file: 601 Caroline St

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
National Flood Insurance Program

FLOODPROOFING CERTIFICATE
FOR NON-RESIDENTIAL STRUCTURES

O.M.B. NO. 1660-0008
Expires March 31, 2012

The floodproofing of non-residential buildings may be permitted as an alternative to elevating to or above the Base Flood Elevation; however, a floodproofing design certification is required. This form is to be used for that certification. Floodproofing of a residential building does not alter a community's floodplain management elevation requirements or affect the insurance rating unless the community has been issued an exception by FEMA to allow floodproofed residential basements. The permitting of a floodproofed residential basement requires a separate certification specifying that the design complies with the local floodplain management ordinance.

BUILDING OWNER'S NAME: Cypress House Key West, LLC

STREET ADDRESS (Including Apt., Unit, Suite, and/or Bldg. Number) OR P.O. ROUTE AND BOX NUMBER: 601 Caroline st (Carriage House)

OTHER DESCRIPTION (Lot and Block Numbers, etc.): KW PT LOT 4 SQR 12 PARCEL ID 00001030-000000

FOR INSURANCE COMPANY USE

POLICY NUMBER

COMPANY NAIC NUMBER

CITY: Key West | STATE: FL | ZIP CODE: 33040

SECTION I–FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Provide the following from the proper FIRM:

COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM INDEX	FIRM ZONE	BASE FLOOD ELEVATION (In AO Zones, Use Depth)
12068	12087C1516	K	2/18/05	AE	6

SECTION II–FLOODPROOFING INFORMATION (By a Registered Professional Engineer or Architect)

RECEIVED SEP 06 2012 BY na 9:00

Floodproofing Design Elevation Information:

Building is floodproofed to an elevation of 7.08 feet NGVD. (Elevation datum used must be the same as that on the FIRM.)

Height of floodproofing on the building above the lowest adjacent grade is 2.38 feet.

(NOTE: For insurance rating purposes, the building's floodproofed design elevation must be at least one foot above the Base Flood Elevation to receive rating credit. If the building is floodproofed only to the Base Flood Elevation, then the building's insurance rating will result in a higher premium.)

SECTION III–CERTIFICATION (By a Registered Professional Engineer or Architect)

Non-Residential Floodproofed Construction Certification:

I certify that, based upon development and/or review of structural design, specifications, and plans for construction, the design and methods of construction are in accordance with accepted standards of practice for meeting the following provisions:

The structure, together with attendant utilities and sanitary facilities, is watertight to the floodproofed design elevation indicated above, with walls that are substantially impermeable to the passage of water.

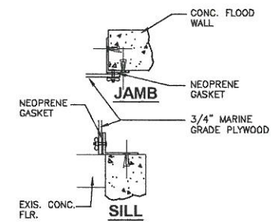
All structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy, and anticipated debris impact forces.

I certify that the information on this certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

ANNALISE MANNIX LICENSE No 57533 STATE OF FLORIDA PROFESSIONAL ENGINEER

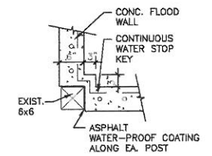
CERTIFIER'S NAME	LICENSE NUMBER (or Affix Seal)	
Annalise Mannix	57533	
TITLE	**COMPANY NAME**	
Principal Engineer	Annalise Mannix Engineering & Consulting, LLC	
ADDRESS	**CITY**	**STATE / ZIP CODE**
3739 Paula Ave	Key West	FL 33040
SIGNATURE	**DATE**	**PHONE**
[signature]	8/31/12	(305) 797-0463

Copies should be made of this Certificate for: 1) community official, 2) Insurance agent/company, and 3) building owner.

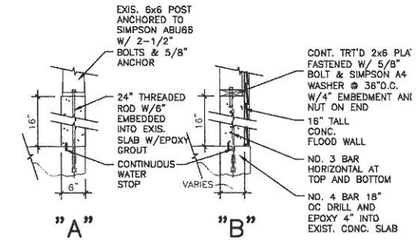


3/A3 MANUAL FLOOD DOOR JAMB DETAILS
1 1/2"=1'-0"

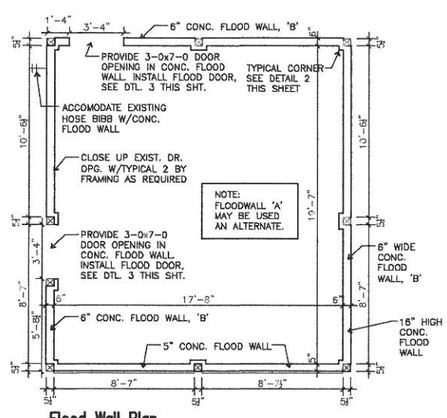
NOTE:
ALTERNATE, USE APPROVED AVAILABLE COMMERCIAL FLOOD GATE/DOOR.



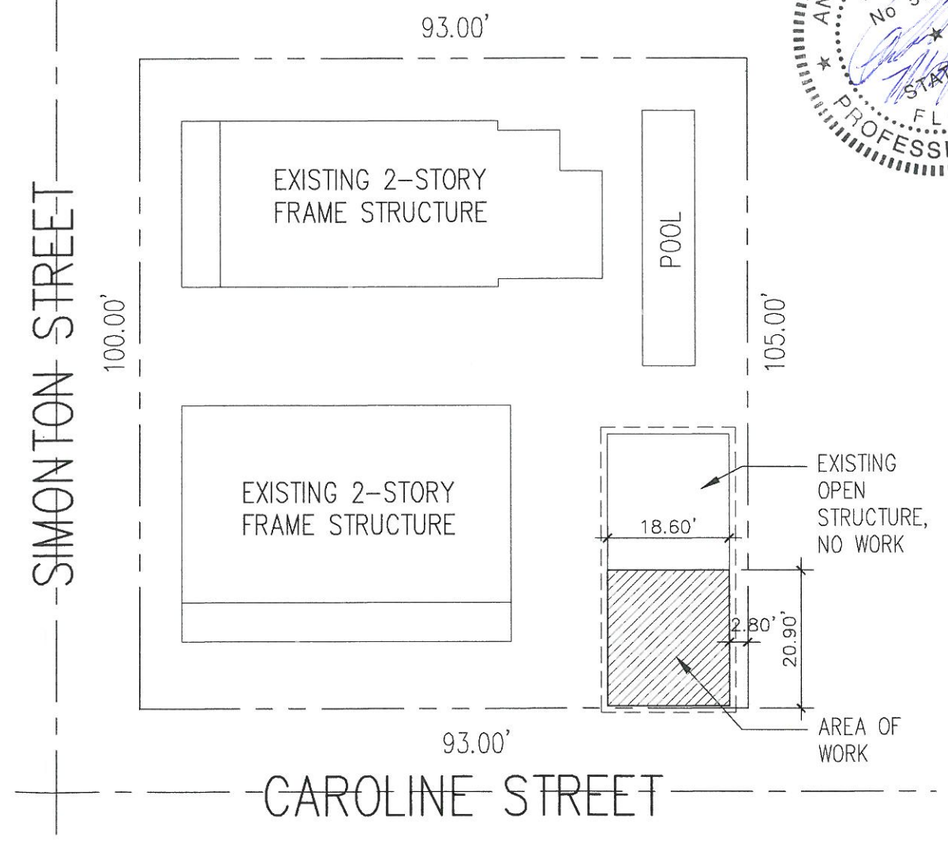
2/A3 PLAN VIEW FOUNDATION DETAIL
3/4"=1'-0"



1/A3 FLOOD WALL DETAILS
3/4"=1'-0"



Flood Wall Plan
SCALE: 1/4" = 1'-0"



1 EXISTING SITE PLAN
SCALE: 1" = 10'-0"

ANNALISE MANNIX ENGINEERING AND CONSULTING, LLC
3739 Paula Avenue
Key West, Florida 33040

Tel: 305-797-0463
Email: amannix@aol.com
FLORIDA REG. P.E. #57533

Seal:

Revisions:

2013 11 05	Historical Architectural Review Committee
2012 10 04	Issued for Permit
2012 05 04	Issued for Permit with revisions
2011 10 07	Issued for Flood wall & details

ANNALISE MANNIX LICENSE No 57533 STATE OF FLORIDA PROFESSIONAL ENGINEER

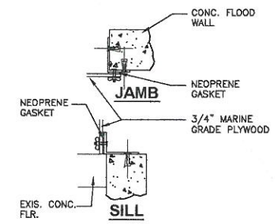
JUL 26 2012

CYPRESS HOUSE
CARRIGE HOUSE INTERIOR REMODELING
601 Caroline St.
Key West, FL

Title:
FLOOD WALL PLAN & DETAILS

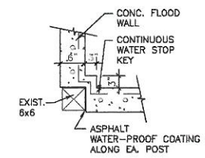
Sheet Number:
A3

Date: 13 March 2012



3 A3 MANUAL FLOOD DOOR JAMB DETAILS
1 1/2"=1'-0"

NOTE:
ALTERNATE, USE APPROVED AVAILABLE COMMERCIAL FLOOD GATE/DOOR.



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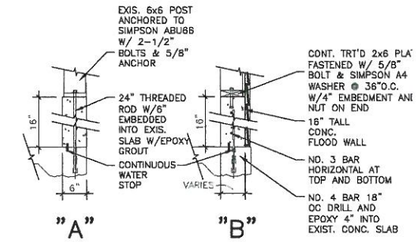

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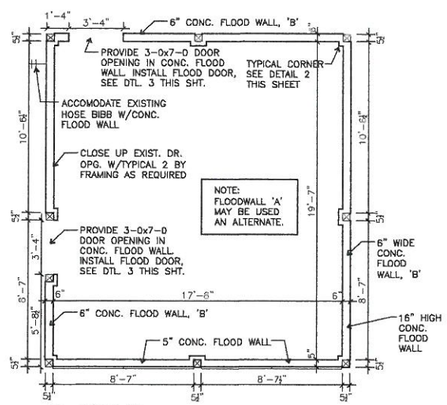
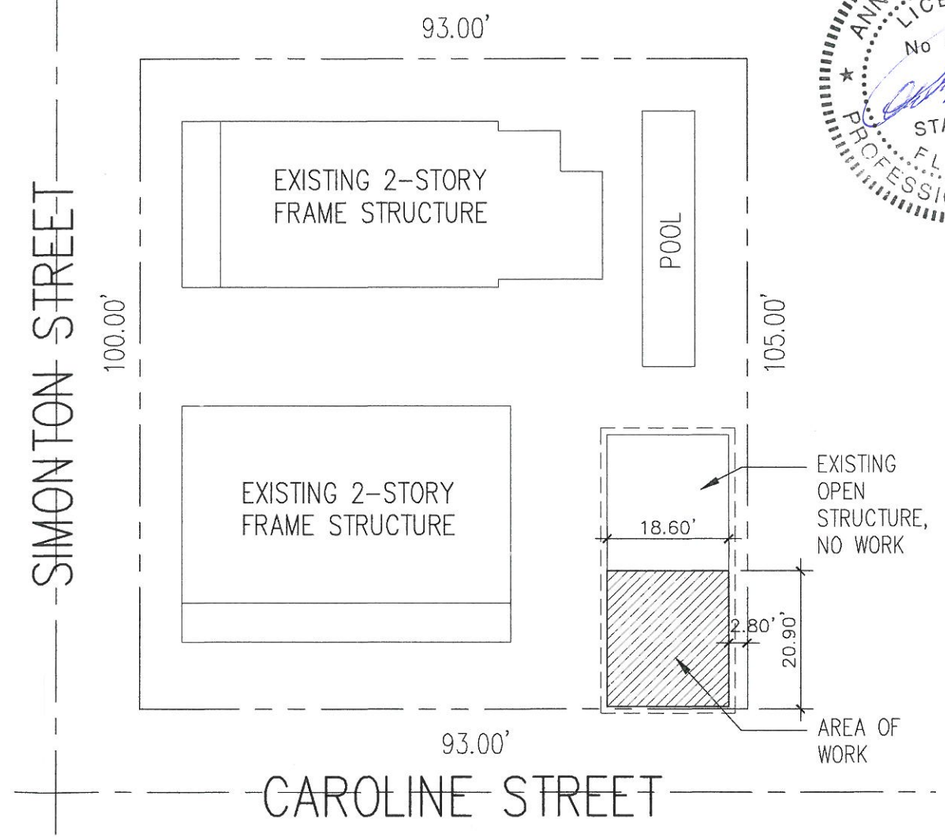


Flood Wall Plan
SCALE: 1/4" = 1'-0"



1 EXISTING SITE PLAN
SCALE: 1" = 10'-0"

ANNALISE MANNIX ENGINEERING AND CONSULTING, LLC
3739 Paula Avenue
Key West, Florida 33040

Tel: 305-797-0463
Email: amannix@aol.com
FLORIDA REG. P.E. #57533

Seal:

Revisions:

2012.12.03 Historical Architectural Review Committee
2012.11.04 Issued for Permit
2012.06.04 Issued for Permit with revisions
2012.06.07 Issued for Flood wall & details

ANNALISE MANNIX LICENSE No 57533 STATE OF FLORIDA PROFESSIONAL ENGINEER

JUL 26 2012

CYPRESS HOUSE
CARRIGE HOUSE INTERIOR REMODELING
601 Caroline St.
Key West, FL

Title:
FLOOD WALL PLAN & DETAILS

Sheet Number:
A3

Date: 13 March 2012

Annalise Mannix Engineering And Consulting, LLC.
FL PE CA License 27779

August 30, 2012

Mr. John Woodson
Building Official
City of Key West
Key West, FL 33040

RECEIVED
AUG 30 2012
By GJS

RE: Flood Proofing Revision
Carriage House Renovation
601 Catherine Street
Key West, FL 33040

Dear Mr. Woodson

Please accept this letter as revision as 5 to the above plans as requested by the floodplain dept. for project plan for 601 Caroline Street Carriage House renovation Flood Panel 12087C 1516K.

Mr. Frasier desires a letter stating what the maximum voltage is below DFE. Since the plans indicate all electric is above DFE, there is no wiring below DFE. But please take this as my statement that "There is no voltage wiring below DFE." Also, please note so on the attached scaled down drawings.

To be clear, the submersible pump is Multiquip Yellow Sub Submersible 110V pump to be plugged into the receptacles above DFE. All electric wiring is above DFE as is already stated on the plans. The plans also state the design meets the ASCE 7-10 and ASCE 24.

Additionally on the plans is the statement that the flood panel meets the design requirements, which includes all components of those books. That means that the flood panels will meet the design loads. But since that is insufficient please accept my statement that "The flood panels meet the FBC and ACSE 7-10 and ASCE 24." I have added this to the attached down scaled plan.

Mr. Fraiser's letter says the plans need a list of material. That is noted on the plans in the notes.

Mr. Fraiser's letter states or implies the FBC and ASCE requires "Load Calculations (included with the construction documents) [FBC B.1603.1 &1612.5]: Hydrostatic,/Hydrodynamic Resistant Construction-Load calculations showing structure will be resistant to expected Hydrostatic/Hydrodynamic pressures & buoyancy [ASCE-24 6.2.2(1) & FBC B. 1603.1]." Perhaps you can, as the Building Official, determine where it states this. The reason being, submitting these will require re-writing them all at an hourly rate to my client. I wish to avoid unnecessary cost. But, if it does state this I will happily provide them.

3739 Paula Avenue ◊ Key West, FL 33040 ◊ 305 - 797 0463

Annalise Mannix Engineering And Consulting, LLC.
FL PE CA License 27779

I have below taken certain excerpts from the Building code. None of which imply calculations are required. They seem to say design loads are required.

The design flood loads are salt water loads at 62.0 lb/cf, 173.7 lb/ft Hyds. Load, 51,829 lbf Buoy 173. Lat. Hyd. Load, 1901.5 lbf Wave, Hyd. Dyn. Load 2.8 lbf, Impact. 72.4 lbf Scour .46 sf.
Based on the review I believe the plans are complete. If you have any questions, please call me at (305) 797-0463.

Sincerely,

Annalise Mannix, P.E.
Principal Engineer

ANNALISE MANNIX LICENSE No 57528 STATE OF FLORIDA PROFESSIONAL ENGINEER

Excerpts from:
2010 Florida Building Code Retrieved August 30, 2012 from http://ecodes.cyberregs.com/cgi-exe/cpage.dll?pg=x&rp=/indx/ST/fl/st/b200v10/st_fl_st_b200v10_16.htm&sid=2012083006152372556&aph=0&cid=iccf&uid=iccf0002&clrA=005596&clrV=005596&clrX=005596&ref=/nonindx/ST/fl/st/b200v10/index.htm#b=1603

"SECTION 1603 CONSTRUCTION DOCUMENTS

1603.1 General.

Construction documents shall show the size, section and relative locations of structural members with floor levels, column centers and offsets dimensioned. The design loads and other information pertinent to the structural design required by Sections 1603.1.1 through 1603.1.9 shall be indicated on the *construction documents*.

Exception: *Construction documents* for buildings constructed in accordance with the *conventional light-frame construction* provisions of Section 2308 shall indicate the following structural design information:

1. Floor and roof live loads.
2. Reserved.
3. Ultimate design wind speed, V_{ult}, (3-second gust), miles per hour (mph) (km/hr) and nominal design wind speed, V_{asd}, as determined in accordance with Section 1609.3.1 and wind exposure.
4. Reserved.
5. Flood design data, if located in *flood hazard areas* established in Section 1612.3.

6. Design load-bearing values of soils.

1603.1.1 Floor live load.

The uniformly distributed, concentrated and impact floor live load used in the design shall be indicated for floor areas. Use of live load reduction in accordance with Section 1607.9 shall be indicated for each type of live load used in the design.

1603.1.2 Roof live load.

The roof live load used in the design shall be indicated for roof areas (Section 1607.11).

1603.1.3 Roof snow load.

Reserved.

1603.1.4 Wind design data.

The following information related to wind loads shall be shown, regardless of whether wind loads govern the design of the lateral-force-resisting system of the building:

1. Ultimate design wind speed V_{ult}, (3-second gust), miles per hour (km/hr) and nominal design wind speed, V_{asd}, as determined in accordance with Section 1609.3.1.

2. Risk Category from Table 1604.5 or Table 1.5-1 of ASCE 7.

3. Wind exposure. Where more than one wind exposure is utilized, the wind exposure and applicable wind direction shall be indicated.

4. The applicable enclosure classifications and, if designing with ASCE 7, internal pressure coefficient.

5. Components and cladding. The design wind pressures in terms of psf (kN/m^2) to be used for the selection of exterior component and cladding materials not specifically designed by the *registered design professional*.

1603.1.5 Earthquake design data.

Reserved.

1603.1.6 Geotechnical information.

The design load-bearing values of soils shall be shown on the *construction documents*.

1603.1.7 Flood design data.

For buildings located in whole or in part in *flood hazard areas* as established in Section 1612.3, the documentation pertaining to design, if required in Section 1612.5, shall be included and the following information, referenced to the datum on the community's Flood Insurance Rate Map (FIRM), shall be shown, regardless of whether flood loads govern the design of the building:

1. In *flood hazard areas* not subject to high-velocity wave action, the elevation of the proposed lowest floor, including the basement.

2. In *flood hazard areas* not subject to high-velocity wave action, the elevation to which any nonresidential building will be dry floodproofed.

3. In *flood hazard areas* subject to high-velocity wave action, the proposed elevation of the bottom of the lowest horizontal structural member of the lowest floor, including the basement.

1603.1.8 Special loads.

Special loads that are applicable to the design of the building, structure or portions thereof shall be indicated along with the specified section of this code that addresses the special loading condition.

1603.1.9 Systems and components requiring special inspections for seismic resistance."

6.0 DRY AND WET FLOODPROOFING

6.1 SCOPE

This section addresses design and construction requirements for floodproofing new construction and substantial improvements in flood hazard areas.

Design of floodproofing measures shall take into consideration and account for the flood loads and combination of loads in Section 1.6, and for nature of flood-related hazards; frequency, depth, and duration of flooding; rate of floodwater rise and fall; floodwater temperature; soil characteristics; flood-borne contaminants and debris; flood warning time; access to and from floodproofed areas; structure occupancy and use; and functional dependence.

6.2 DRY FLOODPROOFING

Dry floodproofing shall be accomplished through the use of flood-damage-resistant materials and techniques that render the dry-floodproofed portions of a structure substantially impermeable to the passage of floodwater below the elevations specified in Table 6-1. Sump pumps shall be provided to remove water accumulated due to any passage of vapor and seepage of water during the flooding event. Sump pumps shall not be relied upon as a means of dry floodproofing. All materials below the elevations specified in Table 6-1 shall conform with the requirements of Section 5.

TABLE 6-1. Minimum Elevation of Floodproofing, Relative to Base Flood Elevation (BFE) or Design Flood Elevation (DFE)—Outside of High Risk Flood Hazard Areas

Structure Category[a]	Minimum Elevation of Floodproofing[b]
I	BFE + 1 ft or DFE, whichever is higher
II[c]	BFE + 1 ft or DFE, whichever is higher
III	BFE + 1 ft or DFE, whichever is higher
IV	BFE + 2 ft or DFE, whichever is higher

[a]See Table 1-1 for structure category descriptions.
[b]Wet or dry floodproofing shall extend to the same level.
[c]Dry floodproofing of residential buildings and residential portions of mixed-use buildings shall not be permitted.

6.2.1 Dry Floodproofing Limitations

Dry floodproofing of nonresidential structures and nonresidential areas of mixed-use structures shall not be allowed unless such structures are located outside of High Risk Flood Hazard Areas, Coastal High Hazard Areas, and Coastal A Zones. Dry floodproofing of residential structures or residential areas of mixed-use structures shall not be permitted.

Dry floodproofing shall be limited to the following:

1. Where flood velocities adjacent to the structure a less than or equal to 5 ft/sec during the design flood; and
2. If human intervention is proposed, where conformance with the limitations of Section 6.2.3 is provided.

6.2.2 Dry Floodproofing Requirements

Dry floodproofed areas of structures shall

1. Be designed and constructed so that any area be the applicable elevation specified in Table 6-1, together with attendant utilities and sanitary fac ties, is flood resistant with walls that are subst tially impermeable to the passage of water. Wa floors, and flood shields shall be designed and structed to resist hydrostatic, hydrodynamic, a other flood-related loads, including the effects buoyancy resulting from flooding to the elevat listed in Table 6-1;
2. Have any soil or fill adjacent to the structure c pacted and protected against erosion and scou accordance with Section 2.4; and
3. Have at least one door satisfying building co requirements for an exit door or primary mea escape, above the applicable elevation specif Table 6-1, and capable of providing human i and egress during the design flood.

6.2.3 Limits on Human Intervention

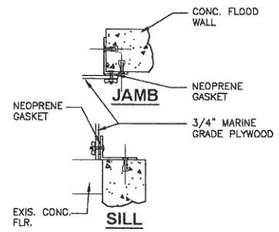
Dry floodproofing measures that require h intervention to activate or implement prior to o a flood shall be permitted only when all of the ing conditions are satisfied:

1. The flood warning time (alerting potential f victims of pending flood situation) shall be mum of 12 hours, unless the community o flood warning system and implements an e gency plan to ensure safe evacuation of flo ard areas, in which case human interventio

GENERAL NOTES:

1. INSTALL BACK FLOW PREVENTER (CHECK VALVE) IN PROPOSED SEWER PIPE.
2. THE DRY FLOOD PROOFING SYSTEM IS DESIGNED IN CONFORMANCE WITH THE FBC, ASCE 24 AND CHAPTER 5 OF ASCE 7-10.
3. ALL WATER, SEWER, MECHANICAL, AND ELECTRICAL INFRASTRUCTURE ARE LOCATED TO PREVENT WATER FROM ENTERING THE STRUCTURE OR ACCUMULATING WITH IN THEIR COMPONENTS.
4. THE SECONDARY ESCAPE DOOR IS FOR EMERGENCY USE ONLY, NOT TO BE USED FOR ACCESSING THE SPACE.
5. ALL ELECTRICAL INSTALLATION IS TO BE ABOVE BASE FLOOD ELEVATION OF 6 FEET NGVD.
6. ALL ELECTRIC RECEPTACLES ARE DESIGNED AT OR ABOVE 6.2 FEET NGVD.
7. ELECTRICAL PANEL SHALL BE AT OR ABOVE DFE 7.0 FEET NGVD. ALL DISCONNECTS SHALL BE AT OR ABOVE DFE 7.0 FEET NGVD.
8. MATERIAL BELOW DFE ARE CONCRETE, GALVANIZED STEEL FASTENERS, GALVANIZED SIMPSON TIES, AND PRESSURE TREATED SIDING, POSTS, SUMP PUMPS AND WOODEN FBC COMPLIANT DOORS.
9. EMERGENCY EGRESS IS THROUGH REAR 3'-0" DUTCH DOOR

REVS
10. THERE IS NO voltage below DFE
11. The FLOOD PANELS Meet ASCE 24
12. FLOOD LOADS ARE SALT WATER 62.0 lb/cf



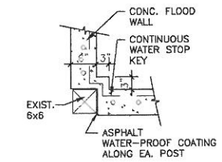
MANUAL FLOOD DOOR JAMB DETAILS
3/A3 1 1/2"=1'-0"

NOTE 1:
ALTERNATE, USE APPROVED AVAILABLE COMMERCIAL FLOOD GATE/DOOR.

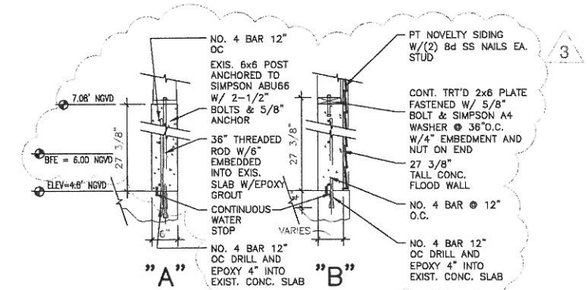
NOTE 2:
FLOOD BARRIER IS DESIGNED TO MEET ASCE24

Alternative:

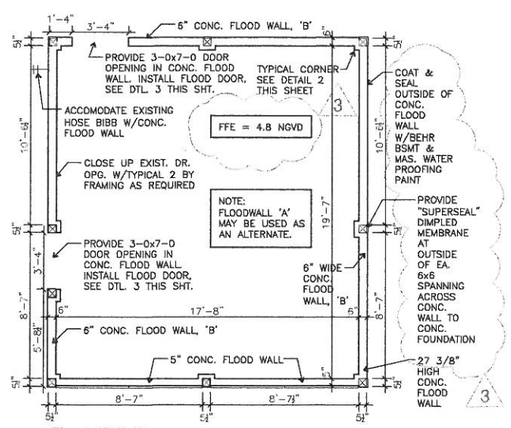
FLOODSHIELD® Flood Protection Door Barrier Model No. Size 6. Install per manufacturers specifications. This is designed to comply with ASCE 24 standards.



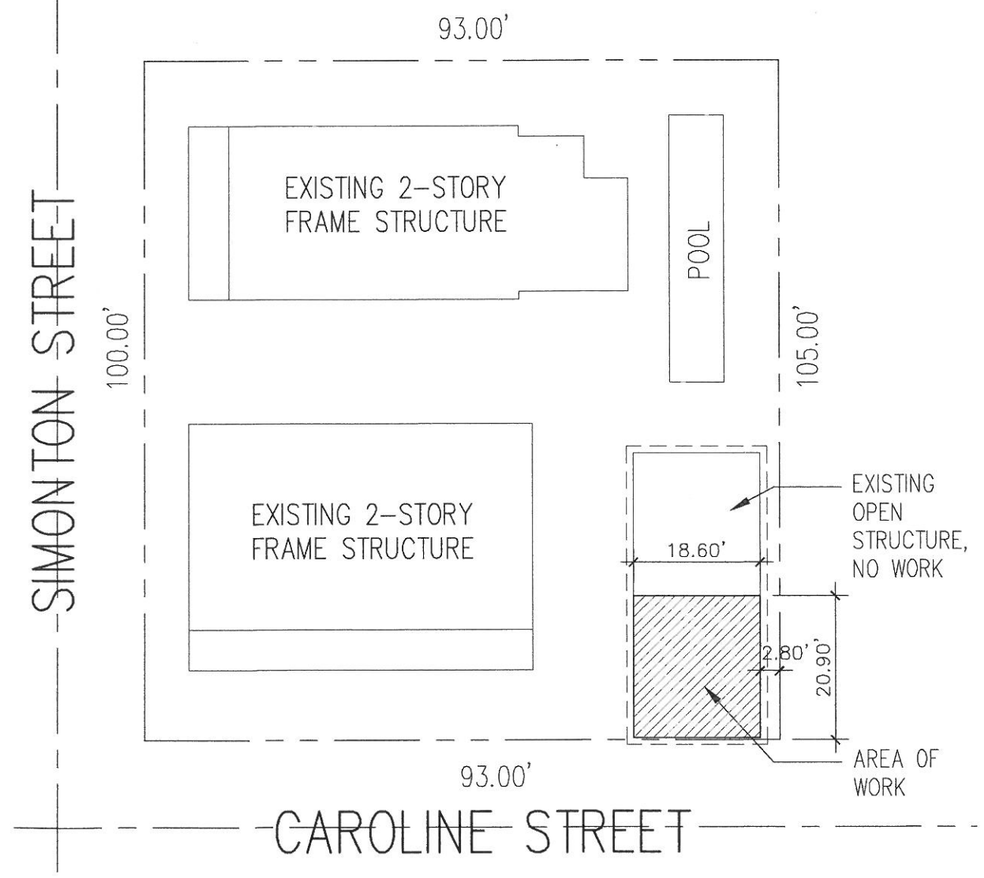
PLAN VIEW FOUNDATION DETAIL
2/A3 3/4"=1'-0"



FLOOD WALL DETAILS
1/A3 3/4"=1'-0"



Flood Wall Plan
SCALE: 1/4" = 1'-0"



1 EXISTING SITE PLAN
SCALE: 1" = 10'-0"

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2012 19.04 Issued for Permit
2012.25.04 Issued for Permit with revisions
2012 18.07 Issued for Flood wall & details
2012.14.08 Reissued for Flood wall & details

REV. 4/10/12
REVS. 6/25/12

CYPRESS HOUSE
CARRIGE HOUSE INTERIOR REMODELING
601 Caroline St.
Key West, FL

Title:
FLOOD WALL PLAN & DETAILS

Sheet Number:
A3

Date: 13 March 2012

REVS

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9. EMERGENCY EGRESS IS THROUGH REAR 3'-0" DUTCH DOOR

REV5
10. THERE IS NO voltage below DFE
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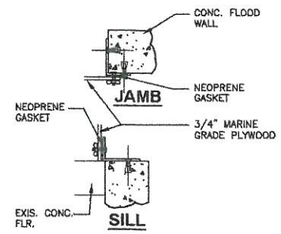
12. FLOOD LOADS ARE SALT WATER 62.0 lb/cf



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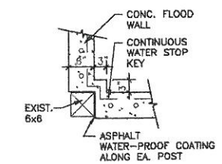
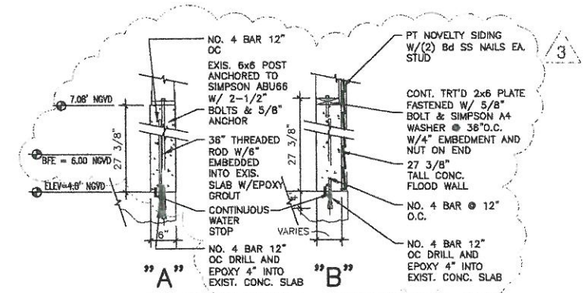
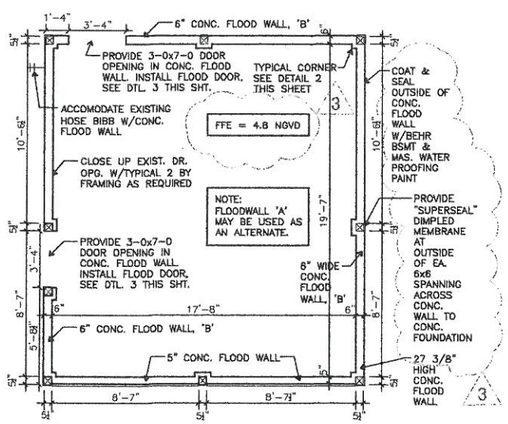
FLOODSHIELD® Flood Protection Door Barrier Model No. Size 6. Install per manufacturers specifications. This is designed to comply with ASCE 24 standards.



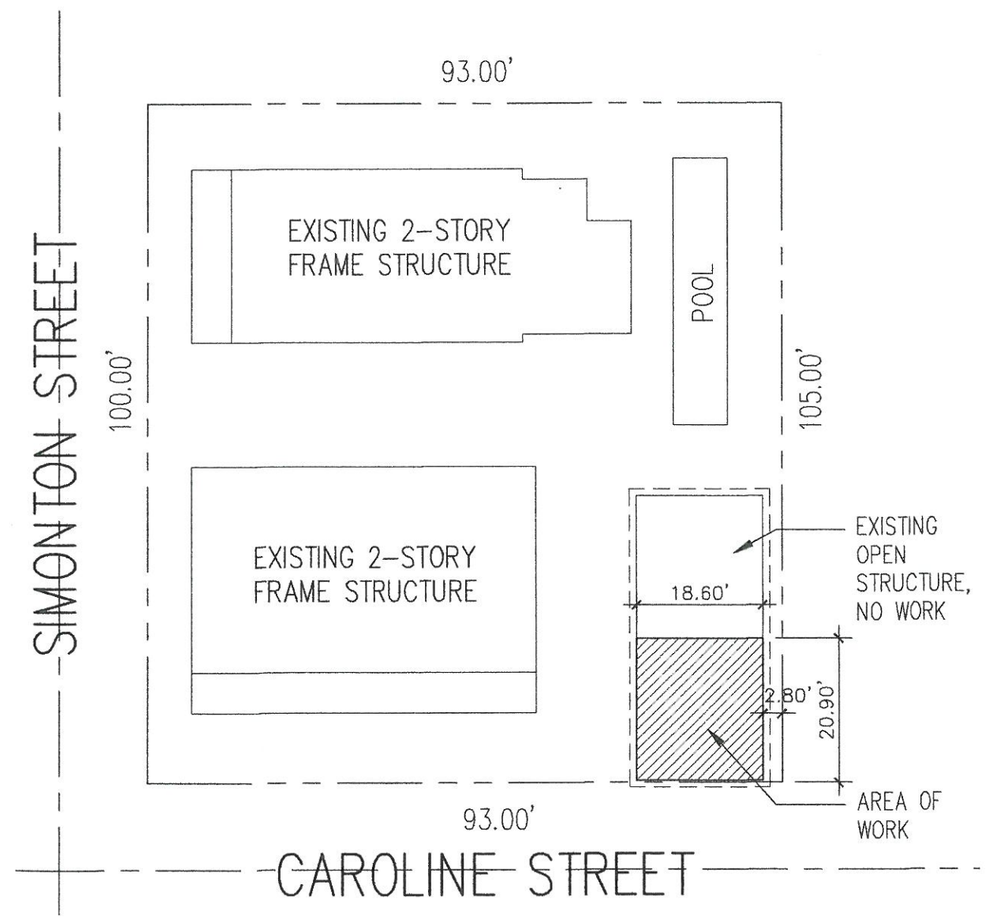
PLAN VIEW
FOUNDATION DETAIL
2/A3 3/4"=1'-0"



FLOOD WALL DETAILS
1/A3 3/4"=1'-0"



Flood Wall Plan
SCALE: 1/4" = 1'-0"



1 EXISTING SITE PLAN
SCALE: 1" = 10'-0"

ANNALISE MANNIX ENGINEERING AND CONSULTING, LLC
3739 Paula Avenue
Key West, Florida 33040

Tel: 305-797-0463
Email: amannix@aol.com
FLORIDA REG. P.E. #57533

Seal:

Revisions:

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2012 19.04 Issued for Permit	
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2012 16.07 Issued for Flood wall & details	
2012 14.08 Reissued for Flood wall & details	3

REV. 4 16 HER
REVS. 1 & 2 HER

CYPRESS HOUSE
CARRIGE HOUSE INTERIOR REMODELING
601 Caroline St.
Key West, FL

Title:
FLOOD WALL PLAN & DETAILS

Sheet Number:
A3

Date: 13 March 2012

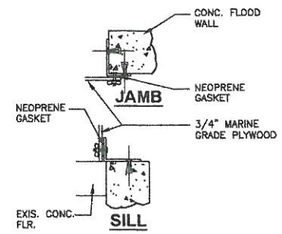
REV5

GENERAL NOTES:

1. INSTALL BACK FLOW PREVENTER (CHECK VALVE) IN PROPOSED SEWER PIPE.
2. THE DRY FLOOD PROOFING SYSTEM IS DESIGNED IN CONFORMANCE WITH THE FBC, ASCE 24 AND CHAPTER 5 OF ASCE 7-10.
3. ALL WATER, SEWER, MECHANICAL, AND ELECTRICAL INFRASTRUCTURE ARE LOCATED TO PREVENT WATER FROM ENTERING THE STRUCTURE OR ACCUMULATING WITH IN THEIR COMPONENTS.
4. THE SECONDARY ESCAPE DOOR IS FOR EMERGENCY USE ONLY, NOT TO BE USED FOR ACCESSING THE SPACE.
5. ALL ELECTRICAL INSTALLATION IS TO BE ABOVE BASE FLOOD ELEVATION OF 6 FEET NGVD.
6. ALL ELECTRIC RECEPTACLES ARE DESIGNED AT OR ABOVE 6.2 FEET NGVD.
7. ELECTRICAL PANEL SHALL BE AT OR ABOVE DFE 7.0 FEET NGVD. ALL DISCONNECTS SHALL BE AT OR ABOVE DFE 7.0 FEET NGVD.
8. MATERIAL BELOW DFE ARE CONCRETE, GALVANIZED STEEL FASTENERS, GALVANIZED SIMPSON TIES, AND PRESSURE TREATED SIDING, POSTS, SUMP PUMPS AND WOODEN FBC COMPLIANT DOORS.
9. EMERGENCY EGRESS IS THROUGH REAR 3'-0" DUTCH DOOR

REVS

10. THERE IS NO Voltage below DFE
11. The Flood Panels Meet ASCE 24
12. FLOOD LOADS ARE SALT WATER 62.0 #/CF



MANUAL FLOOD DOOR JAMB DETAILS

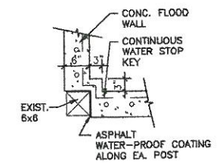
3/A3 1 1/2"=1'-0"

NOTE 1:
ALTERNATE, USE APPROVED AVAILABLE COMMERCIAL FLOOD GATE/DOOR.

NOTE 2:
FLOOD BARRIER IS DESIGNED TO MEET ASCE24

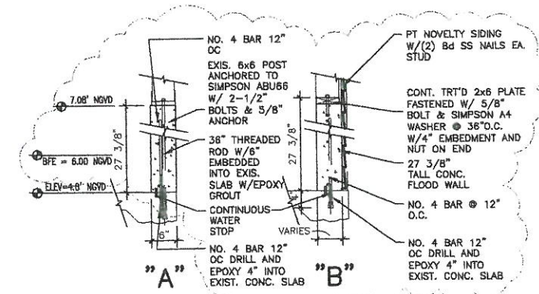
Alternative:

FLOODSHIELD® Flood Protection Door Barrier Model No. Size 6. Install per manufacturers specifications. This is designed to comply with ASCE 24 standards.



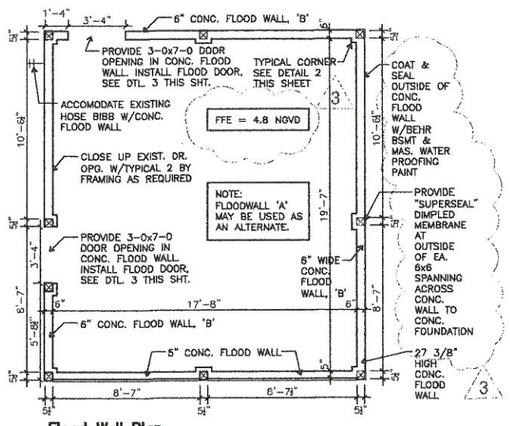
PLAN VIEW FOUNDATION DETAIL

2/A3 3/4"=1'-0"

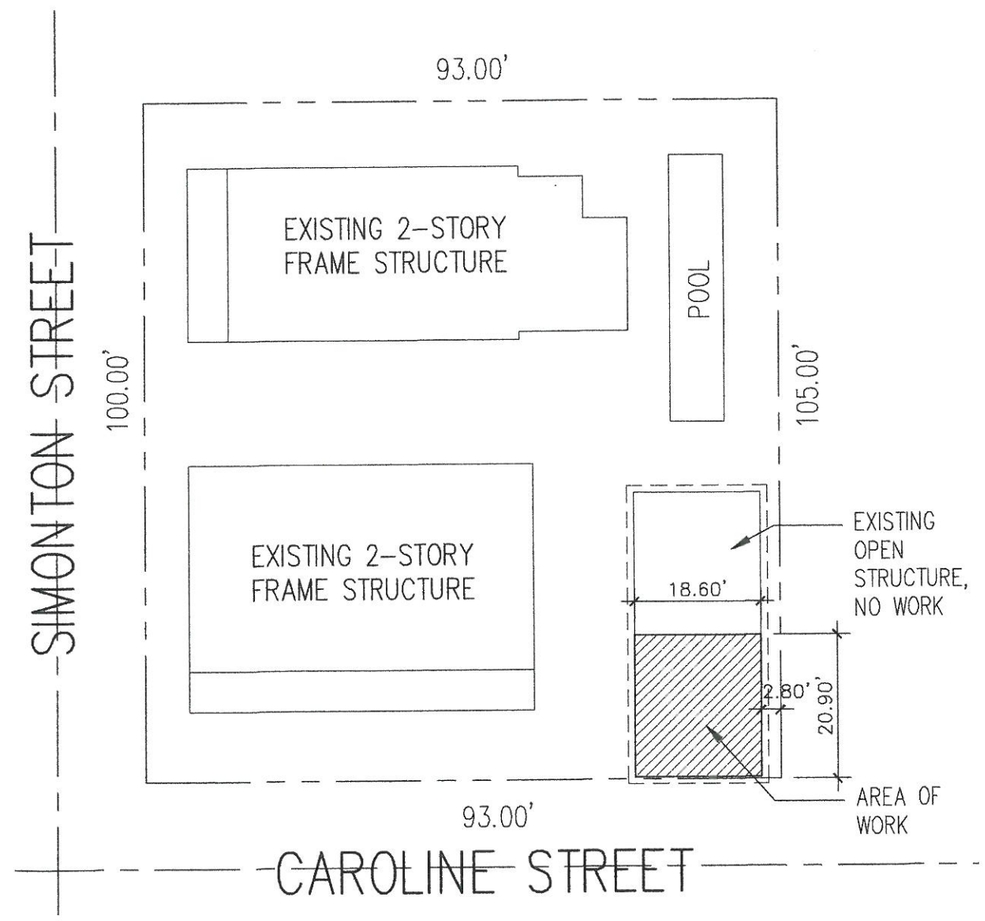


FLOOD WALL DETAILS

1/A3 3/4"=1'-0"



Flood Wall Plan
SCALE: 1/4" = 1'-0"



1 EXISTING SITE PLAN
SCALE: 1" = 10'-0"

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REV 4 10/12
REVS: LEGEND

CYPRESS HOUSE
CARRIGE HOUSE INTERIOR REMODELING
601 Caroline St.
Key West, FL

Title:
FLOOD WALL PLAN & DETAILS

Sheet Number:
A3

Date: 13 March 2012

STATE OF FLORIDA PROFESSIONAL ENGINEER
ANNALISE MANNIX LICENSE No 57533
REVS

Annalise Mannix Engineering And Consulting, LLC.
FL PE CA License 27779

August 24, 2012

Mr. John Woodson
Building Official
City of Key West
Key West, FL 33040

RE: Flood Proofing Revision
Carriage House Renovation
601 Catherine Street
Key West, FL 33040

Dear Mr. Woodson

Please accept this letter as revision as 4 to the above plans as requested by the floodplain dept. for project plan for 601 Caroline Street Carriage House renovation. The rear door will be a PGT FD101 rated for 75PSF with large missile impact. The side door will have hurricane shutters. The front doors will be fixed with shutters. The project is designed to ASCE 07-10 and FBC 2010.

1603.1.1 Floor live load. = 100 PSF

1603.1.2 Roof live load. = 20 PSF

1603.1.4 Wind design data. = Risk Cat II, 180 MPH 3 sec. gust, Exp C, partially enclosed

Based on the review I believe the plans are complete. If you have any questions, please call me at (305) 797-0463.

Sincerely,

ANNALISE MANNIX
LICENSE
No 37533
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Annalise Mannix, P.E.
Principal Engineer

CC: Scott Fraiser

3739 Paula Avenue ◊ Key West, FL 33040 ◊ 305 - 797 0463

MECAWind Version 2.1.0.7 per ASCE 7-10

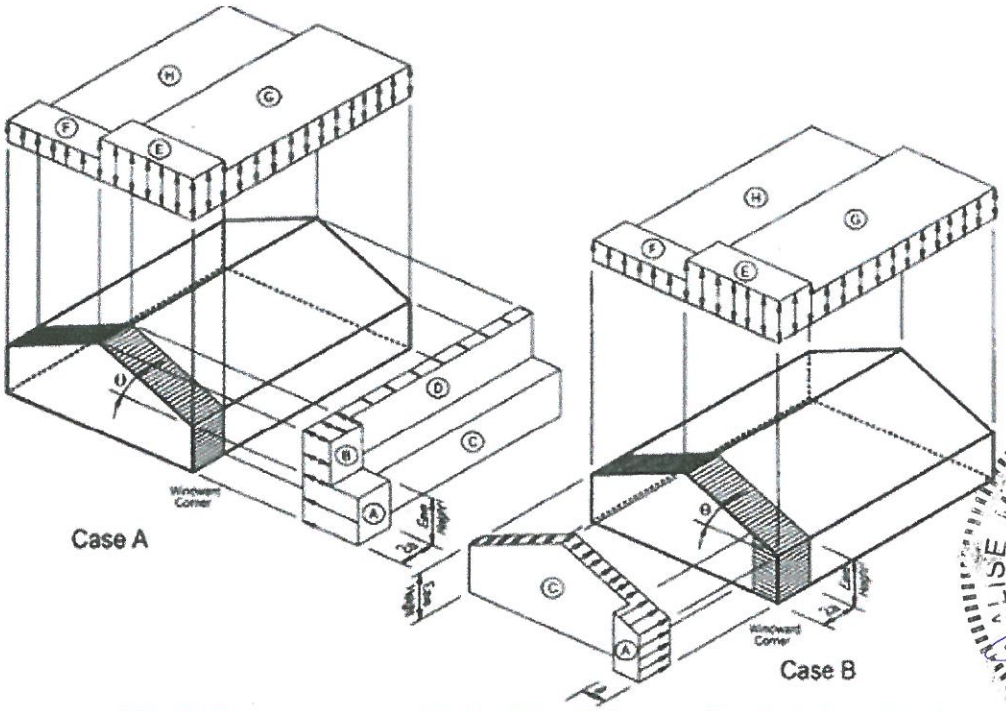
Developed by MECA Enterprises, Inc. Copyright 2012 www.mecaenterprises.com

Date	: 8/24/2012	Project No.	: 20-2012
Company Name	: Annalise Mannix Engineering an	Designed By	: A Mannix
Address	: 3739 Paula Ave	Description	: Wind Load
City	: Key West	Customer Name	:
State	: FL	Proj Location	: 601 Caroline

File Location: C:\Program Files (x86)\MECAWindA\Default.wnd

Envelope Procedure for Diaphragm Buildings per Ch. 28 Part 2

V:	Basic Wind Speed	=	180.00 mph
Cat:	Structural Category(I,II,III, and IV)	=	II
Exp:	Exposure Category(B,C, or D)	=	C
RHt:	Ridge Height	=	11.00 ft
EHt:	Eave Height	=	7.50 ft
Ht:	Mean Roof Height of Building	=	9.25 ft
Theta:	Roof Angle	=	19.29 Deg
L:	Length of Building(If Gabled, along Ridge)	=	20.00 ft
B:	Width of Building(Perpendicular to Ridge)	=	18.00 ft
Kzt:	Topographic Factor	=	1.00
Lambda:	Adjustment Factor for Building Height and Exposure	=	1.21
I:	Importance Factor	=	1.00
a:	10% of Least Horiz Dim. or .4h, whichever is smaller	=	3.00 ft
2a:	Length over which Zone A acts on Each Corner	=	6.00 ft



Wind Pressure on Main Wind Force Resisting System (MWFRS)

Load Case	A psf	B psf	C psf	D psf	E psf	F psf	G psf	H psf	EOH psf	GOH psf
1.00	61.34	-16.66	40.87	-9.23	-53.83	-37.23	-37.51	-28.22	-75.37	-58.99
2.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Note: ps = Lambda * Kzt * I * ps30
Directionality Factor(Kd) is not an input during a Simplified Analysis.

Cypress House Flood Emergency Plan

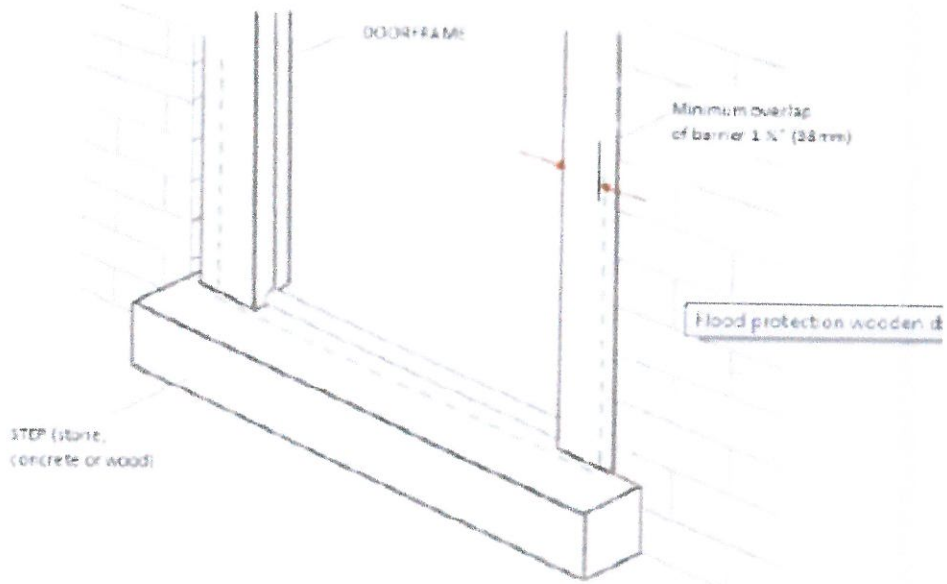
601 Caroline Street Carriage House

In the event of an approaching hurricane or other flood announced by the National Weather Service staff shall prepare the property for wind and flooding. Of importance is the Carriage House. The Carriage House must be properly flood proofed. The following procedure is to be used to ensure the security of the structure, staff and clients. The General Manager is responsible for the installation of the flood barriers.

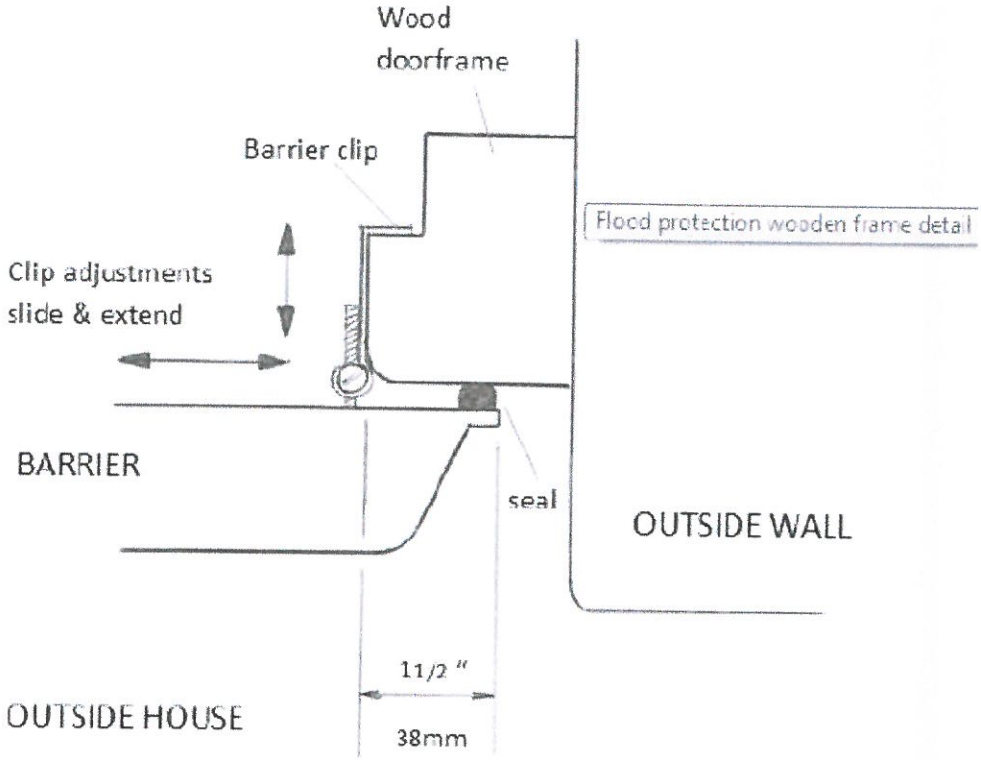
1. 36 hours prior to the expected landfall enter the storage room within the structure and remove a box marked Flood Panels.
2. Remove the flood panels from the marked box which holds them and verify that all panels and hardware is present by checking the component list found taped to the container.
3. By 24 hours prior to landfall install the west facing flood panel, leaving the north facing flood door open.
4. When staff are directed to close the property for the storm check the space to ensure there are no humans or pets in the space. All egress doors open out so once the structure is closed no one is to be inside
5. Turn off all lights and disconnect the computers from the internet and electric.
6. Install the final flood door facing north.
7. Place a note on the door that the room will be closed until further notice.
8. Upon direction to re-open the room, remove each flood door and hardware. If hardware seems to need repair or replacement make an order directly to the address below.
9. Repack it in its container and replace it in the storage room with the sign "Flood Panels -Use in Case of Hurricane" facing out.

The Flood Barrier to be used is the product **FLOODSHIELD®** Flood Protection Door Barrier. The cost is approximately $325. Replacements or additional equipment can be found at: http://www.floodshield.com/Products/floodbarrierusa.html.

Installation Summary:



The barrier seals against the flat outside surface of the doorframe and down onto the step (stone, concrete or wood) as shown ----------.
The barrier needs to overlap onto the doorframe approx 1 ½ inches (38mm) each side of doorframe to allow the barrier to clip to doorframe as shown in



Minimum overlap
of barrier

60' Carolina St Carriage House 8/7/12 Pg 1 of 1

FORCES

DFE = BFE + 1 = 6.0 + 1 = 7.0 EXIST = 4.8 NGVD

d_s = 7.0 − 4.8 = 2.2
HB = 0.7(ds) = 0.17'

d_{cp} = 2.33'

Hydros. Load.

$f_{sta} = (\frac{1}{2})\gamma d_s^2$

$= \frac{1}{2}\, 64\ lb/ft^3\ (2.33)^2 = \boxed{173.7\ lb/ft}$ (× 1.75 FS = 303 lb/ft)

Acting @ 2/3d

Vert. Hyd. Force

F BOUY = γ Vol

$64.0(17.67 \times 19.67 \times 2.33) = \boxed{51829.5\ lbf = F_B}$ (× 1.75 FS = 90.7 k)

Lateral Hydraulic Force

$f_{sta} = \frac{1}{2}\gamma d_s^2$

$\frac{1}{2}\, 64(2.33)^2 = \boxed{173.7\ lbf}$ (× 1.75 FS = 303 lb/ft)

Acting @ 2/3d → .76'

WAVE LOAD

$C_p = 2.8$

$F_{brkw} = (\frac{1}{2}) C_{dk} \gamma D H_b^2$ OR $1.1 C_p \gamma d_s^2 + 2.41\gamma$

$1.1(2.8)(\ldots)(2.33)^2 + 2.41(\ldots)$

$1.070.1 + 837.4 = 19\ldots$

Acting AT: 0.1 ds below E_{sw}

d_s ← 0.1(2.33) = 2.16 FT

RECEIVED
AUG 30 2012
By MC 2:30

ANNALISE MANNIX
LICENSE
No 57533
STATE OF FLORIDA
PROFESSIONAL ENGINEER

8/26/12

Design Flood Velocity

$V_{ft/s} = d_{s\,ft} / t_{sec}$

$C_d = 1.25$

$V = 2.33(1) = \boxed{2.33\ ft/s}$

Hydrodynamic Load

$d_{dyn} = (1/2)\, C_d V^2/g$

$= 1/2\,(1.25)(1)^2/32.2$

$d_{dyn} = .019$

$f_{dyn} = \gamma d_s d_{dyn}$

$(64)(2.33)\,0.019$

$= 2.8\ lbf$

$F_{dyn} = \boxed{2.8\ lbf\ @\ 3/4\ d_s}$ → [ ]

$\times 100\ ft^2 = 5\ lbf$

Debris Impact Load

$F_i = wV/gt$

$1000\ lb\ 2.33\ ft/s / 32.2 \times 1$

$F_i = 72.4\ lbf$

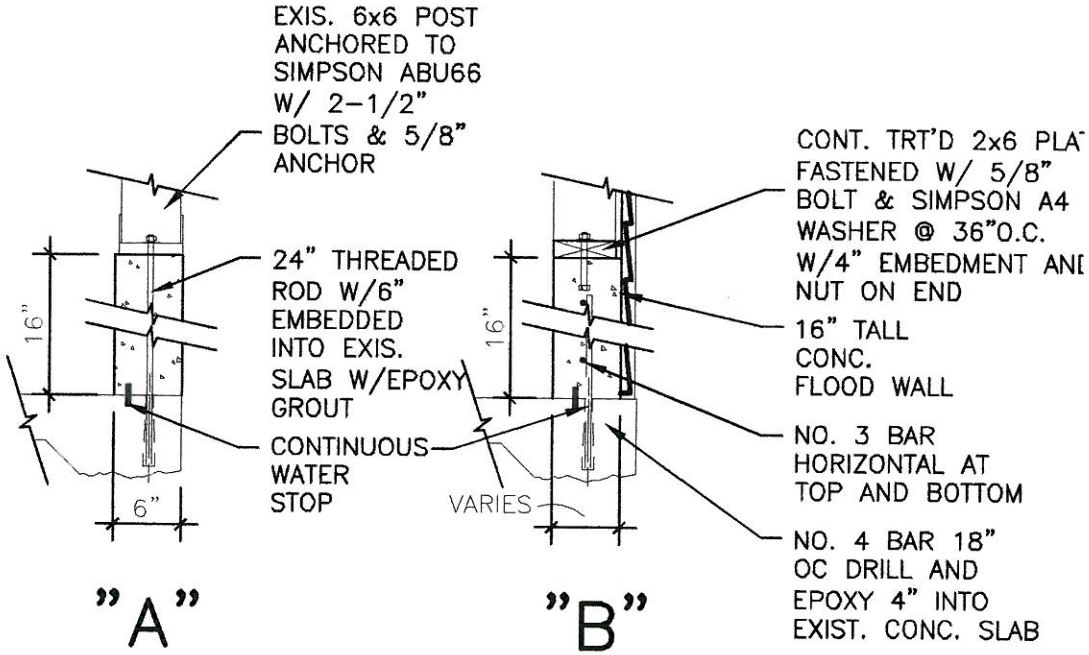
Loading Scour

$S_c = 2.33 \times 0.25 = .46$

RECEIVED
AUG 30 2012
By MC 2:30

Annette Morris, PE # 52533
305-797-0463
[illegible]

How did many get appl.
BTD 2/27/02



1 / A3 FLOOD WALL DETAILS

3/4"=1'-0"

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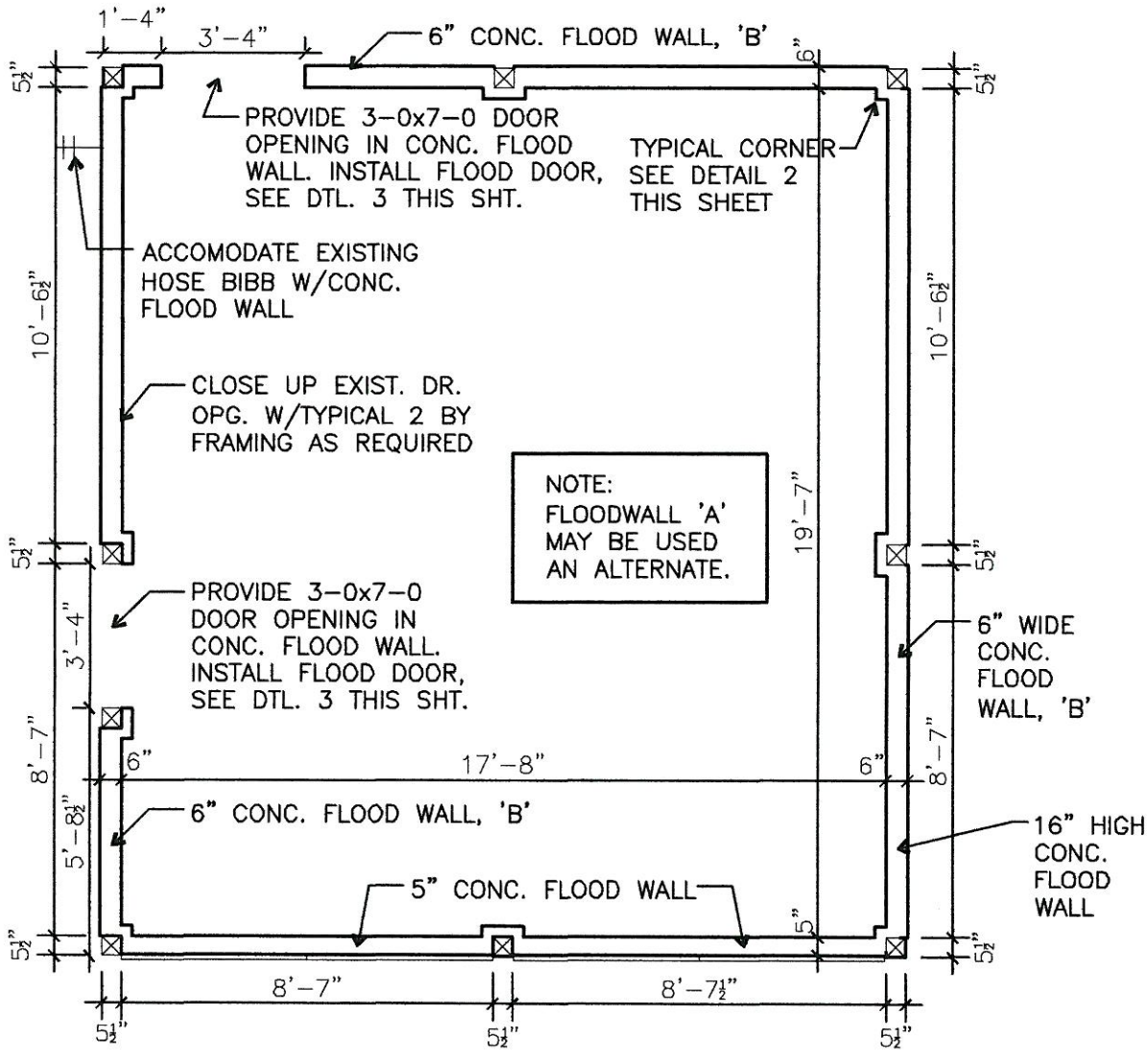
SA28A7 QP120A49

3/13/12
01000423



Flood Wall Plan

SIMON

SA28A7 QP120A49