE: BISCAYNE LANDING NORTH
FP-19-06-08
BOND RELEASE REQUEST

Dear Ms. Prince,

On behalf of our client, Lennar Homes, LLC, please accept this letter as a formal request to release the current performance bond/letter of credit amounts for the above-referenced project based on the information enclosed.

The original bond/letter of credit amount was for $1,725,648.47 and then a bond reduction was submitted in May 2024 to reduce the bond/letter of credit down to $128,936.50

A site visit was conducted and the site was found to be constructed in substantial conformance to the approved plans.

Thank you for your consideration and should you have any questions or need additional information, please call.

Sincerely,
BANKS ENGINEERING

Clayton W. Rebol, P.E.
Vice President

Cc: file, Lennar Homes, LLC

S:\Jobs\42xx\4272\Documents\County\Bond Release\Biscayne Landing North\County_Bond Release Request Ltr.docx

Attachment 3

Letter of Substantial Completion

Professional Engineers, Planners & Land Surveyors

October 9, 2025

Charlotte County Community Development
18400 Murdock Circle
Port Charlotte, Florida 33948

Reference: BISCAYNE LANDING NORTH
FP-19-06-08
LETTER OF SUBSTANTIAL COMPLETION

To Whom It May Concern:

I hereby certify that a visual site inspection was conducted on Wednesday, August 6, 2025, at the above-referenced site, and found the project to be constructed in substantial conformance with the approved construction plans.

Sincerely,
BANKS ENGINEERING

Clayton W. Rebol, P.E.
Vice President

Cc: File

Attachment 4

FDEP Potable Water Clearance

FLORIDA DEPARTMENT OF
Environmental Protection

South District
PO Box 2549
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

POTABLE WATER CLEARANCE – TOTAL

June 14, 2023

Lennar Homes, LLC
Scott Edwards, Vice President
10481 Six Mile Cypress Parkway
Fort Myers, FL 33966
scott.edwards@lennar.com

Clearance Type: Total
Charlotte County
Permit Number: 344279-066-DSGP
PWS Name: Charlotte County Utilities
PWS ID: 5084100
Project Name: Biscayne Landing Phase II
Project Location: Section 10, Township 40S, Range 21E

Dear Scott Edwards:

This letter acknowledges receipt of the certification, dated May 18, 2023, for the subject water distribution system extension. The submitted information demonstrates the system extension has been constructed in accordance with the FDEP Permit Number above and related plans and materials and that satisfactory pressure and bacteriological tests were conducted in accordance with the AWWA standards. Based on the certification and satisfactory bacteriological results, the Department is clearing the system for service.

If you have any questions or comments regarding this total clearance, please contact Brian Eastham by telephone at (239) 344-5616 or by e-mail at Brian.Eastham@FloridaDEP.gov.

Sincerely,

Nolin Moon
Environmental Administrator
Florida Department of Environmental Protection

cc:
E. David Watson, P.E., Charlotte County Utilities, Utilities Director, dave.watson@charlottecountyfl.gov
Clayton W. Rebol, P.E., Banks Engineering, crebol@bankseng.com

Attachment 5

Notification of Completion of Construction for a Domestic Wastewater

Collection/Transmission System

From:	no-reply@dep.state.fl.us
To:	Heather Polito
Cc:	SD_newapps@floridadep.gov; scott.edwards@lennar.com; dave.watson@charlottecountyfl.gov; dave.watson@charlottecountyfl.gov; Clay Rebol; Heather Polito
Subject:	Wastewater Notification Received - Facility ID: FL0040291
Date:	Thursday, May 18, 2023 1:07:17 PM
Attachments:	ATT00001.bin

FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Receipt for Notification Submission

May 18, 2023

Heather Polito

CHARLOTTE COUNTY UTILITIES - EASTPORT WWTP - FL0040291
3100 LOVELAND BLVD
PORT CHARLOTTE, FL

This is to acknowledge that your Notification of Completion of Construction for a Domestic Wastewater Collection/Transmission System was received on **May 18, 2023**.

The form and supporting information fulfills the requirements to notify DEP the domestic wastewater collection/transmission system described below has been constructed in accordance with the associated DEP Permit Number and related plans and materials.

DEP may contact you for additional information. If you indicated substantial deviations and you do not hear from your district office, your project may be placed into service 10 days from the date of this letter. If you did NOT indicate substantial deviations and you do not hear from your district office, your project may be placed into service 3 days from the date of this letter.

This Clearance Notification Process does not relieve you from the responsibility of obtaining other permits or authorizations from other agencies (federal, state, city, etc.) that may be required for the project.

In support of your notification you provided the following information:

Construction Permit Number:	44274-475-DWC/CM
Project Name:	Biscayne Landing Phase II
Project Location:	2039 Lorraine Drive, Port Charlotte, FL 33953
Permittee:	Lennar Homes, LLC
Collection System Owner:	Charlotte County Utilities
Treatment Facility:	CHARLOTTE COUNTY UTILITIES - EASTPORT WWTP - FL0040291
Clearance Type:	Total Clearance
Submitter Indicated Substantial Deviations?:	No

Substantial Deviations (when applicable):

Attachments:
File Description: FDEP Wastewater Cert
File Name: 4272 II FDEP Sewer Cert Sub_5-18-23.pdf
File Hash: 3d50e3bfb87ad45b02b125a232bf9cabc0e03be195765fc825b0c4e5a67bc818

All files related to your facility may be viewed at our Departmental Information Portal:
https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/FL0040291/facility!search
Please allow up to three (3) business days for the above documents to appear.

Staff will notify you of any additional information that may be required to complete your notification.

The Office for your project is:
South District
SD_newapps@floridadep.gov

Please contact this Office for any questions regarding your project.

Attachment 6

Request for Conversion to Operation Phase

Southwest Florida Water Management District
2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
WaterMatters.org

An Equal Opportunity Employer

Bartow Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Office
78 Sarasota Center Boulevard
Sarasota, Florida 34240-9770
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Office
7601 U.S. 301 North (Fort King Highway)
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

February 11, 2022

Biscayne Landing Homeowner's Association, Inc.
Attn: Matthew Koratich
12734 Kenwood Lane, Suite 49
Fort Myers, FL 33907

Subject: **Transfer to Operation Phase**

Project Name:	Biscayne Property
Permit No.:	43042512.001
Compliance No.:	419766
County:	Charlotte
Sec/Twp/Rge:	S10/T40S/R21E

Dear Mr. Koratich:

The request to transfer the subject permit to the operation phase has been approved. District staff have reviewed the submitted information and determined that the stormwater management system was in compliance at the time of our inspection. The District reserves the right to inspect the project in the future to ensure continued compliance with state law and District rules. The permit, approved drawings and other documents are available for viewing through the District's Application and Permit Search Tools at http://watermatters.org/wmiserp.

The subject permit contains a condition requiring periodic inspection and maintenance. The inspections are required every five (5) years. A record of each inspection (including the date of inspection, the name and contact information of the inspector, whether the system was functioning as designed and permitted) must be maintained, and must be made available to the District upon request. Within 30 days of any failure of a stormwater management system or deviation from the permit, an inspection report shall be submitted using Form 62-330.311(1), Operation and Maintenance Inspection Certification available on the District's website, http://www.watermatters.org/permits/erp, describing the remedial actions taken to resolve the failure or deviation.

As outlined in Subsection 62-330.340, F.A.C., "A Permittee shall notify the Agency in writing within 30 days of a change in ownership or control of the entire real property, project, or activity covered by the permit. This notification can be submitted on Form 62-330.340(1) –Request To Transfer Permit available on the District's website, http://www.watermatters.org/permits/erp.

If you have questions, please contact Thomas Stevens, E.I. at the Bartow Service Office.

Sincerely,

David Kramer, P.E.
Bureau Chief
Environmental Resource Permit Bureau
Regulation Division

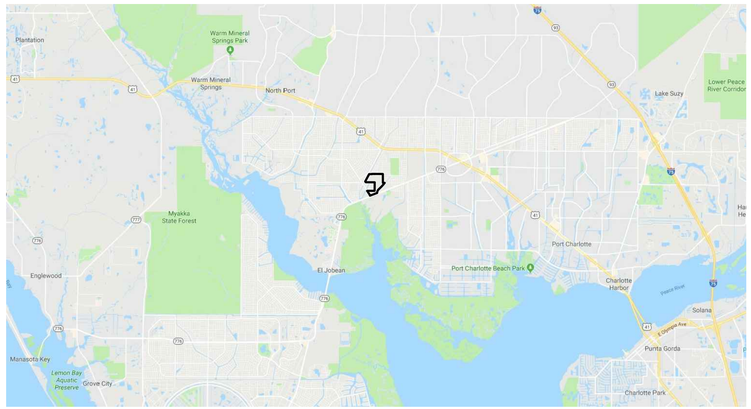
cc: Ryan W. Powers, P.E., Banks Engineering

Attachment 7

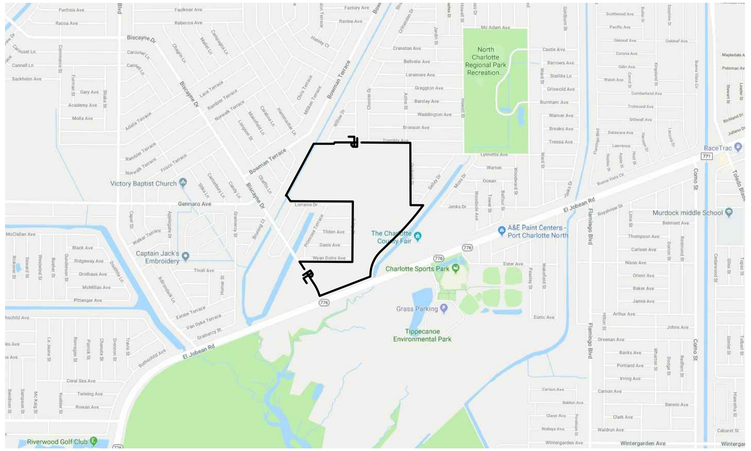
As-Built Record Drawings

BISCAYNE LANDING

RECORD DRAWINGS



GENERAL LOCATION MAP



LOCATION MAP

SECTION 10, TOWNSHIP 40 SOUTH, RANGE 21 EAST
CHARLOTTE COUNTY, FLORIDA

SITE INFORMATION

PROJECT AREA:	125.93 ACRES
PARCEL STRAP NO.:	402110477001 402115276001
PARCEL ADDRESS:	2109 TULIP STREET PORT CHARLOTTE, FL 33953
CURRENT ZONING:	PLANNED DEVELOPMENT (PD)
PROPOSED USE:	RESIDENTIAL SINGLE & MULTI-FAMILY

PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

UTILITY SERVICE PROVIDERS

WATER: CHARLOTTE COUNTY UTILITIES	25550 HARBORVIEW RD. SUITE 1 PORT CHARLOTTE, FL 33980 PHONE: (941) 764-4300
SEWER: CHARLOTTE COUNTY UTILITIES	25550 HARBORVIEW RD. SUITE 1 PORT CHARLOTTE, FL 33980 PHONE: (941) 764-4300
ELECTRIC: FLORIDA POWER AND LIGHT	2245 MURPHY CT. NORTH PORT, FL 34289 PHONE: (800) 375-8490
PHONE: CENTURYLINK	4195 KINGS HIGHWAY PORT CHARLOTTE, FL 33980 PHONE: (941) 637-5141
CABLE: COMCAST	22266 EDGEWATER DRIVE PORT CHARLOTTE, FL 33980 PHONE: (941) 625-6000
FIRE PROTECTION: CHARLOTTE COUNTY FIRE/EMS	26571 AIRPORT RD. PUNTA GORDA, FL 33982 PHONE: (941) 833-5600
SOLID WASTE DISPOSAL: WASTE MANAGEMENT	25515 OLD LANDFILL ROAD PORT CHARLOTTE, FL 33980 PHONE: (941) 629-1106

PROJECT CONTACTS

CIVIL ENGINEER: BANKS ENGINEERING RYAN W. POWERS, P.E. PROJECT MANAGER	4161 TAMIAMI TRAIL - BLDG 5 UNIT 501 PORT CHARLOTTE, FLORIDA 33952 PHONE: (941) 625-1165
SURVEYOR: BANKS ENGINEERING RICHARD M. RITZ, RLS	4161 TAMIAMI TRAIL - BLDG 5 UNIT 501 PORT CHARLOTTE, FLORIDA 33952 PHONE: (941) 625-1165
ENVIRONMENTAL: IAN VINCENT & ASSOCIATES IAN M. VINCENT	4050 ROCK CREEK DRIVE PORT CHARLOTTE, FL 33948 PHONE: (941) 457-6272
LANDSCAPE ARCHITECT: JOHN T. SWEN, P.A.	P.O. BOX 494466 PORT CHARLOTTE, FL 33949 PHONE: (941) 626-7365
TRAFFIC ENGINEER: JMB TRANSPORTATION ENGINEERING, INC. JAMES M. BANKS, P.E.	4711 7TH AVE SW NAPLES, FL 34119 PHONE: (239) 919-2767

Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET
2	GENERAL NOTES & SPECIFICATIONS
3	PROJECT NOTES & LEGEND
4	AERIAL
5	SITE DEVELOPMENT PLAN
5A	PHASING PLAN
6	MASTER PAVING, GRADING, & DRAINAGE PLAN
7	PAVING, GRADING, & DRAINAGE PLAN
8	PAVING, GRADING, & DRAINAGE PLAN
9	PAVING, GRADING, & DRAINAGE PLAN
10	PAVING, GRADING, & DRAINAGE PLAN
11	PAVING, GRADING, & DRAINAGE PLAN
12	PAVING, GRADING, & DRAINAGE PLAN
13	PAVING, GRADING, & DRAINAGE PLAN
14	STRUCTURE LIST
15	PAVING, GRADING, & DRAINAGE DETAILS
16	PAVING, GRADING, & DRAINAGE DETAILS
17	TYPICAL CROSS SECTIONS
17A	TYPICAL CROSS SECTIONS
18	BEST MANAGEMENT PRACTICES PLAN
19	BEST MANAGEMENT PRACTICES DETAILS

BANKS
ENGINEERING
Professional Engineers, Planners, & Land Surveyors
Serving The State Of Florida

4161 TAMIAMI TRAIL - BLDG 5 UNIT 501
PORT CHARLOTTE, FLORIDA 33952
PHONE: (941) 625-1165 FAX: (941) 625-1149
ENGINEERING LICENSE # EB 6469
SURVEY LICENSE # LB 6690
WWW.BANKSENG.COM

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY RYAN W. POWERS, P.E. 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.

RYAN W. POWERS, P.E.
FL LIC. NO. 82437

RECORD DRAWING

DATE

I CERTIFY THAT THESE RECORD DRAWINGS HAVE BEEN REVIEWED BY ME OR BY INDIVIDUAL(S) UNDER MY DIRECT SUPERVISION AND THAT THESE DRAWINGS INCORPORATE THE INFORMATION CONTAINED IN THE CERTIFIED AS-BUILTS. TO THE BEST OF MY KNOWLEDGE AND BELIEF THESE RECORD DRAWINGS SUBSTANTIALLY REFLECT THE UTILITY ASSETS AS CONSTRUCTED. THE ACCURACY OF THESE RECORD DRAWINGS IS RELIANT ON THE ACCURACY APPLIED BY THE SURVEYOR WHO CERTIFIED THE AS-BUILT DRAWINGS.

ALL ELEVATIONS SHOWN ARE IN NAVD 88, TO CONVERT ELEVATIONS INTO NGVD 1929: +1.12 FEET CONVERSION FACTOR.

NO.	DATE	REVISION DESCRIPTION	BY

BISCAYNE LANDING

S:\JOBS\42XX\4272\ENGINEERING\RES-IMP\SITE\4272 - 01 - CVR.DWG 8/5/2021 10:58 AM EDDD VANA

THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING TO FAMILIARIZE HIMSELF WITH THE CONDITIONS FOR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER A WRITTEN LIST OF ALL PERMITS & COPIES THEREOF, & CAREFULLY REVIEW ALL PLANS, SPECIFICATIONS, & PERMITS PREVIOUSLY SECURED ON BEHALF OF THE OWNER. IN CASE OF ANY DISCREPANCY EITHER IN PERMIT DOCUMENTS, PLANS, DRAWINGS, OR SPECIFICATIONS, THE CONTRACTOR MUST PROMPTLY SUBMIT A "WRITTEN CLARIFICATION REQUEST" TO THE OWNER, WHO WILL PROMPTLY FORWARD THE REQUEST TO THE ENGINEER WHO WILL MAKE A DETERMINATION IN WRITING. THE CONTRACTOR MUST VERIFY EXISTING FACILITY INFORMATION, & ALL DESIGN/PERMIT DATA REQUIRED FOR WORK THAT IS TO CONNECT WITH EXISTING FACILITIES. ANY DISCREPANCIES BETWEEN THE CONTRACT REQUIREMENTS & THE EXISTING CONDITIONS MUST BE REFERRED TO THE OWNER IN WRITING, FOR AN ENGINEERING DETERMINATION. ANY FUTURE ADJUSTMENT DUE TO FAILURE BY THE CONTRACTOR TO IDENTIFY THE RELATED DISCREPANCY, WILL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY LICENSES, ADDITIONAL PERMITS, & FOR COMPLYING WITH ALL APPLICABLE FEDERAL, STATE, & LOCAL LAWS, CODES, & REGULATIONS IN CONNECTION WITH THE PERFORMANCE OF THE WORK.

CONSTRUCTION SAFETY & LIABILITY:

THE CONTRACTOR MUST TAKE PROPER SAFETY & HEALTH PRECAUTIONS TO PROTECT THE WORK, THE WORKERS, THE PUBLIC, & THE PROPERTY OF OTHERS. THE CONTRACTOR IS RESPONSIBLE ALSO FOR ALL MATERIALS DELIVERED & WORK PERFORMED UNTIL COMPLETION & ALL ACCEPTANCES HAVE BEEN OBTAINED. THE CONTRACTOR SHALL MAINTAIN TRAFFIC DURING CONSTRUCTION IN ACCORDANCE WITH THE STATE OF FLORIDA ROADWAY & TRAFFIC DESIGN STANDARDS (LATEST EDITION). THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO PERSONS OR PROPERTY THAT OCCURS AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE. THE CONTRACTOR MUST SAVE HARMLESS & INDEMNIFY THE OWNER & THE ENGINEER OF RECORD, ITS OFFICERS, REPRESENTATIVES & EMPLOYEES FROM ALL CLAIMS, LOSS, DAMAGE, ACTIONS, CAUSES OF ACTION, &/OR EXPENSES RESULTING FROM, BROUGHT FOR, OR ON ACCOUNT OF ANY PERSONAL INJURY OR PROPERTY DAMAGE RECEIVED OR SUSTAINED BY ANY PERSONS OR PROPERTY GROWING OUT OF OCCURRING, OR ATTRIBUTABLE TO ANY WORK PERFORMED UNDER OR RELATED TO THIS CONTRACT, RESULTING IN WHOLE OR IN PART FROM THE NEGLIGENT ACTS OR OMISSIONS OF THE CONTRACTOR, ANY SUBCONTRACTOR, OR ANY EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE CONTRACTOR OR ANY SUBCONTRACTOR.

PRE–CONSTRUCTION:

THE OWNER SHALL SECURE PRIOR TO CONSTRUCTION A PROFESSIONAL LAND SURVEYOR TO PERFORM AN "AS–BUILT" SURVEY OF ALL COMPLETED IMPROVEMENTS. THE OWNER SHALL ALSO SECURE PRIOR TO CONSTRUCTION A PROFESSIONAL ENGINEER TO PROVIDE THE APPROPRIATE SERVICES NEEDED IN ORDER TO CERTIFY TO ALL APPLICABLE REGULATORY AGENCIES THAT THE IMPROVEMENTS WERE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH ALL APPLICABLE PERMITS & APPROVALS. THE OWNER SHALL COORDINATE A PRE–CONSTRUCTION MEETING WITH THE ENGINEER, SURVEYOR, CONTRACTOR, TESTING LAB, UTILITY COMPANIES, & APPROPRIATE REGULATORY AGENCIES. THE CONTRACTOR SHALL PROVIDE A SHOP DRAWING SUBMISSION SCHEDULE FOR ALL PROJECT MATERIALS & COMPONENTS. THE CONTRACTOR SHALL NOT INITIATE CONSTRUCTION OF ANY PORTION OF THE IMPROVEMENTS UNTIL THE SHOP DRAWINGS HAVE BEEN REVIEWED & APPROVED FOR THAT PORTION BY THE ENGINEER. THE OWNER, CONTRACTOR, ENGINEER & UTILITY COMPANY SHALL ALSO DISCUSS ALL DOCUMENTATION REQUIRED FOR CONTRIBUTED FACILITIES TRANSFER FROM THE OWNER/DEVELOPER TO THE UTILITY COMPANY UPON PROJECT COMPLETION, UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, THE FOLLOWING DOCUMENTS SHALL BE PROVIDED:

DOCUMENTS REQUIRED FOR CONTRIBUTED FACILITIES FROM DEVELOPER TO UTILITY COMPANY:

1. UTILITY EASEMENT(S): MUST BE RECORDED AT COUNTY CLERK OF COURT OFFICE BEFORE SUBMITTING TO UTILITY.
2. EASEMENT ACKNOWLEDGEMENT.
3. AFFIDAVIT.
4. RELEASE OF LIEN.
5. BILL OF SALE.
6. ASSIGNMENT OF RIGHTS UNDER UTILITY AGREEMENT: WHEN PROPERTY HAS BEEN TRANSFERRED TO A NEW OWNER.
7. RECORD DRAWINGS (AS–BUILT): MUST BE SIGNED & SEALED BY ENGINEER OF RECORD, SUBMIT TWO REPRODUCIBLE COPIES OF PRINTS.
8. DETAILED COST OF CONSTRUCTION: MUST INCLUDE INDIVIDUAL ITEMS OR APPURTENANCES, UNIT COST & TOTAL COST OF EACH. DO NOT INCLUDE WATER SERVICE LINES OR SEWER LATERALS.
9. DESCRIPTION OF FACILITIES: A SHORT EXPLANATION DEPICTING WHAT HAS BEEN CONSTRUCTED.
10. D.E.P. APPLICATION(S).
11. INSPECTION REPORT(S).
12. PRESSURE TEST REPORT(S).
13. INFILITRATION–EXFILTRATION TEST REPORT(S), INCLUDING VIDEO TAPES & LAMPING REPORTS.
14. LIFT STATION INSPECTION (START–UP) REPORT(S) & EQUIPMENT SHOP DRAWINGS.
15. BACTERIOLOGICAL TEST REPORT(S).
16. ENGINEER'S CERTIFICATE OF SUBSTANTIAL COMPLETION TO D.E.P.
17. SYSTEM(S) ACCEPTANCE LETTER(S) FROM D.E.P.

NOTES: ITEM 1–6 & 8 TO BE SUPPLIED BY OWNER. ITEMS 7 & 9–17 TO BE SUPPLIED TO ENGINEER OF RECORD.

UNLESS OTHERWISE SPECIFIED BY THE UTILITY, THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENTS OF THE WATER, GAS, SEWER, TELEPHONE, & POWER COMPANIES, 10 DAYS IN ADVANCE, THAT THE CONTRACTOR INTENDS TO START WORK IN A SPECIFIC AREA, THE OWNER & ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE SUPPORT & PROTECTION OF SEWERS, DRAINS, WATER LINES, GAS LINES, CONDUITS OF ANY KIND, UTILITIES OR OTHER STRUCTURES OWNED BY THE CITY, COUNTY, STATE OR BY PRIVATE OR PUBLIC UTILITIES LEGALLY OCCUPYING ANY STREET, ALLEY, PUBLIC PLACE, RIGHT–OF–WAY, OR EASEMENT.

THE CONTRACTOR SHALL PROVIDE & MAINTAIN A CONSTRUCTION PROJECT SIGN AT A LOCATION DIRECTED BY THE OWNER. BANKS ENGINEERING, INC. SHALL PROVIDE A SEPARATE SIGN FOR INSTALLATION BY THE CONTRACTOR AT THIS LOCATION. THESE SIGNS SHALL BE ERECTED WITHIN 15 DAYS AFTER RECEIVING A NOTICE TO PROCEED. UPON PROJECT COMPLETION, THE CONTRACTOR SHALL REMOVE THESE SIGNS & RETURN TO BANKS ENGINEERING, INC. THEIR SIGN.

ENVIRONMENTAL PROTECTION DURING CONSTRUCTION:

PROTECTION OF L& RESOURCES – EXCEPT IN AREAS IDENTIFIED ON THE PLANS TO BE CLEARED, THE CONTRACTOR MUST NOT DEFACE, INJURE, OR DESTROY TREES OR SHRUBS OR REMOVE OR CUT THEM WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER. IN THE ABSENCE OF A CLEARING PLAN, AREAS SHOWN FOR IMPROVEMENTS SHALL BE CLEARED UNLESS NOTED OTHERWISE.

PROTECTION OF WATER RESOURCES – IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INVESTIGATE & COMPLY WITH ALL APPLICABLE FEDERAL, STATE, REGIONAL COUNTY & MUNICIPAL LAWS CONCERNING POLLUTION OF WATER RESOURCES. ALL WORK MUST BE PERFORMED IN SUCH A MANNER THAT OBJECTIONABLE CONDITIONS WILL NOT BE CREATED IN PUBLIC WATERS RUNNING THROUGH, OR ADJACENT TO THE PROJECT AREA.

1. EROSION & SEDIMENT CONTROL – ALL PRACTICAL & NECESSARY EFFORT SHOULD BE TAKEN DURING CONSTRUCTION TO CONTROL & PREVENT EROSION & THE TRANSPORT OF SEDIMENT TO SURFACE DRAINS, SURFACE WATER, OR ONTO OTHER PROPERTY BY ANY OR ALL OF THE FOLLOWING METHODS:
   - A. STORMWATER FACILITIES ARE TO BE BUILT AS EARLY IN THE CONSTRUCTION PHASE AS POSSIBLE TO ENSURE THE TREATMENT OF STORMWATER RUNOFF. TEMPORARY EROSION & SEDIMENT CONTROL MEASURES, HOWEVER, SUCH AS BERMS, SEDIMENT BASINS, GRASSING, SODDING, SAND BAGGING, BALED HAY OR STRAW, FLOATING SILT BARRIERS, STACKED SILT BARRIERS, ETC., MUST BE PROVIDED & MAINTAINED UNTIL THE PERMANENT FACILITIES ARE COMPLETED & OPERATIONAL.
   - B. REVEGETATION & STABILIZATION OF DISTURBED GROUND SURFACES SHOULD BE ACCOMPLISHED AS SOON AS POSSIBLE.
   - C. FULL COMPACTION OF ANY FILL MATERIAL PLACED AROUND NEWLY INSTALLED STRUCTURES.
   - D. PROHIBIT THE USE OF ANY CONSTRUCTION EQUIPMENT THAT LEAKS EXCESSIVE AMOUNTS OF FUEL OIL, OR HYDRAULIC FLUID.
2. ALL DISTURBED AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, EXCEPT RETENTION AREAS, & SHALL BE STABILIZED BY SODDING, EXCEPT WHERE SEEDING & MULCHING ARE CALLED FOR ON THE PLANS. THE LATEST VERSION OF THE F.D.O.T. ROAD & BRIDGE SPECIFICATIONS SHALL BE USED UNLESS MORE RESTRICTIVE LOCAL SPECIFICATIONS EXIST.

   CONTRACTOR RESPONSIBLE FOR STABILIZING & MAINTAINING SLOPES & SOD THROUGHOUT CONSTRUCTION UNTIL SUCH TIME AS APPROVED BY THE ENGINEER.

PROTECTION OF FISH & WILDLIFE:

THE CONTRACTOR MUST AT ALL TIMES PERFORM ALL WORK IN A WAY & TAKE SUCH STEPS AS REQUIRED TO PREVENT ANY INTERFERENCE WITH OR DISTURBANCE TO FISH & WILDLIFE. THE CONTRACTOR SHALL NOT ALTER WATER FLOWS OR OTHERWISE DISTURB NATIVE HABITATS & JURISDICTIONAL WETLANDS LOCATED WITHIN & / OR ADJACENT TO THE PROJECT AREA.

RECORDING & PRESERVING HISTORICAL & ARCHEOLOGICAL FINDS:

ALL ITEMS HAVING ANY APPARENT HISTORICAL OR ARCHEOLOGICAL INTEREST THAT ARE DISCOVERED IN THE COURSE OF ANY CONSTRUCTION ACTIVITIES MUST BE CAREFULLY PRESERVED. THE CONTRACTOR MUST LEAVE THE ARCHEOLOGICAL FIND UNDISTURBED & MUST IMMEDIATELY REPORT THE FIND TO THE OWNER SO THAT THE PROPER AUTHORITY MAY BE NOTIFIED.

PRIOR TO EXCAVATION
CONTACT SUNSHINE STATE ONE
- CALL OF FLORIDA
1 (800) 432 - 4770

CONTRACTOR SHALL SUBMIT FOR N.P.D.E.S. PERMIT A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.

PERMIT APPLICATION SHALL BE SUBMITTED TO:

N.P.D.E.S. STORMWATER NOTICES CENTER, MS # 2510,
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD,
TALLAHASSEE, FLORIDA
32399-2400

1. GENERAL

1.01 SUBMITTALS

- A. EROSION & CONTROL MEASURES
- B. COMPACTION TESTS
- C. SOIL CLASSIFICATION TESTS
- D. PRESERVATION PLANS

1.02 SITE EXAMINATION

- A. CONTRACTORS, BEFORE SUBMITTING BIDS, SHALL INFORM THEMSELVES AS TO LOCATION & NATURE OF THE WORK, CHARACTER OF EQUIPMENT & FACILITIES NEEDED FOR PERFORMANCE OF THE WORK, GENERAL & LOCAL CONDITIONS PREVAILING AT THE SITE, & OTHER MATTERS WHICH MAY IN ANY WAY, AFFECT THE WORK UNDER CONTRACT.
- B. EXAMINE SOURCES OF INFORMATION CONCERNING GROUND WATER LEVEL, WHETHER SURFACE OR SUBSURFACE. EACH BIDDER TO DRAW HIS OWN CONCLUSION CONCERNING GROUND WATER LEVELS & HOW WATER AFFECTS HIS WORK.

1.03 SUBSURFACE INVESTIGATIONS

- A. SUBSURFACE DATA, INCLUDING GROUND WATER ELEVATIONS OR CONDITIONS, IF SHOWN ON THE DRAWINGS OR ATTACHED TO THESE SPECIFICATIONS, ARE PRESENTED ONLY AS INFORMATION THAT IS AVAILABLE WHICH INDICATED CERTAIN CONDITIONS FOUND & LIMITED TO THE EXACT LOCATIONS, SHALL NOT BE INTERPRETED AS AN INDICATION OF CONDITIONS THAT MAY ACTUALLY BE DEVELOPED THROUGH THE PERIOD OF CONSTRUCTION. BIDDERS SHALL EXAMINE THE SITE OF THE WORK & MAKE THEIR OWN DETERMINATION OF THE CHARACTER OF MATERIALS & THE CONDITIONS TO BE ENCOUNTERED ON THE WORK, & THEIR PROPOSAL SHALL BE BASED UPON THEIR OWN INVESTIGATIONS. THE OWNER & ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR VARIATIONS FOUND TO EXIST BETWEEN THE ATTACHED DATA ABOVE REFERRED TO & ACTUAL FIELD CONDITIONS THAT DEVELOP THROUGH THE PERIOD OF CONSTRUCTION.
- B. WHERE EXISTING GRADES, UTILITY LINES & SUBSTRUCTURES ARE SHOWN ON THE DRAWINGS, THE OWNER & ENGINEER ASSUME NO RESPONSIBILITY FOR CORRECTNESS OF EXISTING CONDITIONS INDICATED. THE CONTRACTOR SHALL ASCERTAIN EXACT LOCATIONS OF UTILITIES & SUBSTRUCTURES THAT MAY BE AFFECTED BY THIS PROJECT, & SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY THAT MAY RESULT FROM WORKING ON OR NEAR THOSE UTILITIES, SUBSTRUCTURES WHICH ARE NOT TO BE REMOVED OR DEMOLISHED.
- C. THE CONTRACTOR SHALL MAKE HIS OWN DEDUCTIONS OF THE SUBSURFACE CONDITIONS WHICH MAY AFFECT METHODS OR COST OF CONSTRUCTION & HE AGREES THAT THE CONTRACTOR WILL MAKE NO CLAIM FOR DAMAGES OR OTHER COMPENSATION EXCEPT SUCH AS ARE PROVIDED FOR IN THE AGREEMENT, SHOULD THE CONTRACTOR FIND CONDITIONS DURING THE PROGRESS OF THE WORK DIFFERENT FROM THOSE AS CALCULATED OR ANTICIPATED BY THE CONTRACTOR.

1.04 BENCHMARKS & MONUMENTS

- A. MAINTAIN CAREFULLY EXISTING BENCH MARKS, MONUMENTS, & OTHER REFERENCE POINTS IF DISTURBED OR DESTROYED, REPLACE AS DIRECTED.

1.05 JOB CONDITIONS

- A. CONDITION OF PREMISES: ACCEPT SITE AS FOUND & EXCAVATE, FILL, COMPACT, & BACKFILL SITE AS HEREINAFTER SPECIFIED.
- B. PROTECTION
  - a. EXISTING STRUCTURES & PROPERTY: TAKE PRECAUTIONS TO GUARD AGAINST MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES & FACILITIES; PROVIDE & PLACE BRACING OR SHORING AS NECESSARY OR PROPER IN CONNECTION THEREWITH; BE RESPONSIBLE FOR SAFETY & SUPPORT OF SUCH STRUCTURES; BE LIABLE FOR ANY MOVEMENT OR SETTLEMENT, ANY DAMAGE OR INJURY CAUSED THEREBY OR RESULTING THEREFROM. IF AT ANY SAFETY OR ANY ADJACENT STRUCTURES APPEARS TO BE ENDANGERED, CEASE OPERATION, TAKE PRECAUTIONS TO SUPPORT SUCH STRUCTURES & NOTIFY THE OWNER. RESUME OPERATIONS ONLY AFTER PERMISSION HAS BEEN CHANGED BY THE OWNER.
  - b. SIDEWALKS & STREETS: TAKE PRECAUTIONS TO GUARD AGAINST MOVEMENT, SETTLEMENT OR COLLAPSE OF ANY SIDEWALKS, CURBS OR STREET PASSAGES ON ADJOINING SITE; BE LIABLE FOR ANY SUCH MOVEMENT, SETTLEMENT OR COLLAPSE; REPAIR PROMPTLY SUCH DAMAGE WHEN SO ORDERED; INSTALL SUCH SHORING, INCLUDING SHEET PILING, AS MAY BE REQUIRED DURING EXCAVATION, TO PROTECT BANKS, ADJACENT PAVING, STRUCTURES & UTILITIES.
  - c. RESPONSIBILITY: BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES OR TO EQUIPMENT & FURNISHINGS HOUSED THEREIN WHICH ARE DUE DIRECTLY OR INDIRECTLY TO CONSTRUCTION OPERATIONS, EXCEPT WHERE REMOVAL IS NECESSITATED BY SITE GRADING OR LOCATION OF NEW BUILDING. USE EVERY POSSIBLE PRECAUTION TO PREVENT INJURIES TO LANDSCAPING, DRIVES, CURBS & WALKS ON OR ADJACENT TO SITE OF THE WORK & REPLACE, AT NO EXPENSE TO OWNER, ANY OF SUCH DESTROYED.

2. EXECUTION

2.01 GENERAL

- A. ACCOMPLISH IN A MANNER THAT PROVIDES FOR THE SAFETY OF THE PUBLIC & WORKMEN & PROVIDE FOR THE PROTECTION OF ALL PROPERTY.
- B. CONSTRUCTION: DO NOT CLOSE, OBSTRUCT OR STORE MATERIAL OR EQUIPMENT IN STREETS, SIDEWALKS, ALLEYS OR PASSAGEWAYS WITHOUT A PERMIT IN ACCORDANCE WITH LOCAL ORDINANCES, REGULATIONS & CODES.
- C. INTERFERENCE: CONDUCT OPERATIONS WITH MINIMUM INTERFERENCE WITH ROADS, STREETS, DRIVEWAYS, ALLEYS, SIDEWALKS & OTHER FACILITIES.
- D. PNEUMATIC TOOLS: WORK WITH PNEUMATIC OR VIBRATORY TOOLS WILL BE PERMITTED ONLY IN A MANNER WHICH CAUSES NO RELATED DAMAGES.
- E. REMOVAL: UNLESS OTHERWISE NOTED OR SPECIFIED TO BE RELOCATED OR STORED, ALL MATERIALS REMOVED BECOME THE PROPERTY OF THE CONTRACTOR & ARE TO BE REMOVED COMPLETELY AWAY FROM THE SITE BY THE CONTRACTOR. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON THE SITE.
- F. TEMPORARY STRUCTURES: REMOVE ALL TEMPORARY STRUCTURES WHEN THEY ARE NO LONGER REQUIRED.
- G. REPAIR: CLEAN UP, REPAIR OR REPLACE AT NO COST TO OWNER ALL PROPERTY DAMAGED BY REASON OF REQUIRED WORK. ALL PATCHWORK SHALL MATCH EXISTING & BE PERFORMED IN A NEAT & WORKMANLIKE MANNER BY CRAFTSMEN SKILLED IN THE TRADE INVOLVED. IN NEWLY GRADED AREAS TAKE EVERY PRECAUTION & TEMPORARY MEASURE NECESSARY, TO PREVENT DAMAGE FROM EROSION OF FRESHLY GRADED AREA, WHERE ANY SETTLEMENT OR WASHING MAY OCCUR PRIOR TO ACCEPTANCE OF THE WORK, REPAIR & RE–ESTABLISH GRADES TO THE REQUIRED ELEVATIONS & SLOPES AT NO ADDITIONAL COST TO THE OWNER. THIS APPLIES TO DAMAGE TO THE NEWLY GRADED AREAS WITHIN THE CONSTRUCTION LIMITS & DAMAGE TO ADJACENT PROPERTIES BY ERODED MATERIAL.

2.02 LOCATIONS & ELEVATIONS

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEYS, MEASUREMENTS & LAYOUTS REQUIRED FOR PROPER EXECUTION OF THE WORK. LAY OUT LINES & GRADES FROM EXISTING SURVEY CONTROL SYSTEM & AS SHOWN ON DRAWINGS.

2.03 CLEARING & GRUBBING

- A. WITHIN LIMITS OF AREA DESIGNATED FOR GRADING & SITE CONSTRUCTION WORK, REMOVE TREES, BRUSH, STUMPS, WOOD, DEBRIS & OTHER DELETERIOUS MATERIALS NOT REQUIRED TO REMAIN AS PART OF FINISHED WORK.
- B. REMOVE ALL GRASS, PLANTS, VEGETATION & ORGANIC MATERIAL FROM SAME AREA.

2.04 STRIPPING

- A. STRIP ALL TOPSOIL ORGANIC MATERIAL SURFACE LITTER, RUBBLE & OVERBURDEN FOR ENTIRE DEPTH OF ROOT SYSTEM OF GRASS OR OTHER VEGETATION OVER THE LIMITS OF CONSTRUCTION.
- B. STOCKPILE TOPSOIL ON SITE WHERE DIRECTED.

2.05 EXCAVATION

- A. BEGIN EXCAVATION AFTER STRIPPING, CLEARING & GRUBBING WHERE APPLICABLE, HAS BEEN COMPLETED.
- B. EXCAVATE TO GRADES REQUIRED TO ACCOMMODATE THE PROPOSED CONSTRUCTION. DEWATER AS NEEDED.
- C. REMOVE "UNSATISFACTORY MATERIALS" ENCOUNTERED FROM THE BUILDING AREAS, & OTHER NON–LANDSCAPED AREAS.
- D. EXCAVATE IN SUCH A MANNER THAT QUICK & EFFICIENT DRAINAGE OF STORMWATER WILL BE AFFECTED.
- E. CLASSIFY EXCAVATED MATERIALS & STOCKPILE SEPARATELY SUITABLE SOILS FOR USE AS BACKFILL MATERIALS. IF SUFFICIENT QUANTITIES OF EXCAVATED MATERIALS MEETING REQUIREMENTS FOR BACKFILL ARE NOT AVAILABLE ON SITE, PROVIDE MATERIALS MEETING THESE REQUIREMENTS.
- F. STOCKPILE EXCAVATED MATERIAL SUITABLE FOR USE AS FILL & BACKFILL.

2.06 FILLING, BACKFILLING & COMPACTING

- A. THE WORK CONSISTS OF COMPACTION OF EXISTING EARTH (EXCLUDE ROCK), SURFACES AFTER EXCAVATION, FILLING & COMPACTION OF SAID AREA TO LEVELS REQUIRED WITH SUITABLE BACKFILL MATERIAL.
- B. MATERIALS: "SATISFACTORY FILL MATERIALS" AASHTO CLASSIFICATION A–3 OR BETTER SHALL BE USED IN FILLS & BACKFILLS.
- C. FILLING & BACKFILLING: PLACE "SATISFACTORY FILL MATERIAL" IN HORIZONTAL LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH. COMPACT AS SPECIFIED HEREIN NO MATERIAL SHALL BE PLACED ON SURFACES THAT ARE MUDDY.
- D. COMPACTION: COMPACTION SHALL BE WITH EQUIPMENT SUITED TO SOIL BEING COMPACTED. MOISTEN OR AERATE MATERIAL AS NECESSARY TO PROVIDE MOISTURE CONTENT THAT WILL READILY FACILITATE OBTAINING SPECIFIED COMPACTION WITH EQUIPMENT USED. COMPACT EACH LAYER TO NOT LESS THAN PERCENTAGE OF MAXIMUM DENSITY SPECIFIED BELOW DETERMINED IN ACCORDANCE WITH AASHTO T–180. INSURE THAT THE COMPACTION OF PREVIOUSLY PREPARED FILL AREAS HAS BEEN MAINTAINED PRIOR TO PLACING NEW LAYERS.
- E. RECONDITIONING OF SUBGRADE: WHERE APPROVED COMPACTED SUBGRADES ARE DISTURBED BY THE CONTRACTOR'S SUBSEQUENT OPERATIONS OF ADVERSE WEATHER SUBGRADE SHALL BE SCARIFIED & COMPACTED AS SPECIFIED HEREIN BEFORE TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION THEREON. RE–COMPACTION OVER UNDERGROUND UTILITIES SHALL BE BY POWER–DRIVEN HAND TAMPERS.
- F. COMPACTION REQUIREMENTS
  - a. FILL UNDER LAWNS & PLANTED: 95%
  - b. BELOW SLABS ON GRADE & CONCRETE WALKS: 98%
  - c. UNDER PAVING PARKING AREAS: 98%

2.07 TESTING

- A. THE CONTRACTOR WILL PROVIDE THE SERVICES OF A TESTING LABORATORY TO PERFORM SPECIFIED TESTS, INSPECTIONS, INSTRUMENTATION & INSPECTION OF WORK.
- B. TESTS OF MATERIALS SHALL BE AS FOLLOWS:
  - a. SOIL CLASSIFICATION: ONE TEST FROM EACH TYPE OF MATERIAL ENCOUNTERED & / OR PROPOSED TO BE USED.
  - b. LABORATORY TESTS FOR MOISTURE–CONTEST & DENSITY ACCORDING TO AASHTO T–180: ONE TEST FOR EACH MATERIAL ENCOUNTERED & / OR PROPOSED TO BE USED.
  - c. FIELD TESTS FOR MOISTURE CONTEST & DENSITY: ONE TEST PER LAYER OF FILL PER 5,000 SQUARE FEET OF AREA.

SUPPLEMENTAL SPECIFICATIONS:

1. GENERAL

   THE CONTRACTOR SHALL BECOME FAMILIAR WITH & ADHERE TO THE SPECIFICATIONS & STANDARDS OF THE UTILITY COMPANIES WHICH ARE SERVING THE PROJECT SITE. THE CONTRACTOR SHALL BECOME FAMILIAR WITH & COMPLY WITH ALL SITE DEVELOPMENT STANDARDS & CODES OF THE REGULATORY AGENCIES ASSOCIATED WITH THIS PROJECT. THE LATEST VERSION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION ROAD & BRIDGE CONSTRUCTION STANDARD SPECIFICATIONS & THE LATEST FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY & TRAFFIC DESIGN STANDARDS SHALL BE INCLUDED WITHIN THE PROJECT SPECIFICATIONS. UNLESS OTHERWISE NOTED, EITHER ON THE PLANS OR WITHIN THE SPECIFICATIONS, THE APPLICABLE SECTIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS & THE LATEST FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY & TRAFFIC DESIGN STANDARDS SHALL APPLY INCLUDING REFERENCES THEREIN. THE GENERAL DESCRIPTION OF THE NATURE OF THE WORK SHALL BE SUFFICIENT CORRELATION TO THE FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, EXACT ITEM DESCRIPTION IS NOT REQUIRED. IN THE EVENT THERE ARE CONFLICTS BETWEEN SPECIFICATIONS OR REQUIREMENTS, THE MOST RESTRICTIVE (CONSERVATIVE) SPECIFICATION OR REQUIREMENT SHALL BE USED.

2. POTABLE WATER DISTRIBUTION/ WASTEWATER COLLECTION INSTALLATION

   UNLESS OTHERWISE NOTED ON THE PLANS, THE STANDARDS & SPECIFICATIONS OF THE ASSOCIATED UTILITY COMPANY SERVING THE PROJECT SITE SHALL BE ADHERED TO FOR ALL MATERIALS, INSTALLATION, TESTING, & CERTIFICATION ACTIVITIES FOR ALL PUMP STATIONS, MAIN LINES, SERVICES, & APPURTENANCES. IF STANDARDS & SPECIFICATIONS ARE NOT AVAILABLE, THE CONTRACTOR SHALL CONFORM WITH THE LATEST STANDARDS & SPECIFICATIONS ADOPTED BY CHARLOTTE COUNTY UTILITIES, LOCAL GOVERNMENTAL REGULATIONS, OR THE MANUFACTURERS RECOMMENDED INSTALLATION PROCEDURES, WHICHEVER IS SPECIFICALLY THE MOST RESTRICTIVE. A COPY OF THE CHARLOTTE COUNTY UTILITIES SPECIFICATIONS CAN BE REVIEWED AT THE OFFICE OF BANKS ENGINEERING, INC.

3. STORMWATER PIPE INSTALLATION & MISCELLANEOUS EXCAVATIONS

   UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM THE EXCAVATION, BEDDING, JOINTS, & BACKFILLING OPERATIONS IN ACCORDANCE WITH THE POTABLE WATER/ WASTEWATER INSTALLATION SPECIFICATIONS, LOCAL GOVERNMENTAL REGULATIONS OR STANDARDS, F.D.O.T. STANDARDS & SPECIFICATIONS OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES, WHICHEVER IS SPECIFICALLY THE MOST RESTRICTIVE.

4. UNSUITABLE MATERIALS

   IF UNSUITABLE MATERIAL IS ENCOUNTERED WITHIN THE ROADWAY AREA & / OR UTILITY AREAS IT SHALL BE REMOVED TO A DEPTH OF THREE (3) FEET BELOW THE SUB–BASE OR TRENCH BOTTOM & SHALL BE BACKFILLED WITH THE AASHTO A–3 MATERIAL OR BETTER WITH PLACEMENT & COMPACTION METHODS IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS OR AS OTHERWISE NOTED ON THE PLANS. UNSUITABLE MATERIALS SHALL BE REMOVED FROM SITE, UNLESS THE ENGINEER APPROVES USE WITHIN LANDSCAPED AREAS.

DEWATERING:

1.01 GENERAL

- A. DEWATERING CONSISTS OF PERFORMING ALL WORK NECESSARY TO REMOVE SURFACE WATER & / OR CONTROL THE GROUND WATER LEVELS & HYDROSTATIC PRESSURES IN ORDER TO PERMIT ALL EXCAVATION & CONSTRUCTION UNDER THIS CONTRACT TO BE PERFORMED IN THE DRY.
- B. WORK OF THIS SECTION INCLUDES INSTALLATION, OPERATIONS, MAINTENANCE, SUPERVISION, SUPPLY, DISMANTLING, & REMOVAL FROM THE SITE OF THE DEWATERING EQUIPMENT.
- C. THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE POTENTIAL FOR EXCESSIVE RAINFALL, THE GROUND CONDITIONS, & THE GROUND WATER CONDITIONS, GROUND WATER ELEVATION CAN FLUCTUATE. IT IS ANTICIPATED THAT ANY EXCAVATIONS MAY ENCOUNTER THE GROUND WATER TABLE.
- D. DRAINAGE OF THE SITE: AT ALL TIMES THE CONTRACTOR SHALL MAINTAIN & OPERATE ADEQUATE SURFACE & SUBSURFACE DRAINAGE METHODS IN ORDER TO KEEP THE CONSTRUCTION SITE DRY & IN SUCH CONDITION THAT PLACEMENT & COMPACTION OF FILL MAY PROCEED UNHINDERED BY SATURATION OF THE AREA DURING CONSTRUCTION, THE SURFACE OF THE BACKFILL AREA SHALL BE LEFT IN SUCH CONDITION THAT PRECIPITATION & / OR SURFACE WATER WILL RUN OFF WITHOUT PONDING.

1.02 METHOD

- A. THE CONTROL OF ALL SURFACE & SUBSURFACE WATER IS PART OF THE DEWATERING REQUIREMENTS, MAINTAIN ADEQUATE CONTROL SO THAT THE STABILITY OF EXCAVATED & CONSTRUCTION SLOPES IS NOT ADVERSELY AFFECTED BY WATER, THAT EROSION IS CONTROLLED, & THE FLOODING OF EXCAVATIONS OR DAMAGE TO STRUCTURES DOES NOT OCCUR, DRAIN SURFACE WATER AWAY FROM THE EXCAVATION.
- B. DISPOSE OF ALL WATER REMOVED FROM THE EXCAVATION IN A MANNER THAT WILL NOT ENDANGER PUBLIC HEALTH, PROPERTY, OR PORTIONS OF THE WORK UNDER CONSTRUCTION OR COMPLETED. DISPOSE OF WATER IN A MANNER THAT WILL CAUSE NO INCONVENIENCE WHATSOEVER TO THE OWNER OR TO OTHERS ENGAGED IN WORK AT THE SITE.
- C. DISPOSE OF WATER RESULTING FROM DEWATERING OPERATIONS IN ACCORDANCE WITH CITY, COUNTY, STATE & FEDERAL REGULATIONS.
- D. CONDUCT OPERATIONS SO THAT STORMWATER RUNOFF, SEDIMENT IS NOT DISCHARGED TO THE ADJACENT WATER BODIES, SEWERS, STREETS & ADJACENT PROPERTIES.
- E. DEWATERING SYSTEM SHALL BE SO DESIGNED AS TO PREVENT REMOVAL OF SOIL FINES FROM THE SITE DURING THE DEWATERING OPERATION.

PORTLAND CEMENT CONCRETE PAVING:

1.01 QUALITY ASSURANCE

- A. COMPLY WITH ACI STANDARDS RECOMMENDED PRACTICES FOR CONSTRUCTION OF CONCRETE PAVEMENTS & CONCRETE BASES (ACI 325.9R, LATEST EDITION)

1.02 REFERENCE STANDARDS

- A. THE FOLLOWING REFERENCE STANDARDS OF THE ISSUES LISTED BELOW BUT REFERRED TO THEREAFTER BY BASIC DESIGNATION ONLY, FORM A PART OF THIS SPECIFICATION TO THE EXTENT INDICATED BY THE REFERENCES THERETO. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH HEREINAFTER SPECIFIED STANDARDS.
  - a. AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM)
  - b. AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS (AASHTO) STANDARD.
  - c. FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARDS & SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION–SECTION 350– "CEMENT CONCRETE PAVEMENT".
  - d. T–180 MOISTURE– DENSITY RELATIONS OF SOILS

1.03 SUBMITTALS

- A. THE CONTRACTOR SHALL SUBMIT TWO COPIES OF TEST REPORTS PREPARED BY AN INDEPENDENT TESTING LABORATORY & CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF FLORIDA. THESE REPORTS SHALL INDICATE ALL TESTS PERFORMED & SHALL INCLUDE A CERTIFICATION STATEMENT OF COMPLIANCE WITH THE PROJECT SPECIFICATIONS. TESTS SHALL BE PERFORMED AS SPECIFIED UNDER THIS SECTION.
  - a. SUBMIT FOR REVIEW THE FOLLOWING:
    1. CONCRETE DESIGN MIX & PROVING FLEXURAL STRENGTH (MODULUS OF RUPTURE) TESTS
    2. EXPANSION JOINT FILLER DATE
    3. JOINT SEALER DATE
    4. PROPOSED PAVING CONSTRUCTION PLAN WHICH SHALL SHOW THE CONCRETE PAVING JOINT TYPES & LOCATIONS & SHALL INCLUDE A STATEMENT OF PROPOSED SEQUENCE & SCHEDULE OF PAVING OPERATIONS
    5. RESULTS OF CONCRETE TESTS
    6. RESULTS OF FIELD TESTS OF LBR & COMPACTION OF STABILIZED SUBGRADE.

1.04 MATERIALS

- A. STABILIZED SUBGRADE: PROVIDE 12 INCH STABILIZED SUBGRADE (LBR 40 MIN) COMPACTED TO A MINIMUM DENSITY OF 98% AS DETERMINED BY AASHTO T–180
- B. CONCRETE: CONCRETE FOR CONCRETE PAVEMENT SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. A SLUMP RANGE BETWEEN 2 TO 4 INCHES & A 28 DAY MODULES OR RUPTURE OF 650 PSI AS DETERMINED BY THE REQUIREMENTS OF PARAGRAPH TESTING SPECIFIED HEREINAFTER.
- C. JOINT SEALER: JOINT SEALING SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS, LATEST EDITION, SECTION 712
- D. PREFORMED EXPANSION JOINT FILLER: PREFORMED EXPANSION JOINT FILLER SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS, LATEST EDITION, SECTION 712

1.05 EXECUTION

- A. COMPLY WITH ACI STANDARD 316–74 & SECTION 350, FDOT STANDARDS & SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED HEREIN.
- B. FINAL GRADING : ALL CONCRETE PAVEMENT SHALL HAVE A MAXIMUM DEVIATION OF 1/8 INCH (PLUS/ MINUS) FROM THE SPECIFIED SURFACE PLANE & PLAN GRADES.
- C. THE SURFACE FINISH SHALL BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE. IN GENERAL THE TEXTURE IS OF A MEDIUM BROOM FINISH AFTER FLOATING.
- D. JOINTS
  - a. CONTRACTION JOINTS INDICATED ON DRAWINGS, OR AS REQUIRED SHALL BE PLACED PERPENDICULAR TO THE FINISH GRADE OF THE CONCRETE. JOINTS SHALL BE CUT TO A DEPTH OF ¼ OF THE SLAB THICKNESS BY CUTTING WITH AN EDGING TOOL HAVING A ¼ INCH RADIUS OR BY SAWING WITH A BLADE PRODUCING A CUT NOT LESS THAN ⅛ INCH IN WIDTH. SAW JOINTS WITHIN 4 TO 6 HOURS OF CONCRETE PLACEMENT.
  - b. EXPANSION JOINTS SHALL BE PLACED WHERE INDICATED ON DRAWINGS, OR AS REQUIRED, USING ½ INCH THICK PREFORMED EXPANSION JOINT MATERIAL ANCHOR WITH APPROVED DEVICES TO PREVENT DISPLACEMENT DURING PLACEMENT & FINISHING. EDGES SHALL BE ROUNDED WITH AN EDGING TOOL. JOINTS SHALL BE FULL DEPTH OF CONCRETE EXCEPT THAT TOP EDGES SHALL BE ½ INCH BELOW THE FINISH CONCRETE SURFACE. EXPANSION JOINTS SHALL BE SEALED TO THE SURFACE BY FILLING WITH JOINT SEALING COMPOUND. JOINTS SHALL BE CLEAN & DRY BEFORE SEALING COMPOUND IS PUT IN PLACE.
  - c. CONSTRUCTION JOINTS ARE TO BE USED AT CONTRACTION JOINT LOCATIONS TO STOP CONCRETE POURS.
- E. CURING: CONCRETE SHALL BE CURED BY PROTECTING IT AGAINST LOSS OF MOISTURE & MECHANICAL INJURY FOR AT LEAST THREE DAYS AFTER PLACEMENT. A PIGMENTED LIQUID CURING MEMBRANE SHALL BE APPLIED IMMEDIATELY AFTER FINISHING; OPERATION AT THE RATE OF ONE GALLON TO NOT MORE THAN 200 SQUARE FEET.
- F. CLEANING & SEALING JOINTS: JOINTS SHALL BE FILLED WITH JOINT–SEALING MATERIAL NO LESS THAN 8 HOURS & WITHIN 2 WEEKS AFTER THOROUGHLY CLEANED OF ALL FOREIGN MATERIAL INCLUDING ANY MEMBRANE CURING COMPOUND.
- G. TESTING: LABORATORY & FIELD TESTING SHALL BE AT THE CONTRACTOR'S EXPENSE. IN ADDITION, ALL RETESTING SHALL BE DONE AT CONTRACTOR'S EXPENSE.
  - a. DESIGN MIXES & TESTING REQUIREMENTS FOR THE CONCRETE PAVEMENT SHALL BE AS FOLLOWS:
    1. FLEXURAL STRENGTH TESTS OF CONCRETE AS BASIS FOR DESIGN
    2. SLUMP, MODULES OF RUPTURE & 7–& 20 DAY COMPRESSIVE STRENGTH TESTS SHALL BE PERFORMED ON SAMPLES TAKEN AT THE SITE AT A FREQUENCY OF TWO PER ACRE
  - b. WHERE THE FLEXURAL STRENGTH OF THE CONCRETE IS SPECIFIED, MAKE ONE STRENGTH TEST & ONE FLEXURAL TEST FOLLOWING (ASTM C192 & ASTM C78) FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF PLACED PER DAY. NUMBER OF CYLINDERS SHALL BE THREE FOR STRENGTH TEST & THREE FOR FLEXURAL TEST. TEST ONE AT THREE DAYS, ONE AT SEVEN DAYS & ONE AT 28 DAYS.

PAVEMENT MARKING:

1.01 QUALITY ASSURANCE

- A. WORK SHALL BE PREFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS IN A NEAT & ACCURATE MANNER.
- B. ALL EQUIPMENT SHALL BE OF A TYPE & DESIGN WHICH WILL READILY OBTAIN THE REQUIRED UNIFORMITY OF APPLICATION OF THE PAVEMENT MARKINGS BOTH AS TO THICKNESS OF COATING & AS TO ALIGNMENT.

1.02 REFERENCE STANDARDS

- A. THE FOLLOWING PUBLICATIONS OF THE ISSUE LISTED BELOW, BUT REFERRED TO THEREAFTER BY BASIC DESIGNATION ONLY, FORM A PART OF THIS SPECIFICATION TO THE EXTENT INDICATED BY THE REFERENCES THERETO;
  1. FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITION.
  2. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, LATEST EDITION.

1.03 SUBMITTALS

- A. SUBMIT PAINT TESTS, AS SPECIFIED IN SECTION 971 OF FDOT SPECIFICATIONS & AS APPLICABLE TO HEREINAFTER SPECIFIED MATERIAL.

1.04 MATERIALS & COLORS

- A. THERMOPLASTIC: IN ACCORDANCE WITH REQUIREMENTS AS SPECIFIED IN SECTION 711 & 971 OF THE FDOT SPECIFICATIONS, LATEST EDITION.
- B. PAINT: IN ACCORDANCE WITH REQUIREMENTS AS SPECIFIED IN SECTION 710 & 971 OF THE FDOT SPECIFICATIONS, LATEST EDITION. LATEX PAINT ONLY.
- C. COLORS: YELLOW & WHITE PER FOOT, OR AS INDICATED ON DRAWINGS.

1.05 EXECUTION

- A. TIME OF APPLICATION: PAINTING SHALL BE DONE ONLY DURING DAYLIGHT HOURS & AS FAR AS PRACTICAL, SHALL BE TERMINATED IN TIME TO PERMIT SUFFICIENT DRYING BY SUNSET.
- B. WEATHER LIMITATIONS: NO PAINT SHALL BE APPLIED WHEN ANY MOISTURE IS PRESENT ON THE SURFACE TO BE PAINTED OR WHEN THE AIR TEMPERATURE IS BELOW 40 DEGREES F. PAINTING SHALL NOT BE DONE WHEN WINDS ARE SUFFICIENT TO CAUSE SPRAY DUST.
- C. PREPARATION OF SURFACE TO BE PAINTED: THE SURFACE WHICH IS TO BE PAINTED SHALL BE CLEANED, BY COMPRESSED AIR OR OTHER EFFECTIVE MEANS, IMMEDIATELY BEFORE THE START OF PAINTING & SHALL BE CLEAN & DRY WHEN THE PAINT IS APPLIED. ANY VEGETATION OR LOOSE SOIL SHALL BE REMOVED FROM THE PAVEMENT BEFORE STRIPING IS BEGUN.
- D. MIXING PAINT: THE PAINT SHALL BE THOROUGHLY MIXED BEFORE IT IS POURED INTO THE PAINTING MACHINE & NO THINNING OF THE PAINT IN THE MACHINE WILL BE ALLOWED AT ANY TIME. BEFORE THE START OF EACH DAY'S WORK THE PAINT CONTAINER, THE CONNECTIONS & THE SPRAY NOZZLES ON THE MACHINE SHALL BE THOROUGHLY CLEANED WITH PAINT THINNER OR OTHER SUITABLE CLEANER.
- E. PAINT APPLICATION: THE TRAFFIC MARKINGS SHALL BE OF THE SPECIFIED DIMENSIONS WITH CLEAN, TRUE EDGES & WITHOUT SHARP BREAKS IN THE ALIGNMENT. A UNIFORM COATING OF PAINT SHALL BE OBTAINED & THE FINISHED MARKINGS SHALL CONTAIN NO LIGHT SPOTS OR PAINT SKIPS. ANY STRIPES WHICH DO NOT HAVE A UNIFORM, SATISFACTORY APPEARANCE, BOTH DAY & NIGHT, SHALL BE CORRECTED.
- F. RATE OF APPLICATION: THE MINIMUM RATE OF APPLICATION FOR PAINT SHALL BE AS FOLLOWS:
  1. FOUR INCH SOLID: 20 GALLONS PER MILE
  2. ANY OTHER WIDTH STRIPE OR MARKINGS: A DIRECT PROPORTION OF THE ABOVE.
  3. HANDICAP LOGO: IN CONFORMANCE TO THE REQUIREMENTS OF THIS SECTION & LOCAL CODES.
- G. REQUIRED FILM THICKNESS: THE MINIMUM WET FILM THICKNESS FOR ALL PAINTED AREAS SHALL BE 15 MILS.
- H. ALIGNMENT OF STRIPES: WHERE A STRIPE DEVIATES FROM THE CORRECT ALIGNMENT, AS INDICATED BY THE STRING LINE, BY MORE THAN ONE INCH IN ANY 20 FOOT LENGTH, IT SHALL BE OBLITERATED & THE STRIPE CORRECTED HEREINAFTER AS SPECIFIED IN PARAGRAPH "CORRECTIVE MEASURES".

1.06 PROTECTION OF PAINTED MARKINGS

- A. PROTECTION OF STRIPES: ALL NEWLY PAINTED STRIPES, OR OTHER MARKINGS, SHALL BE PROTECTED UNTIL THE PAINT IS SUFFICIENTLY DRY TO PERMIT VEHICLES TO CROSS THE MARKING WITHOUT DAMAGE FROM THE TIRES.
- B. REPAIR OF DAMAGED AREAS: ANY PORTION OF THE STRIPES DAMAGED BY PASSING TRAFFIC OR FROM ANY OTHER CAUSE, SHALL BE REPAINTED AT THE CONTRACTOR'S EXPENSE.

1.07 DIMENSION & ALIGNMENT TOLERANCE

- A. DIMENSIONS: NO MARKING SHALL BE LESS THAN THE SPECIFIED WIDTH. NO MARKINGS SHALL EXCEED THE SPECIFIED WIDTH BY MORE THAN ½ INCH. ALIGNMENT TOLERANCES SHALL BE AS SPECIFIED IN 1.05–H.
- B. CORRECTION RATES: ANY CORRECTIONS OF VARIATION IN THE WIDTH OF OR IN THE ALIGNMENT OF STRIPES SHALL NOT BE MADE ABRUPTLY BUT THE STRIPES SHALL BE RETURNED TO THE DESIGN WIDTH AT THE RATE OF AT LEAST 10 FEET FOR EACH ½ INCH.

1.08 CORRECTIVE MEASURES

- A. ALL PAVEMENT MARKINGS WHICH FAIL TO MEET THE SPECIFICATIONS, INCLUDING THE PERMISSIBLE TOLERANCES & THE APPEARANCE REQUIREMENTS, OR ARE MARRED OR DAMAGED BY TRAFFIC OR FROM OTHER CAUSES, SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. ALL DRIP & SPATTERED PAINT SHALL BE REMOVED. WHENEVER IT IS NECESSARY TO REMOVE PAINT IT SHALL BE DONE BY MEANS WHICH WILL NOT DAMAGE THE UNDERLYING SURFACE OF THE PAVEMENT. WHEN NECESSARY TO CORRECT A DEVIATION WHICH EXCEEDS THE PERMISSIBLE TOLERANCE IN ALIGNMENT, THAT PORTION OF THE STRIPE AFFECTED SHALL BE REMOVED & REPAINTED IN ACCORDANCE WITH THESE SPECIFICATIONS.
- B. CORRECTIVE DEVICES: MISALIGNMENT, DEFECTIVE SURFACES, ETC., SHALL BE CORRECTED BY CHEMICAL AGENTS, OR BY ANY OTHER TYPE OF MECHANICAL DEVICE WHICH WILL EFFECTIVELY REMOVE THE PAINT WITHOUT DAMAGE TO THE PAVEMENT SURFACE, OR PREVENT THE REAPPLICATION OF MARKINGS.

1.09 SPARE PAINT

- A. PROVIDE THE OWNER WITH A MINIMUM OF FIVE GALLONS OF TRAFFIC PAINT FROM THE SAME BATCH USED IN APPLICATION OF PAVEMENT MARKINGS. ALSO PROVIDE PAINT SPECIFICATIONS & THE MANUFACTURER'S IDENTIFICATION NUMBER OF THE PAINT USED.

1.10 MARKING TYPE

- A. ANY PAVEMENT MARKINGS LOCATED WITHIN PUBLIC RIGHTS–OR–WAY SHALL BE THERMOPLASTIC UNLESS OTHERWISE INDICATED.
- B. ANY PAVEMENT MARKINGS LOCATED ON–SITE SHALL BE PAINT UNLESS OTHERWISE INDICATED.

CONSTRUCTION TOLERANCES:

THE FOLLOWING ARE THE ALLOWABLE DEVIATIONS FROM PROJECT DESIGN GRADES & GRADIENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM & DOCUMENT COMPLIANCE WITH THESE TOLERANCES PRIOR TO PROCEEDING FROM ONE PHASE OF CONSTRUCTION TO THE NEXT:

1. STORMWATER MANAGEMENT/ DRAINAGE FACILITIES
   - A. PERIMETER CONTAINMENT BERM:
     - MINIMUM ELEVATION = DESIGN GRADE
     - MAXIMUM ELEVATION= DESIGN GRADE + 0.10 FEET
   - B. WATER CONTROL STRUCTURE:
     - MINIMUM GRATE ELEVATION = DESIGN GRADE
     - MAXIMUM GRATE ELEVATION = DESIGN GRADE + 0.10 FEET
     - MINIMUM CREST ELEVATION = DESIGN GRADE
     - MAXIMUM CREST ELEVATION = DESIGN GRADE + 0.05 FEET
     - MINIMUM BLEEDER ELEVATION = DESIGN GRADE
     - MAXIMUM BLEEDER ELEVATION = DESIGN GRADE + 0.05 FEET
     - MINIMUM TOP OF FILTER ELEVATION = DESIGN GRADE
     - MAXIMUM TOP OF FILTER ELEVATION = DESIGN GRADE + 0.05 FEET
   - C. CATCH BASINS/INLETS/PIPE INVERTS:
     - MINIMUM ELEVATION = DESIGN GRADE – 0.05 FEET
     - MAXIMUM ELEVATION = DESIGN GRADE + 0.05 FEET
   - D. SWALE GRADES/ GRADIENTS:
     - MINIMUM ELEVATION = DESIGN GRADE – 0.10 FEET
     - MAXIMUM ELEVATION = DESIGN GRADE +0.10 FEET
     - MINIMUM FLOWLINE GRADIENT = 90% OF DESIGN GRADIENT
   - E. PAVEMENT GRADES/ GRADIENTS:
     - a. FLEXIBLE PAVEMENT GRADE:
       - MINIMUM ELEVATION = DESIGN GRADE – 0.10 FEET
       - MAXIMUM ELEVATION = DESIGN GRADE + 0.10 FEET
     - b. FLEXIBLE PAVEMENT GRADIENTS:
       - MINIMUM GRADIENTS = 90% DESIGN GRADIENT (CROSS SLOPE & LONGITUDINAL SLOPE)
     - c. RIGID (CONCRETE) PAVEMENT GRADE:
       - MINIMUM ELEVATION = DESIGN GRADE – 0.05 FEET
       - MAXIMUM ELEVATION = DESIGN GRADE + 0.05 FEET
     - d. RIGID PAVEMENT GRADIENTS:
       - MINIMUM GRADIENTS = 90% OF DESIGN GRADIENT (CROSS SLOPE & LONGITUDINAL SLOPE)
       - MAXIMUM HANDICAP RAMP = 1:12 (GRADIENT UNLESS OTHERWISE SPECIFIED BY LOCAL CODES)
2. WATER DISTRIBUTION/ WASTEWATER COLLECTION FACILITIES

   UNLESS OTHERWISE SPECIFIED BY THE LOCAL UTILITY COMPANIES, THE FOLLOWING ARE THE ALLOWABLE TOLERANCES FOR THESE ACTIVITIES:
   - A. MANHOLES & PIPE INVERTS:
     - MINIMUM ELEVATION = DESIGN GRADE – 0.05 FEET
     - MAXIMUM ELEVATION = DESIGN GRADE + 0.05 FEET
     - MINIMUM LINE GRADIENT = 90% OF DESIGN GRADIENT
   - B. ALIGNMENT/ LOCATION OF APPURTENANCES:

     AS ALLOWED BY THE APPLICABLE UTILITY & /OR LOCAL GOVERNMENTAL ENTITY. CONTRACTOR SHALL CONFIRM & DOCUMENT THIS PRIOR TO CONSTRUCTION.

NOTE: THE AFOREMENTIONED TOLERANCES DO NOT APPLY TO DESIGN SECTIONS THAT FALL UNDER THE MORE STRINGENT AMERICANS WITH DISABILITIES ACT (ADA) GUIDELINES.

TESTING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING, COORDINATING, DOCUMENTING, & PROVIDING THE FOLLOWING MINIMUM TESTING:

WATER DISTRIBUTION (REFER TO PUBLIC WORKS SPECIFICATIONS)
UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, THE LINES SHALL BE PRESSURE TESTED TO THE RATING OF THE PIPE. THE LINES SHALL BE TESTED IN SEGMENTS BETWEEN MAINLINE VALVES. BACTERIOLOGICAL TEST SAMPLES SHALL BE TAKEN AT ALL BRANCH LINE TERMINATION POINTS OR CONNECTION POINTS & ALONG THE MAIN LINES AT DISTANCES NOT TO EXCEED 2,640 FEET. ALL HYDRANTS & VALVES SHALL BE OPERATED TO TEST PERFORMANCE.

WASTEWATER COLLECTION (REFER TO PUBLIC WORKS SPECIFICATIONS)
UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, THE FORCE MAIN SHALL BE PRESSURE TESTED TO THE RATING OF THE PIPE. VALVES SHALL BE OPERATED TO TEST PERFORMANCE. DEPENDING UPON WATER TABLE CONDITIONS DETERMINED BY THE ENGINEER, THE GRAVITY LINES SHALL BE TESTED FOR EITHER INFILTRATION OR EXFILTRATION & INFLOW. THERE SHALL BE NO PIPE, FITTING OR MANHOLE AS REQUIRED. THE CONTRACTOR SHALL PROVIDE A VIDEO TAPE OF ALL MAIN GRAVITY LINES, ALONG WITH A LOG OF LATERAL LOCATIONS. ALL ELECTRICAL & MECHANICAL DEVICES AT LIFT STATIONS SHALL BE TESTED TO VERIFY PROPER OPERATIONAL STATUS. MAINTENANCE MANUALS SHALL BE PROVIDED.

PRIVATE ROADWAY / PARKING SUBGRADE (REFER TO PUBLIC WORKS SPECIFICATIONS)
THE SUBGRADE SHALL BE TESTED FOR THE LBR VALUE AT A FREQUENCY OF ONE PER 10,000 SF, DENSITY TESTS SHALL BE PERFORMED AT A FREQUENCY OF TWO PER 20,000 SF THICKNESS SHALL BE MEASURED AT EACH DENSITY TEST LOCATION. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

PRIVATE ROADWAY/ PARKING BASE (REFER TO PUBLIC WORKS SPECIFICATIONS)
THE BASE SHALL BE TESTED FOR THE LBR VALUE AT A FREQUENCY OF ONE PER 10,000 SF. DENSITY TESTS SHALL BE PERFORMED AT A FREQUENCY OF TWO PER 10,000 SF. A SIEVE ANALYSIS SHALL BE PERFORMED AT A FREQUENCY OF ONE PER ACRE. THICKNESS SHALL BE MEASURED AT EACH DENSITY TEST LOCATION. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

PRIVATE ASPHALT PAVING (REFER TO PUBLIC WORKS SPECIFICATIONS)
ASPHALTIC CONCRETE SHALL BE TESTED FOR THE FOLLOWING PARAMETERS: THICKNESS, SIEVE ANALYSIS MIX TYPE, STABILITY %, BITUMAN & DENSITY. THE ASPHALT SHALL BE TESTED AT A FREQUENCY OF TWO PER ACRE. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

PUBLIC ROADWAYS (REFER TO PUBLIC WORKS SPECIFICATIONS)
AS REQUIRED BY THE ENTITY HAVING JURISDICTION, BUT NOT LESS THAN REQUIRED FOR PRIVATE ROADWAYS AS OUTLINED ABOVE.

PORTLAND CEMENT CONCRETE (REFER TO PUBLIC WORKS SPECIFICATIONS)
CONCRETE SHALL BE TESTED FOR THE FOLLOWING PARAMETERS: SLUMP, MODULES OF RUPTURE, & 7 AND 28 DAY COMPRESSIVE STRENGTH TESTS SHALL BE PERFORMED ON SAMPLES TAKEN AT THE SITE AT A FREQUENCY OF TWO PER ACRE. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

RETENTION/DETENTION FACILITIES (REFER TO PUBLIC WORKS SPECIFICATIONS)
IF INCLUDED WITHIN THE PROJECT, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER & PERFORM A DRAW DOWN & CAPACITY TEST OF THE FACILITIES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT WATER & ACCEPTABLE MEANS TO MEASURE THE WATER VOLUMES PROVIDED, IF REQUIRED BY THE ENGINEER, IF A FILTRATION SYSTEM IS INCLUDED WITHIN THE PROJECT, THE FILTER MEDIA SHALL BE TESTED FOR COMPLIANCE WITH ALL CURRENT SPECIFICATIONS OF THE WATER MANAGEMENT DISTRICT. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

IN ADDITION TO THE ENVIRONMENTAL PROTECTION DURING CONSTRUCTION SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM THE FOLLOWING IN THE ORDER LISTED:

1. PRIOR TO COMMENCEMENT, PROVIDE NOTIFICATIONS TO THE LOCAL WATER MANAGEMENT DISTRICT & LOCAL GOVERNMENT.
2. ERECT A TURBIDITY SCREEN ON ANY DOWNSTREAM SYSTEM WHICH RECEIVES RUNOFF FROM THE PROJECT. INSTALL OUTFALL CONTROL STRUCTURE & FILTRATION SYSTEM IF INCLUDED.
3. PROVIDE A TEMPORARY FILTER CLOTH COVERED WITH GRAVEL OVER ANY PROPOSED FILTERS.
4. INSTALL A TEMPORARY TURBIDITY SCREEN AT ALL CONTROL STRUCTURES.
5. CONSTRUCT A TEMPORARY PERIMETER BERM AS NECESSARY TO DIRECT ALL RUNOFF WITHIN ANY AREA PLANNED FOR CLEARING.
6. MAINTAIN FILTER DURING CONSTRUCTION TO PROVIDE CONTINUOUS OPERATION.
7. UPON PERFORMING FINAL GRADING, THE CONTRACTOR SHALL REMOVE ALL SILTS, CLAYS & OTHER DELETERIOUS MATERIAL FROM THE BOTTOM OF ALL STORMWATER MANAGEMENT AREAS PRIOR TO GRASSING.
8. AFTER ACHIEVING A NON–ERODIBLE COVER OF GRASS, REMOVE TEMPORARY FILTER CLOTH & GRAVEL OVER FILTERS & REPLACE WITH NEW FILTER CLOTH & COVER MATERIAL IN ACCORDANCE WITH THE PLANS & SPECIFICATIONS.
9. NOTIFY THE OWNER FOR FINAL INSPECTION.
10. UPON FINAL APPROVAL FROM OWNER, REMOVE ALL TEMPORARY EROSION & SEDIMENT CONTROL FACILITIES.

NOTE: GENERAL NOTES & SPECIFICATIONS SHOWN ON THIS SHEET ARE APPLICABLE TO THIS PROJECT UNLESS OTHERWISE NOTED. THE PROJECT NOTES & PLANS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES & SPECIFICATIONS SHOWN ON THIS SHEET.

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
PROVIDED BY BANKS ENGINEERING

PREPARED FOR:

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NO.	DATE	REVISION DESCRIPTION	BY

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RYAN W. POWERS, P.E.
FL LIC. NO. 82437

GENERAL NOTES & SPECIFICATIONS
BISCAYNE LANDING
CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3–25–19	4272	GN–SP	RWP	DCT	CWR	NTS	2

ABBREVIATIONS

ABD	ABANDONED
AC	ACRE
ACCEL	ACCELERATION
ADJ	ADJUST
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
AM	11:59 MIDNIGHT UNTIL 12:00 NOON
APPL	APPLICATION
APPROX	APPROXIMATE
ARV	AIR RELIEF VALVE
ASPH	ASPHALT
ASSEM	ASSEMBLY
ATTN	ATTENTION
AUX	AUXILIARY
AVE	AVENUE
AWG	AMERICAN WIRE GAUGE
BC	BACK OF CURB
BCCMP	BITUMINOUS COATED CORRUGATED METAL PIPE
BE	BURIED ELECTRIC
BEG	BEGIN
BIT	BITUMINOUS
BK	BACK
BL	BASELINE
BLC	BASELINE CONTROL
BLDG	BUILDING
BLKHD	BULKHEAD
BLVD	BOULEVARD
BM	BENCHMARK
BNDRY	BOUNDARY
BOT	BOTTOM
BP	BORROW PIT
BR	BRIDGE
BRG	BEARING
BT	BURIED TELEPHONE
BTFLY	BUTTERFLY
BTWN	BETWEEN
BW	BOTTOM WIDTH
C&G	CURB AND GUTTER
CIP	CAST IN PLACE
CA	COURSE AGGREGATE
CAP	CORRUGATED ALUMINUM PIPE
CASP	CORRUGATED ALUMINIZED STEEL PIPE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CBC	CONCRETE BOX CULVERT
CBS	CONCRETE BOX STRUCTURE
CC	CENTER TO CENTER
CD	CROSS DRAIN
CEM	CEMENT
CF	CUBIC FOOT
CFS	CUBIC FOOT PER SECOND
CH	CHANNEL
CI	CAST IRON
CIP	CAST IRON PIPE
CIRC	CIRCUMFERENCE
CL	CENTERLINE
CLEAR	CLEARANCE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CO	CLEAN OUT
COL	COLUMN
COM	COMMERCIAL
COMP	COMPOSITE
CON	CONNECT
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUATION
CONTR	CONTRACTOR
COORD	COORDINATE
COR	CORNER
CORR	CORRUGATED
COV	COVER
CP	CONCRETE PIPE
CPE	CORRUGATED POLYETHYLENE PIPE
CR	CONTROL RADIUS
CRS	COURSE
CSP	CORRUGATED STEEL PIPE
CTR	CENTER
CY	CUBIC YARD
CULV	CULVERT
CWE	CONTROL WATER ELEVATION
D	DEPTH
DIA	DIAMETER
DA	DRAINAGE AREA
DBH	DIAMETER AT BREAST HEIGHT
DBI	DITCH BOTTOM INLET
DBL	DOUBLE
DE	DRAINAGE EASEMENT
DECEL	DECELERATION
DEG	DEGREE
DELIN	DELINEATORS
DEPT	DEPARTMENT
DET	DETECTABLE
DFE	DESIGN FLOOD ELEVATION
DGN	DESIGN
DHW	DESIGN HIGH WATER
DHWE	DESIGN HIGH WATER ELEVATION
DHWL	DESIGN HIGH WATER LEVEL
DI	DROP INLET
DIM	DIMENSION
DIST	DISTANCE
DR	DRIVE
DRWY	DRIVEWAY
DS	DESIGN SPEED
DSWT	DRY SEASON WATER TABLE
DT	DITCH
DWG	DRAWING
E	EAST
EOP	EDGE OF PAVEMENT
EA	EACH
EB	EASTBOUND
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRIC
ELLIP	ELLIPTICAL
EMBED	EMBEDMENT
EMBK	EMBANKMENT
ENCL	ENCLOSURE
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EST	ESTABLISHED
ESTM	ESTIMATE
ETC	ET CETERA
EW	ENDWALL
EX	EXCEPT
EXC	EXCAVATION
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTENSION
FL	FLOWLINE
FS	FLORIDA STATUTES
FAC	FLORIDA ADMINISTRATIVE CODE
FC	FRICTION COURSE
FD	FRENCH DRAIN
FDN	FOUNDATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FE	FLOOR ELEVATION
FED	FEDERAL
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FLA	FLORIDA
FLEX	FLEXIBLE
FM	FORCE MAIN
FOC	FIBER OPTIC CABLE
FR	FRAME
FT	FOOT OR FEET
FTB	FLOATING TURBIDITY BARRIER
FURN	FURNISH

GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GAR	GARAGE
GB	GRADE BREAK
GD	GUTTER DRAIN
GIP	GALVANIZED IRON PIPE
GM	GAS MAIN
GP	GRADE POINT
GR	GRADE OR GRATE
GRC	GALVANIZED RIGID CONDUIT
GRD	GROUND
GTTR	GUTTER
GV	GATE VALVE
HS	HIGH STRENGTH
HB	HAY BALES
HC	HANDICAPPED OR HORIZONTAL CLEARANCE
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HNDRL	HANDRAIL
HOA	HOME OWNERS ASSOCIATION
HOR	HORIZONTAL
HP	HIGH POINT OR HIGH PRESSURE
HR	HOUR
HSE	HOUSE
HT	HEIGHT
HW	HIGH WATER
HWY	HIGHWAY
HYD	HYDRAULIC
HZ	HERTZ
ID	INSIDE DIAMETER OR IDENTIFICATION
IN	INCH(ES)
INC	INCORPORATED OR INCLUDING
IND	INDUSTRY
INSTALL	INSTALLED
INT	INTERIOR
INV	INVERT
IP	IRON PIPE
IR	IRON ROD
ISECT	INTERSECTION
ISL	ISLAND
JB	JUNCTION BOX
JCT	JUNCTION
JT	JOINT
K	DESIGN HOUR FACTOR
KWH	KILOWATT-HOUR
L	LENGTH
L/W	LIGHTWEIGHT
LA	LIMITED ACCESS
LAT	LATITUDE
LB	POUNDS
LB/SY	POUNDS PER SQUARE YARDS
LBR	LIME ROCK BEARING RATIO
LF	LINEAR FEET (FOOT)
LGTH	LENGTH
LIN	LINEAR
LM	LUMEN
LME	LAKE MAINTENANCE EASEMENT
LMRK	LIME ROCK
LOC	LOCATION
LONG	LONGITUDE
LS	LUMP SUM OR LANDSCAPE
LSB	LANDSCAPE BUFFER
LT	LEFT TURN
LTD	LIMITED
LUM	LUMINAIRE
LX	LUX
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB	MEDIAN BARRIER
MED	MEDIAN
MES	MITERED END SECTION
MFG	MANUFACTURER
MH	MANHOLE
MHW	MEAN HIGH WATER
MI	MILE
MID	MIDDLE
MIL	ONE-THOUSANDTH OF AN INCH
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MLW	MEAN LOW WATER
MOBL	MOBILIZATION
MOD	MODIFIED
MON	MONUMENT
MOT	MAINTENANCE OF TRAFFIC
MP	MILE POST
MPH	MILES PER HOUR
MSL	MEAN SEA LEVEL
MTD	MOUNTED
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
N&C	NAIL AND CAP
N&D	NAIL AND DISK
NA	NOT APPLICABLE
NAVD	NATIONAL AMERICAN VERTICAL DATUM
NB	NORTHBOUND
NE	NORTHEAST
NEMA	NATIONAL ELECTRIC MANUFACTURES ASSOCIATION
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NHW	NORMAL HIGH WATER
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NORM	NORMAL
NTS	NOT TO SCALE
NW	NORTHWEST
NWL	NORMAL WATER LEVEL
OBG	OPTIONAL BASE GROUP
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OVERHEAD ELECTRIC
OH	OVERHEAD
OPT	OPTIONAL
OT	OVERHEAD TELEPHONE
PAR	PARALLEL
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PCBC	PRECAST CONCRETE BOX CULVERT
PCE	PERMANENT CONSTRUCTION EASEMENT
PE	PROFESSIONAL ENGINEER
PED	PEDESTRIAN
PEN	PENETRATION
PG	PROFILE GRADE
PGL	PROFILE GRADE LINE
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PARKING
PKWY	PARKWAY
PL	PROPERTY LINE
PM	12:00 NOON UNTIL 11:59 MIDNIGHT
POC	POINT OF CONNECTION OR POINT OF CURVE
PP	POWER POLE
PR	PAIR
PRC	POINT OF REVERSE CURVATURE
PRCST	PRECAST
PREST	PRESTRESSED
PRM	PERMANENT REFERENCE MONUMENT
PROD	PRODUCT
PROJ	PROJECT
PROP	PROPOSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSU	PRESTRESSED SLAB UNIT
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
Q	PEAK DISCHARGE OR FLOW VOLUME
R	RADIUS
RT	RIGHT
ROW	RIGHT OF WAY
RC	REVERSE CROWN

RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
RDSD	ROADSIDE
RDWY	ROADWAY
REC	RECREATIONAL
RECT	RECTICULINE
REF	REFERENCE
REFL	REFLECTIVE
REG	REGISTERED
REINF	REINFORCED
RELOC	RELOCATED
REM	REMOVAL
RED	REDUCER
REPL	REPLACE
REQ	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RM	RE-USE MAIN OR REFERENCE MONUMENT
RP	REFERENCE POINT
RPM	RAISED RELFECTIVE PAVEMENT MARKERS
RR	RAILROAD
RSF	RESURFACE
SAN	SANITARY
SB	SOUTHBOUND
SCH	SCHEDULE
SD	STORMDRAIN
SE	SOUTHEAST
SECT	SECTION
SED	SEDIMENT
SEP	SEPARATION
SG	SUBGRADE
SHT	SHEET
SHLDR	SHOULDER
SHW	SEASONAL HIGH WATER
SHWT	SEASONAL HIGH WATER TABLE
SP	SUPER PAVE
SPEC	SPECIFICATION
SQ	SQUARE
SF	SQUARE FOOT
SQ IN	SQUARE INCH
SY	SQUARE YARD
SR	STATE ROAD
SS	SANITARY SEWER OR STAINLESS STEEL
ST	STREET
STA	STATION
STAB	STABILIZATION
STB	STAKED TURBIDITY BARRIER
STD	STANDARD
STGE	STORAGE
STL	STEEL
STR	STRUCTURE
STY	STORY
SUB	SUB SOIL
SUBST	SUBSTITUTE
SUPPTS	SUPPORTS
SUR	SURVEY
SURF	SURFACE
SW	SIDEWALK OR SOUTHWEST
SWMA	STORM WATER MANAGEMENT AREA
SYM	SYMMETRICAL
SYS	SYSTEM
TWP	TOWNSHIP
TAN	TANGENT
TC	TANGENT TO CURVE
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEL	TELEPHONE
TEMP	TEMPORARY
TK	TRUCK
THICK	THICKNESS
TIS	TRAFFIC IMPACT STATEMENT
TN	TON
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TRAF	TRAFFIC
TREAT	TREATMENT
TW	TOP OF WALL
TYP	TYPICAL
UE	UTILITY EASEMENT
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNDDR	UNDER DRAIN
USGS	UNITED STATES GEOLOGICAL SERVICE
UTIL	UTILITIES
UV	ULTRAVIOLET
V	VOLT
VAR	VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEH	VEHICLE
VERT	VERTICAL
VOL	VOLUME
VW	VARIABLE WIDTH
W	WIDTH OR WATT
W/	WITH
WB	WESTBOUND
WM	WATER MAIN
WSWT	WET SEASON WATER TABLE
WT	WATER TABLE
WWF	WELDED WIRE FABRIC
WWR	WELDED WIRE REINFORCING
XING	CROSSING
XSEC	CROSS SECTION
YD	YARD
YR	YEAR

NOTE:

1. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE TO FIELD LOCATE HORIZONTAL & VERTICAL LOCATION PRIOR TO CONSTRUCTION.
2. IT SHALL BE THE DEVELOPERS' RESPONSIBILITY TO PROTECT ALL COUNTY AND FLORIDA DEPARTMENT OF TRANSPORTATION OWNED AND MAINTAINED FACILITIES. ANY/ALL COSTS ASSOCIATED WITH ALTERATIONS, RELOCATION OR REPAIRS MADE NECESSARY BY THIS DEVELOPMENT SHALL BE BORNE BY EITHER THE OWNER, DEVELOPER AND/OR CONTRACTOR. SPLICES IN THE FIBER OPTIC CABLE OR THE ADDITION OF ADDITIONAL PULL/JUNCTION BOXES WILL NOT BE PERMITTED. IN THE EVENT A CABLE IS CUT, DAMAGED OR REQUIRES RELOCATION, THE CABLE(S) SHALL BE RESTORED BACK TO THE ORIGINAL CONFIGURATION. ORIGINAL CONFIGURATION IS DEFINED AS SYSTEM STATUS, LAYOUT AND DESIGN PRIOR TO ANY WORK COMMENCING.
3. A LIGHTING DISTRICT RIGHT OF WAY USE PERMIT WILL BE REQUIRED FOR ANY WORK ASSOCIATED WITH INSPECTION, RELOCATION OR THE REPAIR OF ANY EXISTING COUNTY OWNED AND MAINTAINED FACILITY WITHIN THE SR 776 PUBLIC RIGHTS-OF-WAY. SPECIFIC STIPULATIONS OR CONDITIONS WILL BE IMPOSED AT TIME OF PERMIT APPLICATION. IN THE EVENT COUNTY OWNED FACILITIES REQUIRE ALTERATIONS, RELOCATION AND/OR REPAIR, THAT WORK WILL BE PERFORMED BY CHARLOTTE COUNTY FORCES OR FORCES CONTRACTED BY OR APPROVED BY CHARLOTTE COUNTY TO MAKE THE NECESSARY CORRECTIONS. EITHER THE OWNER, DEVELOPER AND/OR CONTRACTOR WILL POST A CHECK IN AN AMOUNT SUFFICIENT TO COVER MENTIONED COSTS OR THE COSTS NEEDED TO INSPECT WORK TO ENSURE WORK PERFORMED WITHIN THE RIGHT-OF-WAY IS PERFORMED IN ACCORDANCE WITH AND ACCEPTABLE TO COUNTY AND FDOT STANDARDS. AN ESTIMATED AMOUNT WILL BE CALCULATED BASED UPON THE TYPE OF WORK REQUIRED. SHOULD THE COSTS TO ALTER, RELOCATE, REPAIR OR INSPECT EXCEED THE ESTIMATED AND POSTED AMOUNT, THE PERMIT HOLDER BY ACCEPTANCE OF THE PERMIT CONDITIONS, WILL BE CHARGED AND AGREE TO REIMBURSE CHARLOTTE COUNTY, ANY ADDITIONAL COSTS INCURRED. NO WORK SHALL COMMENCE UNTIL THIS CHECK IS POSTED AND NO CO WILL BE GIVEN UNTIL ANY OUTSTANDING MONIES DUE THE COUNTY ARE SETTLED.

GENERAL SPECIFICATIONS:

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH FLORIDA DEPT. OF TRANSPORTATION (F.D.O.T.) STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, CURRENT EDITION.
2. THE CONTRACTOR SHALL SUPPLY SATISFACTORY DENSITY TESTS OF SUBGRADE & LIMEROCK BASE MATERIALS TO THE ENGINEER PRIOR TO PAYMENT &/OR FINAL ACCEPTANCE. ONE TEST PER COURSE PER 600 SQUARE YARDS.
3. ALL REINFORCED CONCRETE PIPE (RCP) CULVERTS SHALL MEET ASTM C 76, CLASS III, TYPE "B" WALL FOR ROUND PIPE & MEET ASTM C 507, TABLE I FOR ELLIPTICAL PIPE & OTHERWISE BE INSTALLED & MANUFACTURED IN ACCORDANCE WITH F.D.O.T. SECTIONS 430 & 941.
4. CONTRACTOR SHALL PROVIDE & MAINTAIN TRAFFIC CONTROL IN ACCORDANCE WITH F.D.O.T. ROADWAY & TRAFFIC DESIGN STANDARDS CURRENT EDITION & THE FEDERAL HIGHWAY ADMINISTRATION'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION.
5. CONTRACTOR SHALL SEED & MULCH ALL DISTURBED AREAS & OTHERWISE RESTORE ALL AREAS TO EXISTING CONDITION OR BETTER.
6. ALL PAVEMENT STRIPING TO BE TWO COATS OF HEAVY DUTY ACRYLIC BASED TRAFFIC PAINT.
7. ALL TRAFFIC SIGNS TO BE DRIVEN STEEL POST TYPE GROUND SIGNS IN ACCORDANCE WITH F.D.O.T. INDEX DRAWINGS 11860 & 11863 (80 M.P.H. WIND LOAD) & F.D.O.T. SPECIFICATIONS SECTION 700-HIGHWAY SIGNING.
8. ALL WORK SHOWN BY INDEX NO. SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY & TRAFFIC DESIGN STANDARDS CURRENT EDITION.

DRAINAGE GENERAL NOTES:

1. ALL EXISTING ELEVATIONS IN PLAN SET ARE IN NAVD 88 DATUM.
2. ALL PROPOSED ELEVATIONS ARE IN NAVD 88 DATUM.
3. CONTRACTOR SHALL MAINTAIN A CURRENT AND UPDATED SET OF AS-BUILT DRAWINGS AT ALL TIMES AND PROVIDE ONE COPY TO THE ENGINEER UPON COMPLETION OF CONSTRUCTION.
4. ALL BACKFILL SHALL BE COMPACTED IN STRICT ACCORDANCE WITH THE BEDDING DETAILS.
5. CONTRACTOR SHALL COORDINATE ALL WORK IN THE COUNTY RIGHT-OF-WAY WITH THE CHARLOTTE COUNTY D.O.T.&E.
6. ALL REINFORCED CONCRETE PIPE (RCP) CULVERTS SHALL MEET ASTM C 76, CLASS III, TYPE "B" WALL FOR ROUND PIPE AND MEET ASTM C 507, TABLE I FOR ELLIPTICAL PIPE AND OTHERWISE BE INSTALLED AND MANUFACTURED IN ACCORDANCE WITH F.D.O.T. SECTIONS 430 & 941.
7. ALL ROOF TOP DRAINS ARE TO BE DIRECTED TO DRAINAGE AREA.
8. CONTRACTOR SHALL SOD OR SEED & MULCH ALL DISTURBED AREAS ON-SITE AND OTHERWISE RESTORE ALL AREAS TO EXISTING CONDITION OR BETTER.
9. SOD ALL SWALE AND TREATMENT AREAS.
10. CONTRACTOR SHALL SOD ALL DISTURBED AREAS WITHIN THE COUNTY RIGHT-OF-WAY
11. THE GRADES REPRESENT THE FINISHED GRADE ON TOP OF THE SOD.
11. A RIGHT-OF-WAY USE PERMIT WILL BE REQUIRED FOR ALL WORK WITHIN RIGHT-OF-WAY.
12. SHOP DRAWINGS ARE REQUIRED FOR ALL STRUCTURES.
13. THE PROPOSED MITERED END SECTIONS WITHIN COUNTY RIGHT OF WAY, SHALL EXTEND BEYOND THE PROPOSED EDGE OF PAVEMENT A MINIMUM OF 6'-0".
14. CONTRACTOR RESPONSIBLE FOR WATERING AND MOWING OF SOD PLACED IN THE ROW UNTIL ESTABLISHMENT AND FINAL ACCEPTANCE BY THE COUNTY.
15. CURB ELEVATIONS SHOWN ARE FOR THE LOW SIDE OF THE CURB UNLESS OTHERWISE NOTED.
16. ALL SLOPES TO BE 4:1 MAXIMUM. (UNLESS NOTED OTHERWISE)
17. ALL WORK SHOWN BY INDEX NO. (DESIGN STANDARDS/STANDARD PLANS) SHALL BE IN ACCORDANCE WITH FDOT STANDARD PLANS FOR ROAD & BRIDGE CONSTRUCTION OR FDOT DESIGN MANUAL, LATEST EDITION.

BMP GENERAL NOTES:

SCHEDULE OF BMP IMPLEMENTATION:

1. INSTALL ALL TEMPORARY BMP MEASURES PRIOR TO START OF CONSTRUCTION.
2. INSTALL ALL PERMANENT BMP MEASURES IMMEDIATELY AFTER FINAL GRADING.
3. REMOVE TEMPORARY BMP FEATURES AS APPLICABLE.

PROJECT INFORMATION:

1. THIS PROJECT PRESENTS NO ADVERSE IMPACTS ON LOCAL GROUNDS OR SURFACE WATERS, AND DOES NOT ADVERSELY IMPACT THE FLOOD ZONE.
2. THIS SITE CAN BE USED FOR THE DEVELOPMENT AS SHOWN. WITHOUT UNIQUE DANGER FROM FLOOD, ADVERSE SOIL, AND/OR FOUNDATION CONDITIONS, SUBJECT TO PROPER GEOTECHNICAL INVESTIGATION, SITE DESIGN, AND STRUCTURE DESIGN.
3. THE PROJECT DOES NOT IMPACT ANY KNOWN UNMITIGATED WETLANDS.
4. NO KNOWN ARCHAEOLOGICAL SITES EXIST WITHIN THE PROJECT AREA.
5. THE CONTRACTOR SHALL SUPPLY BATHYMETRIC SURVEY ON ALL LAKES GREATER THAN 12' DEEP PRIOR TO FINAL ACCEPTANCE.

NOTES:

1. SURVEY LOCATION INFORMATION PROVIDED BY BANKS ENGINEERING.
2. A SEPARATE RIGHT-OF-WAY USE PERMIT WILL BE REQUIRED FOR ALL UTILITY WORK WITHIN THE PUBLIC RIGHT-OF-WAY. SPECIFIC STIPULATIONS OR CONDITIONS WILL BE IMPOSED A THE TIME OF PERMIT APPLICATION.
3. ALL SIDEWALKS SHALL MEET ADA STANDARDS.
4. ALL SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE.
5. ALL ELEVATIONS SHOWN ARE IN NAVD 88, TO CONVERT ELEVATIONS INTO NGVD 1929: +1.12 FEET CONVERSION FACTOR.

SITE DATA TABLE:

PROPERTY AREA:	125.93 ACRES
PROJECT AREA (DRAINAGE BASIN):	98.67 ACRES
CURRENT ZONING AND LAND USE:	PD (PLANNED DEVELOPMENT) (VACANT)
PROPOSED USE:	MIXED USE PLANNED DEVELOPMENT (PD)

LANDUSE BREAKDOWN:

PROPERTY AREA:	125.93 AC	(100%)
PROJECT AREA (DRAINAGE BASIN):	98.67 AC	(78.4%) (100%)
RESIDENTIAL TRACTS:	57.30 AC	(58.1%)
LAKES:	22.07 AC	(22.3%)
PRIVATE RIGHT OF WAY	11.63 AC	(11.8%)
COMMON OPEN AREA (GREEN SPACE):	6.64 AC	(6.7%)
AMENITY IMPROVEMENT AREA:	0.74 AC	(0.8%)
AMENITY OPEN AREA:	0.29 AC	(0.3%)
OPEN GREEN SPACE:	18.48 AC	(14.7%)
PRESERVATION AREA:	8.78 AC	(7.0%) (100%)
WETLAND PRESERVE (WL-1):	2.33 AC	(26.5%)
UPLAND PRESERVE (OSW-1):	6.45 AC	(73.5%)

FLOOD ZONE:

PARCEL LIES IN FLOOD ZONES X, 8AE
FEMA FLOOD MAPS 12015C0040F DATED 5/5/2003,
12015C0202F DATED 5/5/2003, 12015C0043F DATED 5/5/2003,
12015C0206F DATED 5/5/2003.

UNIT BREAKDOWN:

SINGLE FAMILY DETACHED (52'X130')	233
SINGLE FAMILY ATTACHED VILLAS (72'X130' 2 UNITS/LOT)	122
TOTAL UNITS:	**355**

DEVELOPMENT STANDARDS:

DESCRIPTION	SINGLE FAMILY DETATCHED	SINGLE FAMILY ATTACHED VILLAS
REQUIRED PARKING	2 / UNIT	2 / UNIT
MIN. LOT REQUIREMENT (SQ. FT.)	5,000	3,200
MAX. PERCENTAGE OF LOT COVERAGE (%)	60	70
MIN. WIDTH (FT.)	50	35
MIN. FRONT YARD (FT.)	20	20
MIN. SIDE YARD INTERIOR (FT.)	5	5/0**
MIN. SIDE YARD ABUTTING A ROAD (FT.)	15	15
MAX. BUILDING HEIGHT (FT.)	38	38
MIN. REAR YARD ABUTTING A LOT (FT.)	10	10
MIN. REAR YARD ABUTTING WATER (FT.)	15	15
MIN. REAR YARD ABUTTING A ROAD (FT.)	15	15
SETBACK FOR ACCESSORY STRUCTURE FROM REAR LOT LINE (FT.)	SAME AS PRINCIPAL BUILDING	
SETBACK FOR ACCESSORY STRUCTURE FROM SIDE YARD (FT.)	SAME AS PRINCIPAL BUILDING	
SETBACK FOR ACCESSORY STRUCTURE ABUTTING A ROAD (FT.)	SAME AS PRINCIPAL BUILDING	
SETBACK FOR ACCESSORY STRUCTURE ABUTTING WATER (FT.)	SAME AS PRINCIPAL BUILDING	

NOTE:
** SINGLE FAMILY ATTACHED WILL HAVE 0' SIDE SETBACK ON ONE SIDE.

PARKING CALCULATION:

SINGLE FAMILY RESIDENTIAL

REQUIRED: 2.0 SPACES PER DWELLING UNIT
(358 UNITS) X (2.0)
=716 SPACES

PROVIDED: 2.0 SPACES PER DWELLING UNIT
(358 UNITS) X (2.0)
=716 SPACES

TOTAL REQUIRED SPACES: 716 SPACES

TOTAL PROVIDED SPACES: 716 SPACES

AMENITY AREA

PARKING FOR THE PROJECT AMENITY AREA WILL BE DETERMINED AND PROVIDED ONSITE AT THE TIME OF FINAL SITE PLAN APPROVAL.

DESIGN HIGH WATER ELEVATIONS:

LAKE DESIGN DATA

LAKE ID	A	CONTROL ELEVATION	100Y24H	25Y24H	TOB	TOB AREA
	(acres)	(ft) NAVD	(ft) NAVD	(ft) NAVD	(ft) NAVD	(acres)
LAKE A	0.48	5.00	8.35	7.77	8.66	0.79
LAKE B	1.76	5.00	8.25	7.73	8.58	2.31
LAKE C	2.71	6.50	8.33	7.84	7.84	3.04
LAKE D	1.06	6.50	8.46	7.94	7.94	1.18
LAKE E	0.55	6.50	8.47	7.95	8.77	0.67
LAKE F	7.39	6.50	8.09	7.71	7.71	7.92
LAKE G	2.52	6.50	7.83	7.57	8.25	2.73
LAKE H	1.48	6.50	7.6	7.42	8.04	1.6
LAKE I	1.03	6.50	7.52	7.29	7.52	1.13
LAKE J	3.09	5.50	6.24	5.89	6.25	3.28

1

OPEN SPACE:

COMMON OPEN AREA (GREEN SPACE):	25.35 AC
LAKES:	22.07 AC
OPEN HABITAT SPACE:	9.72 AC
AMENITY OPEN AREA:	0.29 AC

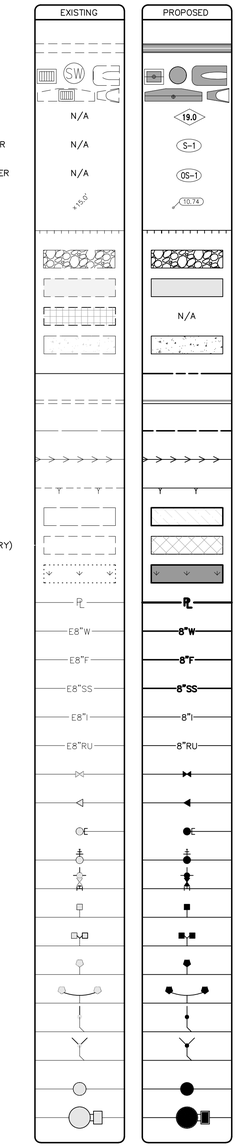
OPEN SPACE = (COMMON OPEN AREA + LAKES + OPEN HABITAT SPACE + AMENITY OPEN AREA) / PROPERTY AREA
= (25.12 AC + 22.07 AC + 9.72 AC + 0.29) / 125.93 AC
= 45.4%

OPEN HABITAT SPACE

REQUIRED: 5% OF PROJECT AREA=
(125.93 AC x 0.05) = 6.30 AC

PROVIDED: OPEN HABITAT SPACE ÷ PROPERTY AREA
(9.72 ÷ 125.93) = 7.7%

LEGEND



BISCAYNE LANDING

PRIOR TO EXCAVATION CONTACT SUNSHINE STATE ONE - CALL OF FLORIDA
1 (800) 432 - 4770

CONTRACTOR SHALL SUBMIT FOR N.P.D.E.S. PERMIT A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.

PERMIT APPLICATION SHALL BE SUBMITTED TO:

**N.P.D.E.S. STORMWATER NOTICES CENTER, MS # 2510,
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD,
TALLAHASSEE, FLORIDA
32399-2400**

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
PROVIDED BY BANKS ENGINEERING

PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

NO.	DATE	REVISION DESCRIPTION	BY
1	6-25-20	REVISED TOB ELEVATIONS	DCT

BANKS ENGINEERING
Professional Engineers, Planners, & Land Surveyors
Serving The State Of Florida

4161 TAMIAMI TRAIL - BLDG 5 UNIT 501
PORT CHARLOTTE, FLORIDA 33952
PHONE: (941) 625-1165 FAX: (941) 625-1149

ENGINEERING LICENSE # EB 6469
SURVEY LICENSE # LB 6690

WWW.BANKSENG.COM

RYAN W. POWERS, P.E.
FL LIC. NO. 82437

PROJECT NOTES AND LEGEND
BISCAYNE LANDING
CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_PN&L	RWP	DCT	CWR	N/A	3

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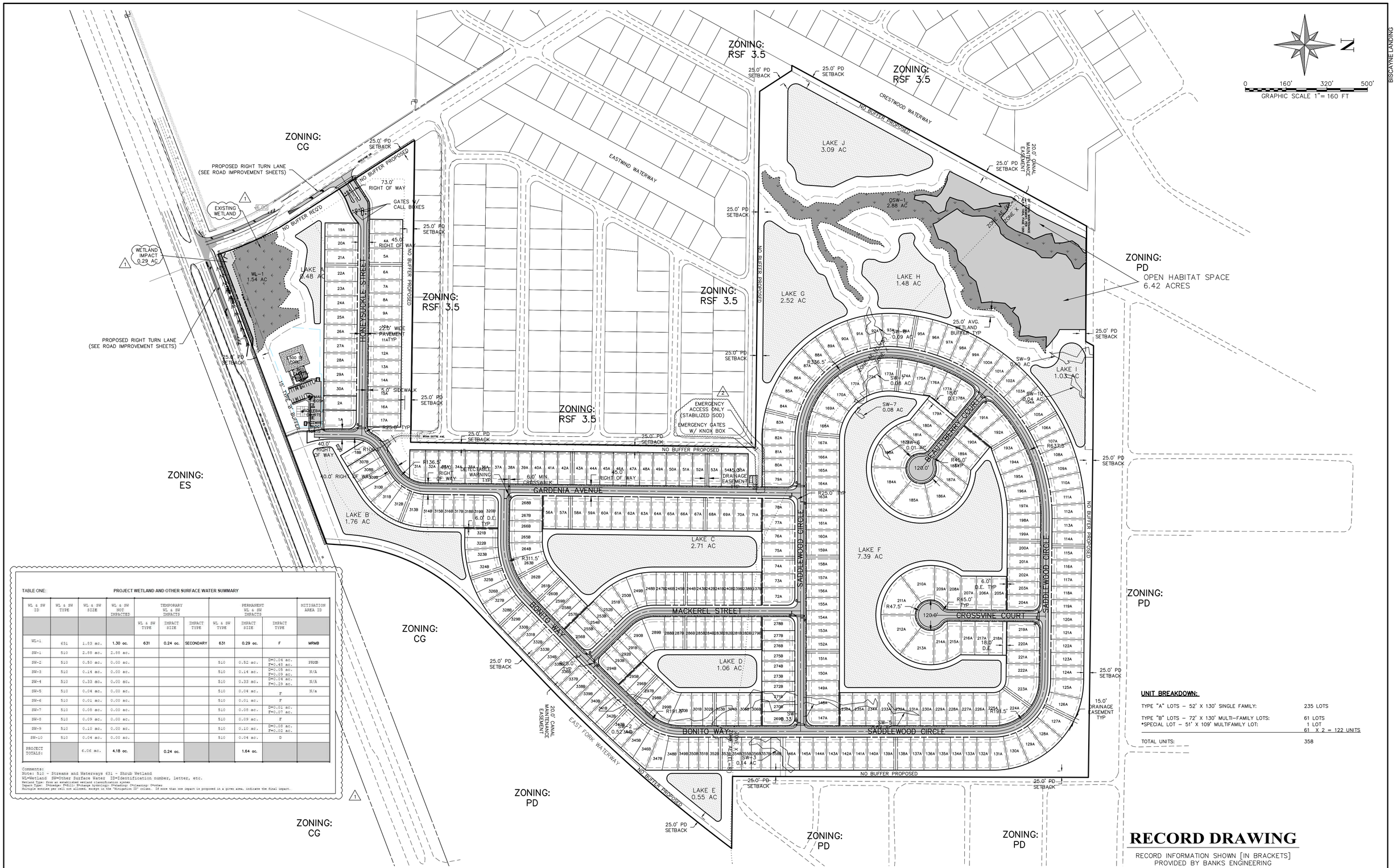

TABLE ONE: PROJECT WETLAND AND OTHER SURFACE WATER SUMMARY

WL & SW ID	WL & SW TYPE	WL & SW SIZE	WL & SW NOT IMPACTED	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION AREA ID
				WL & SW TYPE	IMPACT SIZE	IMPACT TYPE	WL & SW TYPE	IMPACT SIZE	IMPACT TYPE	
WL-1	631	1.53 ac.	1.30 ac.	631	0.24 ac.	SECONDARY	631	0.29 ac.	F	MRMB
SW-1	510	2.88 ac.	2.88 ac.							
SW-2	510	0.50 ac.	0.00 ac.				510	0.52 ac.	D=0.04 ac. F=0.48 ac.	PRMB
SW-3	510	0.14 ac.	0.00 ac.				510	0.14 ac.	D=0.05 ac. F=0.09 ac.	N/A
SW-4	510	0.33 ac.	0.00 ac.				510	0.33 ac.	D=0.04 ac. F=0.29 ac.	N/A
SW-5	510	0.04 ac.	0.00 ac.				510	0.04 ac.	F	N/a
SW-6	510	0.01 ac.	0.00 ac.				510	0.01 ac.	F	
SW-7	510	0.08 ac.	0.00 ac.				510	0.08 ac.	D=0.01 ac. F=0.07 ac.	
SW-8	510	0.09 ac.	0.00 ac.				510	0.09 ac.	F	
SW-9	510	0.10 ac.	0.00 ac.				510	0.10 ac.	D=0.08 ac. F=0.02 ac.	
SW-10	510	0.04 ac.	0.00 ac.				510	0.04 ac.	D	
PROJECT TOTALS:		6.06 ac.	4.18 ac.		0.24 ac.			1.64 ac.		

Comments:
Note: 510 - Streams and Waterways 631 - Shrub Wetland
WL=Wetland SW=Other Surface Water ID=Identification number, letter, etc.
Wetland Type: form an established wetland classification system
Impact Type: D=Dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other
Multiple entries per cell not allowed, except in the "Mitigation ID" column. If more than one impact is proposed in a given area, indicate the final impact.

UNIT BREAKDOWN:

TYPE "A" LOTS – 52' X 130' SINGLE FAMILY:	235 LOTS
TYPE "B" LOTS – 72' X 130' MULTI-FAMILY LOTS:	61 LOTS
*SPECIAL LOT – 51' X 109' MULTIFAMILY LOT:	1 LOT
	61 X 2 = 122 UNITS
TOTAL UNITS:	358

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS] PROVIDED BY BANKS ENGINEERING

PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

NO.	DATE	REVISION DESCRIPTION	BY
2	12-9-2020	REVISED EMERGENCY ACCESS POINT	DCT
1	12-1-20	REVISED TABLE ONE PER SITE PLAN CHANGES	DCT

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RYAN W. POWERS, P.E.
FL LIC. NO. 82437

SITE DEVELOPMENT PLAN

BISCAYNE LANDING

CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_SDP	RWP	DCT	CWR	1" = 160'	5

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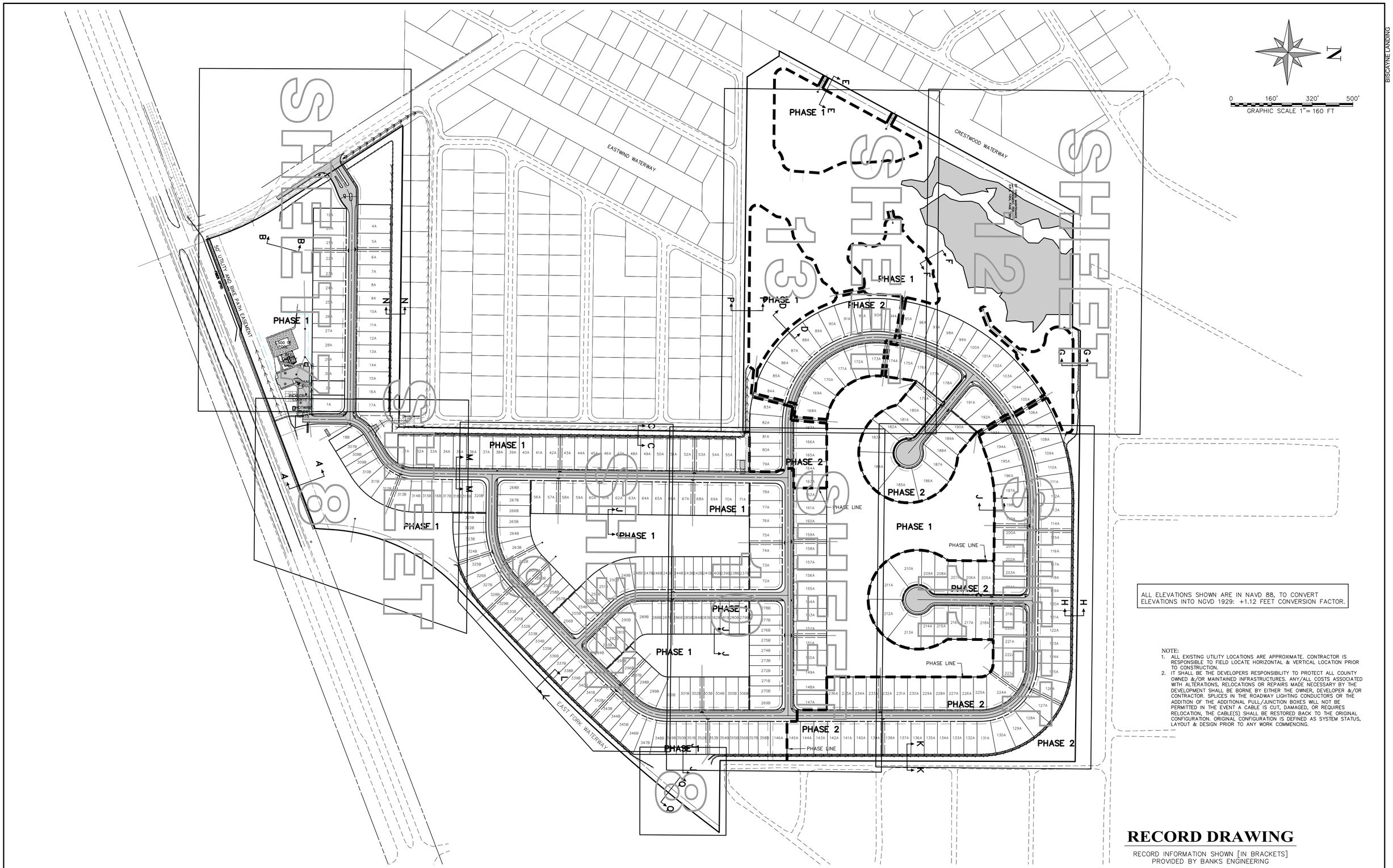

ALL ELEVATIONS SHOWN ARE IN NAVD 88, TO CONVERT ELEVATIONS INTO NGVD 1929: +1.12 FEET CONVERSION FACTOR.

NOTE:
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RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
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PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

NO.	DATE	REVISION DESCRIPTION	BY

BANKS ENGINEERING
Professional Engineers, Planners, & Land Surveyors
Serving The State Of Florida

4161 TAMIAMI TRAIL – BLDG 5 UNIT 501
PORT CHARLOTTE, FLORIDA 33952
PHONE: (941) 625-1165 FAX: (941) 625-1149

ENGINEERING LICENSE # EB 6469
SURVEY LICENSE # LB 6690

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RYAN W. POWERS, P.E.
FL LIC. NO. 82437

MASTER PAVING, GRADING AND DRAINAGE PLAN

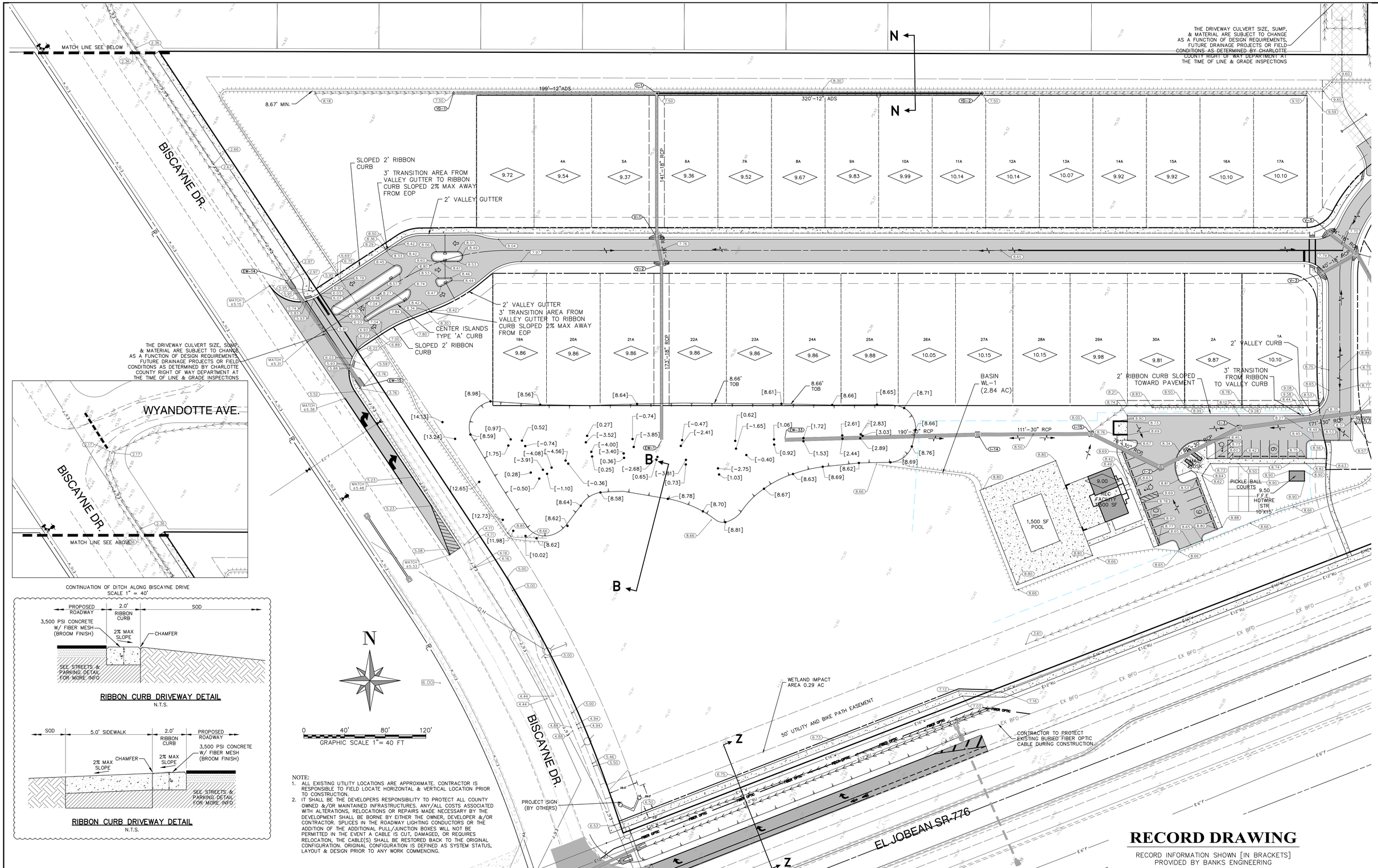
BISCAYNE LANDING

CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_MPGD	RWP	DCT	CWR	1" = 160'	6

BISCAYNE LANDING

S:\JOBS\4272\4272\ENGINEERING\REC-DWG\SITE\4272 - 07 - MPGD.DWG 9/9/2021 10:39 AM TODD VAWA



CONTINUATION OF DITCH ALONG BISCAYNE DRIVE
SCALE 1" = 40'

RIBBON CURB DRIVEWAY DETAIL
N.T.S.

RIBBON CURB DRIVEWAY DETAIL
N.T.S.

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FORT MYERS, FL 33966
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FL LIC. NO. 82437

PAVING, GRADING & DRAINAGE PLAN
BISCAYNE LANDING
CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_PGD-1	RWP	DCT	CWR	1" = 40'	7

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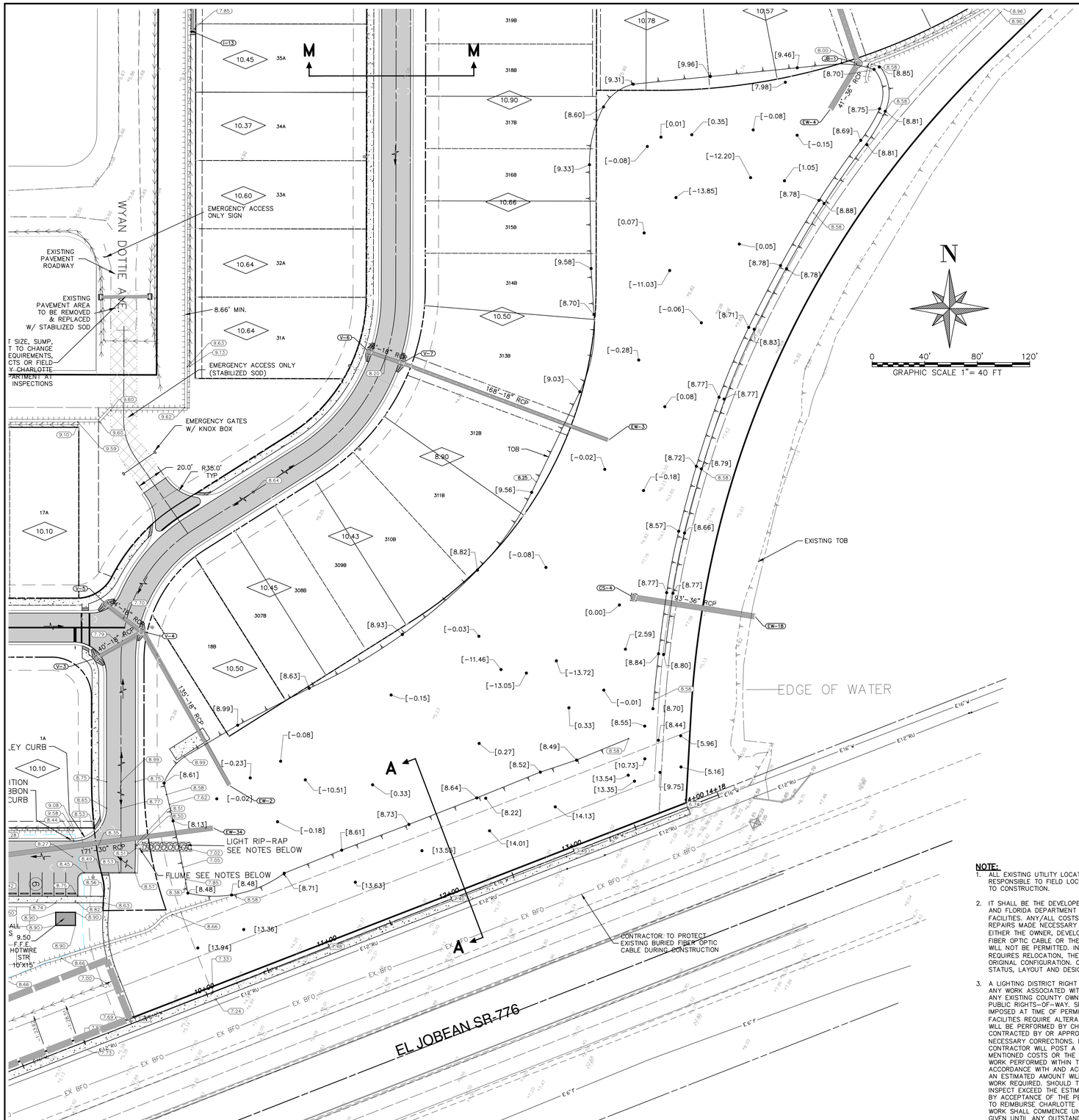

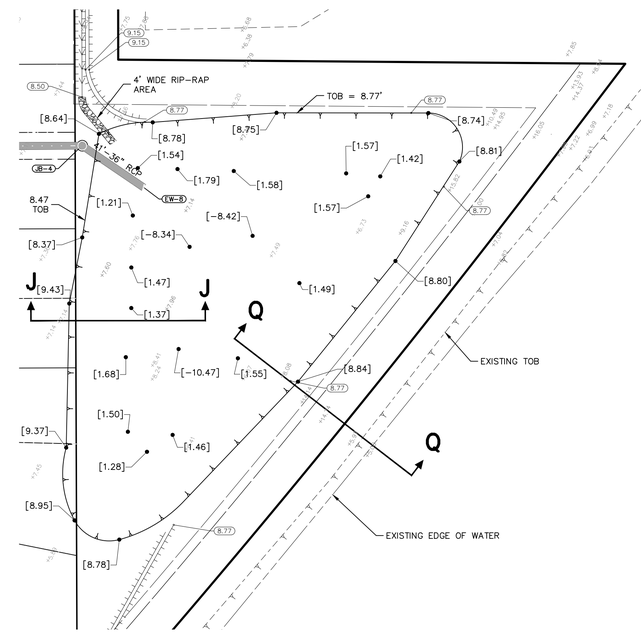

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3. A LIGHTING DISTRICT RIGHT OF WAY USE PERMIT WILL BE REQUIRED FOR ANY WORK ASSOCIATED WITH INSPECTION, RELOCATION OR THE REPAIR OF ANY EXISTING COUNTY OWNED AND MAINTAINED FACILITY WITHIN THE SR 776 PUBLIC RIGHTS-OF-WAY. SPECIFIC STIPULATIONS OR CONDITIONS WILL BE IMPOSED AT TIME OF PERMIT APPLICATION. IN THE EVENT COUNTY OWNED FACILITIES REQUIRE ALTERATIONS, RELOCATION AND/OR REPAIR, THAT WORK WILL BE PERFORMED BY CHARLOTTE COUNTY FORCES OR FORCES CONTRACTED BY OR APPROVED BY CHARLOTTE COUNTY TO MAKE THE NECESSARY CORRECTIONS. EITHER THE OWNER, DEVELOPER AND/OR CONTRACTOR WILL POST A CHECK IN AN AMOUNT SUFFICIENT TO COVER MENTIONED COSTS OR THE COSTS NEEDED TO INSPECT WORK TO ENSURE WORK PERFORMED WITHIN THE RIGHT-OF-WAY IS PERFORMED IN ACCORDANCE WITH AND ACCEPTABLE TO COUNTY AND FDOT STANDARDS. AN ESTIMATED AMOUNT WILL BE CALCULATED BASED UPON THE TYPE OF WORK REQUIRED. SHOULD THE COSTS TO ALTER, RELOCATE, REPAIR OR INSPECT EXCEED THE ESTIMATED AND POSTED AMOUNT, THE PERMIT HOLDER BY ACCEPTANCE OF THE PERMIT CONDITIONS, WILL BE CHARGED AND AGREE TO REIMBURSE CHARLOTTE COUNTY, ANY ADDITIONAL COSTS INCURRED. NO WORK SHALL COMMENCE UNTIL THIS CHECK IS POSTED AND NO CO WILL BE GIVEN UNTIL ANY OUTSTANDING MONIES DUE THE COUNTY ARE SETTLED.

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
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LAKE B LIGHT RIP-RAP NOTES:

1. FLUME TO BE CONCRETE 3' WIDE X 4' LONG 6" THICK (3000 PSI) WITH A TAPER TO THE CENTER FOR DRAINAGE FLOW
2. PROPOSED RIP-RAP TO EXTEND 2' ON EITHER SIDE OF FLUME & BE 12" DEEP
3. LIGHT RIP-RAP (4"-6" STONES) TO BE INSTALLED ON TOP OF 12" SUBBASE (LBR 40) WITH FILTER FABRIC IN BETWEEN RIP-RAP & SUBBASE
4. CURB SECTION CONNECTED TO FLUME TO HAVE POSITIVE DRAINAGE TOWARD LAKE B

PREPARED FOR:

LENNAR HOMES, LLC
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FORT MYERS, FL 33966
PHONE: 239-931-4778

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FL LIC. NO. 82437

PAVING, GRADING & DRAINAGE PLAN

BISCAYNE LANDING

CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_PGD-1	RWP	DCT	CWR	1" = 40'	8

BISCAYNE LANDING

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1	6-25-20	REVISED TOB ELEVS, REVISED PIPE SIZE, REVISED FDOT ELEV	DCT

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BISCAYNE LANDING

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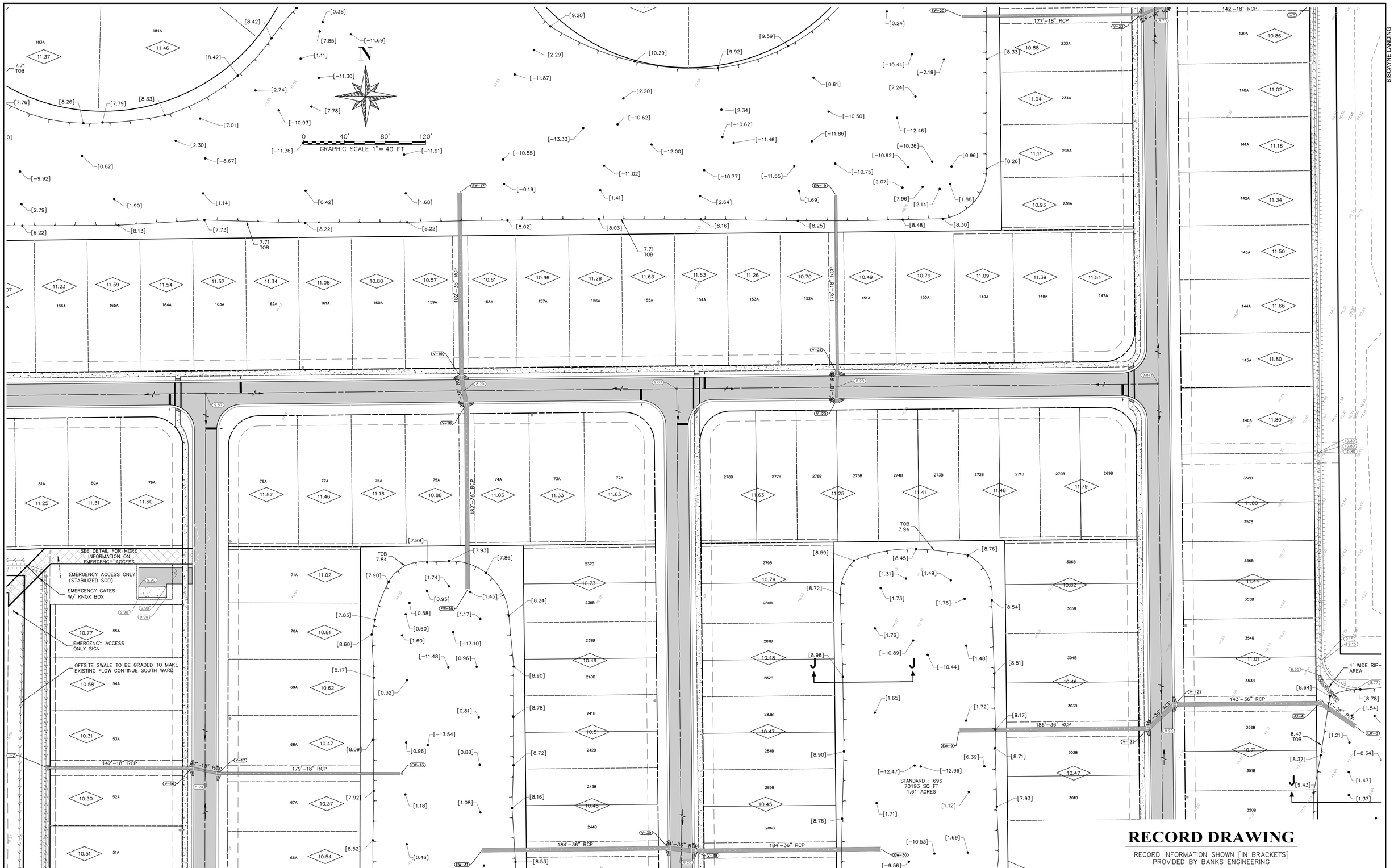

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CHARLOTTE COUNTY, FLORIDA

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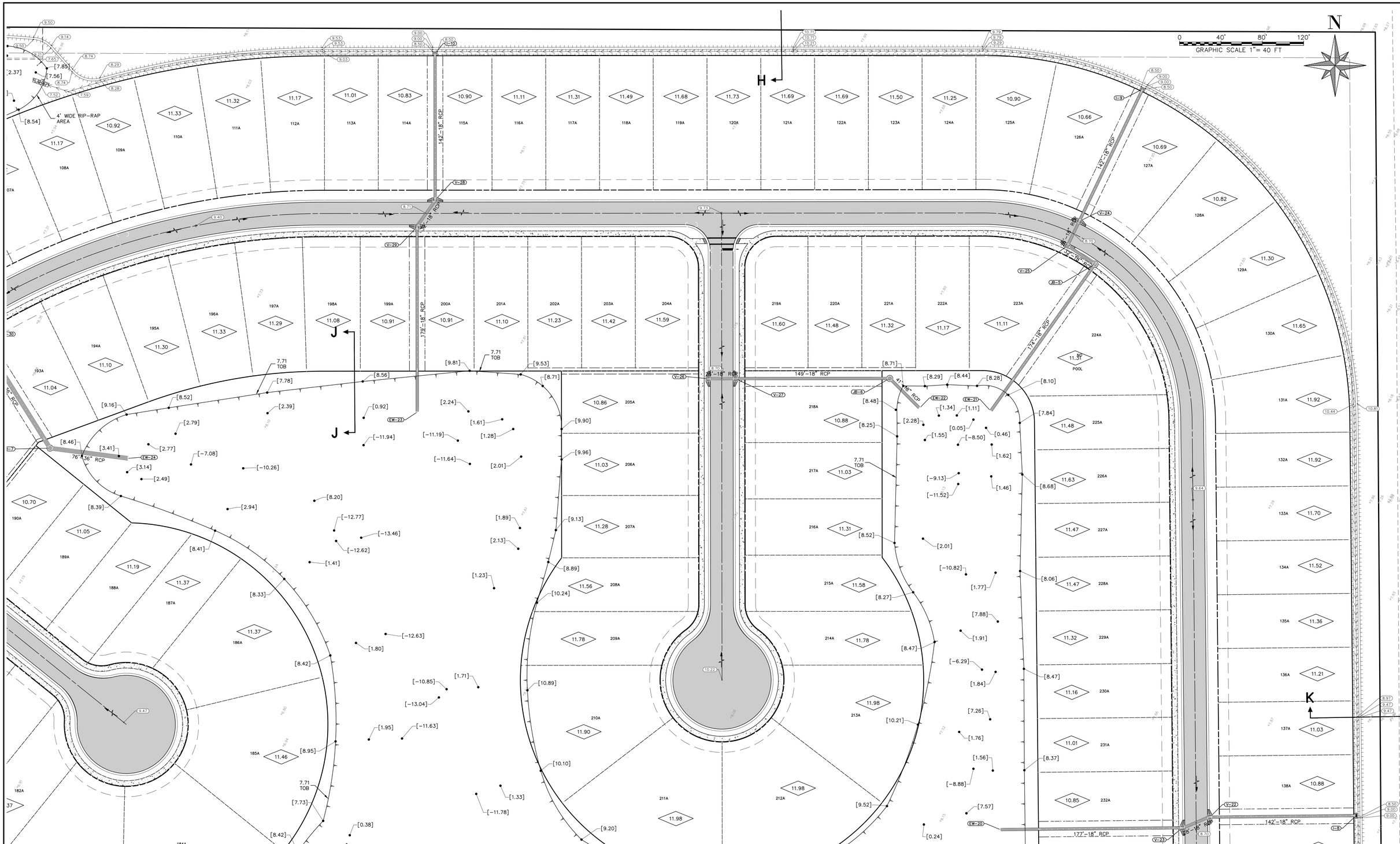

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BISCAYNE LANDING

CHARLOTTE COUNTY, FLORIDA

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3-25-19	4272	_PGD-1	RWP	DCT	CWR	1" = 40'	11

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BISCAYNE LANDING

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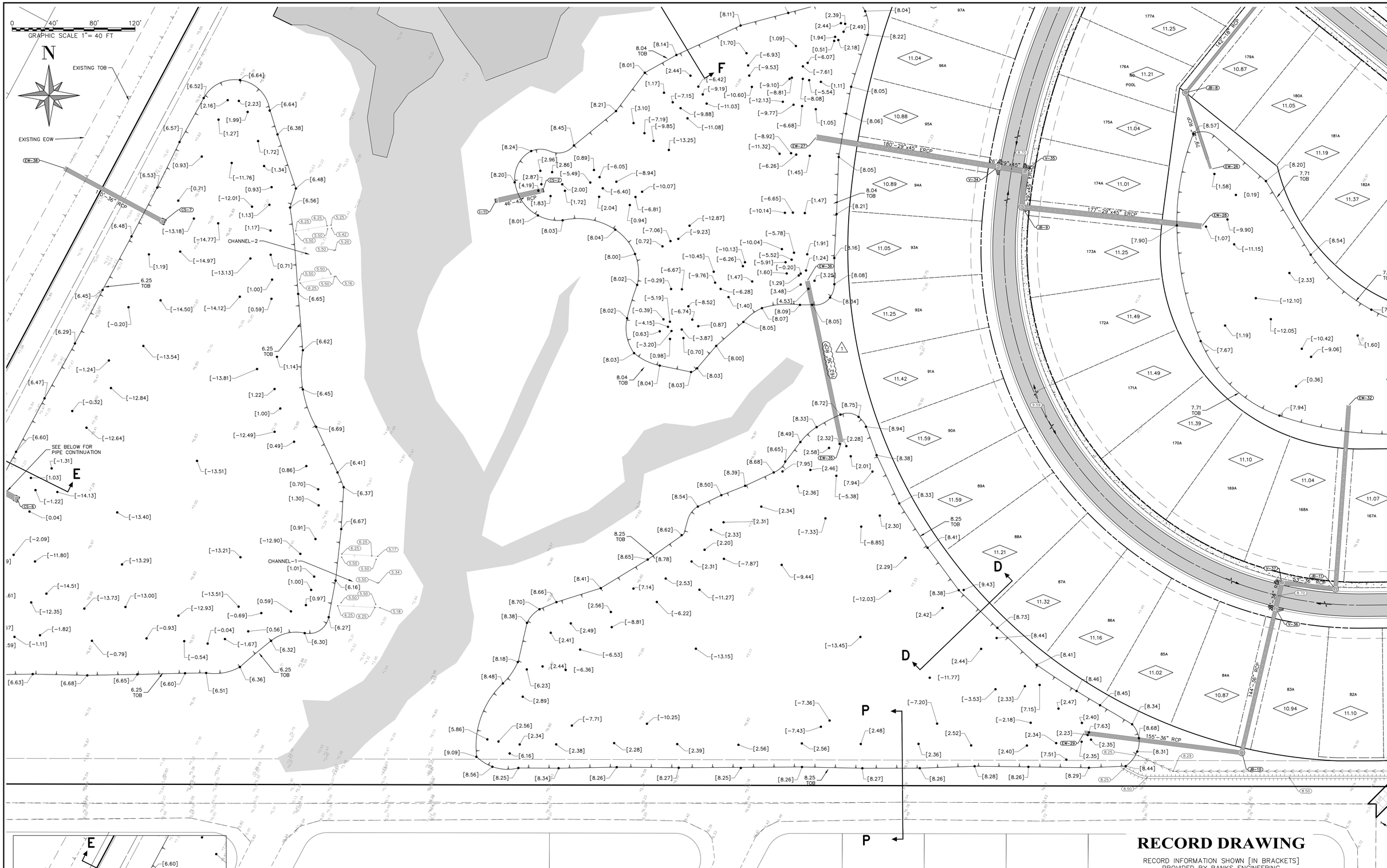

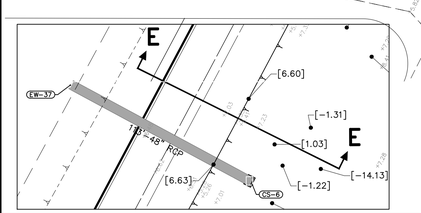

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3-25-19	4272	_PGD-1	RWP	DCT	CWR	1" = 40'	13

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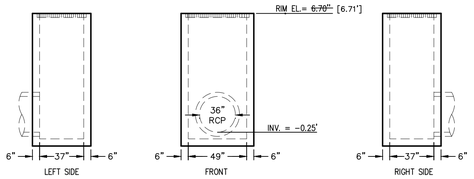
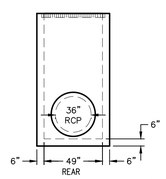
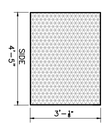


TYPE "D" CONTROL STRUCTURE W/ 4 SIDED SKIMMER

CONTROL STRUCTURE CS-1 DETAIL

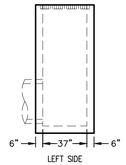
N.T.S.

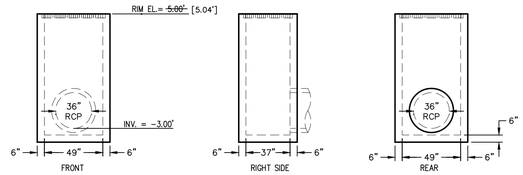




TYPE "D" GRATE

NTS

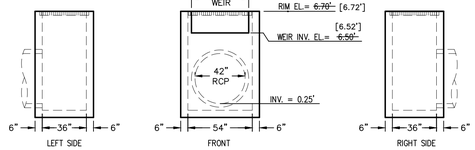




TYPE "D" CONTROL STRUCTURE W/ 4 SIDED SKIMMER

CONTROL STRUCTURE CS-7 DETAIL

N.T.S.



TYPE "E" CONTROL STRUCTURE W/ 4 SIDED SKIMMER

CONTROL STRUCTURE CS-2 DETAIL

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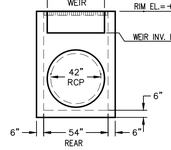
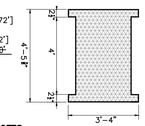


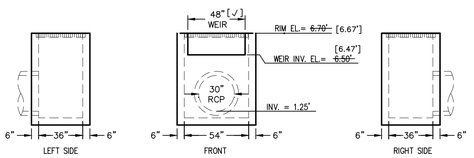


NOTES:

1. REMOVE 4" SECTION FROM ONE SIDE OF EACH GRATE. CUT AND REMOVE 4" SECTION OUT OF EACH GRATE ON BOTH ENDS.GRIND SHAPE EDGE
2. PAINT AS REQUIRED TO PREVENT CORROSION.

TYPE "E" GRATE

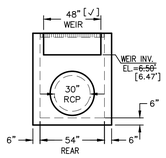
NTS

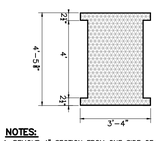


TYPE "E" CONTROL STRUCTURE W/ 4 SIDED SKIMMER

CONTROL STRUCTURE CS-3 DETAIL

N.T.S.





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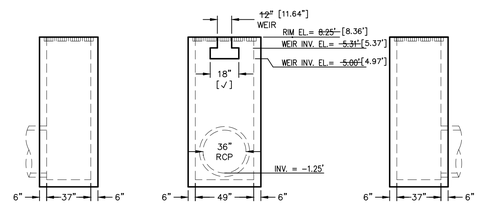
TYPE "E" GRATE

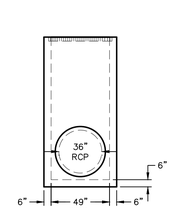
NTS

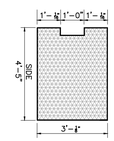


TYPE "D" CONTROL STRUCTURE W/ 4 SIDED SKIMMER

CONTROL STRUCTURE CS-4 DETAIL

N.T.S.



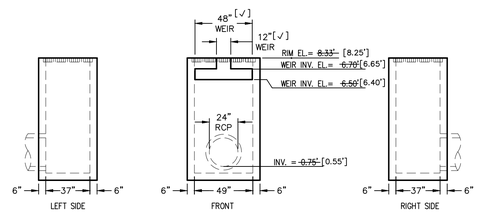


NOTES:

1. REMOVE 4" SECTION FROM ONE SIDE OF EACH GRATE. CUT AND REMOVE 4" SECTION OUT OF EACH GRATE ON BOTH ENDS.GRIND SHAPE EDGE
2. PAINT AS REQUIRED TO PREVENT CORROSION.

TYPE "D" GRATE

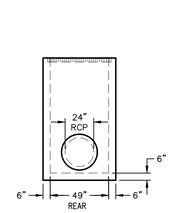
NTS

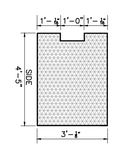


TYPE "D" CONTROL STRUCTURE W/ 4 SIDED SKIMMER

CONTROL STRUCTURE CS-5 DETAIL

N.T.S.



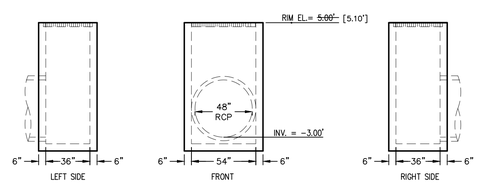


NOTES:

1. REMOVE 4" SECTION FROM ONE SIDE OF EACH GRATE. CUT AND REMOVE 4" SECTION OUT OF EACH GRATE ON BOTH ENDS.GRIND SHAPE EDGE
2. PAINT AS REQUIRED TO PREVENT CORROSION.

TYPE "D" GRATE

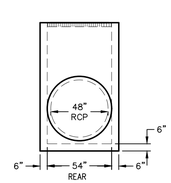
NTS

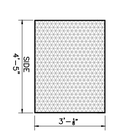


TYPE "E" CONTROL STRUCTURE W/ 4 SIDED SKIMMER

CONTROL STRUCTURE CS-6 DETAIL

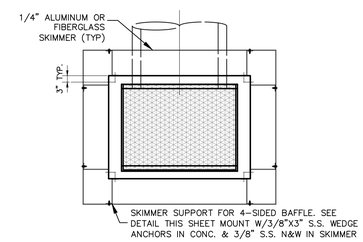
N.T.S.

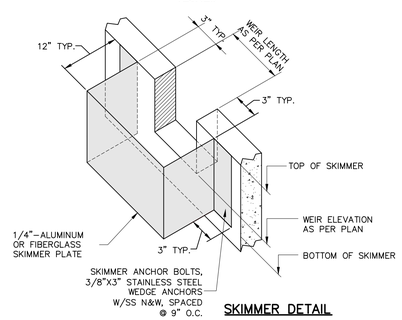




TYPE "D" GRATE

NTS





SKIMMER DETAIL

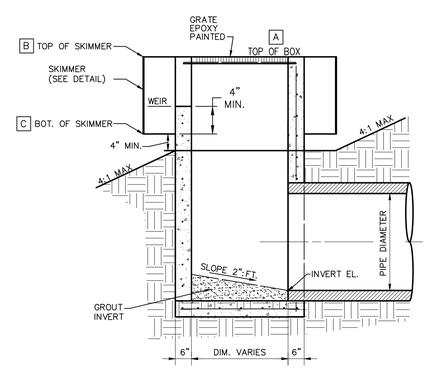
N.T.S.

NOTES:

A. MANUFACTURED PER DOT INDEX 232, SUPPLEMENTAL INDEX #201.
B. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 psi @ 28 DAYS. TYPE II CEMENT USED.
C. ALL EXPOSED EDGES SHALL BE 3/4" CHAMFERED.
D. ALL REINFORCING HAS A MINIMUM 2" CLEARANCE FROM INSIDE FACE.
E. SEE CONTROL STRUCTURE TABLE, THIS SHEET, FOR ELEV. & DIM. DATA.

CS SKIMMER TABLE

STRUCTURE NUMBER	A	B	C	SKIMMER
CS-1	NO SKIMMER			
CS-2	~~6.70'~~ [6.72']	~~6.95'~~ [6.97']	~~6.17'~~ [6.10']	4 SIDES
CS-3	~~6.70'~~ [6.67']	~~6.95'~~ [6.87']	~~6.17'~~ [6.00']	4 SIDES
CS-4	~~8.25'~~ [8.36']	~~8.50'~~ [8.56']	~~4.67'~~ [6.10']	4 SIDES
CS-5	~~8.33'~~ [8.25']	~~8.58'~~ [8.55']	~~6.17'~~ [6.20']	4 SIDES
CS-6	~~5.00'~~ [5.10']	~~5.25'~~ [5.30']	~~4.67'~~ [4.80']	4 SIDES
CS-7	~~5.00'~~ [5.04']	~~5.25'~~ [5.04']	~~4.67'~~ [5.15']	4 SIDES



CONTROL STRUCTURE SECTION

N.T.S.

STRUCTURE TABLE

STRUCTURE	TYPE	STRUCTURE DETAILS
JB-1	JUNCTION BOX	RIM = 8.00 INV N = -1.50 INV SW = -1.50
JB-2	JUNCTION BOX	RIM = 8.90 INV NW = -0.82 INV S = -0.82
JB-3	JUNCTION BOX	RIM = 8.90 INV N = -0.82 INV SE = -0.82
JB-4	JUNCTION BOX	RIM = 8.00 INV W = -1.93 INV SE = -1.93
JB-5	JUNCTION BOX	RIM = 8.73 INV SW = 4.50 INV NW = 4.50
JB-6	JUNCTION BOX	RIM = 8.70 INV W = 2.50 INV SE = 2.50
JB-7	JUNCTION BOX	RIM = 9.19 INV E = -1.52 INV NW = -1.52
JB-8	JUNCTION BOX	RIM = 9.39 INV S = 0.80 INV NE = 0.80
JB-9	JUNCTION BOX	RIM = 8.71 INV N = 1.56 INV E = 1.56
JB-10	JUNCTION BOX	RIM = 8.50 INV W = 0.75 INV N = 0.75
JB-11	JUNCTION BOX	RIM = 8.73 INV W = 0.75 INV N = 0.75
JB-12	JUNCTION BOX	RIM = 6.40 INV NE = 1.00 INV W = 1.00

STRUCTURE TABLE

STRUCTURE	TYPE	STRUCTURE DETAILS
I-1	TYPE "C" INLET	GRATE = 7.50 INV W = 0.82 INV E = 0.82 INV S = 0.82
I-2	TYPE "D" INLET W/ ALTERNATE BOTTOM	GRATE = 8.00 INV NW = 0.25 INV NE = 0.25
I-3	TYPE "D" INLET	GRATE = 8.00 INV SW = 0.25 INV E = 0.25
I-5	TYPE "C" INLET	GRATE = 8.00 INV NW = 4.00
I-6	TYPE "C" INLET	GRATE = 8.00 INV S = 1.46 INV E = 1.46
I-7	TYPE "C" INLET	GRATE = 8.00 INV E = 1.50
I-8	TYPE "C" INLET	GRATE = 8.50 INV W = 4.50
I-9	TYPE "C" INLET	GRATE = 8.50 INV SW = 4.50
I-10	TYPE "C" INLET	GRATE = 8.50 INV S = 4.50
I-11	TYPE "E" INLET W/ ALTERNATE BOTTOM	GRATE = 2.56 INV E = -3.00
I-12	TYPE "E" INLET	GRATE = 4.50 INV E = 0.80
I-13	TYPE "C" INLET	GRATE = 7.85 INV N = 1.46
I-14	TYPE "D" INLET	GRATE = 8.00 INV W = 0.25 INV E = 0.25
I-15	TYPE "D" INLET WITH ALTERNATE BOTTOM	GRATE = 8.00 INV W = 0.25 INV SE = 0.25
YD-1	YARD DRAIN	GRATE = 7.50 INV E = 0.82
YD-2	YARD DRAIN	GRATE = 7.50 INV W = 0.82
YD-3	YARD DRAIN	GRATE = 8.70 INV SW = 6.70
YD-4	YARD DRAIN	GRATE = 8.42 INV NE = 6.42

STRUCTURE TABLE
*SEE CONTROL STRUCTURE DETAILS FOR MORE INFORMATION

STRUCTURE	TYPE	STRUCTURE DETAILS
CS-1	TYPE "D" INLET	GRATE = 6.70 INV SE = -0.25
CS-2	TYPE "E" INLET W/ ALTERNATE BOTTOM	GRATE = 6.70 INV W = 0.25
CS-3	TYPE "E" INLET	GRATE = 6.70 INV SW = 1.25
CS-4	TYPE "D" INLET	GRATE = 8.25 INV E = -1.25
CS-5	TYPE "D" INLET	GRATE = 8.33 INV SE = 0.75
CS-6	TYPE "E" INLET W/ ALTERNATE BOTTOM	GRATE = 5.00 INV NW = -3.00
CS-7	TYPE "D" INLET	GRATE = 5.00 INV NW = -3.00

STRUCTURE TABLE

STRUCTURE	TYPE	STRUCTURE DETAILS
V-1	TYPE "V" INLET	EOP = 7.50 INV N = 0.82 INV S = 0.82
V-2	TYPE "V" INLET	EOP = 7.50 INV N = 0.82 INV S = 0.82
V-3	TYPE "V" INLET	EOP = 7.50 INV NE = 3.50
V-4	TYPE "V" INLET W/ ALTERNATE BOTTOM	EOP = 7.50 INV NW = 3.50 INV SW = 3.50 INV SE = 1.50
V-5	TYPE "V" INLET	EOP = 7.50 INV SE = 3.50
V-6	TYPE "V" INLET	EOP = 8.00 INV E = 2.25
V-7	TYPE "V" INLET	EOP = 8.00 INV W = 2.25 INV E = 2.25
V-8	TYPE "V" INLET W/ ALTERNATE BOTTOM	EOP = 8.00 INV S = -1.50 INV NE = -1.50
V-9	TYPE "V" INLET W/ ALTERNATE BOTTOM	EOP = 8.00 INV SW = -1.50 INV NW = -1.50
V-10	TYPE "V" INLET	EOP = 8.00 INV SE = 4.00 INV NW = 1.94
V-11	TYPE "V" INLET	EOP = 8.00 INV SE = 1.94 INV NW = 4.00
V-12	TYPE "V" INLET W/ ALTERNATE BOTTOM	EOP = 8.00 INV SW = -1.93 INV E = -1.93
V-13	TYPE "V" INLET W/ ALTERNATE BOTTOM	EOP = 8.00 INV W = -1.93 INV NE = -1.93
V-14	TYPE "V" INLET	EOP = 8.00 INV W = 1.46 INV E = 1.46
V-15	TYPE "V" INLET	EOP = 8.00 INV W = 1.46 INV E = 1.46
V-16	TYPE "V" INLET	EOP = 8.00 INV W = 1.50 INV E = 1.50
V-17	TYPE "V" INLET	EOP = 8.00 INV W = 1.50 INV E = 1.50
V-18	TYPE "V" INLET W/ ALTERNATE BOTTOM	EOP = 8.00 INV N = 0.58 INV S = 0.58
V-19	TYPE "V" INLET W/ ALTERNATE BOTTOM	EOP = 8.00 INV S = 0.58 INV N = 0.58
V-20	TYPE "V" INLET	EOP = 8.00 INV N = 2.28

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
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PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

NO.	DATE	REVISION DESCRIPTION	BY

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THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY RYAN W. POWERS, P.E. 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.

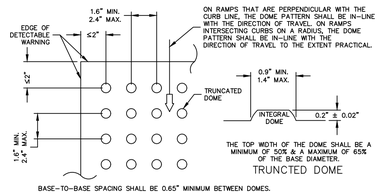
RYAN W. POWERS, P.E.
FL LIC. NO. 82437

STRUCTURE LIST
BISCAYNE LANDING
CHARLOTTE COUNTY, FLORIDA

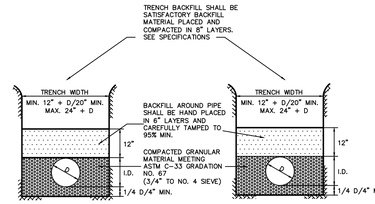
DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_STRUCT-LIST	RWP	DCT	CWR	N.T.S.	14

BISCAYNE LANDING

S:\JOBS\4272\4272\ENGINEERING\REC-DWG\SITE\4272 - 13 - STRUCTURE LIST.DWG 8/9/2021 11:07 AM 1080 VAAA



DETECTABLE WARNING DETAIL
N.T.S.



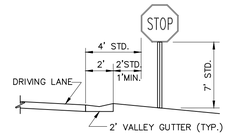
CLASS I-A BEDDING FOR AREAS BELOW GROUNDWATER TABLE
N.T.S.

VII-4

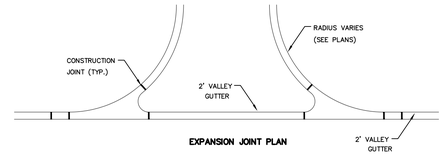
CLASS I-B BEDDING FOR AREAS BELOW GROUNDWATER TABLE
N.T.S.

VII-3

SIGN DETAIL
N.T.S.

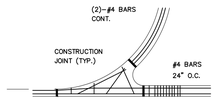


TYPICAL SIGN PLACEMENT
N.T.S.



EXPANSION JOINT PLAN

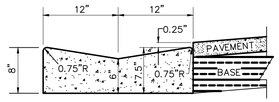
CONCRETE CURB JOINTS:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS. UNLESS OTHERWISE NOTED.
2. AN EXPANSION JOINT WILL BE PLACED AT THE END OF ALL RETURNS AT INTERVALS NOT TO EXCEED 50' WITH CONTRACTION JOINTS AT 10' INTERVALS BETWEEN.
3. PVC SLIP JOINTS SHALL BE CONSTRUCTED TO PERMIT EXPANSION AND CONTRACTION OF STEEL ACROSS JOINT.
4. EXPANSION JOINTS SHALL BE CONSTRUCTED WITH 1/2" BITUMINOUS IMPREGNATED WITH EXPANSION JOINT MATERIAL.



REINFORCING DIAGRAM

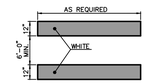
REINFORCING NOTES:
1) REINFORCING BARS TO BE PLACED A MINIMUM OF 2" FROM BOTTOM AND 3" FROM SIDES OF CURB AND GUTTER.

VALLEY CROSSING DETAIL
N.T.S.



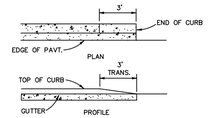
NOTES:
1) CONCRETE TO BE F.D.O.T. CLASS I OR EQUAL (2,500 PSI MINIMUM STRENGTH).
2) CONSTRUCTION TO BE IN ACCORDANCE WITH F.D.O.T. SPECIFICATION SECTION 520.

STANDARD 2' CONCRETE VALLEY GUTTER DETAIL
NOT TO SCALE



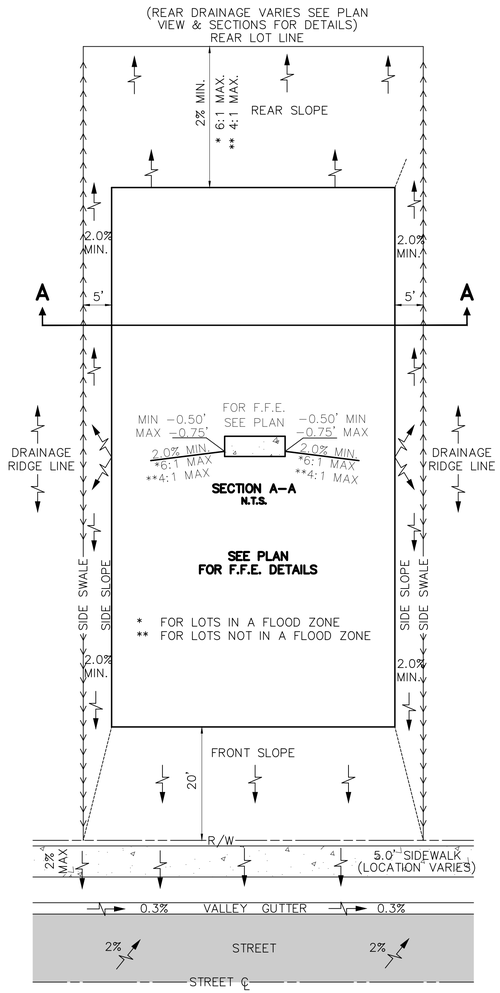
CROSSWALK STRIPING DETAIL
N.T.S.

NOTES:
1) TRAFFIC STRIPE LOCATION TO BE IN ACCORDANCE WITH F.D.O.T. DETAIL 17346.
2) TRAFFIC STRIPE MATERIAL TO BE IN ACCORDANCE WITH F.D.O.T. SPECIFICATION SECTION 710.

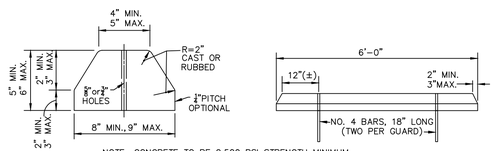


STRAIGHT END

CURB & GUTTER ENDING DETAIL
N.T.S.



TYPICAL SPLIT LOT GRADING DETAIL
NOT TO SCALE

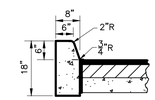


NOTE: CONCRETE TO BE 2,500 PSI STRENGTH MINIMUM.

WHEEL STOP DETAIL
N.T.S.

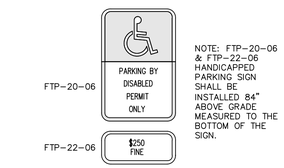
STOP BAR STRIPING DETAIL
N.T.S.

NOTES:
1) TRAFFIC STRIPE LOCATION TO BE IN ACCORDANCE WITH F.D.O.T. DETAIL 17346.
2) TRAFFIC STRIPE MATERIAL TO BE IN ACCORDANCE WITH F.D.O.T. SPECIFICATION SECTION 710.



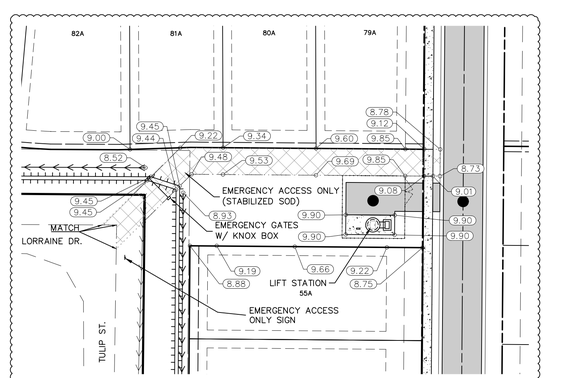
NOTES:
1. CONCRETE TO BE F.D.O.T. CLASS I OR EQUAL. (2,500 PSI MINIMUM STRENGTH).
2. CONSTRUCTION TO BE IN ACCORDANCE WITH F.D.O.T. SPECIFICATION SECTION 520.

TYPE "D" CURB DETAIL
N.T.S.



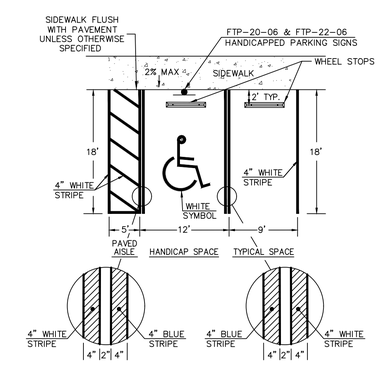
NOTE: FTP-20-06 & FTP-22-06 HANDICAPPED PARKING SIGN SHALL BE INSTALLED 84" ABOVE GRADE MEASURED TO THE BOTTOM OF THE SIGN.

FTP-20-06 & FTP-22-06 HANDICAP PARKING SIGNS
N.T.S.



EMERGENCY ACCESS ACCESS DETAIL
N.T.S.

1



NOTE:
1. HANDICAP PARKING SPACE AND ACCESS AISLE SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION.
2. ALL STRIPING TO BE HEAVY DUTY ACRYLIC BASED TRAFFIC PAINT.
3. PARKING SPACE AND ACCESS AISLE MEASUREMENTS ARE ESTABLISHED FROM THE CENTER OF THE MARKINGS AS SHOWN ABOVE.

PARKING SPACE DETAIL
N.T.S.

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
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PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

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RYAN W. POWERS, P.E.
FL LIC. NO. 82437

PAVING, GRADING & DRAINAGE DETAILS

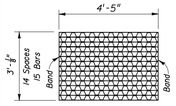
BISCAYNE LANDING

CHARLOTTE COUNTY, FLORIDA

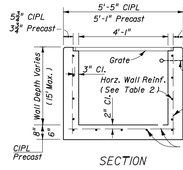
DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_PGD-DT-1	RWP	DCT	CWR	N.T.S.	15

BISCAYNE LANDING

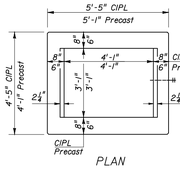
S:\JOBS\4XXX\4272\ENGINEERING\MISC-DWG\DTET\4272 - 14 - PGD-DT.DWG 8/3/2021 11:07 AM TODD VANA



TYPE D
Straight Bars 2"x1/4"
Reticuline Bars 1 1/4" x 3/8"
Bands 2"x1/4"
Approx. Weight 190 Lbs.



SECTION



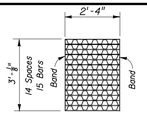
PLAN

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 2)

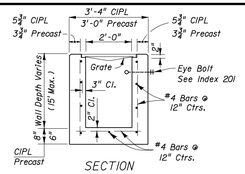
WALL DEPTH	SCHEDULE	AREA (in^2/ft)	MAX. SPACING BARS	MAX. SPACING WWF
0'-6'	A12	0.20	12"	8"
6'-10'	A6	0.20	6"	5"
10'-15'	A4	0.20	4"	3"
10'-15'	B5.5	0.24	5 1/2"	5"

TYPE D

Recommended Maximum Pipe Size:
3'-1" Wall - 24" Pipe
4'-1" Wall - 36" Pipe



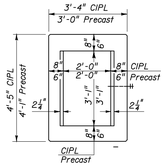
TYPE C
Straight Bars 2"x1/4"
Reticuline Bars 1 1/4" x 3/8"
Bands 2"x1/4"
Approx. Weight 104 Lbs.



SECTION

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 1)

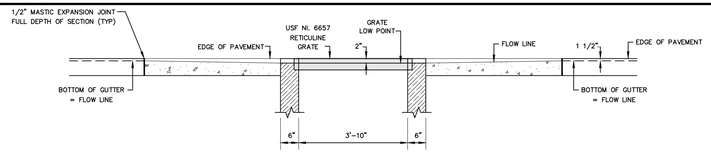
WALL DEPTH	SCHEDULE	AREA (in^2/ft)	MAX. SPACING BARS	MAX. SPACING WWF
0'-15'	A12	0.20	12"	8"



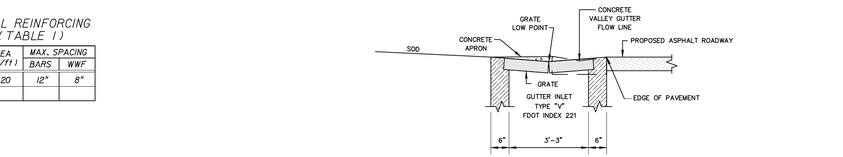
PLAN

TYPE C

Recommended Maximum Pipe Size:
2'-0" Wall - 18" Pipe
3'-1" Wall - 24" Pipe (18" where an 18" pipe enters a 2'-0" wall)



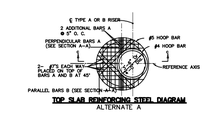
CONCRETE INLET APRON SECTION A–A
N.T.S.



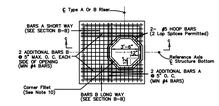
CONCRETE INLET APRON SECTION B–B
N.T.S.

GENERAL NOTES

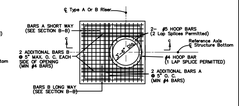
1. STANDARD STRUCTURE BOTTOMS 4'-0" DIAMETER AND SMALLER (ALT. A) AND 3'-6" SQUARE (ALT. B) ARE DESIGNATED TYPE P. LARGER STANDARD STRUCTURE BOTTOMS ARE DESIGNATED TYPE J. RISERS ARE PERMITTED FOR ALL STRUCTURES.
2. WALLS OF CIRCULAR STRUCTURES (ALTERNATE A) CONSTRUCTED IN PLACE MAY BE OF NON-REINFORCED CONCRETE OR BRICK OR REINFORCED CONCRETE. PRECAST AND RECTANGULAR STRUCTURES (ALTERNATE B) SHALL BE CONSTRUCTED OF REINFORCED CONCRETE ONLY.
3. WALL THICKNESS AND REINFORCEMENT ARE FOR EITHER REINFORCED CAST-IN-PLACE OR PRECAST CONCRETE UNITS EXCEPT THAT PRECAST CIRCULAR UNITS MAY BE FURNISHED WITH WALLS IN ACCORDANCE WITH EITHER A.S.T.M. C-478 (UP TO 96" DIAMETER) OR A.S.T.M. C-76, CLASS III, B WALL, MODIFIED WHERE THE ELLIPTICAL STEEL CAGE AREA IS PLACED IN THE CENTER ONE-THIRD OF THE WALL.
4. TOP AND FLOOR SLAB THICKNESS AND REINFORCEMENT ARE FOR PRECAST AND CAST IN PLACE CONSTRUCTION. TOP AND FLOOR SLABS SHALL BE OF CLASS II CONCRETE. CONCRETE AS SPECIFIED IN A.S.T.M. C-478 (4000 PSI) MAY BE USED IN LIEU OF CLASS I AND CLASS II CONCRETE IN PRECAST ITEMS MANUFACTURED IN PLANTS WHICH ARE UNDER THE "STANDARD OPERATING PROCEDURES" FOR THE INSPECTION OF PRECAST DRAINAGE PRODUCTS.
5. ALL REINFORCEMENT SHALL BE A.S.T.M. A615, GRADE 60 OR 65 KSI WELDED WIRE FABRIC, EITHER SMOOTH OR DEFORMED.
6. STRUCTURE BOTTOMS MAY BE USED IN CONJUNCTION WITH CURB INLET TOPS TYPES 1, 2, 3, 4, 5, 6, 9, AND 10, AND ANY MANHOLE OR JUNCTION BOX UNLESS OTHERWISE SHOWN IN THE PLANS OR OTHER STANDARD DRAWINGS. ALT. B STRUCTURE BOTTOMS MAY BE USED IN CONJUNCTION WITH CURB INLET TYPES 7 & 8, OR ANY DITCH BOTTOM INLET UNLESS OTHERWISE SHOWN IN THE PLANS OR OTHER STANDARD DRAWINGS.
7. RECTANGULAR STRUCTURES MAY BE ROTATED AS DIRECTED BY THE ENGINEER IN ORDER TO FACILITATE CONNECTIONS BETWEEN THE STRUCTURE WALLS AND STORM SEWER PIPES.
8. EXCEPT WHEN ACI HOOKS ARE SPECIFICALLY REQUIRED, EMBEDMENT HOOKS IN THE TOP AND BOTTOM SLABS MAY BE REPLACED WITH STRAIGHT EMBEDMENTS OR PERIPHERAL REINFORCEMENT IN ACCORDANCE WITH THE REINFORCEMENT DETAIL SHOWN UNDER "REBAR STRAIGHT END EMBEDMENT OR PERIPHERAL REINFORCEMENT IN LIEU OF ACI STANDARD HOOKS FOR TOP AND BOTTOM SLABS, INDEX NO. 201, SHEET 3 OF 6.
9. ALL STEEL BARS SHALL HAVE 1-1/2" MINIMUM COVER UNLESS OTHERWISE SHOWN. HORIZONTAL STEEL IN RECTANGULAR STRUCTURES SHALL BE LAPPED A MINIMUM OF 24 BAR DIAMETERS AT CORNERS.
10. THE CORNER FILLETS SHOWN ARE NECESSARY FOR RECTANGULAR STRUCTURES USED WITH CIRCULAR RISERS AND INLET THROATS AND USED ON SKEW WITH RECTANGULAR RISERS, INLET AND INLET THROATS. FILLETS WILL BE REQUIRED IN LIEU OF THE BOTTOM SLAB OF THE ALT. B RISER WHEN USED WITH THE ALT. A BOX. EACH FILLET SHALL BE REINFORCED WITH 2- # 5 BARS.
11. INLET THROATS, RISER OR MANHOLE TOPS SHALL BE SECURED TO STRUCTURES AS SHOWN ON INDEX NO. 201.
12. STRUCTURES WITH DEPTHS OVER 14' ARE TO BE CHECKED FOR FLOATATION BY DESIGNER OF PROJECT DRAINAGE.
13. UNITS LARGER THAN SPECIFIED STANDARD MAY BE SUBSTITUTED AT THE CONTRACTOR'S OPTION WHEN THESE UNITS WILL NOT CAUSE OR INCREASE THE SEVERITY OF UTILITY CONFLICTS. SUCH LARGER UNITS SHALL BE FURNISHED AT NO ADDITIONAL COST TO THE DEPARTMENT. LARGER ALTERNATE A UNITS CANNOT REPLACE ALTERNATE B UNITS WITHOUT APPROVAL OF THE ENGINEER. THIS NOTE APPLIES TO THIS INDEX ONLY.
14. FOR MANHOLE AND JUNCTION BOX TOPS, FOR FRAMES AND COVERS, AND, FOR SUPPLEMENTARY DETAILS SEE INDEX NO. 201.
15. TYPE J STRUCTURE BOTTOMS MUST HAVE A MINIMUM OF 6'-0" WALL HEIGHT WHEN POSSIBLE FOR MAINTENANCE ACCESS.



TOP SLAB REINFORCING STEEL DIAGRAM
ALTERNATE A

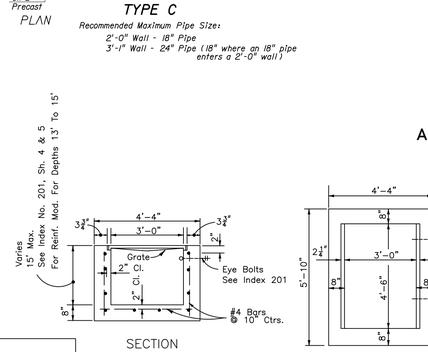


SQUARE OPENING WITH CORNER FILLETS



ROUND RISER OPENING

TOP SLAB REINFORCING STEEL DIAGRAM
ALTERNATE B



SECTION

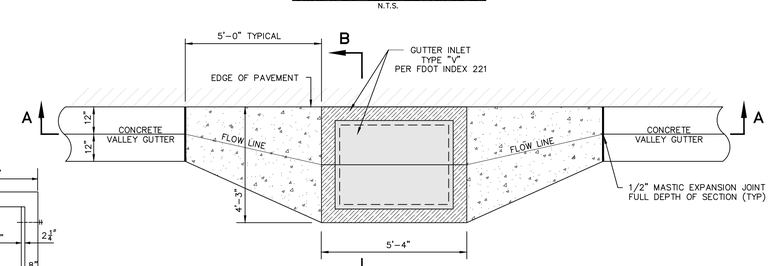
TYPE E
Recommended Maximum Pipe Size:
3'-0" Wall–24" Pipe
4'-6" Wall–42" Pipe

PLAN

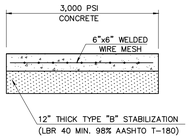
NOTE:
1. 6" WALL THICKNESS MUST BE USED FOR PRE-CAST INLETS IN ACCORDANCE WITH F.D.O.T. INDEX 201.
2. CONCRETE TO BE F.D.O.T. CLASSI OR EQUAL. (2,500 PSI MINIMUM STRENGTH)
3. CONSTRUCTION TO BE IN ACCORDANCE WITH F.D.O.T. SPECIFICATIONS SECTION 425.

INLET "E" DETAIL

N.T.S.



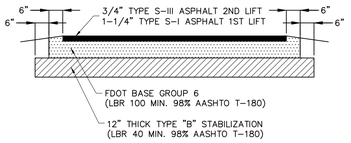
CONCRETE INLET APRON
N.T.S.



NOTES:
1. SIDEWALKS TO BE 4" THICK WITH WELDED WIRE MESH OR FIBERMESH.
2. ALL SIDEWALK RAMPS TO CONFORM TO FDOT INDEX 304.
3. SOLID WASTE PAD TO BE 6" WITH WELDED WIRE MESH AS SHOWN.

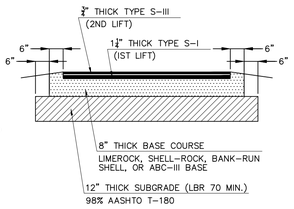
CONCRETE SIDEWALK SECTION

N.T.S.

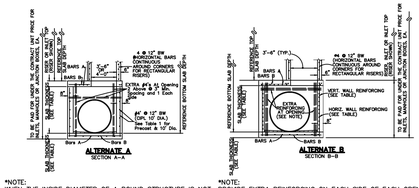


STREET AND PARKING ASPHALT SECTION

N.T.S.



ENTRANCE ROADWAY WITHIN PUBLIC RIGHT OF WAY

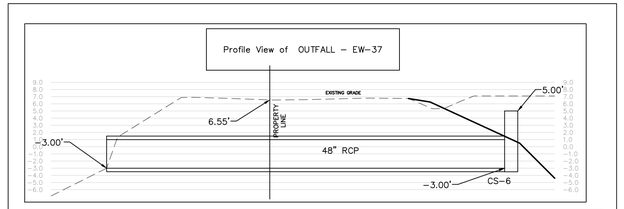


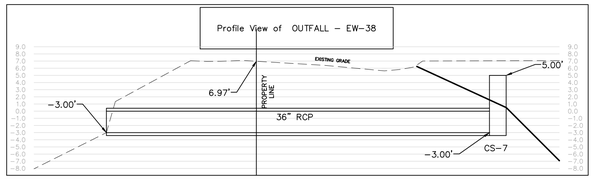
*NOTE:
WHEN THE INSIDE DIAMETER OF A ROUND STRUCTURE IS NOT MORE THAN 1'-0" LARGER THAN THE OPENING IN THE RISER OR TOP SLAB, THE TOP OF THE STRUCTURE OR RISER SHALL BE CONSTRUCTED ACCORDING TO THE "SPECIAL TOP SLAB" DETAILS ON THIS SHEET.

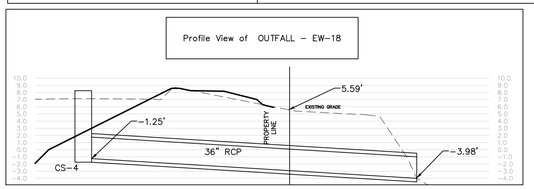
*NOTE:
PROVIDE EXTRA REINFORCING ON EACH SIDE OF EACH OPENING AT 3" MAXIMUM SPACING EQUAL TO HALF THE AREA OF VERTICAL REINFORCEMENT REMOVED BY THE OPENING AND PROVIDE THE SAME AREA OF REINFORCEMENT ABOVE EACH OPENING AT 3" MAXIMUM SPACING AS REMOVED BY THE OPENING.

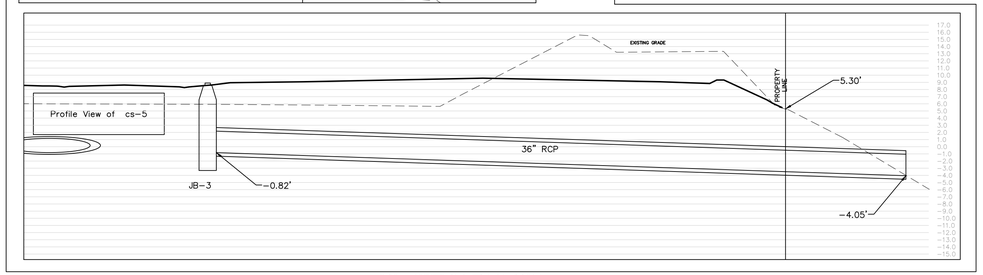
TYPE "P" AND TYPE "J" INLET BOTTOMS

N.T.S.



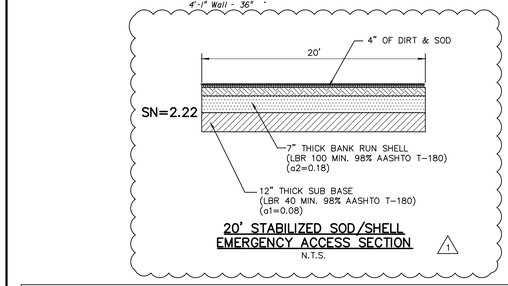






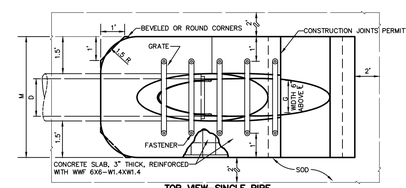
OUTFALL PIPE SECTIONS

N.T.S.



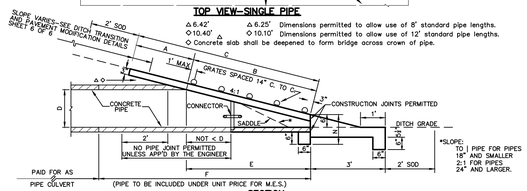
20' STABILIZED SOD/SHELL EMERGENCY ACCESS SECTION

N.T.S.



TOP VIEW–SINGLE PIPE

△ 6.42' △ 10.40'
△ 6.25' Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.10' Dimensions permitted to allow use of 12' standard pipe lengths.
◇ Concrete slab shall be deepened to form bridge across crown of pipe.



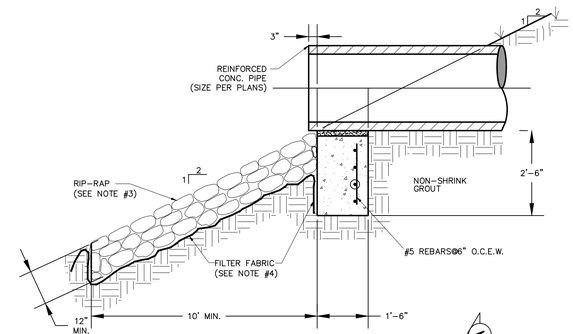
SECTION

DIMENSIONS & QUANTITIES

D	X	A	B	C	E	F	G	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad Pipe	N	Grate Pipe Size
15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63"	7.21"	9.79"	12.37"	1.19"	None
18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92"	7.75"	10.58"	13.42"	1.21"	None
24"	3'-5"	2.53'	7.18'◇	9.71'	7.03'◇	11'	1.73'	5.50"	8.92"	12.33"	15.75"	1.23"	None
30"	4'-3"	2.70'	9.22'	11.95'	9.03'	13'	2.00'	6.08"	10.33"	14.58"	18.83"	1.29"	2"
36"	5'-1"	2.87'	11.31'◇	14.18'	11.03'◇	15'	2.24'	6.67"	11.75"	16.83"	21.92"	1.33"	2"
42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25"	13.25"	19.25"	25.25"	1.38"	2"
48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	7.83"	14.58"	21.33"	28.08"	1.42"	2"
54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42"	16.08"	23.75"	31.42"	1.46"	3"
60"	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00"	17.50"	26.00"	34.50"	1.50"	3"

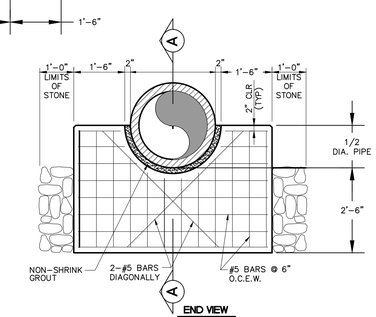
MITERED END SECTION

N.T.S.



SECTION A

NOTES:
1. CONCRETE SHALL BE 3000 PSI @ 28 DAYS
2. CHAMFER ALL EXPOSED EDGES 3/4"
3. RIP-RAP SHALL BE SUPPLIED AND CONSTRUCTED AS DEFINED IN THE F.D.O.T. SPECIFICATIONS SEC. 530, RIPRAP, SPECIFICALLY SEC. 530-3.3 RUBBLE. 50 LB. MIN. NO BROKEN CONCRETE SHALL BE USED.
4. FILTER FABRIC SHALL BE SUPPLIED AND CONSTRUCTED AS DEFINED IN THE F.D.O.T. SPECIFICATIONS SEC 514, PLASTEC FILTER FABRIC, SPECIFICALLY SEC. 514-3.4 RIPRAP, INCLUDED IN UNIT COST OF ENDWALL.



END WALL / PIPE SUPPORT DETAIL

N.T.S.

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
PROVIDED BY BANKS ENGINEERING

PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

NO.	DATE	REVISION DESCRIPTION	BY
1	10-26-20	ADDED STABILIZED SOD/SHELL EMERGENCY ENTRANCE DETAIL	DCT

BANKS ENGINEERING
Professional Engineers, Planners, & Land Surveyors
Serving The State Of Florida

4161 TAMIAMI TRAIL – BLDG 5 UNIT 501
PORT CHARLOTTE, FLORIDA 33952
PHONE: (941) 625-1165 FAX: (941) 625-1149

ENGINEERING LICENSE # EB 6469
SURVEY LICENSE # LB 6690

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RYAN W. POWERS, P.E.
FL LIC. NO. 82437

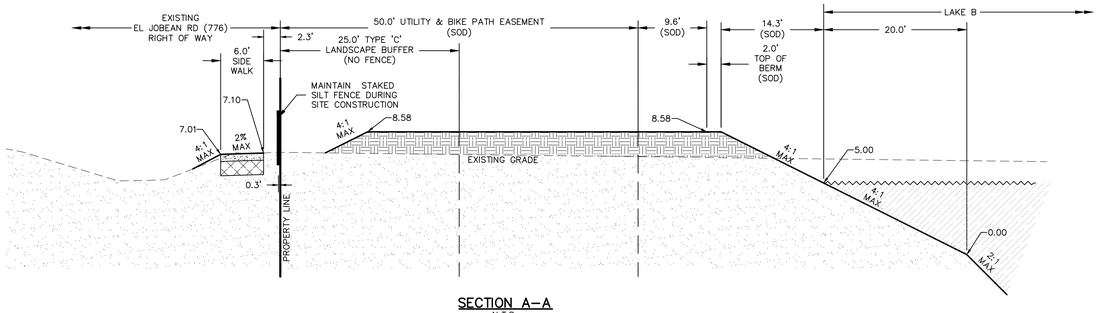
PAVING, GRADING & DRAINAGE DETAILS

BISCAYNE LANDING

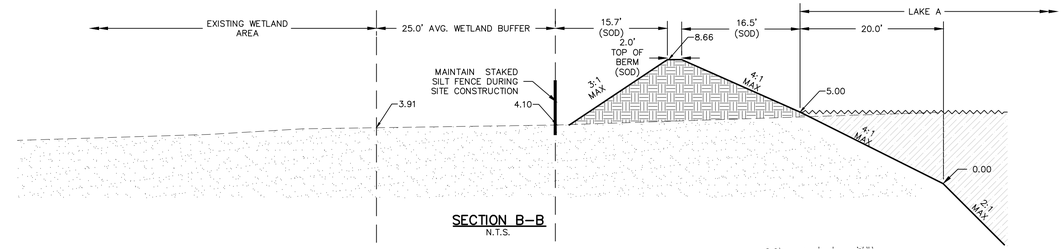
CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_PGD-DT-2	RWP	DCT	CWR	N.T.S.	16

S:\JOBS\4200\4272\ENGINEERING\REC-DWG\SITE\4272 - 15 - PGD-DT-2.DWG 8/5/2021 11:09 AM TODD VANA



SECTION A–A
N.T.S.



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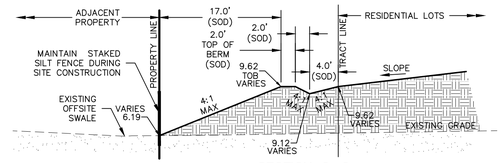

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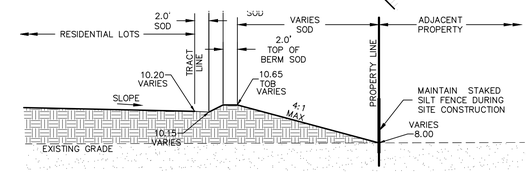

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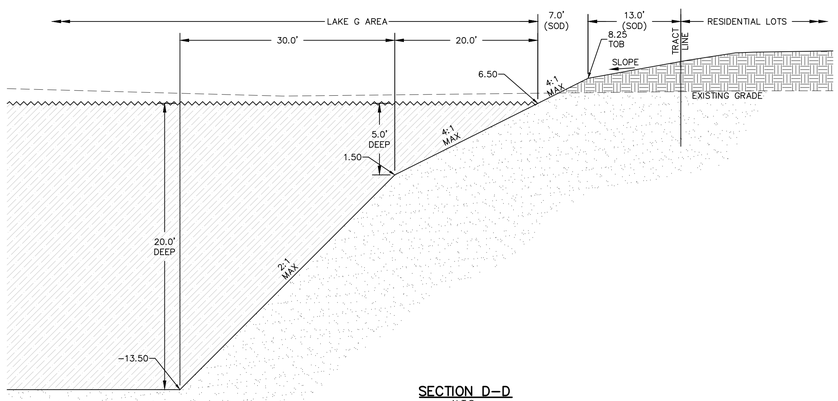

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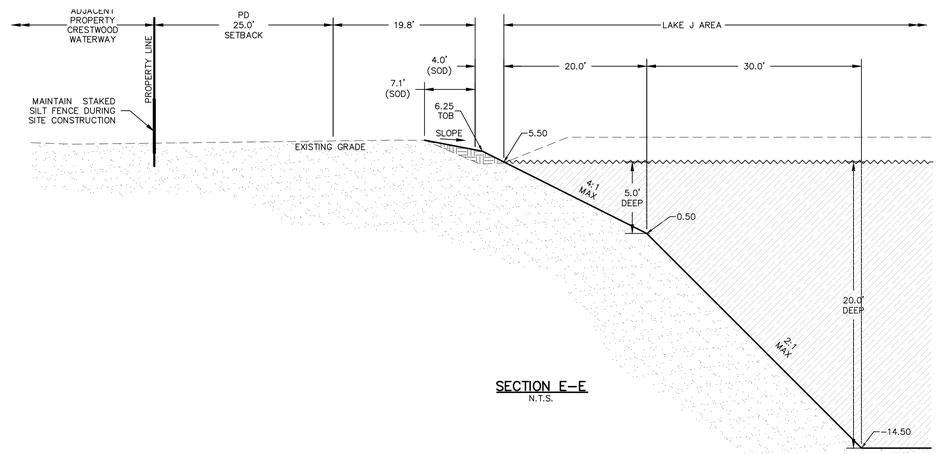

SECTION E–E
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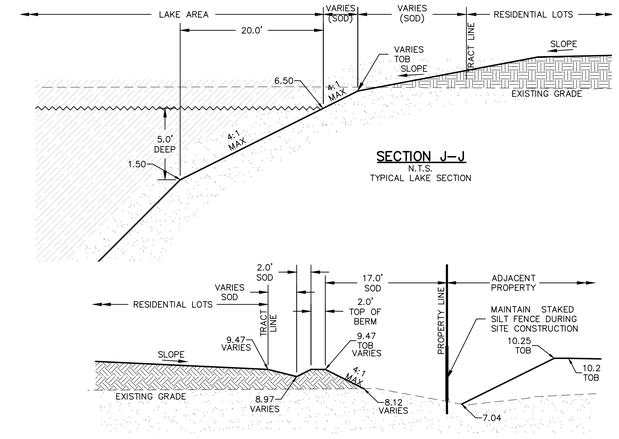
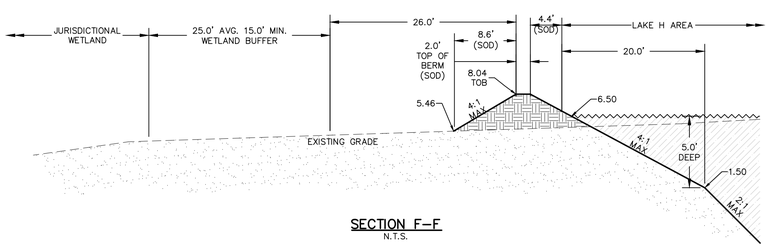
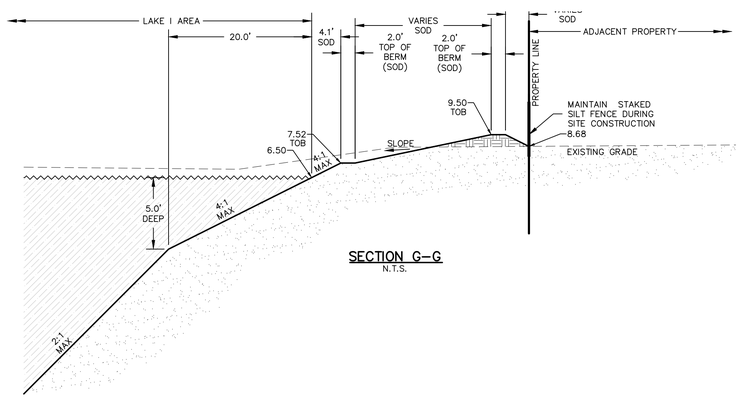


SECTION J–J
N.T.S.
TYPICAL LAKE SECTION

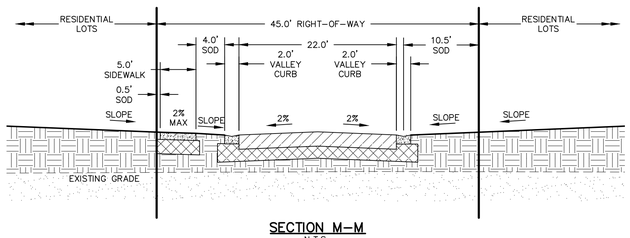


SECTION F–F
N.T.S.

SECTION K–K
N.T.S.



SECTION G–G
N.T.S.



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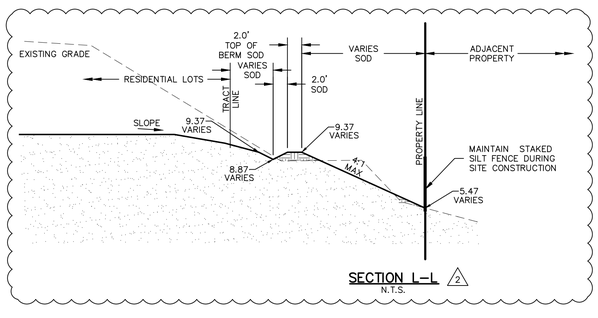
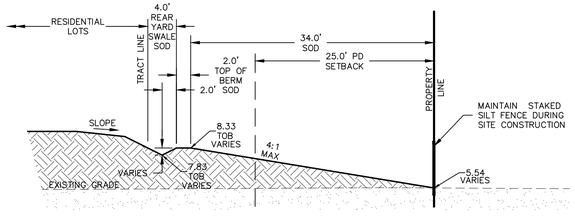


SECTION L–L 2
N.T.S.



SECTION N–N
N.T.S.

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
PROVIDED BY BANKS ENGINEERING

PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239–931–4778

NO.	DATE	REVISION DESCRIPTION	BY

BANKS ENGINEERING
Professional Engineers, Planners, & Land Surveyors
Serving The State Of Florida

4161 TAMIAMI TRAIL – BLDG 5 UNIT 501
PORT CHARLOTTE, FLORIDA 33952
PHONE: (941) 625–1165 FAX: (941) 625–1149

ENGINEERING LICENSE # EB 6469
SURVEY LICENSE # LB 6690

WWW.BANKSENG.COM

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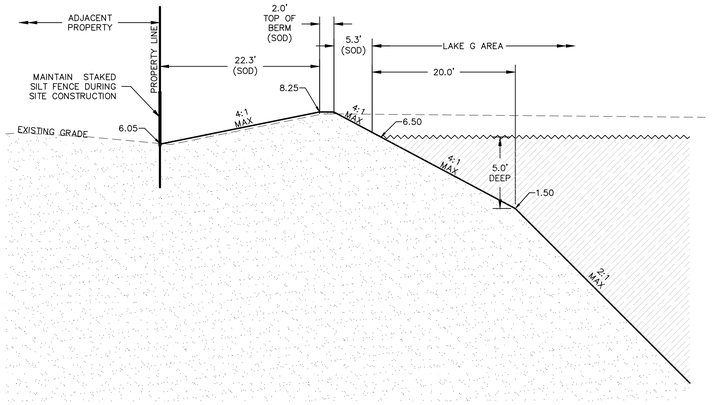
RYAN W. POWERS, P.E.
FL LIC. NO. 82437

TYPICAL CROSS SECTIONS
BISCAYNE LANDING
CHARLOTTE COUNTY, FLORIDA

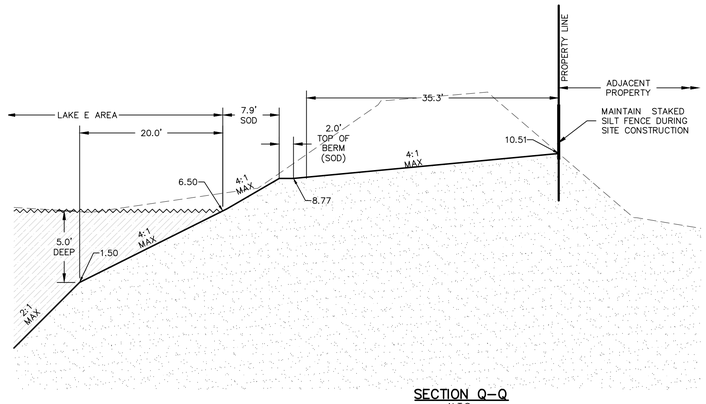
DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3–25–19	4272	_X–SEC	RWP	DCT	CWR	N.T.S.	17

BISCAYNE LANDING

S:\JOBS\4200\4272\ENGINEERING\REC-DWG\SITE\4272 - 18 - X-SECS.DWG 8/5/2021 11:14 AM TODD VANA



SECTION P–P
N.T.S.



SECTION Q–Q
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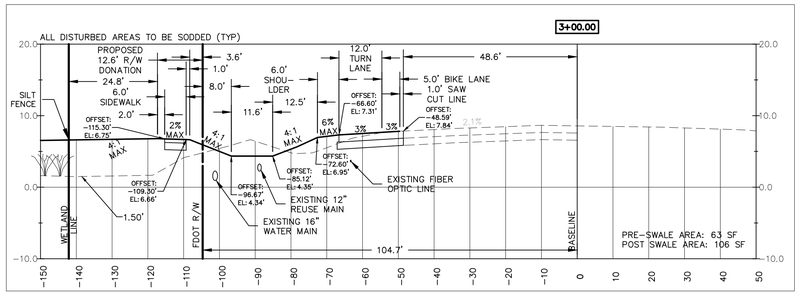
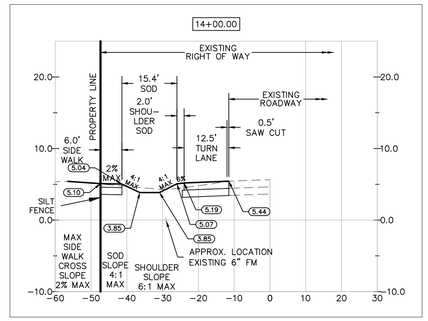


TYPICAL 776 (EL JOBEAN ROAD) TURN LANE SECTION
N.T.S.



TYPICAL BISCAYNE DR. TURN LANE SECTION
N.T.S.

BISCAYNE LANDING

RECORD DRAWING

RECORD INFORMATION SHOWN [IN BRACKETS]
PROVIDED BY BANKS ENGINEERING

PREPARED FOR:

LENNAR HOMES, LLC
10481 SIX MILE CYPRESS PARKWAY
FORT MYERS, FL 33966
PHONE: 239-931-4778

NO.	DATE	REVISION DESCRIPTION	BY

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RYAN W. POWERS, P.E.
FL LIC. NO. 82437

TYPICAL CROSS SECTIONS
BISCAYNE LANDING
CHARLOTTE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
3-25-19	4272	_X-SEC	RWP	DCT	CWR	N.T.S.	17A

S:\JOBS\4272\4272\DRAWINGS\REC-DWG\RT\4272 - 16 - X-SECS.DWG 8/5/2021 11:15 AM TODD VANA

Attachment 8

Public Works Department Approval

From:	Benjamin, Roy
To:	Mastney, Eileen
Cc:	Prince, Tara; Jones, Michael; Shao, Jenny; Benjamin, Roy
Subject:	RE: Bond Release- FP-19-06-08 Biscayne Landing North
Date:	Tuesday, October 14, 2025 2:31:33 PM
Attachments:	image002.png image003.png

I have approved this one in Accela BRR-25-14. Thanks

If you have further concerns please contact me at the information below.

Best Regards,

Roy Benjamin
Construction Services Manager
Charlotte County Public Works
410 Taylor Road, Unit 104
Punta Gorda, Florida 33950
Roy.benjamin@charlottecountyfl.gov

Office (941) 575-3628
Cell (941) 628-8065
Fax (941) 575-3664
To Exceed Expectations in the Delivery of Public Services"

APWA Logo

From: Mastney, Eileen <Eileen.Mastney@charlottecountyfl.gov>
Sent: Tuesday, October 14, 2025 12:05 PM
To: Benjamin, Roy <Roy.Benjamin@charlottecountyfl.gov>
Cc: Prince, Tara <TaraG.Prince@Charlottecountyfl.gov>; Jones, Michael <Michael.Jones@charlottecountyfl.gov>; Shao, Jenny <Jenny.Shao@charlottecountyfl.gov>
Subject: Bond Release- FP-19-06-08 Biscayne Landing North

Good afternoon, Roy

Lennar Homes, Inc. is requesting a Bond Release for FP-19-06-08 Biscayne Landing North. The Accela reference number is BRR-25-14 and I have assigned the reviews to you.