

City of Miami Beach

Last Completed Item Reviews Across All Submittals

Permit Type: Building - Residential **Work Class:** Marine **Application Date:** 04/04/2022 **Status:** Applied

Address: 94 PALM AVE

Permit: BR2206644

MIAMI BEACH

Print Date & Time: 06/01/2022 5:42:55PM

BUILDING DEPARTMENT

Reviewed For Compliance

BR2206644

06/01/2022 5:46:09 PM

Item Review Type	Status	Version	Completed Date	Assigned User
Permit Landscape Review	Pass	1	04/19/2022	Eugene Nunez
Public Works (Building Permits)	Pass	1	04/25/2022	Eugene Egemba
Electrical Review	Pass	1	04/21/2022	Diego Martinez
Planning Review - VDR	Pass	1	05/02/2022	Antonio Atala
Building Review	Pass	1	04/19/2022	Armando Lopez
Urban Forestry Group Review	Pass	1	04/19/2022	Jorge Nunez
Structural Review	Pass	1	04/19/2022	Jaime Cynamon
Environmental Review	Pass	2	05/11/2022	Jorge Nunez
Permit Intake Review	Pass	3	05/31/2022	Brittany Washington
Submittal Version Complete	Pass	3	06/01/2022	Haidenys Monzon

INITIAL ORGANIZATIONAL WRITTEN CONSENT
OF
PALM ISLAND HOLDINGS, LLC

The undersigned, being the sole Member and the sole Manager of **Palm Island Holdings, LLC**, a Delaware limited liability company (the "Company"), hereby waive any and all requirements for notice of the time and place of an organizational meeting of the Company and do hereby agree, declare and consent, pursuant to the provisions of the Delaware Limited Liability Company Act, to the adoption of the following by written consent, effective as of August 4, 2021:

1. **Certificate of Formation.** The Certificate of Formation of the Company was filed with the Delaware Secretary of State on August 4, 2021, as evidenced by the certified copy of the Certificate of Formation attached hereto and incorporated herein by reference.

2. **Limited Liability Company Agreement.** The affairs of the Company and the Company's conduct of business shall be governed by the Delaware Limited Liability Company Act and the Company's Limited Liability Company Agreement, a copy of which is attached hereto and incorporated herein by reference, the form of which is hereby confirmed, ratified and approved.

3. **Manager.** The business and affairs of the Company shall be managed by the Manager. The Manager shall direct, manage and control the business of the Company and shall have full and complete authority, power and discretion to make any and all decisions and to do any and all things which the Manager shall deem to be reasonably required to accomplish the business and objectives of the Company subject to the authority of the Member under Delaware law to take over the management of the business of the Company at any time, as more specifically set forth in the Company's Limited Liability Company Agreement. **DLC Capital Management, LLC** is hereby appointed the initial Manager of the Company to serve until the earlier of (A) the next annual meeting of the Members, (B) its resignation, or (C) its successor is duly elected and qualified.

4. **Member.** The name of the initial Member of the Company and its membership units in the Company are as set forth below. The Member has made, or upon execution of this written consent shall make, the following capital contribution to the Company:

<u>Member Name</u>	<u>Capital Contribution</u>	<u>Number of Membership Units</u>
DLC Capital Management, LLC	\$100.00	100 Common Units

5. **Bank Account.** The Manager of the Company is hereby authorized, empowered and directed as an agent of the Company to open an account with any commercial banking institution and to deposit therein all funds of the Company. For the avoidance of doubt, said Manager is also authorized to open any such account on behalf of any other entity for which the Company is acting as a manager, trustee or other fiduciary and to deposit only funds or other assets of such other entity in such account, and not to commingle any other assets with such assets, and to direct the payment of funds from such account to pay expenditures incurred in connection with the

business of such Company. All checks, drafts and notes of the Company or such other entity, as the case may be, payable on said account will be made in the name of the Company or such other entity, as appropriate, and be signed by such individuals as are properly designated. Copies of such resolutions as are required by such banking or other financial institution(s) to affect the foregoing are hereby made a part hereof, and they are hereby approved and adopted.

6. **Employer Identification Number.** The future and past actions of the Manager of the Company (or any agent thereof) undertaken to execute and file with the Internal Revenue Service an Application for Employer Identification Number on Internal Revenue Service (Form SS-4) are hereby ratified, adopted and approved in all respects and all such actions shall be binding upon the Company to the same extent as if authorized by this Consent.

7. **Foreign Authority.** The Manager of the Company is hereby authorized, empowered and directed as an agent of the Company to make and file such certificates, reports or other instruments as may be required by law to be filed in any state, territory or dependency of the United States, or in any foreign country in which said officers shall find it advisable, to file the same to authorize the Company to transact business in such state, territory, dependency or foreign country.

8. **General Authority.** The Manager of the Company is hereby authorized and directed to take any and all actions and to execute any and all further agreements, instruments and documents as the Manager shall determine to be necessary or appropriate to effect the foregoing resolutions, the taking of any such action to be conclusive evidence that the same was deemed to be necessary or appropriate and was hereby authorized. All prior actions taken by the Member and/or the Manager in connection with the foregoing resolutions be, and they hereby are, ratified and approved.

This Consent may be executed separately in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same consent. In the event that any signature is delivered by facsimile transmission or by the signature page being sent via e-mail to the other party as a portable document format (.pdf) file or image file attachment, such signature shall have the same force and effect as if such signature page were an original thereof.

[Signature appears on the following page.]

IN WITNESS WHEREOF, this Consent has been executed as of the date first written
above.

06/01/2022 5:46:13 PM

DLC CAPITAL MANAGEMENT, LLC

By: 

Jamie Mandel, President

True and correct copies of each of the following documents are appended to this Consent:

- I. Certificate of Formation
- II. Limited Liability Company Agreement

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06/01/2022 3:46:13 PM

CONSTRUCTION COST AFFIDAVIT

For Office Use Only

Permit/Process No	
Date of Submittal	

I, Palm Island Holdings LLC TRS, acting as agent (owner, registered agent, or legal representative) and
I (general contractor/ sub-contractor), Southeast Marine Construction, Inc
do hereby attest that the construction costs indicated herein are accurate for the construction project located at:
94 Palm Avenue, Miami Beach, Florida 33139

Master Permits:

Total project cost: \$ 120,000 Building cost (excludes roofing, windows, railings, and MEP) \$: _____

Stand alone and sub permits

Roofing \$: _____ Windows \$: _____ Railings \$: _____
Electrical \$: _____ Mechanical \$: _____ Plumbing \$: _____
Other \$: _____ Description: _____

Registered Owner/Sub-contractor: Palm Island Holdings LLC TRS

Signature of Owner/Sub-contractor: [Signature]

Printed Name: Janice Mandel

STATE OF FLORIDA
COUNTY OF _____

Registered Contractor: Southeast Marine Construction, Inc

Signature of Contractor: [Signature]

Printed Name: Joseph Thomas

STATE OF FLORIDA
COUNTY OF Miami Dade

The foregoing instrument was acknowledged before
me this 21 day of December, 2021
by Janice Mandel, who is personally known to me or
who has produced _____
as identification and who has taken an oath.

Notary Public, State of Florida

Printed Name

Commission Number:

My Commission Expires:



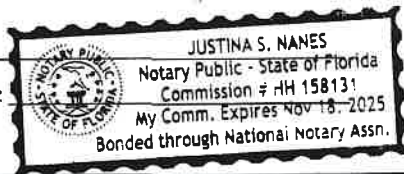
The foregoing instrument was acknowledged before
me this 5th day of April, 2022
by Joseph Thomas, who is personally known to me or
who has produced _____
as identification and who has taken an oath.

Notary Public, State of Florida

Printed Name

Commission Number:

My Commission Expires:



National Pollutions Discharge Elimination System (NPDES)
Construction Site Sediment and Erosion Control Affidavit

The quality of Biscayne Bay and its interconnected waterbodies is critical to environmental, economic, and recreational prosperity, and to the health, safety and welfare of the citizens of the City of Miami Beach. The City of Miami Beach participates as a co-permittee with Miami-Dade County in the [National Pollution Discharge Elimination System \(NPDES\) program](#). The program aims to improve water quality of stormwater. The City of Miami Beach must comply with permit conditions, which require the City to reduce erosion and control sedimentation from construction sites (construction activity means the act of developing or improving land that involves the disturbance of soils and includes clearing, grading, and excavation. The Florida Department of Environmental Protection has determined that demolition activities also meet the definition of construction activity):

The City of Miami Beach requires the following to ensure permit conditions are met and construction sites are in compliance with Chapter 46, Article X of the municipal code.

1. Sediment & Erosion Control Plan: Applicants for new construction projects or substantial improvements (i.e., additions, demolitions, pools, etc.) shall submit as part of the mandatory permit submittal documents of erosion and sedimentation control details, notes, or plan for the development of the site. The qualifier for the permittee shall attest by his notarized signature that the erosion and sedimentation controls will be maintained for the duration of the permitted construction activities (see below).

2. Best Management Practices (BMPs) for Erosion and Sedimentation Control: Mandatory erosion and sedimentation control best management practices that shall be implemented at each development site are:

- a. **Temporary Gravel Construction Entrance & Exit** (See Attachment A).
- b. **Storm Drain Inlet Protection** (See Attachment B).
- c. **Silt Fence** (See Attachment C).
- d. **Floating Turbidity Barrier** (as applicable for waterfront construction) Attachment D

NOTE: The preceding elements of the plan must be implemented at the development site, inspected, and approved by the Environment & Sustainability Department director, or designee prior to the acceptance of the first mandatory Florida Building Code inspection request.

3. Compliance with Erosion and Sedimentation Control Plan and/or Mandatory BMPs: Mandatory Florida Building Code and environmental inspections for erosion and sedimentation control shall be performed simultaneously with construction inspections. Failure to maintain erosion and sedimentation control measures during the entire construction phase will result in a rejected inspection request from the Building Official and/or Code Compliance Department action to be treated as a violation of the Florida Building Code or the City's Code.

I hereby agree to maintain a sediment and erosion control plan and/ or BMPs for the duration of the construction phase. Failure to maintain sediment and erosion control measures during the construction phase will result in a violation of the Florida Building Code by the Building Official. If compliance is not achieved, a stop work order may be issued. In addition, pursuant to Chapter 46, Article X, City of Miami Beach Municipal Code, failure to maintain sediment and erosion controls may result in fines and penalties.

[SIGNATURES ON THE FOLLOWING PAGE]

MIAMI BEACH

BUILDING DEPARTMENT

Reviewed For Compliance

BR2206644

06/01/2022 5:46:14 PM

STATE OF Florida
COUNTY OF Miami-Dade

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 27 day of April, by Joseph Thomas who is personally known to me or who has produced _____ as identification.

Southeast Marine Construction, Inc
General Contractor - Company Name

Joseph Thomas
Name of Qualifier

Joseph Thomas
Signature of Qualifier

Date: 04/26/2022

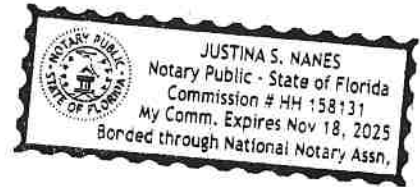
License of Qualifier: CGC1524635

Justina Nanes
Notary Signature

Name: Justina Nanes

My commission expires: NOV 18TH 2025

[Notary Seal]



STATE OF Florida
COUNTY OF Miami-Dade

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this ___ day of _____, by _____ who is personally known to me or who has produced _____ as identification.

Property Owner Name

Property Owner Signature

Property Address

Permit Number

Notary Signature

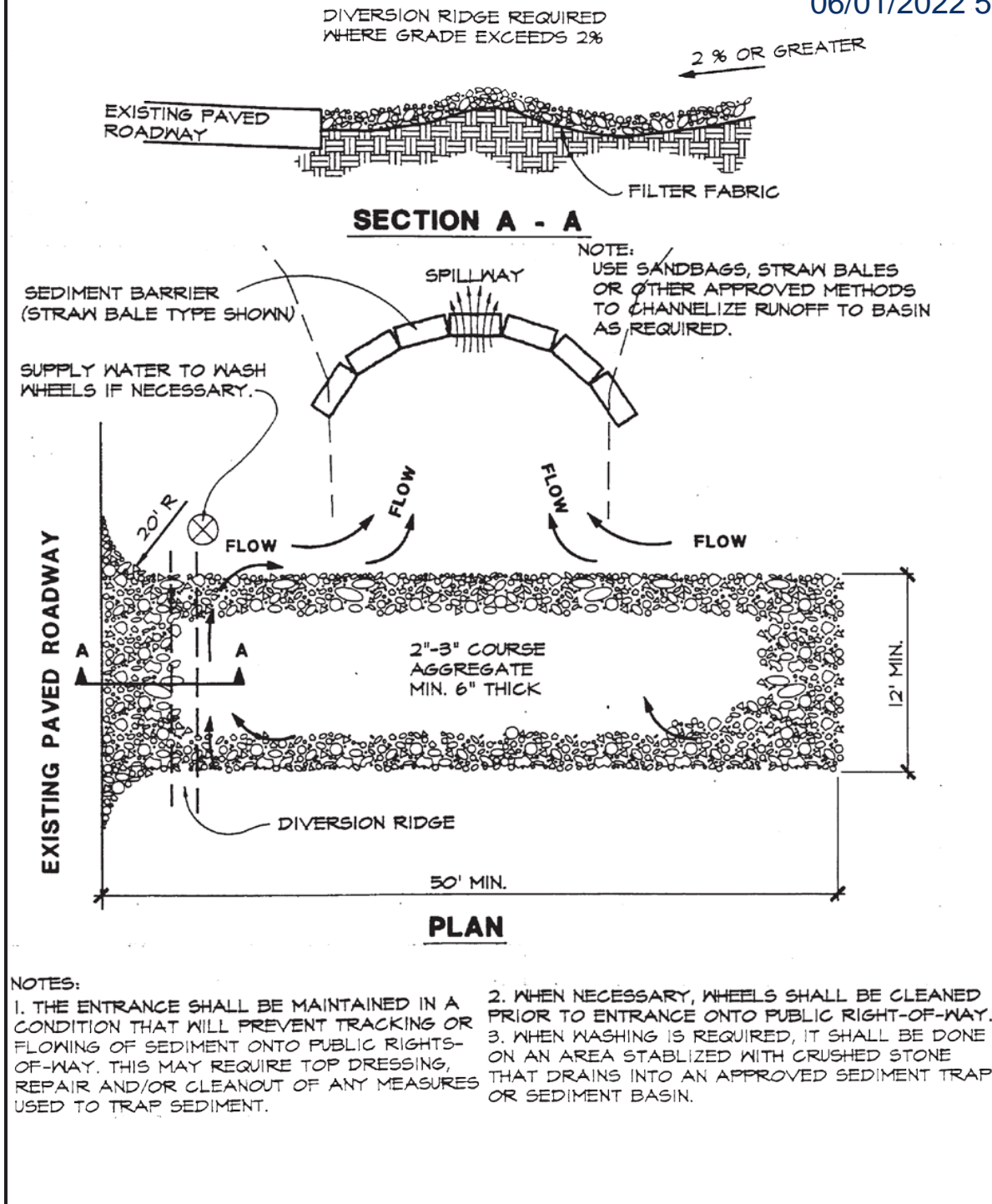
Name: _____

My commission expires: _____

[Notary Seal]

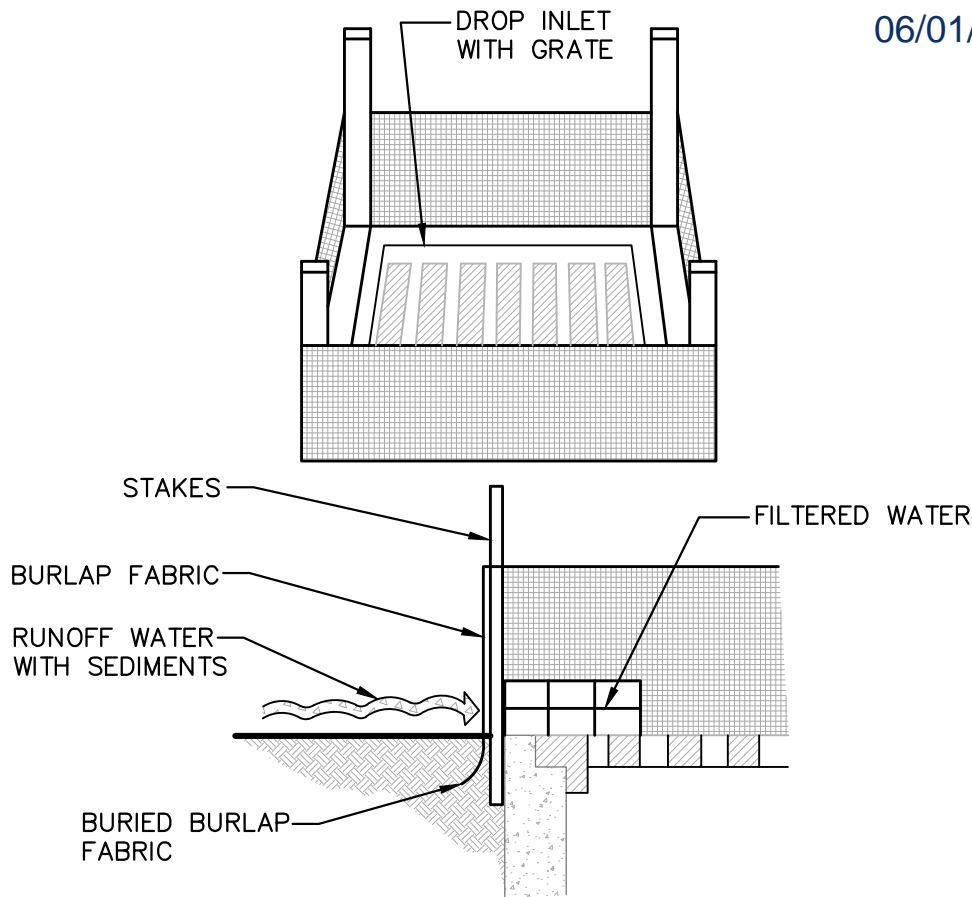
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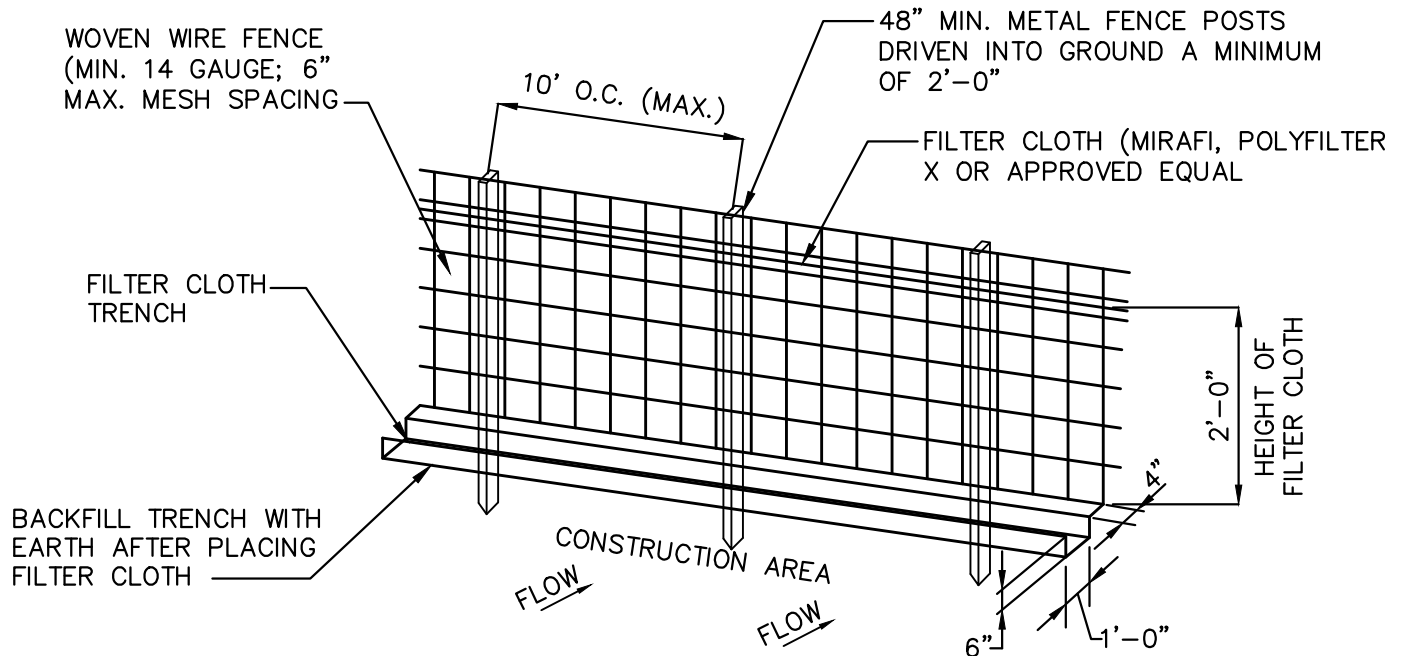
SPECIFIC APPLICATION:

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.50 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

BURLAP DROP INLET SEDIMENT FILTER
N.T.S.

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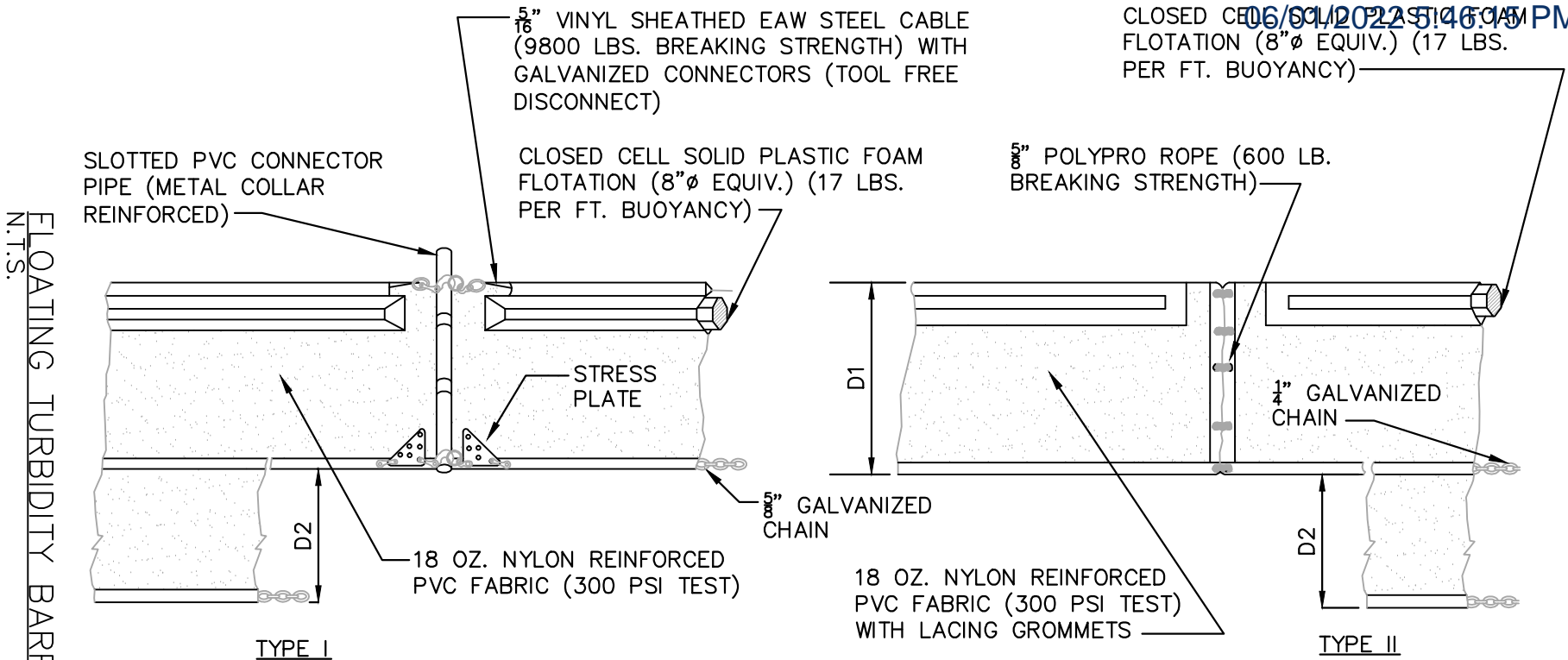
CONSTRUCTION SPECIFICATIONS:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS BY USE OF WIRE TIES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE BY USE OF WIRE TIES SPACED EVERY 24" X 24".
3. SILT FENCES TO BE INSTALLED IN LOCATIONS AS SHOWN ON THIS EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING OF CONSTRUCTION TO CONTROL SEDIMENT.
4. SILT FENCES TO BE MAINTAINED AND CLEANED AS NECESSARY TO MAINTAIN IN FUNCTIONAL CONDITION.
5. SILT FENCES TO BE REMOVED AND THE AREA TO BE RESTORED TO ITS NATURAL CONDITION WHEN PERMANENT EROSION AND SEDIMENT CONTROL PROCEDURES ARE EFFECTIVE.

FILTER FENCE
N.T.S.

BR2206644

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CLOSED CELL SOLID PLASTIC FOAM
FLOTATION (8"Ø EQUIV.) (17 LBS.
PER FT. BUOYANCY)



D1 = 5' STD, (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D2 = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5').
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPE I AND II MY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

General Sediment and Erosion Control Notes

Reviewed For Compliance

BR2206644

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1. The contractor is responsible for following the best erosion and sediment control practices as outlined in the plans specification, applicable permit(s), and the prevention, correction, control, and abatement of erosion and water pollution in accordance with chapter 62-302, Florida Administrative Code.
2. Erosion and sediment control barriers shall be placed where there is potential for downstream water quality degradation.
3. The site contractor is responsible for removing the temporary erosion and sediment control devices after completion of construction and only when areas have been stabilized.
4. The site contractor is responsible for the maintenance of BMPs to make sure they are functioning as designed at all times.
5. The BMP structures shall be inspected after each rain and repairs made as needed. Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
6. Correctly installed silt fences will be used along the limits of construction to minimize offsite siltation migration.
7. Sod shall be placed in areas which may require immediate erosion protection to ensure water quality standards are maintained and where no active construction is occurring.
8. The contractor shall pay for any water quality control violations from any agency that results in fines being assessed to the owner because of the contractor's failure to eliminate turbid runoff from leaving the site and raising background levels of turbidity above existing background levels.

Inlet Protection

9. Wire mesh shall be laid over the top drop inlet so that the wire extends a minimum of 1 foot beyond each side of the inlet structure. Hardware cloth or comparable wire mesh with ½ - inch opening shall be used. If more than one strip of mesh is necessary the strips shall be overlapped.
10. FDOT NO. 1 coarse aggregate shall be placed over the wire mesh as indicated on detail. The depth of stone shall be at least 12 inches over the entire inlet opening. The stone shall extend beyond the inlet opening at least 18 inches on all sides.
11. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone must be pulled away from the inlet, cleaned and replaced.
12. The filter barrier shall be entrenched and backfilled. A trench shall be excavated around the inlet and width of a bale to a minimum depth of four inches. After the bales are stacked, the excavated soil shall be backfilled and compacted against the filter barrier.
13. Bale shall be either wire-bound or string-tied with the bindings oriented around the sides rather than over and under the bales.
14. Bales shall be placed lengthwise in single row surrounding the inlet with the ends of adjacent bales pressed together.
15. Each bale shall be securely anchored and held in place by at least two stakes or rebars driven through the bale.
16. Loose straw should be wedged between bales to prevent water from entering between bales.

Turbidity Barriers

17. Floating turbidity barriers will be placed at all outfall locations connected to the work area during active construction. If seagrasses are present barriers will not be placed over them. The floating turbidity barriers shall be installed in a manner to prevent manatee entanglement.
18. Turbidity barriers to be marked with site contractor's company name using permanent markings no smaller than 3 inches in height on the top of the barrier.

EROSION AND SEDIMENT CONTROL GENERAL NOTES

N.T.S.

MIAMIBEACH

Permit Application

Reviewed For Compliance

BR2206644

06/01/2022 5:46:15 PM

Application Date: 04/01/2022

Permit #: BOA2216301

Parcel / Folio Number:
0242050010330

Building Department
1700 Convention Center Drive, 2nd Floor
Miami Beach, Florida 33139
Phone: 305-673-7810, Fax: 305-673-7857
http://www.miamibeachfl.gov/building/

Property Address:
94 PALM AVE Miami Beach

Unit #:

Master Permit Number (If applicable):

Violation # (If applicable):

Permit Type: Building Online Application

Permit Workclass: Building Online Application

Occupancy Classification:

Square Feet: 0.00

Valuation: \$120,000.00

OPT In / Opt Out : Opt Out - Not Participate

Description of Work: Installation of a new concrete seawall and riprap boulders.

Property Owner

Name: Palm Island Holdings LLC TRS Jamie Mandel

Email: andrea@inspiratamgmt.com

Business Phone: (305) 921-9344

Contractor

Company Name: Southeast Marine Construction, Inc

License Num: CGC1524635

Name: Joseph Thomas

Email: semarine@semarineconstruction.com

Business Phone: 954-630-2300

Notice & Certification

This application is hereby made to obtain a permit to do the work and installation as indicated. I certify that all work will be performed to meet the standards of all laws and construction regulations in this jurisdiction. I understand that a **separate permit** must be secured for **Electrical, Elevator, Fire, Mechanical, Plumbing, Signs, Wells, Pools, Furnaces, Boilers, Heaters, Tanks, Air Conditioners, etc.**

Owner's Affidavit: I certify that all the forgoing information is correct. Owner Certifies that the aforementioned Contractor has the authorization to perform the work as specified above.

Lessee's Affidavit: Lessee certifies that he has full consent and authorization from owner of subject property to perform the above-mentioned work and to hire above captioned contractor.

In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this country, and there may be additional permits required from other governmental entities such as: the Environmental Division of Miami-Dade County; Permitting, Environment and Regulatory Affairs, Water & Sewer Department, Department of Environmental Protection, South Florida Water Management District, Miami-Dade County Impact Fee, water management districts, state agencies, and/or federal agencies.

Under penalties of perjury, I declare that to the best of my knowledge, the facts stated in this document are true. Any information found to be false may cause the revocation and/or denial of the permit and/or Certificate of Occupancy.

OWNER'S ELECTRONIC SUBMISSION STATEMENT: Under penalty of perjury, I declare that all the information contained in this permit application is true and correct.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT IS REQUIRED FOR ANY WORK WITH COST EXCEEDING \$2,500.00.

Signature of Owner/Agent or GC (for Sub-permits):

Signature: Jamie Mandel
PRINT NAME: Jamie Mandel
STATE OF FLORIDA MIAMI-DADE COUNTY
Sworn to and subscribed before me this 4
day of April, 2022
by Jamie Mandel
Signature of Notary Public

Print Name: William W. Riley

(SEAL)

Personally know
or Produced Identification



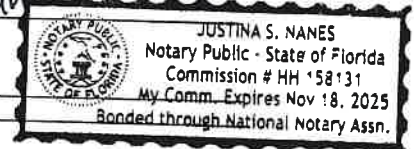
Signature of Qualifier:

Signature: Joseph Thomas
PRINT NAME: Joseph Thomas
STATE OF FLORIDA MIAMI-DADE COUNTY
Sworn to and subscribed before me this 5th
day of April, 2022
by Joseph Thomas
Signature of Notary Public

Print Name: Justina S. Naves

(SEAL)

Personally know
or Produced Identification



ADA Information

To request this material in accessible format, sign language interpreters, information on access for persons with disabilities, and/or any accommodation to review any document or participate in any city-sponsored proceeding, please contact 305-604-2489 (voice), 305-673-7524 (fax), or 305-673-7218 (TTY) five (5) days in advance to initiate your request. TTY users may also call 711 (Florida Relay Service)

Delaware

The First State

MIAMI BEACH

BUILDING DEPARTMENT

Reviewed For Compliance

BR2206644

06/01/2022 5:46:09 PM

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "PALM ISLAND HOLDINGS, LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-SIXTH DAY OF MAY, A.D. 2022.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "PALM ISLAND HOLDINGS, LLC" WAS FORMED ON THE FOURTH DAY OF AUGUST, A.D. 2021.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE BEEN PAID TO DATE.




Jeffrey W. Bullock, Secretary of State

6141627 8300

SR# 20222359879

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203530619

Date: 05-26-22

CLIENT: Miami Beach, Florida
03/22/2022 5:46:15 PM

ENVIRONMENTAL CONSULTANT:
OCEAN CONSULTING, LLC.
340 Minorca Avenue, Suite 7
Coral Gables, Florida 33134
Tel: (305) 921-9344
Fax: (305) 677-3254

CONTRACTOR:

PROJECT ENGINEER:
ADOLFO J. GONZALEZ P.E.
2050 Coral Way Suite 502
Miami, FL 33145
Office - 305-415-8782

SEAL / SIGNATURE / DATE

Digitally signed by Adolfo J Gonzalez
Date: 2022.04.05 14:51:34 -04'00'

Digitally signed by Adolfo J Gonzalez
Date: 2022.03.22 14:43:36 -04'00'

Adolfo J. Gonzalez PE
Lic. No. 58620

PERMIT DRAWINGS

Issue # Issue Date

① March 22, 2022

PROJECT: 21-11465

PROJECT LOCATION & NOTES

SCALE : AS SHOWN
SHEET NO.

S-1

GENERAL NOTES:

- ELEVATIONS SHOWN REFER TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
- ALL DIMENSIONS ON PLANS ARE SUBJECT TO VERIFICATION IN THE FIELD.
- IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE CODES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF ENGINEER BEFORE PROCEEDING WITH WORK. CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR ALL LINES, ELEVATIONS, AND MEASUREMENTS IN CONNECTION WITH THEIR WORK.
- IT IS THE INTENT OF THESE PLANS AND THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH LOCAL, STATE, AND FEDERAL ENVIRONMENTAL PERMITS ISSUED FOR THIS PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE AND GOVERN HIMSELF BY ALL PROVISIONS OF THESE PERMITS.
- APPLICABLE BUILDING CODE: FLORIDA BUILDING CODE, 2020 EDITION (AND CURRENT ADDENDUMS).
- APPROVED CONTRACTOR TO DETERMINE THE SUITABILITY OF EXISTING STRUCTURES AND VERIFY ALL DIMENSIONS. THE APPROVED CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, MEANS, SEQUENCES AND PROCEDURES OF WORK.
- DO NOT SCALE DRAWINGS FOR DIMENSIONS.
- CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK.
- CONTRACTOR TO PROPERLY FENCE AND SECURE AREA WITH BARRICADES.
- ANY DEVIATION AND/OR SUBSTITUTION FROM THE INFORMATION PROVIDED HEREIN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
- ALL NEW MATERIALS AND/OR PATCHWORK SHALL BE PROVIDED TO MATCH EXISTING MATERIALS AND/OR ADJOINING WORK WHERE PRACTICAL EXCEPT AS SPECIFICALLY NOTED HEREIN.
- LICENSED CONTRACTOR SHALL USE ALL POSSIBLE CARE TO PROTECT ALL EXISTING MATERIALS, SURFACES, AND FURNISHINGS FROM DAMAGE DURING ALL PHASES OF CONSTRUCTION.
- THE LICENSED CONTRACTOR TO INSTALL AND REMOVE ALL SHORING AND BRACING AS REQUIRED FOR THE PROPER EXECUTION OF THE WORK.
- ALL NEW WORK AND/OR MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF EACH ADMINISTRATIVE BODY HAVING JURISDICTION IN EACH PERTAINING CIRCUMSTANCE.
- THE CONTRACTOR WILL EMPLOY AND MAINTAIN ADEQUATE SEDIMENT AND EROSION CONTROL MEASURES TO PROTECT BISCAYNE BAY FROM SEDIMENT AND CONSTRUCTION DEBRIS.

DESIGN CRITERIA

STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE FOLLOWING CODES AND SPECIFICATIONS:

- FLORIDA BUILDING CODE (FBC), 2020 EDITION.
 - ACI 318-19, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
 - ASCE 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
 - NDS NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 2018 EDITION.
 - EM 1110-2-1100 (PART VI) COASTAL ENGINEERING MANUAL, 2011 EDITION.
- IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES AND REGULATIONS AND THE REQUIREMENTS OF THE REFERENCED STANDARDS OF THESE SPECIFICATIONS, THE PROVISIONS OF THE MORE STRINGENT SHALL GOVERN.

CONCRETE

- CONCRETE SHALL CONFORM TO ACI 318 (LATEST ED.) AND SHALL BE REGULAR WEIGHT, SULFATE RESISTANT, WITH A DESIGN STRENGTH OF 5,000 PSI AT 28 DAYS W/ A MAX WATER-CEMENTIOUS MATERIALS RATIO, BY WEIGHT, NORMAL WEIGHT AGGREGATE CONCRETE OF 0.40.
- OWNER SHALL EMPLOY AND PAY FOR TESTING SERVICES FROM AN INDEPENDENT TESTING LABORATORY FOR CONCRETE SAMPLING AND TESTING IN ACCORDANCE W/ ASTM.
- LICENSED CONTRACTOR IS RESPONSIBLE FOR THE ADEQUACY OF FORMS AND SHORING AND FOR SAFE PRACTICE IN THEIR USE AND REMOVAL.
- CONCRETE COVER SHALL BE 3" UNLESS OTHERWISE NOTED ON APPROVED DRAWINGS.
- REINFORCING STEEL SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF ASTM A615 GRADE 60 SPECIFICATIONS. ALL REINFORCEMENT SHALL BE PLACED IN ACCORDANCE W/ ACI 315 AND ACI MANUAL OF STANDARD PRACTICE.
- SPLICES IN REINFORCING BARS SHALL NOT BE LESS THAN 48 BAR DIAMETERS AND REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS AND CHANGES IN DIRECTION. CONTINUITY SHALL BE PROVIDED AT CORNERS OR CHANGES IN DIRECTION BY BENDING THE LONGITUDINAL STEEL AROUND THE CORNER 48 BAR DIAMETERS.

PILE DRIVING NOTES

- PILE DRIVING OPERATIONS SHALL BE OBSERVED BY A SPECIAL INSPECTOR, INCLUDING TEST PILES SUFFICIENT TO DETERMINE THE APPROXIMATE LENGTH REQUIRED TO MEET DESIGN CAPACITY.
- PILES SHALL BE DRIVEN USING AN APPROVED CUSHION BLOCK CONSISTING OF MATERIAL SO ARRANGED SO AS TO PROVIDE THE TRANSMISSION OF THE HAMMER ENERGY.
- PILES SHALL BE DRIVEN TO REQUIRED MINIMUM 15 TON BEARING CAPACITY.
- PILES SHALL BE DRIVEN WITH A DROP HAMMER OR GRAVITY HAMMER PROVIDED THE HAMMER SHALL WEIGH NO LESS THAN 3,000 POUNDS, AND THE FALL OF THE HAMMER SHALL NOT EXCEED 6 FT.
- PILES SHALL BE DRIVEN WITH A VARIATION OF NOT MORE THAN 1/4" PER FOOT FROM THE VERTICAL, OR FROM THE BATTER LINE INDICATED, WITH A MAX VARIATION OF THE HEAD OF THE PILE FROM THE POSITION SHOWN ON THE PLANS OF NOT MORE THAN 3".
- WHERE PILING MUST PENETRATE STRATA OFFERING HIGH RESISTANCE TO DRIVING, THE STRUCTURAL ENGINEER OF RECORD OR SPECIAL INSPECTOR MAY REQUIRE THAT PILES BE SET IN PRE-DRILLED OR PUNCHED HOLES. THE PILES SHALL REACH THEIR FINAL PENETRATION BY DRIVING.

RER - NATURAL RESOURCES DIVISION
PRELIMINARY APPROVAL
NAME Romina Cores
DATE 03/25/2022



LOCATION MAP AND LEGAL DESCRIPTION



PROJECT SITE LOCATION:

94 Palm Ave
Miami Beach, FL 33140

LATITUDE: 25°47'28.35"N
LONGITUDE: 80° 9'29.93"W

FOLIO No.: 02-4205-001-0330

LEGAL DESCRIPTION:

32.53 42 4-5 54 42

PALM ISLAND PB 6-54

LOTS 36 & 37 & 20FT STRIP IN BAY

ADJ EACH BLK 1

OR 18142-1043 0698 1

COC 25980-4788 09 2007 1

CLIENT: **BR22-00004**
Miami Beach, Florida

DATE: **06/07/2022** 5:46:16 PM

3921 Alton Road, Suite 421
Miami Beach Florida 33140

ENVIRONMENTAL CONSULTANT:

OCEAN

CONSULTING, LLC.

340 Minorca Avenue, Suite 7

Coral Gables, Florida 33134

Tel: (305) 921-9344

Fax: (305) 677-3254

CONTRACTOR:

PROJECT ENGINEER:

ADOLFO J. GONZALEZ P.E.

2050 Coral Way Suite 502

Miami, FL 33145

Office - 305-415-8782

SEAL / SIGNATURE / DATE

Digitally signed

by Adolfo J

Gonzalez

Date: 2022.04.05

14:52:27 -04'00'

Digitally signed

by Adolfo J

Gonzalez

Date: 2022.03.22

14:43:59 -04'00'

Adolfo J. Gonzalez PE

Lic. No. 58620

PERMIT DRAWINGS

Issue # Issue Date

① March 22, 2022

PROJECT: 21-11465

EXISTING CONDITIONS

SCALE: AS SHOWN

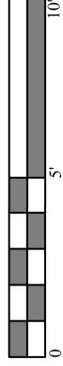
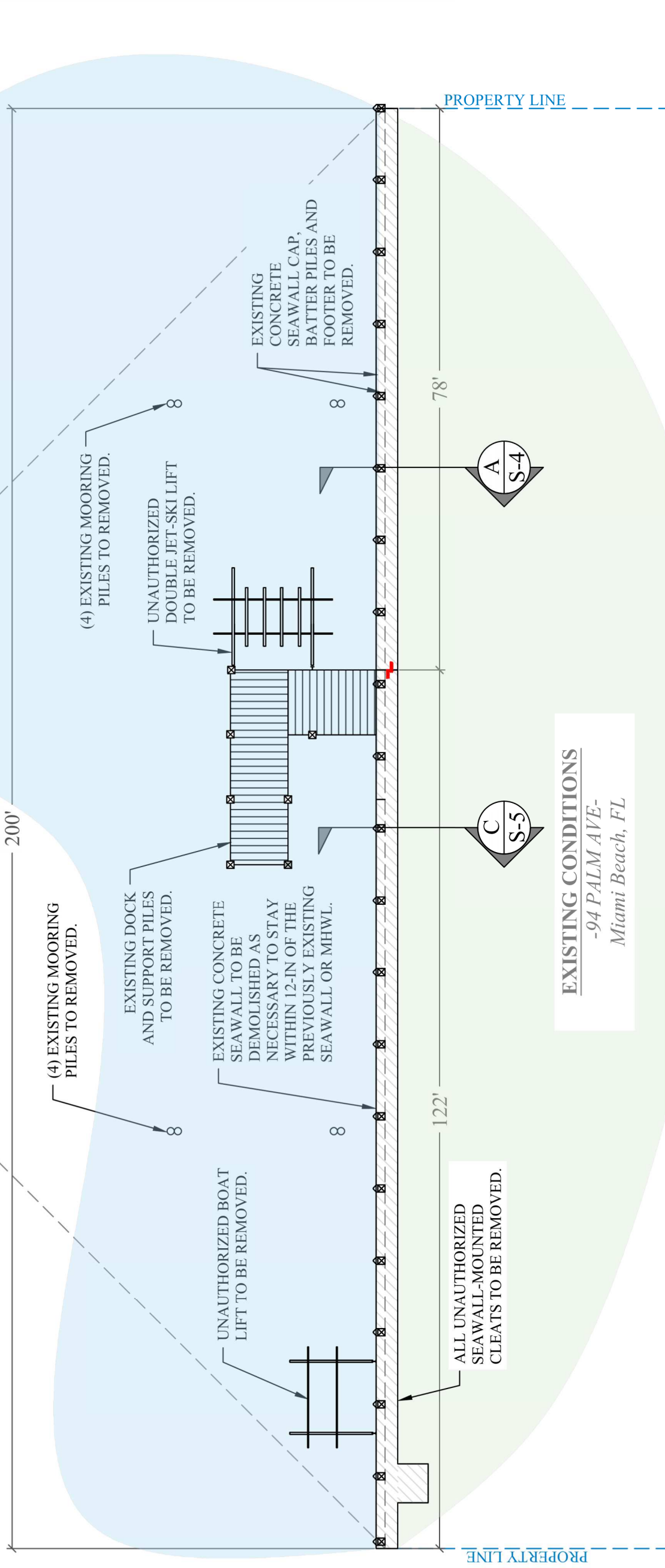
SHEET NO.

S-2

B I S C A Y N E B A Y

R.E.R D-5 BOUNDARY

RER - NATURAL RESOURCES DIVISION
PRELIMINARY APPROVAL
NAME Romina Cores
DATE 03/25/2022



SCALE: 3/16" = 1"

CLIENT: **BR220604**

DATE: **06/01/2022 5:46:16 PM**

3921 Alton Road, Suite 421
Miami Beach Florida 33140

ENVIRONMENTAL CONSULTANT:
OCEAN CONSULTING, LLC.
340 Minorca Avenue, Suite 7
Coral Gables, Florida 33134
Tel: (305) 921-9344
Fax: (305) 677-3254

CONTRACTOR:

PROJECT ENGINEER:
ADOLFO J. GONZALEZ P.E.

2050 Coral Way Suite 502
Miami, FL 33145
Office - 305-415-8782

SEAL / SIGNATURE / DATE

Digitally signed by Adolfo J. Gonzalez
Date: 2022.04.05 14:52:53 -04'00'
Digitally signed by Adolfo J. Gonzalez
Date: 2022.03.22 14:45:28 -04'00'

Adolfo J. Gonzalez PE
Lic. No. 58620

PERMIT DRAWINGS

Issue # Issue Date

① March 22, 2022

PROJECT: 21-11465

PROPOSED CONDITIONS

SCALE: AS SHOWN
SHEET NO.

S-3

B I S C A Y N E B A Y

R.E.R D-5 BOUNDARY

RER - NATURAL RESOURCES DIVISION
PRELIMINARY APPROVAL
NAME Romina Cores
DATE 03/25/2022

NOTE: TURBIDITY CURTAIN
TO SURROUND ALL AREAS
OF CONSTRUCTION.

200'

(42) NEW PROPOSED 12"x12" P.S.
CONCRETE KING & BATTER PILES
SPACED 10-FT O.C. MAX; (21) KING
PILES AND (21) BATTER PILES.

NEW REINFORCED
CONCRETE SEAWALL
PANELS AND CAP TO
BE INSTALLED.

NEW 18"-24" DIA. LIME ROCK RIP-RAP TO
BE INSTALLED AT A 2H:1V SLOPE
PLACED 8-FT MAX FROM WET-FACE OF
NEW SEAWALL ALONG ENTIRE
PROPERTY SHORELINE. (118.5 CY)

NEW 10-FT SG-750 VINYL
SHEET PILE RETURN WALL.

D
S-5

PROPOSED CONDITIONS
-94 PALM AVE-
Miami Beach, FL

NEW 10-FT SG-750 VINYL
SHEET PILE RETURN WALL.

B
S-4

E
S-6

PROPERTY LINE

0 5' 10'

SCALE: 3/16" = 1"

BR2206644
CLIENT: Miami Beach, Florida

06/01/2022 5:46:16 PM

3921 Alton Road, Suite 421
Miami Beach Florida 33140

ENVIRONMENTAL CONSULTANT:

OCEAN

CONSULTING, LLC.

340 Minorca Avenue, Suite 7
Coral Gables, Florida 33134

Tel: (305) 921-9344

Fax: (305) 677-3254

CONTRACTOR:

PROJECT ENGINEER:

ADOLFO J. GONZALEZ P.E.

2050 Coral Way Suite 502

Miami, FL 33145

Office - 305-415-8782

SEAL / SIGNATURE / DATE

Digitally signed
by Adolfo J
Gonzalez
Date:
2022.04.05
14:53:08 -04'00'

Digitally signed by
Adolfo J Gonzalez
Date: 2022.03.22
14:45:44 -04'00'

Adolfo J. Gonzalez PE

Lic. No. 58620

PERMIT DRAWINGS

Issue # Issue Date

① March 22, 2022

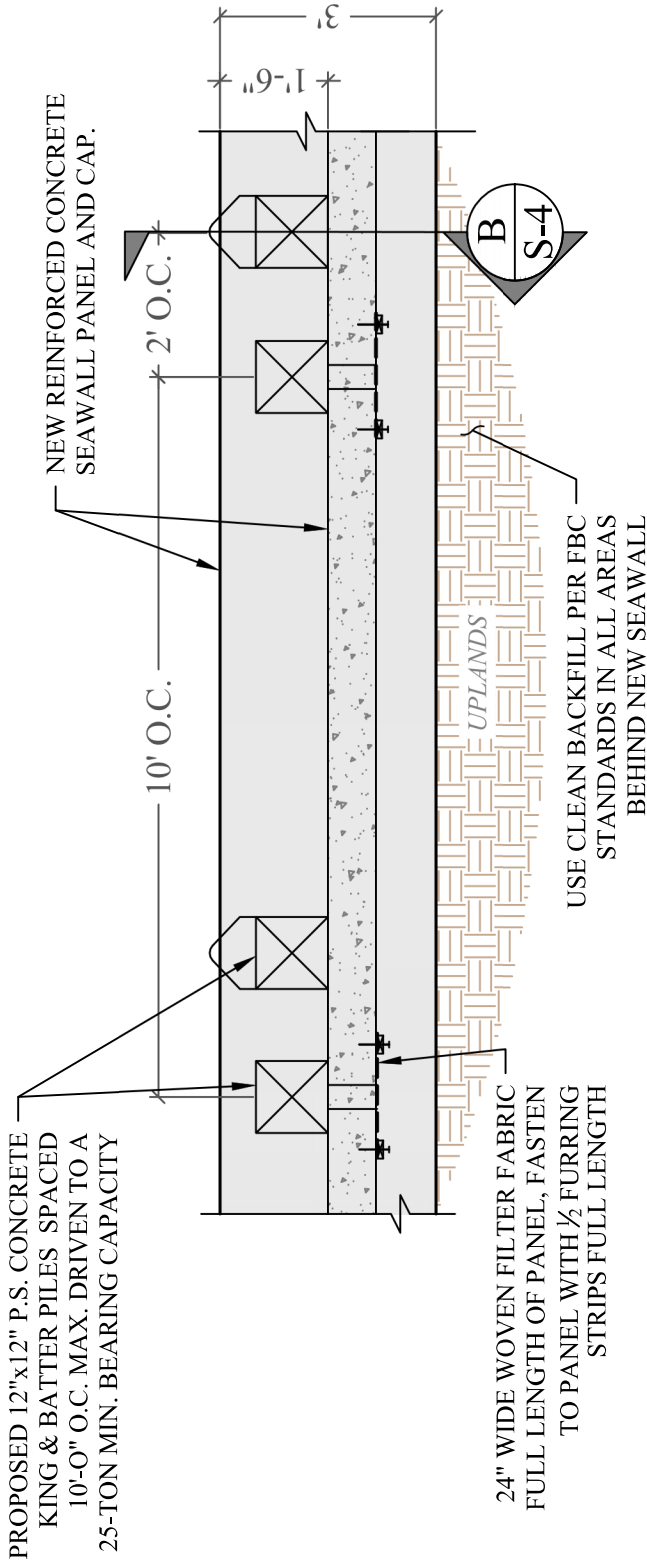
PROJECT: 21-11465

SEAWALL SECTIONS

SCALE: AS SHOWN

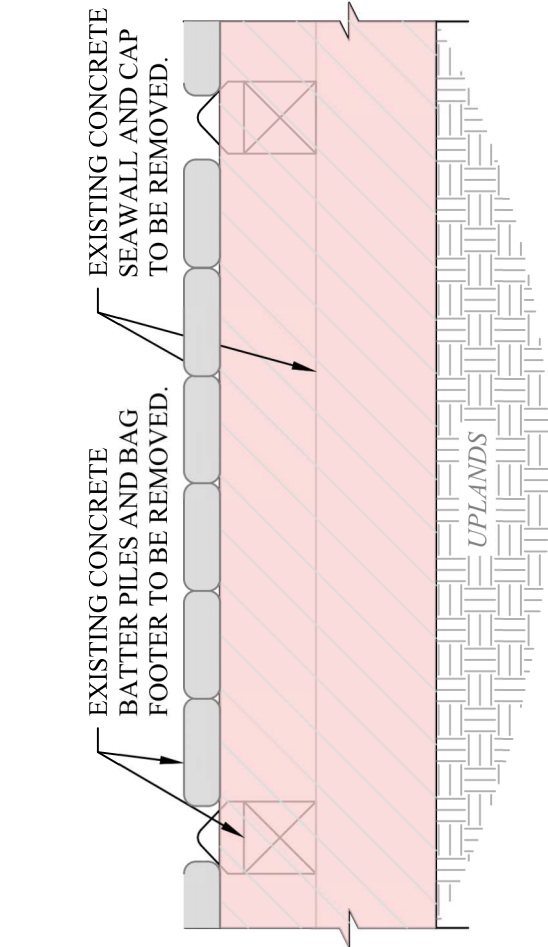
SHEET NO.

S-4



PROPOSED CONDITIONS 2
SCALE: 3/8" = 1'-0"

RER - NATURAL RESOURCES DIVISION
PRELIMINARY APPROVAL
NAME Romina Cores
DATE 03/25/2022



EXISTING CONDITIONS 1
SCALE: 3/8" = 1'-0"

UPLAND SOIL TO BE EXCAVATED
AND STABILIZED TO PREVENT
RUN-OFF IN PREPARATION FOR
REMOVAL OF EXISTING SEAWALL.

EXISTING CONCRETE
SEAWALL CAP TO BE
REMOVED.

EXISTING CONCRETE
BATTER PILES TO BE
REMOVED.

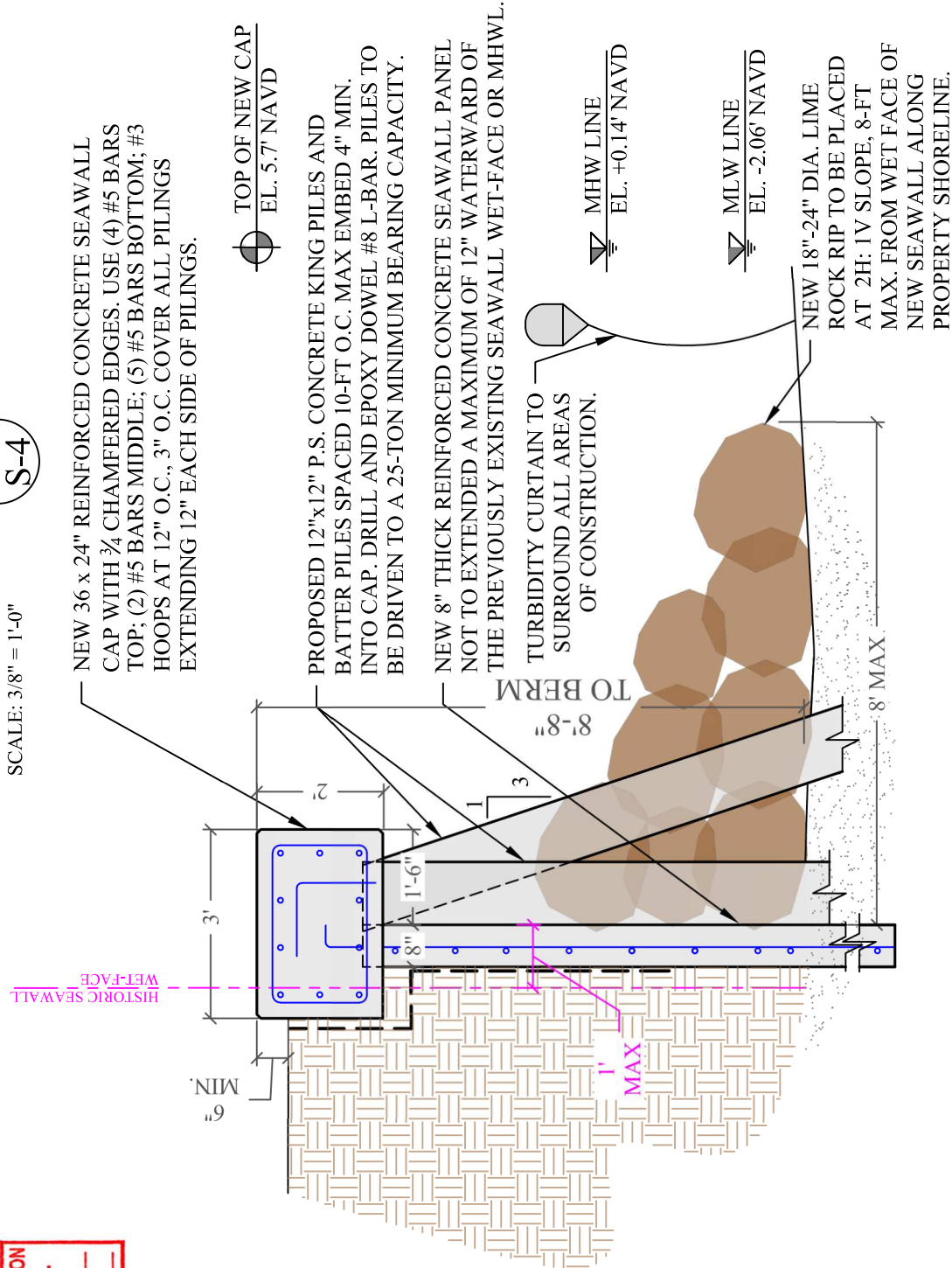
EXISTING CONCRETE
SEAWALL TO BE REMOVED
AS NECESSARY TO STAY
WITHIN 1-FT OF MHWL.

EXISTING CONCRETE
FOOTER TO BE REMOVED.

TOP OF EXTG. CAP
EL. +3.44' NAVD

MHW LINE
EL. +0.14' NAVD

MLW LINE
EL. -2.06' NAVD



PROPOSED SEAWALL SECTION B
SCALE: 3/8" = 1'-0"

BR2206644
CLIENT: Miami Beach, Florida

06/01/2022 5:46:16 PM

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Miami Beach Florida 33140

ENVIRONMENTAL CONSULTANT:
OCEAN CONSULTING, LLC.
340 Minorca Avenue, Suite 7
Coral Gables, Florida 33134
Tel: (305) 921-9344
Fax: (305) 677-3254

CONTRACTOR:

PROJECT ENGINEER:
ADOLFO J. GONZALEZ P.E.

2050 Coral Way Suite 502
Miami, FL 33145
Office - 305-415-8782

SEAL / SIGNATURE / DATE
Digitally signed by Adolfo J Gonzalez
Date: 2022.04.05 14:53:28 -04'00'

Digitally signed by Adolfo J Gonzalez
Date: 2022.03.22 14:46:00 -04'00'

Adolfo J. Gonzalez PE
Lic. No. 58620

PERMIT DRAWINGS

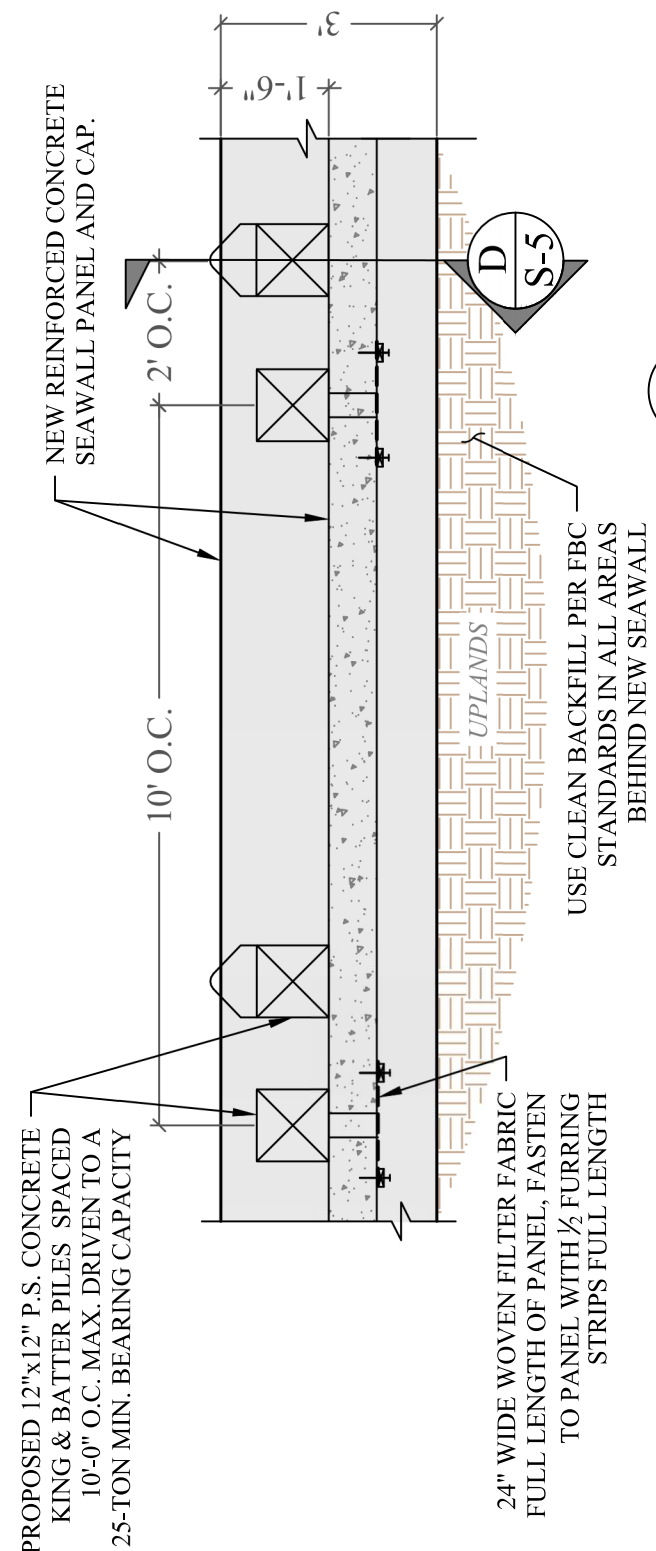
Issue # Issue Date
① March 22, 2022

PROJECT: 21-11465

SEAWALL SECTIONS

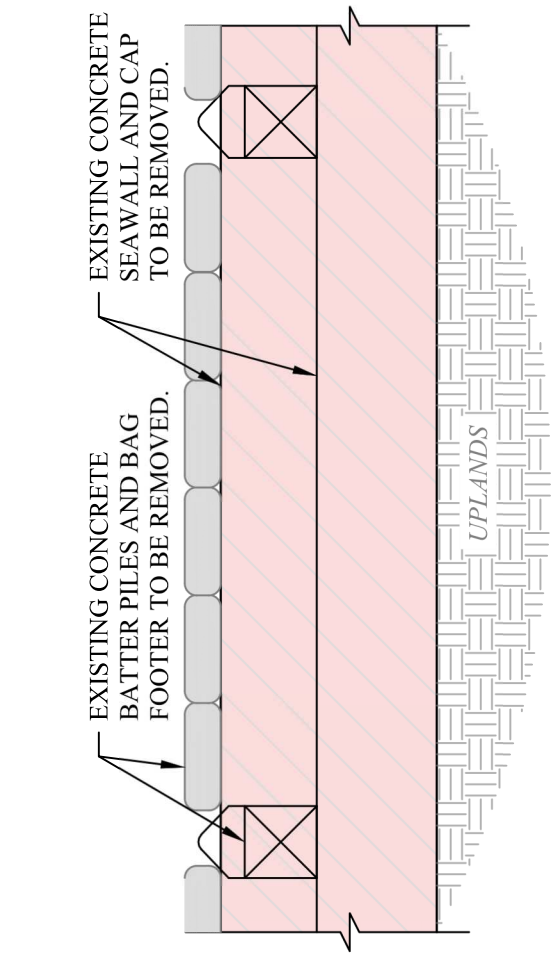
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SHEET NO.

S-5

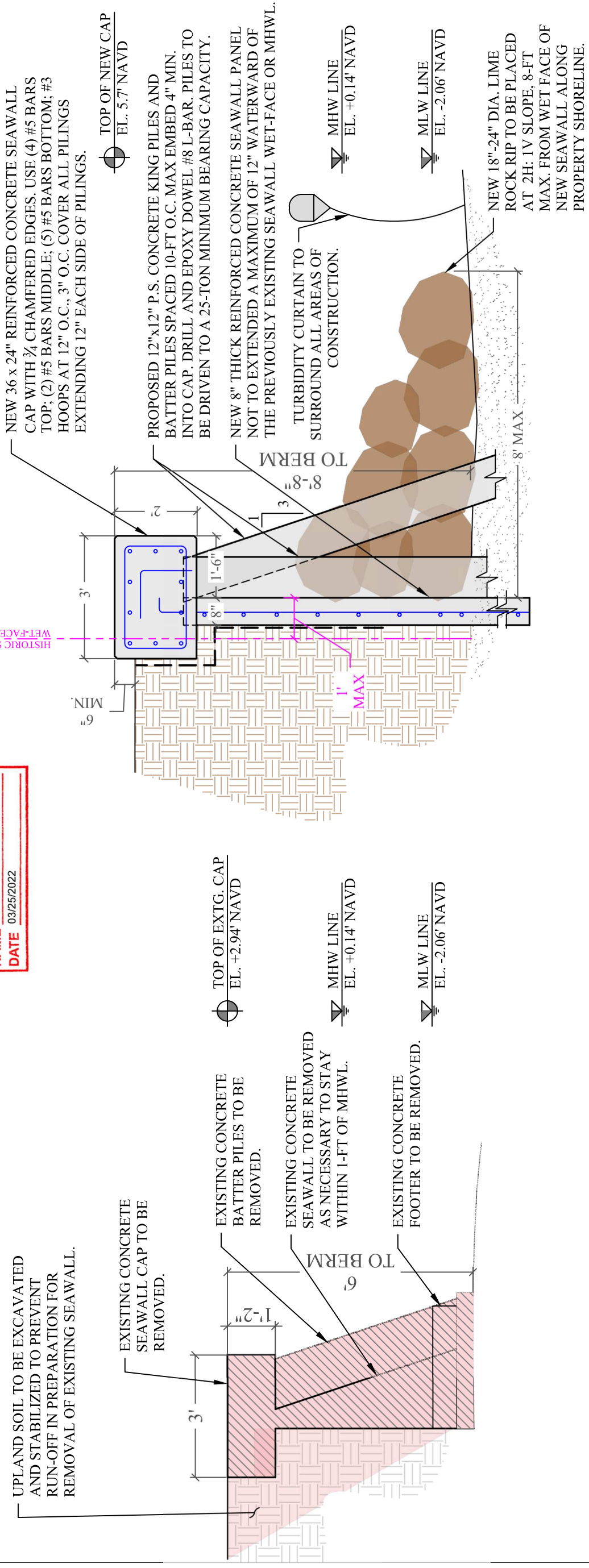


PROPOSED CONDITIONS 4
SCALE: 3/8" = 1'-0"

RER - NATURAL RESOURCES DIVISION
PRELIMINARY APPROVAL
NAME Romina Cores
DATE 03/25/2022



EXISTING CONDITIONS 3
SCALE: 3/8" = 1'-0"



PROPOSED SEAWALL SECTION D
SCALE: 3/8" = 1'-0"

EXISTING SEAWALL SECTION C
SCALE: 3/8" = 1'-0"



SEAWALL PROJECT
Reviewed For Compliance

CLIENT:
BR22-206644

DATE: 06/01/2022 5:46:16 PM

3921 Alton Road, Suite 421
Miami Beach Florida 33140

ENVIRONMENTAL CONSULTANT:

**OCEAN
CONSULTING, LLC.**
340 Minorca Avenue, Suite 7
Coral Gables, Florida 33134
Tel: (305) 921-9344
Fax: (305) 677-3254

CONTRACTOR:

PROJECT ENGINEER:
ADOLFO J. GONZALEZ P.E.

2050 Coral Way Suite 502
Miami, FL 33145
Office - 305-415-8782

SEAL / SIGNATURE / DATE



Digitally signed
by Adolfo J
Gonzalez

Date: 2022.03.22
14:46:13 -04'00'

Adolfo J. Gonzalez PE
Lic. No. 58620

PERMIT DRAWINGS

Issue # Issue Date

① March 22, 2022

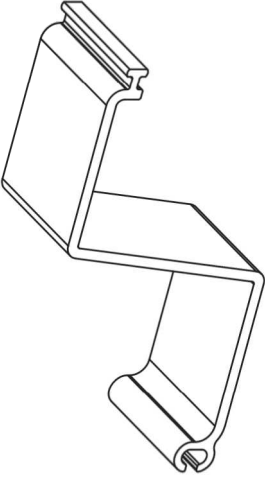
PROJECT: 21-11465

RETURN WALL DETAILS

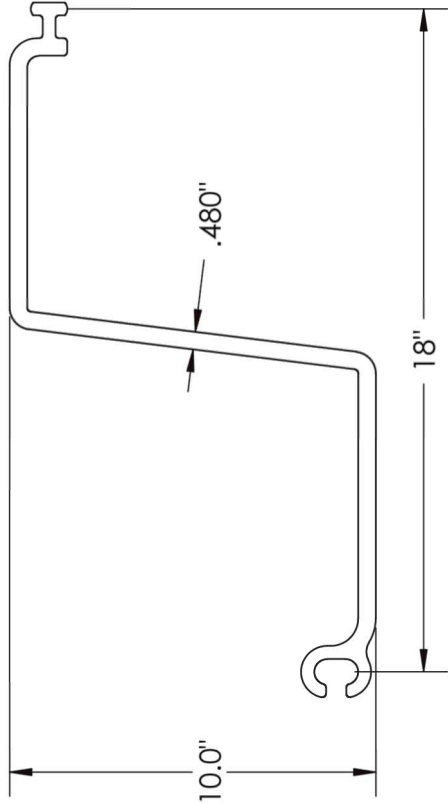
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SHEET NO.

S-6

SG-750

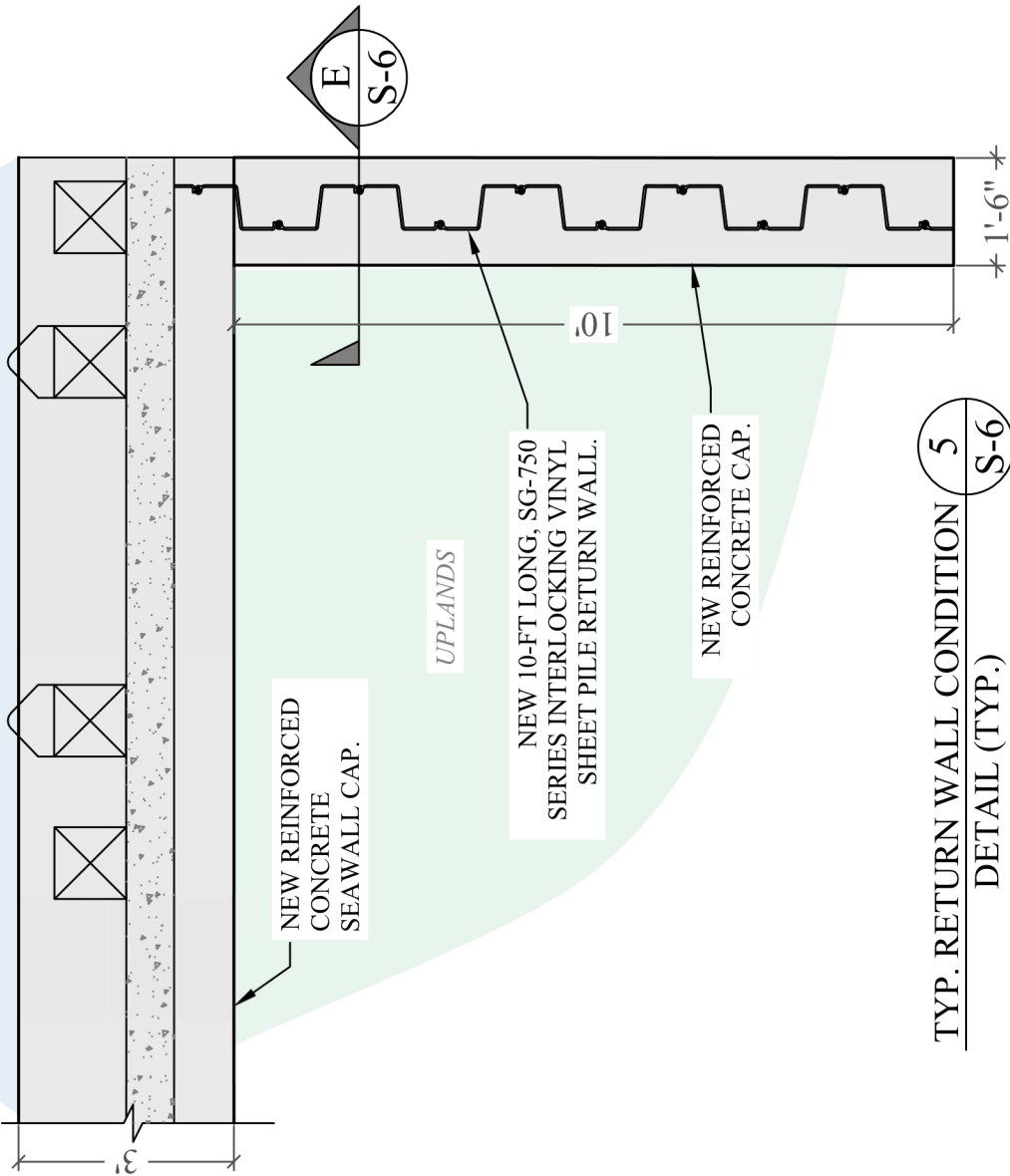


Allowable Moment (M)	8,480 ft-lb/ft	37.71 kN-m/m
Section Modulus (Z)	31.8 in ³ /ft	1,710 cm ³ /m
Moment of Inertia (I)	159 in ⁴ /ft	21,700 cm ⁴ /m
Impact Strength	15,000 in-lbs/in ²	2,625 N-mm/mm ²
Thickness (t)	0.480 in	12.2 mm
Section Depth	10.0 in	254 mm
Section Width	18 in	457 mm
Material	Weatherable Rigid Vinyl	
Standard Colors	Grey, Clay	
Technology	Z Profile, I-Beam Lock, XCR™	
Standard Packaging	12 sheets/bundle	



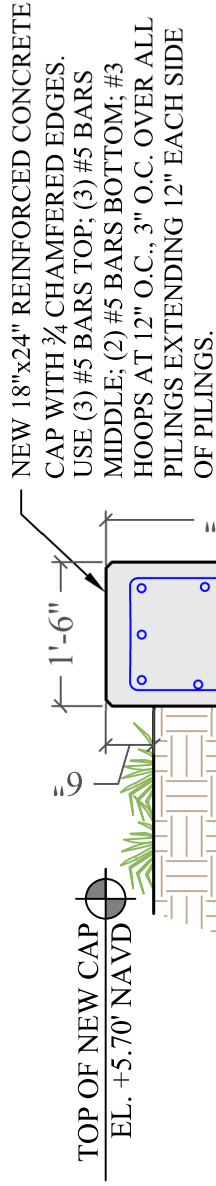
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cmilc.com



DETAIL (TYP.)

SCALE: 3/8" = 1'-0"



NEIGHBORING
PROPERTY

RETURN WALL SECTION

SCALE: 1/2" = 1'-0"

E

S-6



PILE NOTE:

CONCRETE COMPRESSIVE STRENGTH:
3000 PSI @ RELEASE
5000 PSI @ DRIVING

STRANDS - USE FOUR 7/16" (270K)
LOW RELAXATION ASTM 416-87
UNCOATED 7-WIRE STRANDS
TENSIONED TO 2.33 KIPS EACH

1-POINT PICKUP-MAXIMUM L = 50'
2-POINT PICKUP-MAXIMUM L = 62'

SPIRAL TO BE ASTM A-82 TIGHT
HARD-DRAWN WIRE

NOTICE TO THE CITY OF MIAMI BEACH BUILDING DEPARTMENT OF EMPLOYMENT AS SPECIAL INSPECTOR UNDER THE FLORIDA BUILDING CODE (6th Edition, 2017)

06/01/2022 5:46:12 PM

I have been retained by: Palm Island Holdings LLC TRS Jamie Mandel to perform special inspector services at the 94 Palm Ave Seawall project on the below listed structures as of 04/04/2022 (date). I am a registered architect or a professional engineer licensed in the State of Florida.

Process Number: BR2206644 Master Permit (IF APPLICABLE): _____



Special Inspector for Pilings, [CMDC Sect. 8-22](#)



Special Inspector for Lightweight Insulating Concrete, CMDC Sect. 8-22



Special Inspector for Soil Compaction, CMDC Sect. 8-22



Special Inspector for Precast Units and Attachments, CMDC Sect. 8-22



Special Inspector for Reinforced Masonry, [FBC 2122.2.4](#) & [CMDC Sect. 8-22](#)



Special inspector for Steel Bolted & Welded Connections, CMDC Sect. 8-22



Special Inspector for Trusses over 35 feet long or 6 feet high, CMDC Sect. 8-22



Special Inspector for Curtain Wall, CMDC Sect. 8-22



Special Inspector for Structural Glazing, CMDC Sect. 8-22



Special Inspector for Composite Floor System, CMDC Sect. 8-22



Special Inspector for _____

NOTE: Only the marked boxes apply.

The following individuals employed by this firm or me are authorized representatives to perform inspections

- | | |
|----------------------------------|----------|
| 1. <u>Adolfo J Gonzalez P.E.</u> | 2. _____ |
| 3. _____ | 4. _____ |

* Special inspectors utilizing authorized representatives shall insure the authorized representative is qualified by education or licensure to perform the duties assigned by the Special Inspector. The qualifications shall include: licensure as a professional engineer or architect; graduation from an engineering education program in civil or structural engineering; graduation from an architectural education program; successful completion of the NCEES Fundamentals Examination; or registration as a building inspector or general contractor.

I will notify the City of Miami Beach Building Department of any changes regarding authorized personnel performing inspection services.

I understand that **all mandatory inspections, as required by the Florida Building Code, shall be requested by the permit holder and approved by the Building Department Inspectors. Inspections performed by the Special inspector hired by the Owner are in addition to the mandatory inspections performed by the Building Department.** A Special Inspection Log for each building must be displayed in a convenient location on the site for inspection by the Building Department Inspectors. Further, upon completion of the work under each building permit, I will submit to the Building Department at the time of final inspection the completed Inspection Log form and sealed statement that, to the best of my knowledge, belief and professional judgment those portions outlined above meet the intent of the Florida Building Code and are in subsequent accordance with the approved plans.

Architect/Engineer's Printed Name and Signature: Adolfo J Gonzalez

Digitally signed by Adolfo J Gonzalez
 Date: 2022.04.05 14:54:41 -04'00'

Address, Telephone, and E-mail: 2050 Coral Way, Suite 502, Miami, Florida 33145, (305)415-8782, adolfogonzalezpe@gmail.com

License Number: 58620



Digitally signed by Adolfo J Gonzalez
 Date: 2022.04.05 14:55:11 -04'00'

Signed and Sealed: _____

Date: _____

Accepted at the Building Department by: _____

Date: _____

ADOLFO GONZALEZ, P.E.
Lic No. 58620
2050 Coral Way, Suite 502
Miami, FL 33145
(305) 415 8782

Reviewed For Compliance

BR2206644

06/01/2022 5:46:09 PM



STRUCTURAL CALCULATIONS

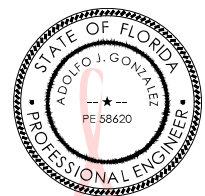
JOB NO. 21-22465

94 PALM AVE SEAWALL PROJECT

94 Palm Ave Miami Beach, FL 33140

CALCULATED BY J. Alvarez
CHECKED BY A. Gonzalez

DATE 3/22/22
DATE 3/22/22

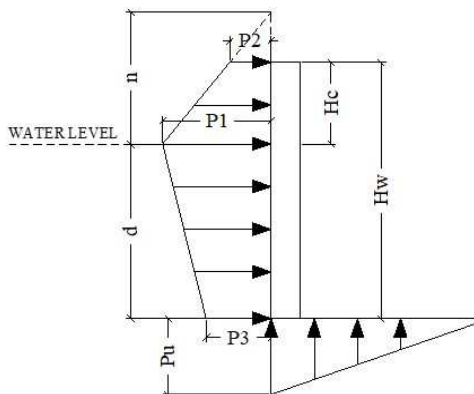


Digitally signed by
Adolfo J Gonzalez
Date: 2022.03.22
14:42:51 -04'00'

CONCRETE SEAWALL

General Data

Hw	8.70	ft	Overall Height of structure
Hc	5.76	ft	Heigh of structure above MLW
wall b	0.67	ft	
Cap b	2.00	ft	
Cap h	3.00	ft	
γ_w	62.40	pcf	
γ_{soil}	110.00	pcf	
H1	5.76	ft	
H2	2.00	ft	
H3	0.94	ft	



Stability

Case I Water at mean low level

ds	0.94	ft	Structure depth
Hb	0.73	ft	Breaking wave height

Case II Water level and wave height

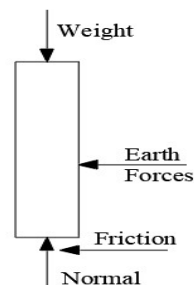
ds	2.94	ft	Structure depth
Hb	2.29	ft	Breaking wave height

Case I Water at mean low level

Forces

a) Structural weight	5.18	ton/feet
b) Normal force	5.18	ton/feet
c) Friction	2.99	ton/feet
d) Earth forces	0.62	ton/feet
e) Hydrostatic Forces	0.01	ton/feet

Weight



a) Structural weight

	L (ft)	h (ft)	γ (pcf)	weight (plf)	arm	M
cap	2.0	3	150	900.00	1.50	1350.00
new wall	8.70	0.7	150	874.35	0.34	292.91
existing wall	9.00	1.0	150	1350.00	1.17	1579.50
Fill	10.20	6.30	110	7065.42	2.77	19564.56
LL		3	60	180.00	1.50	270.00
Total				10369.77		23056.97

weight per lineal feet	10369.77	plf
	5.18	ton/feet

c) Friction

α	30	soil test	Angle of internal friction
μ	0.58	$\tan \alpha$	Coefficient of static friction
Fr	5983.32	plf	$F_r = \mu N$
	2.99	ton/feet	

d) Earth forces

ϕ	30	Angle of internal friction of backfill
K_a	0.33	$K_a = \tan^2(45 - \phi/2)$
FE	1231.22	plf
	0.62	ton/feet

Sliding Stability

Stability Forces	2.99	ton/feet	Friction
Anti Stability Forces	0.60	ton/feet	Earth forces
Factor of safety	4.97	Stability Forces/Anti Stability Forces	
Check	OK		

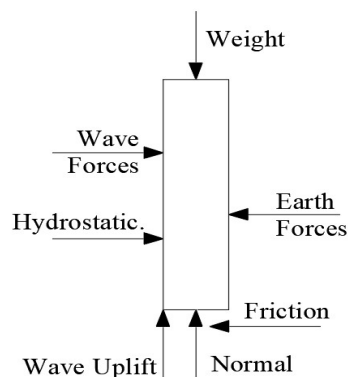
Overtuning Stability

Stability Moments	23056.97	ft-lb/ft
	11.53	ft-ton/ft
Anti Stability Moments	3356.70	ft-lb/ft
	1.68	ft-ton/ft
Factor of safety	6.87	Stability Forces/Anti Stability Forces
Check	OK	

Case II Water level and wave height

Forces

a) Structural weight	5.18	ton/feet
b) Wave forces	0.02	ton/feet
	0.37	ton/feet
c) Earth forces	0.62	ton/feet
d) Hydrostatic forces	0.13	ton/feet
e) Normal force	5.17	ton/feet
f) Friction	3.62	ton/feet



b) Wave forces

Table VI-5-53 Goda Formula for Irregular Waves Coastal Engineering Manual

06/01/2022 5:46:10 PM

Structure Type Modification Factors

$\lambda_1, \lambda_2, \lambda_3$	1	For vertical wall structures
		Wave crest height
η	3.44	ft $\eta = 0.75 (1 + \cos \beta) \lambda_1 H_{design}$
		Modification Coefficients
Bm	0	Width of rubble foundation
δ_{22}	-0.51	$\delta_{22} = -0.36 \left(\frac{B_m}{L} - 0.12 \right) + 0.93 \left(\frac{H_s + d}{H_s} - 0.6 \right)$
δ_2	-2.52	$\delta_{22} \leq 0 \quad \delta_2 = 4.9 * \delta_{22}$ $\delta_{22} > 0 \quad \delta_2 = 3 * \delta_{22}$
δ_{11}	-0.33	$\delta_{11} = 0.93 \left(\frac{B_m}{L} - 0.12 \right) + 0.36 \left(\frac{H_s + d}{H_s} - 0.6 \right)$
δ_1	-6.55	$\delta_{11} \leq 0 \quad \delta_1 = 20 * \delta_{11}$ $\delta_{11} > 0 \quad \delta_1 = 15 * \delta_{11}$
α_{11}	0.018	$\delta_2 \leq 0 \quad \alpha_{11} = \cos \delta_2 / \cosh \delta_1$ $\delta_2 > 0 \quad \alpha_{11} = (1 / \cosh \delta_1) (\sqrt{\cosh \delta_2})$
Hdesign / d	0.78	$\alpha_{10} = \begin{cases} H_{design} / d & \rightarrow H_{design} / d \leq 2 \\ 2 & \rightarrow H_{design} / d > 2 \end{cases}$
α_{10}	0.78	
α_1	0.014	$\alpha_1 = \alpha_{11} * \alpha_{10}$
α_{21}	0.013	$\frac{H_b - d}{3 H_b} \left(\frac{H_{design}}{d} \right)^2$
α_{22}	2.56	$\frac{2d}{H_{design}}$
α_2	0.013	Smaller of α_{21} and α_{22}
α^*	0.014	Larger of α_1 and α_2

Hb	3.14	ft	$ds+5*Hb*\tan 1$	
ts	4.5	sec		Wave period
L	45.25	ft	$L = t_s \sqrt{g * H_b}$	Wave length at water depth

Determine pressure coefficient for Goda Formula

α^*	0.014	
α_1	1.00	$\alpha_1 = 0.6 + 0.5 \left(\frac{4\pi H_s/L}{\sinh(4\pi H_s/L)} \right)^2$
α_2	0.013	Smaller of α_{21} and α_{22}
α_3	0.92	$\alpha_3 = 1 - \frac{h_w - h_c}{h_s} \left(1 - \frac{1}{\cosh(2\pi H_s/L)} \right)$

Calculate wave pressures

P1	145	psf	$P_1 = 0.5 (1 + \cos \beta)(\lambda_1 \alpha_1 + \lambda_2 \alpha^* \cos^2 \beta) \rho_w g H_{design}$
	-98	psf	$\left(1 - \frac{h_c}{\eta} \right) P_1$
P2	0	psf	$\left\{ \begin{array}{l} \left(1 - \frac{h_c}{\eta} \right) P_1 \text{ for } \eta > h_c \\ 0 \text{ for } \eta \leq h_c \end{array} \right\}$
P3	134	psf	$P_3 = a_3 P_1$
Pu	132	psf	$P_u = 0.5 (1 + \cos \beta)(\lambda_3 \alpha_1 \alpha_3) \rho_w g H_{design}$
B	0.67	ft	width of structure (cross section)

Levels of uncertainty		
UFH	0.9	Table VI-5-55 Coastal Engineering Manual
UFV	0.77	
UMH	0.81	
UMV	0.72	

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Calculate wave forces per linear foot of structure

Fh	745.95 0.37	plf ton/ft	$F_h = U F H \left(\frac{1}{2} (P_1 + P_2) H_c + \frac{1}{2} (P_1 + P_3) H' \right)$
----	----------------	---------------	---

Fu	34.11 0.02	plf ton/ft	$F_u = U F V \left(\frac{1}{2} (P_1 B) \right)$
----	---------------	---------------	--

c) Earth forces

β	0		Angle of incidence of design wave
Hw	8.70	ft	
γ	110	pcf	Unit weight of backfill
ϕ	30		Angle of internal friction of backfill
Kp	2.99		$K_p = \tan^2(45 + \phi/2)$
FE	12458.27 6.23	plf ton/feet	$FE = \frac{1}{2} \gamma_s H^2 K_p \cos \beta$

d) Hydrostatic Forces

P	269.68 0.13	plf ton/ft	$P = \frac{1}{2} \gamma_w H^2$
---	----------------	---------------	--------------------------------

e) Normal force

N	5.17	ton/ft	$N = W - F_u$
---	------	--------	---------------

f) Friction

α	35	soil test	Angle of internal friction
μ	0.70	$\tan \alpha$	Coefficient of static friction
Fr	7232.34 3.62	plf ton/feet	$F_r = \mu N$

Sliding Stability

Stability Forces	4.23	ton/feet	
Anti Stability Forces	0.51	ton/feet	
Factor of safety	8.33		Stability Forces/Anti Stability Forces
Check	OK		

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Overtuning Stability

	F	arm	M
Structutural weight	5.18	page 1	11.53
Wave Forces	0.37	0.76	0.29
Earth forces	0.62	2.73	1.68
Hydrostatic forces	0.13	0.98	0.13

Total Stability Moment	11.53 ft-ton/ft
Total Anti Stability Moment	2.10
Factor of safety	5.49
Check	OK

LIFT STRUCTURAL MEMBER

Neptune Boat Lift

Capacity	20	kp	
I	1.1		Impact
FS	1.5		Factor of safety
Pm	16.5	kp	Load per side

$$P = \left(\frac{Cap}{2} \right) * I * FS$$

LOADS AT CAP

LL	100	psf
DL	8	psf

Horizontal Load

Case I Water at mean low level

Forces

a) Earth forces	1.23	kp/feet
b) Hydrostatic Forces	-0.03	kp/feet
	1.20	kp/feet

Case II Water level and wave height

Forces

b) Wave forces	Fu	0.75	kp/feet
c) Earth forces		-1.23	kp/feet
d) Hydrostatic forces		0.27	kp/feet
		-0.22	kp/feet

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Precast Concrete Panel

L	10	ft	Pile spacing
f'c	5000	psi	
fy	60000	psi	
load	0.51	kp	
M	6.35	kp ft/ft	
H	8.70	ft	
b	12	in	
λ	1		PCI page 5-18

f'r	353.55	psi	$f_r = 5 \lambda \sqrt{f'_c}$	PCI EQ 5-7
-----	--------	-----	-------------------------------	------------

Required Section Modulus

W	17.95	in ³	$W = \frac{M}{f_r}$
t req	3.00	in	$W = \frac{b t^2}{6}$
t	8.00	in	

Maximum spacing for reinforcing bar

fs	40	ksi	PCI page 5-18
#5	0.31	in ²	
Cc	2.5	in	
s	9	in	the greater of $\left\{ \begin{array}{l} s = 15 \frac{40}{f_s} - 2.5 c_c \\ s = 12 \left(\frac{40}{f_s} \right) \end{array} \right\}$ PCI EQ 5-6
	12	in	
s	9	in	Steel spacing

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 Title Block Line 6

Project Title:
 Engineer:
 Project ID:
 Project Descr:

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Concrete Beam

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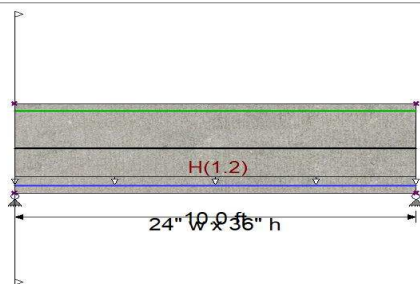
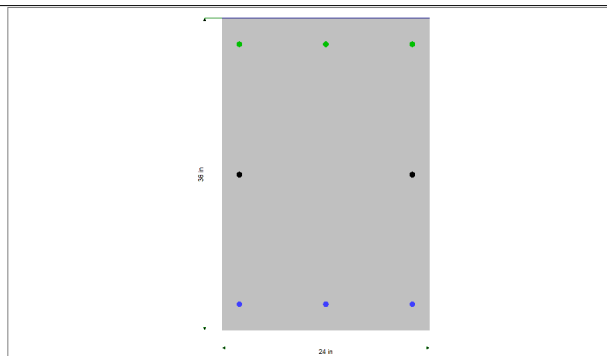
CODE REFERENCES

Calculations per ACI 318-11, IBC 2012, CBC 2013, ASCE 7-10

Load Combination Set : ASCE 7-16

Material Properties

f'_c	=	3.0 ksi	ϕ Phi Values	Flexure :	0.90
$f_r = f'_c^{1/2}$	=	410.792 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups	=	40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #	=	3
			Number of Resisting Legs Per Stirrup	=	2



Cross Section & Reinforcing Details

Rectangular Section, Width = 24.0 in, Height = 36.0 in

Span #1 Reinforcing....

3-#5 at 3.0 in from Bottom, from 0.0 to 10.0 ft in this span

2-#5 at 18.0 in from Top, from 0.0 to 10.0 ft in this span

3-#5 at 3.0 in from Top, from 0.0 to 10.0 ft in this span

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Load for Span Number 1

Uniform Load : H = 1.20 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

				Design OK	
Maximum Bending Stress Ratio	=	0.154	: 1	Maximum Deflection	
Section used for this span		Typical Section		Max Downward Transient Deflection	0.000 in Ratio = 0 < 360.0
Mu : Applied		28.50 k-ft		Max Upward Transient Deflection	0.000 in Ratio = 0 < 360.0
Mn * Phi : Allowable		185.464 k-ft		Max Downward Total Deflection	0.000 in Ratio = 0 < 180.0
Location of maximum on span		5.009 ft		Max Upward Total Deflection	0.000 in Ratio = 0 < 180.0
Span # where maximum occurs		Span # 1			

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Overall Maximum	6.000	6.000
Overall Minimum	3.600	3.600
+D+H	6.000	6.000
+D+L+H	6.000	6.000
+D+Lr+H	6.000	6.000
+D+S+H	6.000	6.000
+D+0.750Lr+0.750L+H	6.000	6.000
+D+0.750L+0.750S+H	6.000	6.000
+D+0.60W+H	6.000	6.000
+D+0.750Lr+0.450W+H	6.000	6.000
+D+0.750S+0.450W+H	6.000	6.000

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BUILDING DEPARTMENT

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Vertical Reactions

Support notation : Far left is #1

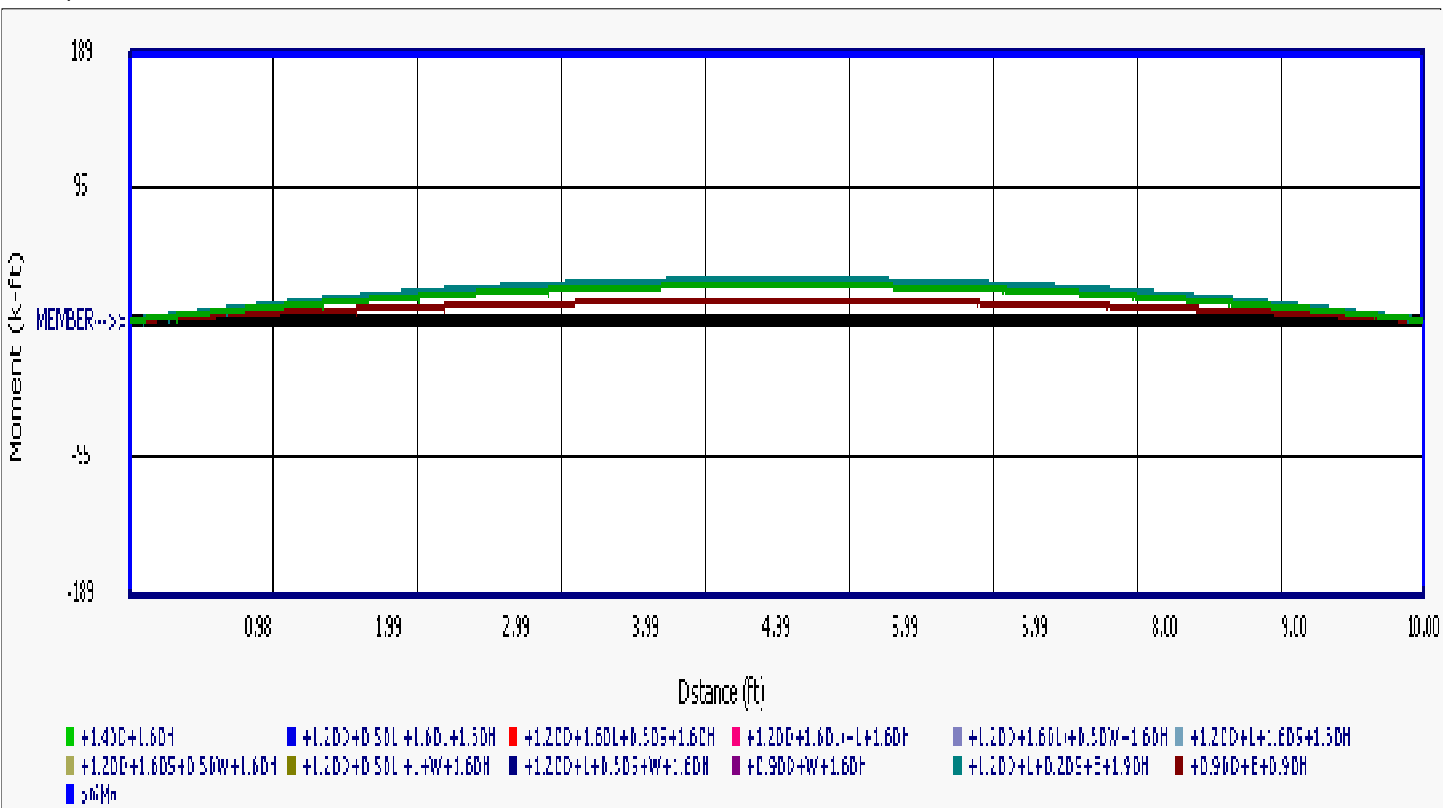
Load Combination	Support 1	Support 2
+0.60D+0.60W+0.60H	3.600	3.600
+D+0.70E+0.60H	3.600	3.600
+D+0.750L+0.750S+0.5250E+H	6.000	6.000
+0.60D+0.70E+H	6.000	6.000
D Only		
Lr Only		
L Only		
S Only		
W Only		
E Only		
H Only	6.000	6.000

Shear Stirrup Requirements

Entire Beam Span Length : $V_u < \Phi V_c/2$, Req'd Vs = Not Req'd 11.4.6.1, use #3 stirrups spaced at 0.000 in

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl (in)	Location in Span (ft)	Load Combination	Max. "+" Defl (in)	Location in Span (ft)
H Only	1	0.0009	5.000		0.0000	0.000



Concrete Beam

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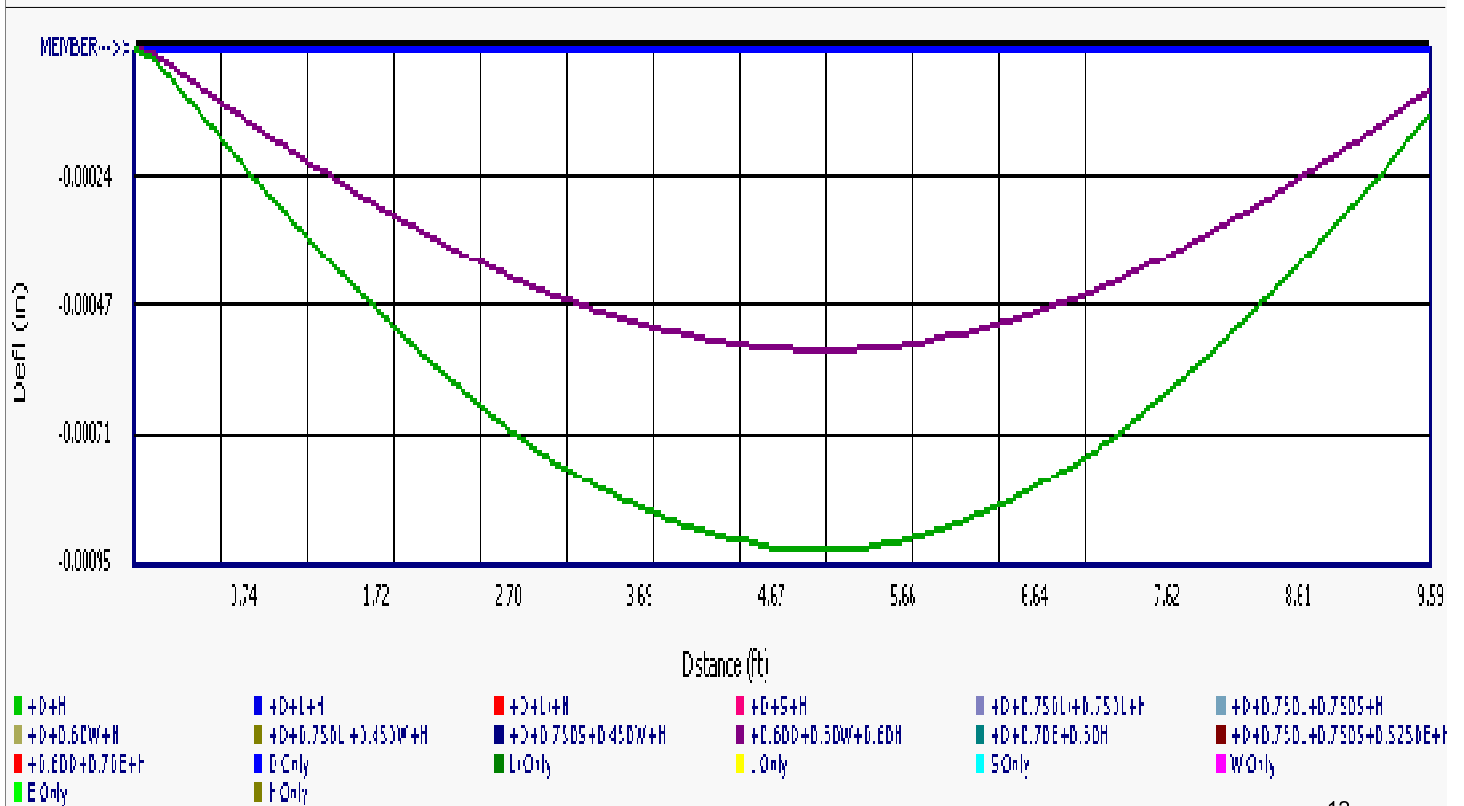
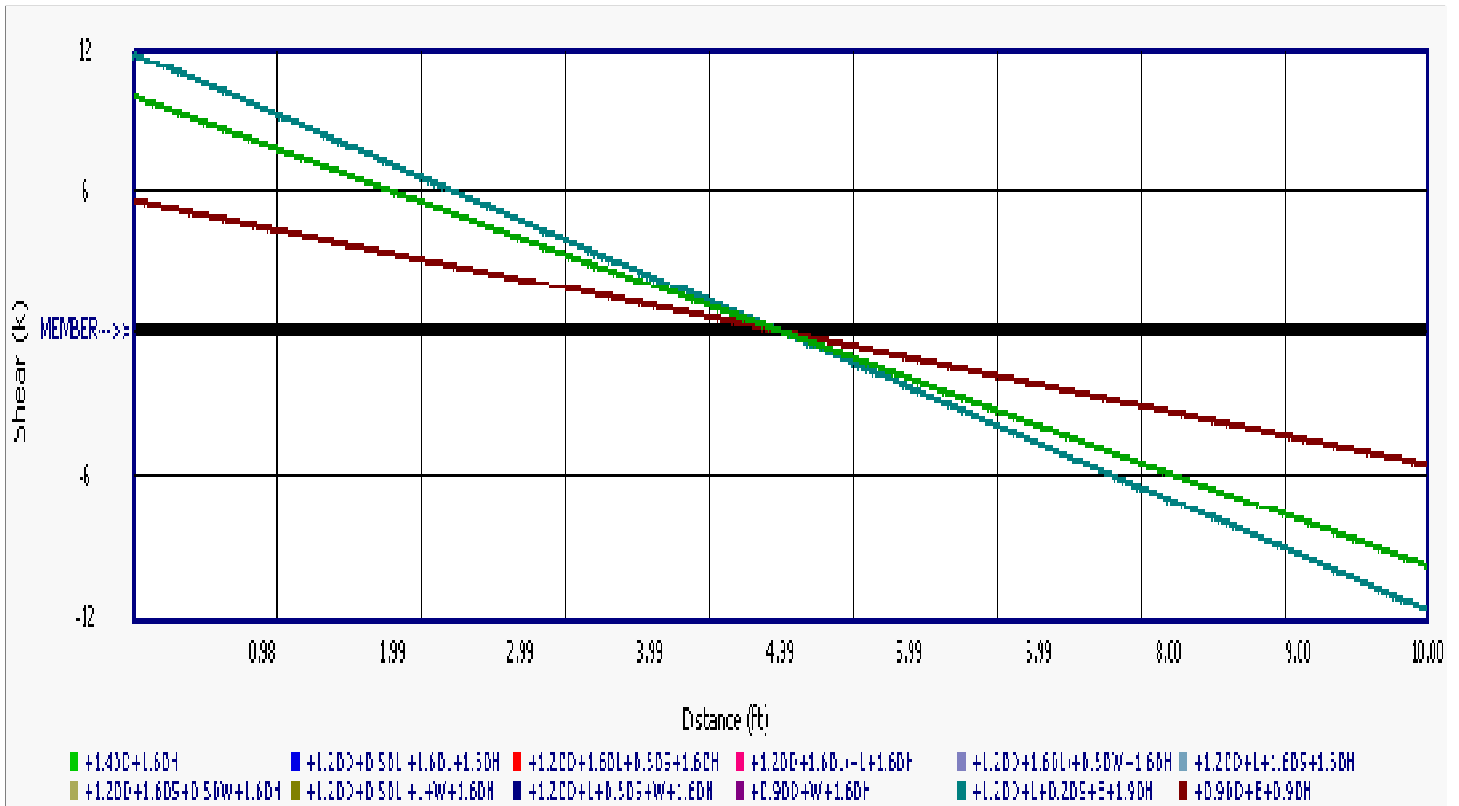
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Engineer:
Project ID:
Project Descr:

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**BATTER PILE
 GENERAL DATA**

D	12 in	
(4) 7/16 Strands		
f'c	5,000.00 psi	
fs	60,000.00 psi	G-60
fsu	270,000.00 psi	Streghth of strands
sl	1/3	Slope of batter
S	10 ft	

P	12.00 kp	
β	71.60 degrees	Slope of batter
Fc	37.95 kp	$F_c = \frac{P}{\cos \beta}$
	18.97 ton	

Check Pile capacity

Batter pile in compression

Padm	25 ton	Pile capacity geo report
Check	OK	