

P&Z Agenda April 8th, 2024

PLANNING & ZONING BOARD
REGULAR MEETING
Monday, April 8th, 2024
City Meeting Room – 74 6th Street
Agenda

Regular Meeting: 6:00 PM

- 1. Approval of March 11th, 2024 workshop, regular meeting and public hearing minutes.
- 2. Review, Discussion and Decision for Mobile Home. (R-3) @ 338 22nd Ave, Block 217 Lot 10,11,12. For Shuler Bros. Rentals, Inc. Owner; Contractor: Ironwood homes, Inc.
- 3. Review, Discussion and Decision for <u>Addition</u>. **(R-2) @ 252 Jacobi Oneal Ln,** Block 226 Lot 1. For David & Harolyn Walker; Contractor: Scott's Framing Services, LLC.
- Review, Discussion and Decision for <u>Certificate of Appropriateness & Addition</u>. (O/R)
 (Historic District) @ 116 11th Street, Block 78 Lot 4. For David & Tara Lynn Jones;
 Contractor: TBD
- Review, Discussion and Decision for <u>Certificate of Appropriateness & Addition/Renovation</u>.
 (R-1) (Historic District) @ 98 Bay Avenue, Block 193 Lots 6-10. For Philip & Rhonda Shelley; Contractor: William Ross Development
- Review, Discussion and Decision for <u>Certification of Appropriateness & Signs</u>. (C-1)
 (Historic District) @ 17 Avenue D, Block E-2, Front 40' of lots 1-2 and 40x18.5' of lot 3. For Apalachicola Oasis, LLC.; Contractor: Self
- 7. Review, Discussion and Decision for <u>Certification of Appropriateness & Accessory</u>

 <u>Structures/Stormwater Best Management Practice</u>. **(O/R)** (Historic District) @ 92 Avenue

 E, Block 30 Lots SW 4&5. For Kevin Curry; Contractor: TBD

Other/New Business:

There is an alternate position open. Advertised on City Website for applicants 3/4/24 – applicants expected to be on City Commission agenda in May!

PLANNING & ZONING BOARD

REGULAR MEETING

Monday, April 8th, 2024

City Meeting Room – 74 6th Street

Agenda

Outstanding/Unresolved Issues:

• 94 Bay Avenue was tabled at the February meeting – they expect to re-submit their design for the May P&Z meeting.

Motion to adjourn the meeting.



Minutes
March 11th, 2024

PLANNING & ZONING BOARD WORKSHOP & REGULAR MEETING Monday, March 11th, 2024 City Meeting Room – 74 6th Street Minutes

Attendance: Vice-Chair Chase Galloway, Myrtis Wynn, Jim Bachrach, Bobby Miller, Elizabeth Milliken

Workshop: 5:00PM

- Workshop to discuss the P&Z/Architectural Review Board's roles and responsibilities as written
 in the City LDC. The City Attorney, City Manager, and City Planner will go over applicable
 LDC, provide resources, and answer any questions that any Board members may have as the
 City has experienced some LDC changes over the last year. This meeting is not to discuss any
 potential changes to the LDC, but just to refresh on the current LDC. Adjourn by 5:50PM to
 allow a 10-minute break prior to the 6:00PM meeting.
 - o The City Manager, Travis Wade, discussed Robert's Rules of Order.
 - The City Attorney, Dan Hartman, discussed Sunshine Law. He also explained that P&Z members can meet with applicants about their projects on their own, but that they do have to disclose this when the project comes up for discussion.
 - The City Planner, Bree Robinson, explained how Municode works and how board members and applicants alike can easily search the Land Development Code online. She discussed the City website and directed the board to review the Planning page on the website for maps, links to resources, Q&A, and to see the forms that citizens see when applying for different projects, etc.
 - The City Attorney discussed the P&Z/Architectural Review Board's roles and responsibilities as laid out in Sec. 101-60. Section 109-21, 109-22, 109-48, and 109-51 were all discussed in how the P&Z Board is to discuss Certificates of Appropriateness and make considerations.
 - The Historic District Guidelines were discussed and the City Attorney gave a brief overview of the content as well as how to take them into account – he confirmed that they are a part of the City LDC as Historic District Guidelines and the P&Z Board should use them as a tool to approve and deny application for Certificates of Appropriateness.

PLANNING & ZONING BOARD WORKSHOP & REGULAR MEETING Monday, March 11th, 2024 City Meeting Room – 74 6th Street Minutes

 Discussion was held and the board adjourned the workshop to enter the Regular Meeting.

Regular Meeting: 6:00 PM

- 1. Approval of February 12th, 2024 meeting minutes.
 - Motion to approve by Jim Bachrach; 2nd by Myrtis Wynn. All in favor motion carried.
- 2. Review, Discussion and Decision for Fence. (R-2) @ 178 22nd Ave, Block 237 Lot 7. For Stephen Penn Owner; Contractor: Self
 - Motion to approve by Bobby Miller; 2nd by Elizabeth Milliken. All in favor motion carried.
- 3. Review, Discussion and Decision for <u>Certificate of Appropriateness & Fence</u>. (R-1) (Historic **District)** @ 140 Avenue D, Block 48 Lot 4/5. For Charles Miller; Contractor: Ryan McClain
 - Motion to approve by Jim Bachrach; 2nd by Myrtis Wynn. All in favor motion carried.
- 4. Review, Discussion and Decision for <u>Accessory Structures</u>. (R-2) @ 245 Jacobie Oneal Lane, Block 226. For Olivia & Steve Wells; Contractor: TBD
 - Motion to approve by Jim Bachrach; 2nd by Bobby Miller. All in favor motion carried.
- 5. Review, Discussion and Decision for <u>Accessory Structure & Pavers</u>. (R-2) @ 148 13th Street, Block 90 Lot ½ 2 & ½ 3. For Thomas Becknell & Pamela Erwin; Contractor: Self
 - Motion to approve by Bobby Miller; 2nd by Jim Bachrach. All in favor motion carried.

PLANNING & ZONING BOARD WORKSHOP & REGULAR MEETING Monday, March 11th, 2024 City Meeting Room – 74 6th Street Minutes

- Review, Discussion and Decision for <u>Certificate of Appropriateness & Sign</u>. (C-1) (Historic District) @ 25 Ave D, Block E-2 Lots 1-2-3. For Star Step Capital Florida Properties LLC (Oyster City); Contractor: William Ross Development
 - Motion to approve by Jim Bachrach; 2nd by Myrtis Wynn. All in favor motion carried.
- 7. Review, Discussion and Decision for <u>Certificate of Appropriateness</u>, <u>Fence</u>, <u>& Addition</u>. **(C-2)**(Historic District) @ 111 Ave E, Block 32 Lots 8-19. For Tom Brocato; Contractor: Self
 - Motion to approve by Bobby Miller; 2nd by Jim Bachrach. All in favor motion carried.

Other/New Business:

- Justin McMillan has resigned from the Board Myrtis Wynn is now a full voting member!
- There is an alternate position now open. Advertised on City Website for applicants 3/4/24.

Outstanding/Unresolved Issues:

• 94 Bay Avenue was tabled at the February meeting – they expect to re-submit their design for the April P&Z meeting.

Motion to adjourn the meeting by Jim Bachrach; 2nd by Myrtis Wynn – meeting adjourned.

Meeting Minutes Approved by:				
Chair – Joe Taylor	Date			

PLANNING & ZONING BOARD QUASI-JUDICIAL PUBLIC HEARING MONDAY, MARCH 11th, 2024 City Meeting Room – 74 6th Street Minutes

Attendance: Chase Galloway – Vice Chair, Jim Bachrach, Bobby Miller, Elizabeth Milliken, Myrtis Wynn

Quasi-Judicial Public Hearing: Immediately following Regular Meeting @ 6:00 PM

- Discussion & Decision for proposed Accessory Structure (Shed) to be placed in the O/R Zone at 119
 12th Street, more specifically described as Block 78 Lot 6 for William Mulley Owner; Contractor:
 TBD. Applicant is requesting approval of a special exception for an accessory structure to be used as a storage shed.
 - Discussion held City Planner stated that she received 1 letter in support of the request.
- 2. Pending approval of the special exception decision on Development Order (site plan) approval and Certificate of Appropriateness for an accessory structure at 119 12th Street.
 - Motion to approve by Jim Bachrach; 2nd by Bobby Miller. All in favor special exception for accessory structure in O/R Zone, site plan, and certificate of appropriateness approved.

Other/New Business:

Outstanding/Unresolved Issues:

Motion to adjourn the meeting by Jim Bachrach; 2nd by Chase Galloway. Meeting adjourned.

In our continuing effort to keep the citizens of Apalachicola informed, this agenda is posted on our website at www.cityofapalachicola.com prior to the scheduled meeting for public review. Additional information such as the City Land Development Code and zoning related maps, along with other development information is also available on the website for your convenience. Please direct any questions concerning items on this agenda or the Planning & Zoning Board to Bree Robinson (850)323-0985 or brobinson@cityofapalachicola.com.



Mobile Home 338 22nd Ave



City of Apalachicola Planning & Zoning Application for Development/Site Plan Approval

Official Use Only

Date Received: 3/21/24
Meeting Date: 4/8/24

Fees Due: 200,000 Date Fees Paid: 3/21/24

OWNER INFORMATION	CONTRACTOR INFORMATION		
Owner Shuler Bros. Rentals, Inc. Address 34 45 Street City Apalachicola State FL Zip32320 Phone 350-453-1757 PROJECT	Contractor Name Ironwood Homes, Inc. State License # City License # Email feliciaethridge 17 dg mail.com Phone 850-838-9090 or 850-843-0428 CT TYPE		
→ New Construction	Fence		
Addition	Repair		
Alteration/Renovation	Certificate of Appropriateness		
Relocation	★ Other Mobile Hope		
Demolition			
PROPERTY II	NFORMATION		
PROPERTY INFORMATION Street Address (911 Address): 338 22 Averve City & State: Apalachical a FL Zip: 32320 Parcel ID #: 01 045 08w 8330 0217 0010 Block: 217 Lot: 10,11,12 Zoning District: R3 [] Historic District [X] Non-Historic District FEMA Flood Zone: X			
OFFICIAL	USE ONLY		
Certificate of Appropriateness Required? Y N This development request has been approved for a			
Setback Requirements of Property: Front: 15 Rear: 25 Side: 15/pt/ Corner Lot? Y N Street Sides: Lot Coverage: 40%. STAFF NOTES/RECOMMENDATIONS:	Certificate of Appropriateness (if applicable), zoning, land use, and development review by the City of Apalachicola Planning & Zoning Board and a		
Setback Requirements of Property: Front: 15 Rear: 25 Side: 15/pt/ Corner Lot? Y N Street Sides: Lot Coverage: 40%. STAFF NOTES/RECOMMENDATIONS:	Certificate of Appropriateness (if applicable), zoning, land use, and development review by the City of Apalachicola Planning & Zoning Board and a		

NOTE: This is a conceptual approval through the City based on our Land Development Code (LDC.) Please be aware that other documentation may be required by the Building Official.

Shuler Brothers Rentals, Inc. 338 22nd Avenue Block 217, Lots10, 11 and 12 Mobile Home Site Plan Applicant Initial

Describe the proposed project and materials. Describe architectural elements, materials, and relationship to	the existing st	ructure(s).		
13 x72 mobile Home 3 beds 2 bath. Same				
mobile home as the 2	approved	in 2021 right next		
door in same block.				

PROJECT SCOPE	MANUFACTURER	PRODUCT DESCRIPTION	FL PRODUCT APPROVAL#
Siding			TAX X ATO TAZ II
Doors			
Windows	See Bulding	Permit Application	
Roofing	and attachm	ents to application	
Trim			
Foundation			
Shutters			
Porch/Deck			
Fencing			
Driveways/Sidewalks	Shuler R	rothers Rentals, Inc.	
Other	338 Block 21	3 22nd Avenue 7, Lots10, 11 and 12 e Home Site Plan	

NOTE: Please have a site plan prepared to turn in with your application. At minimum, the site plan needs to contain: a North arrow, surrounding streets, lot lines, lot dimensions, setbacks, current structure dimensions, proposed structure dimensions, fence locations, and fence heights. Applications requiring a Certificate of Appropriateness will also need to submit renderings/elevations of any proposed structures and note the materials proposed. More information may be requested by City Staff.

CERTIFICATION

By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of application. I acknowledge that I understand and have complied with all of the submittal requirements and procedures and have read and understand the following:

- 1. I/We hereby attest to the fact that the above supplied property address(es), parcel numbers(s), and legal description(s) is(are) the true and proper identification of the area of this petition.
- 2. I/We authorize staff from the City of Apalachicola to enter onto the property in question during regular business hours in order to take photos which will be placed in the permanent file.
- 3. I/We understand that the COA review time period will not commence until the application is deemed complete by staff and may take up to 10 business days to process. I further understand that an incomplete application submittal may cause my application to be deferred to the next posted deadline date.
- 4. I/We understand that, for Board review cases, an agenda and staff report (if applicable) will be available on the City's website approximately one week before the Planning & Zoning Board Meeting.
- 5. I/We understand that the approval of this application by the Planning & Zoning Board or staff in NO way constitutes approval of a Building Permit for Construction from the City of Apalachicola Community and Economic Development Office.
- 6. I/We understand that all changes to the approved scope of work stated in a Certificate of Appropriateness or Development Order application have to be approved by the P&Z Board before work commences on those changes. There will be no charge for revisions. Making changes that have not been approved can result in a Stop Work Order being placed on the entire project and additional fees/penalties.
- 7. I/We understand that any decision of the P&Z Board may be appealed to the City Commission within 30 days after the decision by the P&Z Board; otherwise, the decision will be final.
- 8. I/We understand that a Certificate of Appropriateness is only valid for one year after issuance. They are renewable for six months without cause if requested, and for an additional six months upon showing of good cause by the applicant. The applicant must submit all requests for extensions in writing and provide appropriate support documents to City Staff, if needed.
- 9. I/We understand that P&Z Board approval is permission to obtain a permit for work and installation as indicated. I certify that all work will be performed to meet standards of all laws regulating construction in this jurisdiction.
- 10. I/We understand that there will be no issuance of a Certificate of Appropriateness without the property owner obtaining Homeowner's Association approval (if required) prior to the P&Z Board Meeting and/or before the beginning of an work and in no way authorizes work that is in violation of any association rules or regulations.

Shuler Bros. Rentals, Inc. Shomas M. Shuler, President

SIGNATURE OF APPLICAN

DATE

Shuler Brothers Rentals, Inc. 338 22nd Avenue Block 217, Lots10, 11 and 12 Mobile Home Site Plan

Owners, Builders, Developers

PLASE NOTE:

- If the proposed development is located within the City's Historic District; a <u>Certificate of Appropriateness</u> from the City's Planning & Zoning Board and Architectural Review Committee is necessary before any permitting can take place.
- 2. Required site plan elements and the Development Order/Certificate of Appropriateness applications are due <u>10 BUSINESS DAYS</u> prior to the scheduled monthly meeting (second Monday of each month) of the Planning & Zoning Board.
- 3. Residential site plan approvals are valid for one year after issuance. If a building permit is not obtained within a year after receiving P&Z approval, the applicant must re-apply and receive P&Z approval again. (Commercial site plan approvals are valid for two years.)
- 4. After you have received your Planning & Zoning Approval and/or Certificate of Appropriateness, whichever applies, take all development documents to the Building Department at 192 Coach Wagoner Blvd, Apalachicola to apply for your building permit. A P&Z Development Order Application is not a building permit application there will be building permit forms to fill out. Building permit issuance and all inspections will be coordinated with the Building Department Clerk. Please be advised that additional documentation may be required by the Building Clerk or Building Official. Please email buildingdept@cityofapalachicola.com or call City Hall at (850)653-7592 with any permitting questions.
- 5. Land Development regulations can be found on the City of Apalachicola website @ www.cityofapalachicola.com.
- 6. Please note that if any shrubs are planted or any materials (concrete, gravel, etc.) are placed in the City Right of Way that there is a possibility of removal at no expense to the City.

It is our intent to save you time any money in your plan preparation! The City of Apalachicola Planning & Zoning Board is a seven-member citizen board that also sits as the City's Architectural Review Board. Our responsibilities include protecting the historical character of the City. By working with the Planning & Zoning Board to obtain a Certificate of Appropriateness, your development will not only proceed more smoothly, but will also enhance the City's architectural integrity and historical character of Apalachicola.

Bree Robinson
City Planner
(850)323-0985
brobinson@cityofapalachicola.com

Thank you, PLANNNG & ZONING BOARD CITY OF APALACHICOLA



OFC USE	
FEES:	
Application Fee:	\$
Other:	S
Total:	\$
Paid:	

Owner of New Children College College



OFC USE	
Approved b	y Building Official:
	•
Date:	

City of Apalachicola BUILDING PERMIT APPLICATION

	EMAIL: INShuler lawer Com
Address: 34 4th Street	Phone#: <u>850-453-1757</u>
Fee Simple Title Holder (If other than Owner):	me
Contractor's Name: Ironwood Homes, Inc.	Ph# <u>850-838-9090</u>
Address: 3483 S. Byron Butler Parkway	Ph# 850-843-0428 -cell
State License #: Perry FL 32348	COA #
Address of Project: 338 22 M Avenue	
Purpose of Permit: mobile home install - r	new 10 ·
Property/Parcel ID# & Legal description: <u>Ol - 095</u>	5-08W-8330-0217-0010, Lots 113 12, Black on body of water? Yes 217
Will the Structure be located at least 30 feet from a	ny body of water? Yes
If the application is for a Commercial Project ple	soco list the Name of the Dusiness of the
the application is for a commercial reject pic	ease list the Name of the Business: Na
ar the application is for a commercial rioject pie	ease list the Name of the Business: N/2
Bonding Company:	Ph#
Bonding Company:	Ph#
Bonding Company:	Ph# Ph#
Bonding Company: <u>Na</u> Architect's/Engineer Name: <u>Na</u>	Ph# Ph#
Bonding Company: <u>Na</u> Architect's/Engineer Name: <u>Na</u> Mortgage Lender's Name: <u>Peoples South Ba</u>	Ph# Ph# Ph#

WARNING TO OWNER: Your failure to record a Notice of Commencement may result in you paying twice for improvements to your property. If you intend to obtain financing, consult with your lender or attorney BEFORE recording your Notice of Commencement.

For improvements to real property with a construction cost of \$2,500.00 or more, a certified copy of the Notice of Commencement is required to be submitted to the Building Department when application is made for a permit or the applicant may submit a copy of the Notice of Commencement along with an affidavit attesting to its recording. A certified copy of the Notice of Commencement must be provided the Building Department BEFORE the second or any subsequent inspection can be performed. Filing of the documents that have been certified may be done by mail, fax, or hand-delivery.

Application is hereby made to obtain a permit to do the work and installations as indicated. I certify that NO WORK or installation has been commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction. I understand that a

separate permit must be secured for electrical work, plumbing, signs, roofing, pools, furnaces, boilers, heaters, tanks, and air conditioners, etc. (applications may be emailed to Ron Nippe, Building Permit Clerk, rnippe@cityofapalachicola.com or buildingdept.@cityofapalachicola.com or dropped off at City Hall, 192 Coach Wagoner Blvd., Apalachicola, FL 32320

nming Pool olition	Roof Other:	Sign	Pole Barn
Squa Lowe Type	re Footage: <u>934 sf</u> st Floor Elevation: of Walls	Area Heated/Cool #of Stories Type of Floor	ed
ng Department	does not have the auth	ority to enforce DEED	RESTRICTIONS
t all work will be	e done in compliance wi	th all applicable laws	nd correct to regulating
Date	Contractor	Date	
Data	Notary as to Caylor I		
Date			
	nming Pool polition position of building to see the Howe the	nming Pool Roof polition Other: position of building: t_15	Square Footage: 934 Sf Area Heated/Coole Lowest Floor Elevation: #of Stories Type of Walls Type of Floor th Height Width ng Department does not have the authority to enforce DEED fy that the information contained in this application is true at all work will be done in compliance with all applicable laws 3-18-34

Shuler Brothers Rentals, Inc. 338 22nd Avenue Block 217, Lots10, 11 and 12 Mobile Home Site Plan



VERIFICATION OF 911 ADDRESS FORM

FRANKLIN COUNTY PLANNING DEPARTMENT

34 Forbes Street, Suite 1, Apalachicola, Florida 32320 Phone: 850-653-9783 Fax: 850-653-9799 WWW.FRANKLINCOUNTYFLORIDA.COM

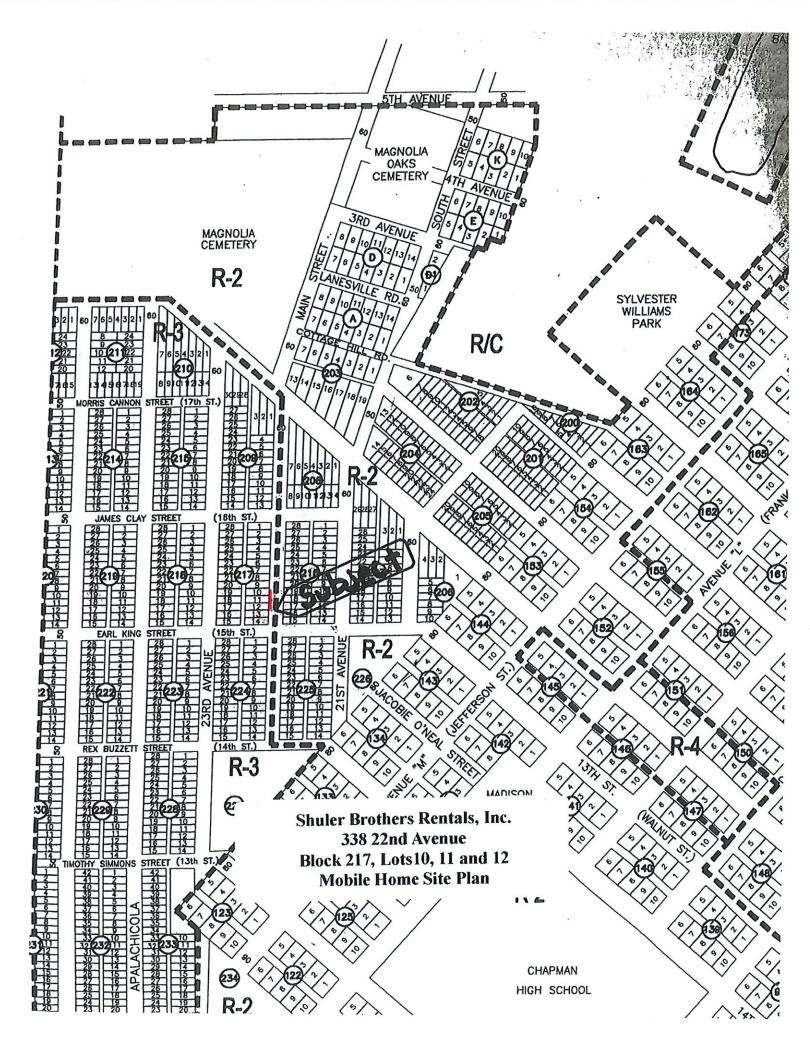
APPLICATION MUST BE COMPLETE: (For more property information visit the Franklin County Property Appraiser's Website at www.qpublic.net/franklin) *One Parcel per application.

Property Owner Information:
Property Owner(s): Shuler Brothers Rentals, Tac.
Property Owner(s): Shuler Brothers Rentals, Inc. Mailing Address: 34-44 street Apalachicala, FL 32320
Property Information:
Lot(s): 12 N, 10 Block: 217 Subdivision: City Apolach Unit:
(Form cannot be processed without a full/valid parcel id number)
Doguestow's Information.
Requestor's Information:
Requestor's Name: Thomas M. Sheer, President Phone #: 850-653-1757
Prione #: 880-653-113
Email Address: MShulerDshulerlawfl. com
OFFICE USE ONLY
THIS 911 ADDRESS HAS BEEN ASSIGNED TO THE DESCRIBED PROPERTY
BELOW. PLEASE SEE ATTACHED IF THIS PROPERTY IS A METES & BOUNDS PROPERTY:
BELOW. PLEASE SEE ATTACHED IF THIS PROPERTY IS A METES & BOUNDS

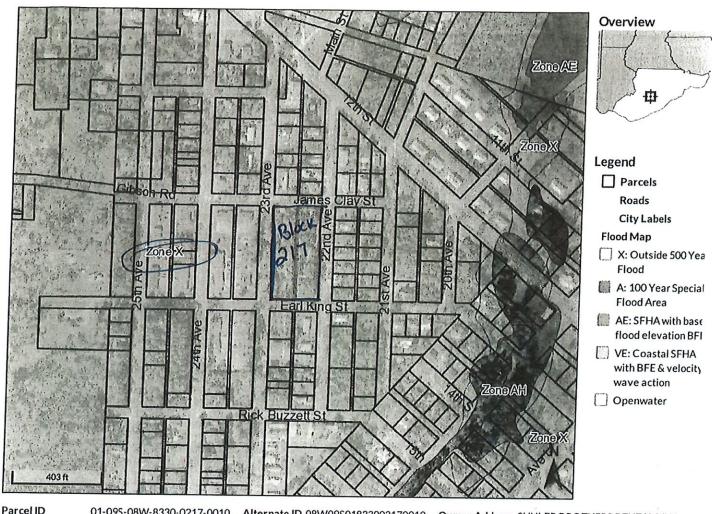
THIS FORM IS NOT VALID UNLESS SIGNED BY AN AUTHORIZED EMPLOYEE OF THE FRANKLIN COUNTY PLANNING DEPARTMENT

COUNTY SHERIFF'S DEPARTMENT.

THE ABOVE ADDRESS SHALL NOT BE CHANGED BY ANYONE OTHER THAN THIS DEPARTMENT AND WILL BE IN CONJUNCTION WITH THE POSTAL SERVICE AND THE 911 COORDINATOR FOR THE FRANKLIN



qPublic_net™ Franklin County, FL



Sec/Twp/Rng

01-09S-08W-8330-0217-0010

Alternate ID 08W09S01833002170010 Owner Address SHULER BROTHERS RENTALS INC

MOBILE HOM 40 4TH STREET

Acreage n/a APALACHICOLA, FL 32320

Property Address 335 EARL KING District

Brief Tax Description BL 217 LOTS 1 THRU 28 INC

1-9S-8W

(Note: Not to be used on legal documents)

Class

Date created: 5/28/2021 Last Data Uploaded: 5/28/2021 7:42:37 AM

Developed by Schneider

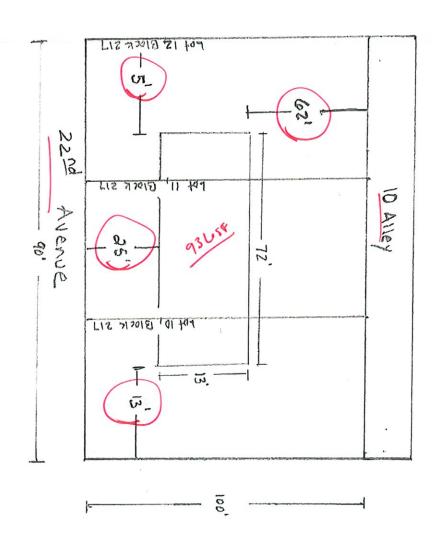
"X" FLOOD ZONE

Shuler Brothers Rentals, Inc. 338 22nd Avenue Block 217, Lots10, 11 and 12 **Mobile Home Site Plan**

(Not to Scan)

9,000sf 102 40%: 3,400sp

Shuler Brothers Rentals, Inc. Block 217, Lots10, 11 and 12 Mobile Home Site Plan 338 22nd Avenue

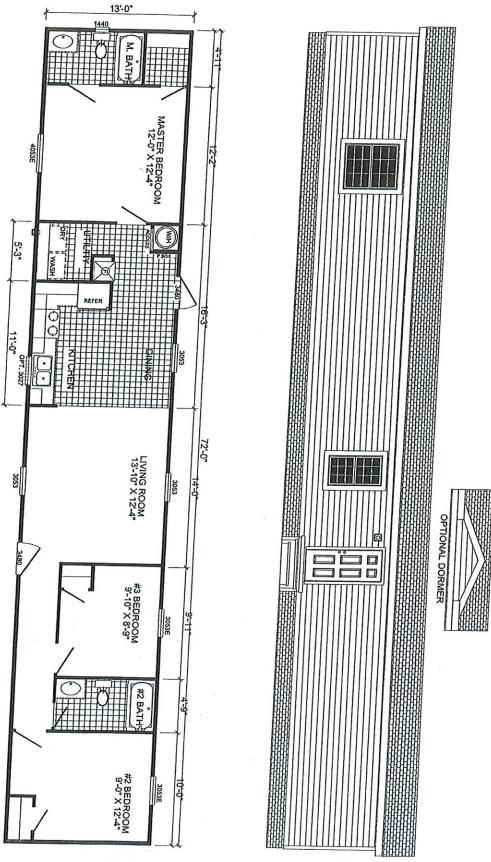


Shuler Brothers Rentals, Inc. 338 22nd Avenue Block 217, Lots10, 11 and 12 **Mobile Home Site Plan**

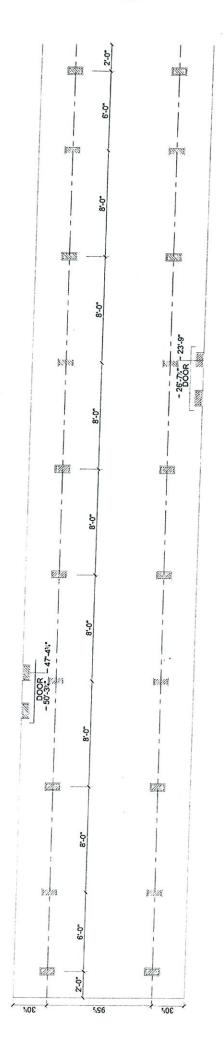
N

All room dimensions include dosets and square footage figures are approximate.

3-BEDROOM / 2-BATH
14 X 72 - Approx. 936 Sq. Ft.



Shuler Brothers Rentals, Inc. 338 22nd Avenue Block 217, Lots10, 11 and 12 Mobile Home Site Plan



SUPPORT PIER/TYP

6-25-2015

FOUNDATION NOTES: - THIS DRAWING IS DESIGNED FOR THE STANDARD WIND ZONE AND IS TO BE USED IN CONJUNCTION WITH THE INSTALLATION MANUAL AND IT'S SUPPLEMENTS. - FOOTINGS ARE SHOWN FOR EXAMPLE ONLY QUANTITY AND SPACING MAY VARY BASED ON PAD TYPE, SOIL CONDITION, ETC.

MODEL: L-4723A - 14 X72 3-BEDROOM / 1-BATH Live Oak Homes

Shuler Brothers Rentals, Inc. Block 217, Lots10, 11 and 12 Mobile Home Site Plan 338 22nd Avenue



Addition
252 Jacobi Oneal Ln



City of Apalachicola Planning & Zoning Application for Development/Site Plan Approval

Official Use Only

Date Received: 3/22/2

Meeting Date: 4/

Date Fees Paid: 3/25/24

OWNER INFORMATION	CONTRACTOR INFORMATION		
Owner David + Harolyn Walker Address 252 Jacobi Oneal Ln City Apalachicola State FL Zip 32320 Phone 850-899-5005	Contractor Name Scott's Framing Services, LLC State License # 87-130445D City License # Email JMScott 2231 Ogmail.com Phone 850-653-7762		
PROJEC	CT TYPE		
New Construction Addition Screen Porch Alteration/Renovation Relocation	Fence Repair Certificate of Appropriateness Other		
Demolition			
	NFORMATION		
Street Address (911 Address): 252 Jacobi Oneal Ln City & State: Application of L Zip: 32320 Parcel ID #: 01-095-08W-8330-0226-0011 Block: 226 Lot: 1797/108 Zoning District: Constylisty 2-2 [] Historic District [X] Non-Historic District 904/600 FEMA Flood Zone: 904/600			
OFFICIAL	USE ONLY		
Certificate of Appropriateness Required? Y/N Setback Requirements of Property: Front:	This development request has been approved for a Certificate of Appropriateness (if applicable), zoning, land use, and development review by the City of Apalachicola Planning & Zoning Board and a building permit is authorized to be issued.		
	City Staff		
	Date Approved		

NOTE: This is a conceptual approval through the City based on our Land Development Code (LDC.) Please be aware that other documentation may be required by the Building Official.

Applicant Initial

Describe the proposed project and materials. Describe the proposed project in terms of size, affected
architectural elements, materials, and relationship to the existing structure(s).
Add a screened porch to the back of the house
20x12. The porch would be attached to the house
with one door, 3/4 screened + 1/4 at bottom wrapped
with same siding as the house. Materials list
attached.

PROJECT SCOPE	MANUFACTURER	PRODUCT DESCRIPTION	FL PRODUCT APPROVAL#
Siding			
Doors			
Windows			
Roofing			
Trim			
Foundation			,
Shutters			
Porch/Deck			
Fencing			
Driveways/Sidewalks			
Other			

NOTE: Please have a site plan prepared to turn in with your application. At minimum, the site plan needs to contain: a North arrow, surrounding streets, lot lines, lot dimensions, setbacks, current structure dimensions, proposed structure dimensions, fence locations, and fence heights. Applications requiring a Certificate of Appropriateness will also need to submit renderings/elevations of any proposed structures and note the materials proposed. More information may be requested by City Staff.

CERTIFICATION

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- 1. I/We hereby attest to the fact that the above supplied property address(es), parcel numbers(s), and legal description(s) is(are) the true and proper identification of the area of this petition.
- 2. I/We authorize staff from the City of Apalachicola to enter onto the property in question during regular business hours in order to take photos which will be placed in the permanent file.
- 3. I/We understand that the COA review time period will not commence until the application is deemed complete by staff and may take up to 10 business days to process. I further understand that an incomplete application submittal may cause my application to be deferred to the next posted deadline date.
- **4.** I/We understand that, for Board review cases, an agenda and staff report (if applicable) will be available on the City's website approximately one week before the Planning & Zoning Board Meeting.
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- **8.** I/We understand that a Certificate of Appropriateness is only valid for one year after issuance. They are renewable for six months without cause if requested, and for an additional six months upon showing of good cause by the applicant. The applicant must submit all requests for extensions in writing and provide appropriate support documents to City Staff, if needed.
- 9. I/We understand that P&Z Board approval is permission to obtain a permit for work and installation as indicated. I certify that all work will be performed to meet standards of all laws regulating construction in this jurisdiction.
- 10. I/We understand that there will be no issuance of a Certificate of Appropriateness without the property owner obtaining Homeowner's Association approval (if required) prior to the P&Z Board Meeting and/or before the beginning of an work and in no way authorizes work that is in violation of any association rules or regulations.

3/25/24 DATE

SIGNATURE OF APPLICANT

Owners, Builders, Developers

PLASE NOTE:

- 1. If the proposed development is located within the City's Historic District; a <u>Certificate of Appropriateness</u> from the City's Planning & Zoning Board and Architectural Review Committee is necessary before any permitting can take place.
- 2. Required site plan elements and the Development Order/Certificate of Appropriateness applications are due <u>10 BUSINESS DAYS</u> prior to the scheduled monthly meeting (second Monday of each month) of the Planning & Zoning Board.
- 3. Residential site plan approvals are valid for one year after issuance. If a building permit is not obtained within a year after receiving P&Z approval, the applicant must re-apply and receive P&Z approval again. (Commercial site plan approvals are valid for two years.)
- 4. After you have received your Planning & Zoning Approval and/or Certificate of Appropriateness, whichever applies, take all development documents to the Building Department at 192 Coach Wagoner Blvd, Apalachicola to apply for your building permit. A P&Z Development Order Application is not a building permit application there will be building permit forms to fill out. Building permit issuance and all inspections will be coordinated with the Building Department Clerk. Please be advised that additional documentation may be required by the Building Clerk or Building Official. Please email buildingdept@cityofapalachicola.com or call City Hall at (850)653-7592 with any permitting questions.
- 5. Land Development regulations can be found on the City of Apalachicola website @ www.cityofapalachicola.com.
- 6. Please note that if any shrubs are planted or any materials (concrete, gravel, etc.) are placed in the City Right of Way that there is a possibility of removal at no expense to the City.

It is our intent to save you time any money in your plan preparation! The City of Apalachicola Planning & Zoning Board is a seven-member citizen board that also sits as the City's Architectural Review Board. Our responsibilities include protecting the historical character of the City. By working with the Planning & Zoning Board to obtain a Certificate of Appropriateness, your development will not only proceed more smoothly, but will also enhance the City's architectural integrity and historical character of Apalachicola.

Bree Robinson City Planner (850)323-0985 brobinson@cityofapalachicola.com

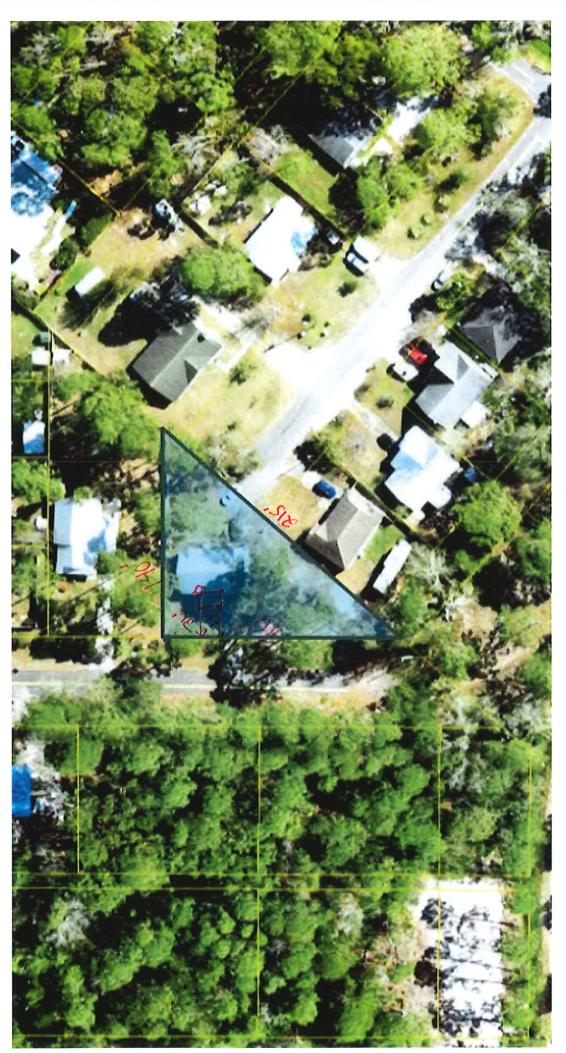
Thank you,
PLANNNG & ZONING BOARD
CITY OF APALACHICOLA

Applicant Initial

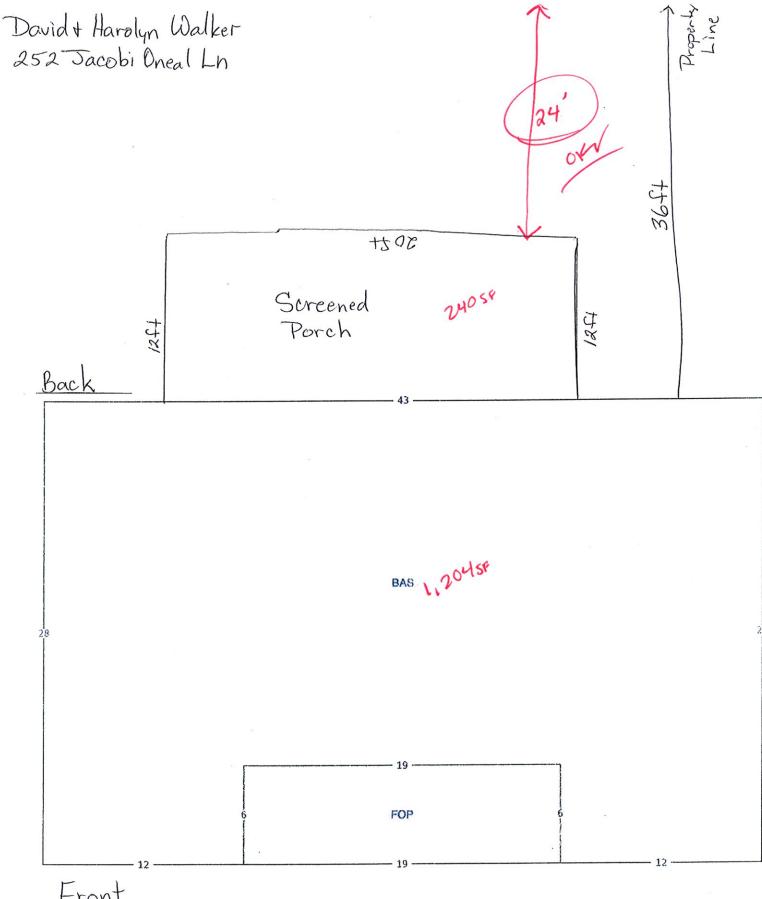
wo has "

SF= 11,197 402: 4,478 SF





and the te



Front

2:48 4



Harolyn Walker Material list ~ 252 Jacobi Oneal Ln



Done

Lowe's Home Centers, LLC

Sales Person: Sharon Brenson Sales #: 4965514 Contact: James Scott Customer #: 8506537762 Store #: 0448 Project #: 204970904 Date Estimated: 03/24/24

Quantity	Item#	Item Description	Vendor Part#	
12 5142		2-in x 4-in x 12-ft Southern Yellow Pine Kiln-dried Lumber	020412#2 SYP	
13	74740	2-in x 6-in x 16-ft Southern Yellow Pine Kiln-dried Lumber	37019	
10	12246	3/8-in x 4-ft x 8-ft Pine Plywood Sheathing	721366	
12	5142	2-in x 4-in x 12-ft Southern Yellow Pine Kiln-dried Lumber	020412#2 SYP	
25	312282	2-in x 4-in x 8-ft #2 Southern Yellow Pine Pressure Treated Lumber	OG220408- AG	
9	12242	19/32-in x 4-ft x 8-ft Pine Plywood Sheathing	NA	
1	43564	2-in x 0.113-in 21 Degree Hot-Dipped Galvanized Ring Collated Framing Nails (1000-Per Box)	20171SHPT	
12	12246	3/8-in x 4-ft x 8-ft Pine Plywood Sheathing	721366	

Total For Items \$1,209.56 *Freight Charges \$0.00 Delivery Charges \$0.00 **'Tax Amount** \$0.00 *Total Estimate \$1,209.56

*Freight, Delivery and Taxes will be calculated at the time of checkout.

The quote is valid until 03/24/2024.

Manager Signature Date



COA + Addition 116 11th Street

City of Apalachicola Planning & Zoning

Official Use Only Date Received: 3

Meeting Date: Fees Due: 590

	Application for Development/Site Pla	n Approval Date Fees Paid: 3/19/24						
	OWNER INFORMATION	CONTRACTOR INFORMATION						
	Owner David (d Taralynn Jone: Address 2213 Tallehassee DR	Contractor Name						
>	Address 2213 Tallehassee DR	State License # City License #						
	City Tallahassee State 17 Zip32309	Email						
	Phone 850-5/0-7323	Phone						
	PROJECT TYPE							
	New Construction	Fence						
	Addition	Repair						
1	Alteration/Renovation	Variance						
	Relocation	Certificate of Appropriateness						
	Demolition	Other						
	PROPERTY II	NFORMATION						
	Street Address (911 Address): // 6 // th 5 ? City & State: Apalachicola FL ? Parcel ID #:	7in: 3732 N						
	Parcel ID #:	Block: 78 Lot: 4						
7	Zoning District: [] Historic Dist	rict [] Non-Historic District						
FEMA Flood Zone:								
		USE ONLY This development request has been approved for a						
	Certificate of Appropriateness Required? Y/N Setback Requirements of Property:	Certificate of Appropriateness (if applicable), zoning,						
	Front: 15 Rear: 25 Side: 15 splwy	land use, and development review by the City of						
	Corner Lot? Y N Street Sides: Lot Coverage:	Apalachicola Planning & Zoning Board and a						
	Lot Coverage: 40%	building permit is authorized to be issued.						
	STAFF NOTES/RECOMMENDATIONS:							
	- needs C.o. A.							
		City Staff						
		Date Approved						

NOTE: This is a conceptual approval through the City based on our Land Development Code (LDC.) Please be aware that other documentation may be required by the Building Official.

Describe the proposed project and materials. Describe the proposed project in terms of size, affected
architectural elements, materials, and relationship to the existing structure(s).
ide are adding an 8'x 24' back porch that will be the
same design is material's as the existing front porch wood and metal rook
wood with metal roof
We are adding an 8 x 24 deck & a 3x 25 wheel chain
ramp with Pyrical wood construction
3,

PROJECT SCOPE	MANUFACTURER	PRODUCT DESCRIPTION	FL PRODUCT APPROVAL#	
Siding				
Doors				
Windows				
Roofing				
Trim				
Foundation				
Shutters				
Porch/Deck 8'x 24' porch u	ith typical woo	ld metal root constru thair ramp will by	fu	el o
8 x 27' deck d Fencing	3'x 25' whee	tchair vamp with by	pted wood con	Street
Driveways/Sidewalks				
Other				

NOTE: Please have a site plan prepared to turn in with your application. At minimum, the site plan needs to contain: a North arrow, surrounding streets, lot lines, lot dimensions, setbacks, current structure dimensions, proposed structure dimensions, fence locations, and fence heights. Applications requiring a Certificate of Appropriateness will also need to submit renderings/elevations of any proposed structures and note the materials proposed. More information may be requested by City Staff.

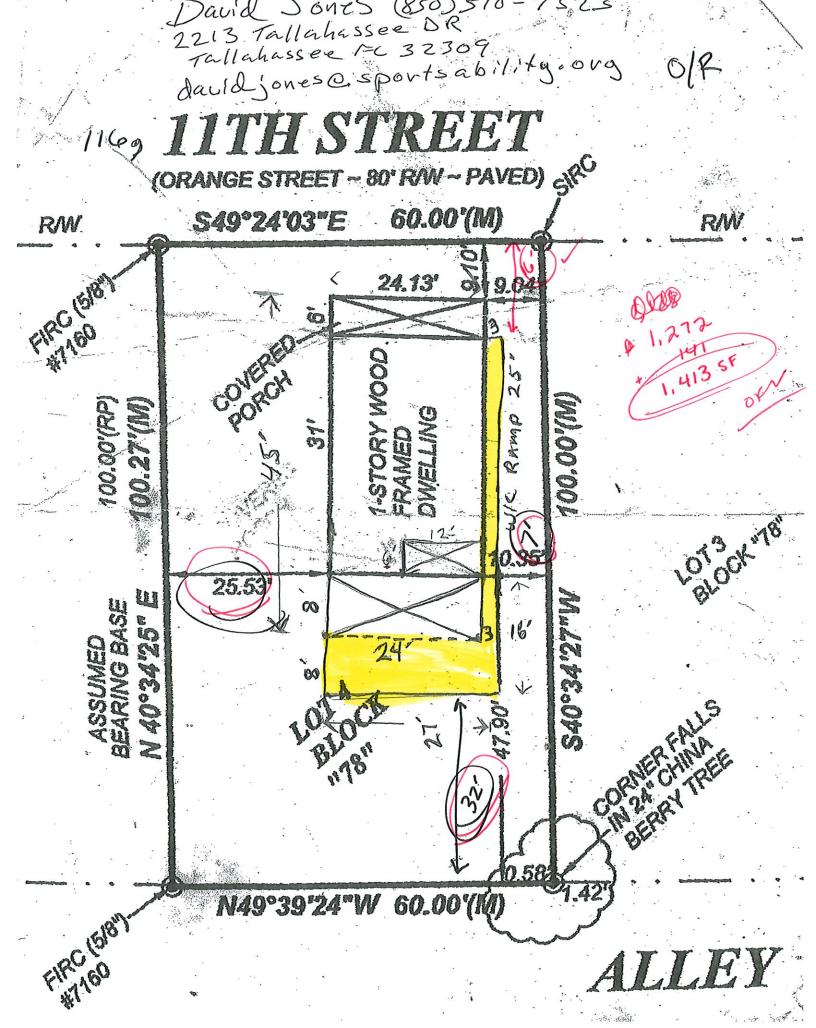
CERTIFICATION

By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of application. I acknowledge that I understand and have complied with all of the submittal requirements and procedures and have read and understand the following:

- 1. I/We hereby attest to the fact that the above supplied property address(es), parcel numbers(s), and legal description(s) is(are) the true and proper identification of the area of this petition.
- 2. I/We authorize staff from the City of Apalachicola to enter onto the property in question during regular business hours in order to take photos which will be placed in the permanent file.
- 3. I/We understand that the COA review time period will not commence until the application is deemed complete by staff and may take up to 10 business days to process. I further understand that an incomplete application submittal may cause my application to be deferred to the next posted deadline date.
- 4. I/We understand that, for Board review cases, an agenda and staff report (if applicable) will be available on the City's website approximately one week before the Planning & Zoning Board Meeting.
- 5. I/We understand that the approval of this application by the Planning & Zoning Board or staff in NO way constitutes approval of a Building Permit for Construction from the City of Apalachicola Community and Economic Development Office.
- 6. I/We understand that all changes to the approved scope of work stated in a Certificate of Appropriateness or Development Order application have to be approved by the P&Z Board before work commences on those changes. There will be no charge for revisions. Making changes that have not been approved can result in a Stop Work Order being placed on the entire project and additional fees/penalties.
- 7. I/We understand that any decision of the P&Z Board may be appealed to the City Commission within 30 days after the decision by the P&Z Board; otherwise, the decision will be final.
- 8. I/We understand that a Certificate of Appropriateness is only valid for one year after issuance. They are renewable for six months without cause if requested, and for an additional six months upon showing of good cause by the applicant. The applicant must submit all requests for extensions in writing and provide appropriate support documents to City Staff, if needed.
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- 10. I/We understand that there will be no issuance of a Certificate of Appropriateness without the property owner obtaining Homeowner's Association approval (if required) prior to the P&Z Board Meeting and/or before the beginning of an work and in no way authorizes work that is in violation of any association rules or regulations.

3/19/24 DATE

SIGNATURÉ OF APPLICANT



28 m ground existing house 4X6 PT through post 511 concrete Avoil Post 21/12 rinsolst straps on frust sevens double 2x12 6 irders > Simpson joist hangers JF 6X6 post pitch Mip 1008 3/12 3X8 Kingheddrevs .4X8 headers 4x8 rafters 1/2 roof decking (2x6) SIMPSON Trust screws 2X8 ledger to existly house Deck 2x8 joist 16" oc 5/4 decking Metal vooling

NOTICE OF COMMENCEMENT

Space Reserved For Recording:	
PERMIT#	PARCEL ID#
STATE OF FLORIDA, COUNTY	OF FRANKLIN
The UNDERSIGNED hereby give Chapter 713, Florida Statutes, the f	notice that improvements will be made to certain real property, an in accordance with lowing information is provided in the Notice of Commencement.
	PERTY: (Include Street Address) Jatson St Apalachicola FL
General Description of Improven	ents: rebuild back porch and extend deck
Owner Information or Lessee Int Name: <u>David C. Jones</u> Address: <u>22 13 Tall ahass</u>	rmation Contracted For The Improvements: Phone Number: (850) 510-7323 ee Dr. Tallahassee, FL32309
Owner's Interest In Site Of The	nprovement: 100%
	Phone Number:
Surety: (If Applicable, A Copy C	The Payment Bond Is Attached):Amount: \$
	Phone Number:
PERSONS WITH IN THE STAT	E OF FLORIDA DESIGNATED BY THE OWNER UPON WHOM NOTICES OR SERVED AS PROVIDED FOR BY FLORIDA STATUTE 713.13(1) (A) 7.
NAME: ADDRESS:	
IN ADDITION TO HIMSELF O	R HERSELF, OWNER DESIGNATES THE FOLLOWING PERSON(S) TO RECEIVE OTICE AS PROVIDED IN SECTION 713.13 (1)(B) FLORIDA STATUTES:
EXPIRATION DATE OF NOTI THE DAT OF RECORDING U	E OF COMMENCEMENT (THE EXPIRATION DATE IS ONE (1) YEAR FROM LESS A DIFFERENT DATE IS SPECIFIED.)
OF COMMENCEMENT ARE OF COMMENCEMENT ARE OF COMMENCEMENT AND THE OF COMPETORS THE FIRST INSPECT	AYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE ONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION IND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR EMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOBSITE ION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR EFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF
	Owner/Agent Signature:
NOTARY SEAL:	Printed Name: day of In the year of 20
	Notary Signature:

OFC USE		
FEES:		
Application I	lee: \$	
Other:	\$	
Total:	\$	
Paid:		



OFC I	JSE
Appro	ved by Building Official:
Date:	
Permit	#

City of Apalachicola

BUILDING PERMIT APPLICATION

Owner's Name: David C. Jones	EMAIL: david iones@+dog.org
Address: 2213 Tallahassee Dr. Tall., FL 32309	Phone#: (850) 510-7323
Fee Simple Title Holder (If other than Owner):	
Contractor's Name:	Ph#
Address:	Ph#
State License #:	COA#
Address of Project: 116 115 St. A palachic	cola, F.L.
Purpose of Permit: rebuild covered porch an	d extend deck
Property/Parcel ID# & Legal description:	
Will the Structure be located at least 30 feet from any body	
If the application is for a Commercial Project please list	t the Name of the Business:
Bonding Company: N/A	Ph#
Architect's/Engineer Name://A	Ph#
Mortgage Lender's Name://A	Ph#
Water System Provider: City of Apalach Sewer	System Provider: City of Apalach
	-0

WARNING TO OWNER: Your failure to record a Notice of Commencement may result in you paying twice for improvements to your property. If you intend to obtain financing, consult with your lender or attorney BEFORE recording your Notice of Commencement.

For improvements to real property with a construction cost of \$2,500.00 or more, a certified copy of the Notice of Commencement is required to be submitted to the Building Department when application is made for a permit or the applicant may submit a copy of the Notice of Commencement along with an affidavit attesting to its recording. A certified copy of the Notice of Commencement must be provided the Building Department BEFORE the second or any subsequent inspection can be performed. Filing of the documents that have been certified may be done by mail, fax, or hand-delivery.

Application is hereby made to obtain a permit to do the work and installations as indicated. I certify that NO WORK or installation has been commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction. I understand that a

separate permit must be secured for electrical work, plumbing, signs, roofing, pools, furnaces, boilers, heaters, tanks, and air conditioners, etc. (applications may be emailed to Ron Nippe, Building Permit Clerk, rnippe@cityofapalachicola.com or buildingdept.@cityofapalachicola.com or dropped of at City Hall, 192 Coach Wagoner Blvd., Apalachicola, FL 32320

Purpose of Building:				
Multi-Family S	Demolition	Roof	Industrial Sign porch t exten	Shed Pole Barn
Distance from property lines: F Cost of Construction: \$ 2 40 EPI: Flood Zone: #of Units \(\mu\) \(\mu\) Type of Roo Extreme Dimensions of:	Squa Lowe f M & f & Type	31.9 L Side 10.8 re Footage: 192319 est Floor Elevation: 24 of Walls NA width	Area Heated/C #of Stories Type of Floor 5/_	boled <u>NA</u>
NOTICE: City of Apalachicola B OR COVENANTS on properties		t does not have the aut	hority to enforce D	DEED RESTRICTIONS
OWNER'S AFFIDAVIT: I hereby the best of my knowledge, and construction and zoning.	certify that the info	ormation contained in the done in compliance v	nis application is tr vith all applicable l	ue and correct to aws regulating
Owner	Date	Contractor	D	ate
Notary as to Owner	Date	Notary as to Contrac	tor D	ate
My Commission Expires:		My Commission Exp	ires:	_



COA + Addition/Renovation 98 Bay Avenue

001	
((TS))	

City of Apalachicola Planning & Zoning Application for Development/Site Plan Approval

Official Use Only
Date Received: 3/22/24
Meeting Date: 4/8/24
Fees Due: \$90.

application for Development, Site I to	Date Fees Paid:	
OWNER INFORMATION	CONTRACTOR INFORMATION	
Owner Philip and Rhonda Shelley	Contractor Name William Ross Dese bonent	
Address P.O. Box 189	State License # 1.26 135 4 City License #	
	Email rusty Desorthern Shores builders, com	
Phone 847 505 9933	Phone 662. 871. 2698	
РРОЈЕС	CT TYPE	
New Construction	Fence	
Addition	Repair	
Alteration/Renovation	Certificate of Appropriateness	
Relocation	Other	
Demolition		
	NFORMATION	
Street Address (911 Address): 98 Boy A City & State: Apoly achieve 2	1400e Cip: 32320	
Parcel ID #: 61-09\$-08W-8330-0193-0010	Block: /93 Lot: 6 2	
Zoning District: [X] Historic District	rict [] Non-Historic District	
FEMA Flood Zone: AF/VF		
OFFICIAL	USE ONLY	
Certificate of Appropriateness Required? Y) N	This development request has been approved for a	
Setback Requirements of Property:	Certificate of Appropriateness (if applicable), zoning,	
Front: 15' Rear: 20w Side: 15/5	land use, and development review by the City of	
Corner Lot?Y/N Street Sides:	Apalachicola Planning & Zoning Board and a	
Lot Coverage:	building permit is authorized to be issued.	
STAFF NOTES/RECOMMENDATIONS:		
-see plans, needs C.o. A. For back		
deck additions	City Staff	
-meets LDC for stairs addition.		
-See renderings!	Date Approved	

NOTE: This is a conceptual approval through the City based on our Land Development Code (LDC.) Please be aware that other documentation may be required by the Building Official.

Applicant Initial

Join two I	6	a dditi	4-	Over	hana
construct	Stoil	***	1 3 7	Floor	Deck
PROJECT SCOPE	MANUFA	ACTURER	PRODUCT DESC	RIPTION	FLPRODUCT
	and desire and to the company				APPROVAL#
Siding					
Doors					
Windows					
Roofing			metal :	standing	
			Seam		
Trim					
Foundation					
Shutters		-			
Porch/Deck			composite	with mbet	
Fencing			Framinag		
Driveways/Sidewalks					
Other		-,			

NOTE: Please have a site plan prepared to turn in with your application. At minimum, the site plan needs to contain: a North arrow, surrounding streets, lot lines, lot dimensions, setbacks, current structure dimensions, proposed structure dimensions, fence locations, and fence heights. Applications requiring a Certificate of Appropriateness will also need to submit renderings/elevations of any proposed structures and note the materials proposed. More information may be requested by City Staff.

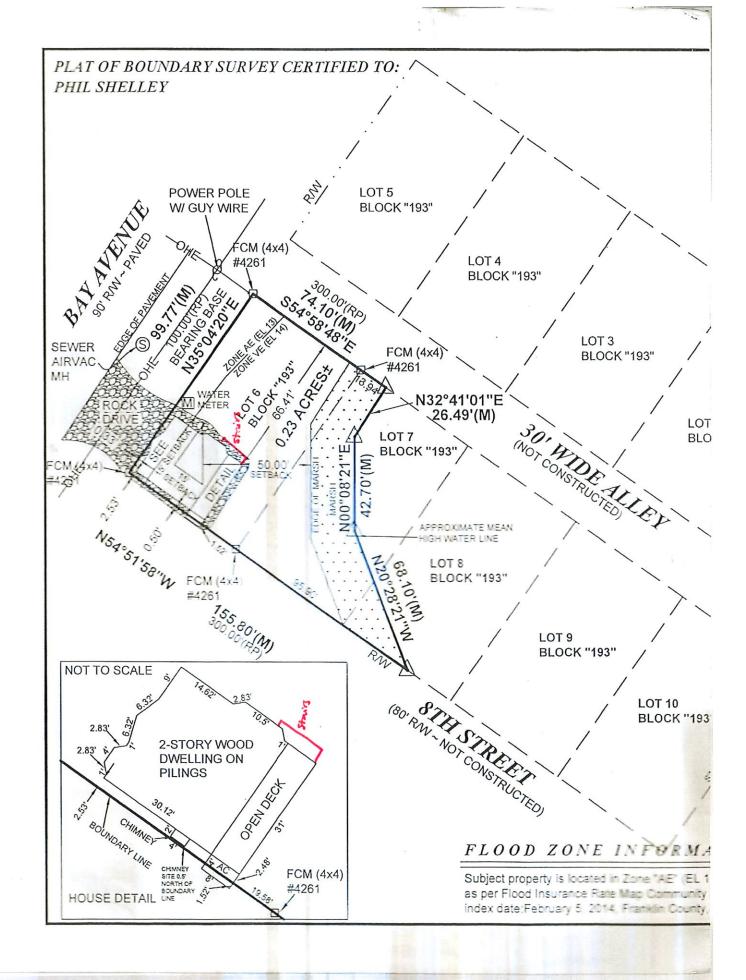
CERTIFICATION

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3 22 2024

SIGNATURE OF APPLICANT



SHELLEY RENOVATION

48 BAY AVENUE, APALACHICOLA, FL 32320

DRAWING INDEX:

GROUND FLOOR PLAN 4

1ST FLOOR PLAN A-2

2ND FLOOR PLAN Ą-3 FRONT ELEYATION **A-**4

140 Melanie Lane Apalachicola, Fl. 3232(eebenoit1961@gmail.cc 850-899-0095

ARCHITECT

AR 14052

RIGHT ELEVATION

REAR ELEYATION A A L-A

LEFT ELEYATION

NEW FOUNDATION PLAN &

STRUCTURAL SECTION

ROOF PLAN ₽-4 PLANS CONFORM TO THE 2020 F.B.C.

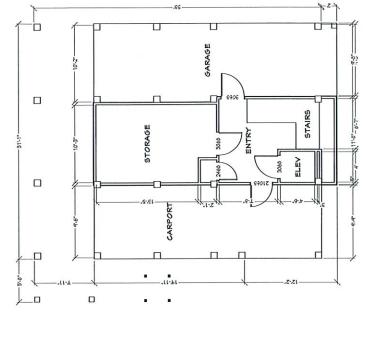
INFORMATION ON DRAWINGS AS PER 1606.1.7 FLORIDA BUILDING CODE

2 WIND IMPORTANCE FACTOR: 1.0 / BUILDING CATEGORY: LOW RISE, HURRICANE PROTECTED

5 COMPONENTS AND CLADDING DESIGN PRESSURE: 45 PSF 3 WIND EXPOSURE: C 4 APPLICABLE INTERNAL PRESSURE COEFFICIENT: +/- .55

plans/reno/sheller





GARAGE

STORAGE

GARAGE

STAIRS

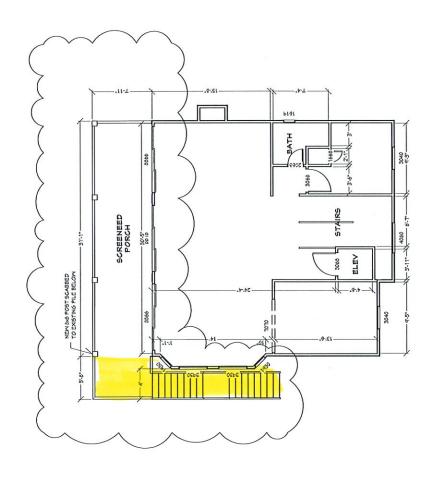
ELEV

9070

NEW GROUND FLOOR PLAN

184 sq ft ENTRY 1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)

160 sq ft ENTRY CURRENT GROUND FL 1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)



DECK -30.-2. 8578

9988

3068

1 3000 K ELEV

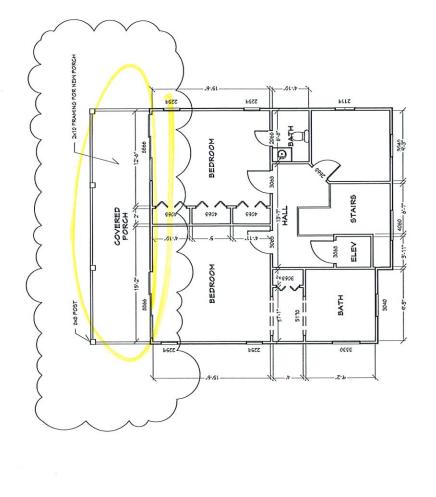
CEEL BY

983 sq ft H&C

CURRENT 1ST FLOOR PLAN 1/8" = 1' (11"x17" @ 100%) 1/4" = 1' (24"x36" @ 200%)

NEW 15T FLOOR PLAN 1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)

1,005 sq ft H&C



5554

BEDROOM

9907

BEDROOM

DECK

DECK

5524

2114

STAIRS

ELEV 3068

ВАТН

0666

HALL

5554

3434

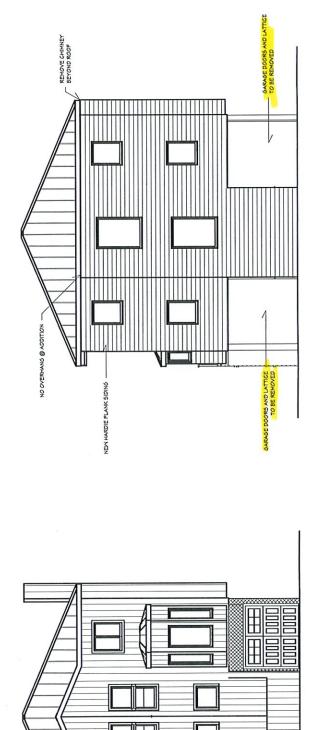
1231

CURRENT 2ND FLOOR PLAN 1/8" = 1'(11"x17" @ 100%) 1/4" = 1'(24"x36" @ 200%)

950 sq ft H&C

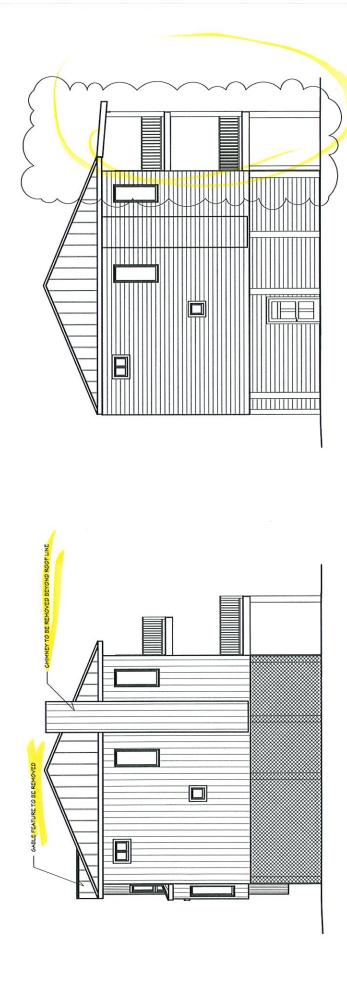
NEW 2ND FLOOR PLAN 1/8" = 1'(11"x17" @ 100%) 1/4" = 1'(24"x36" @ 200%)

975 sq ft H&C



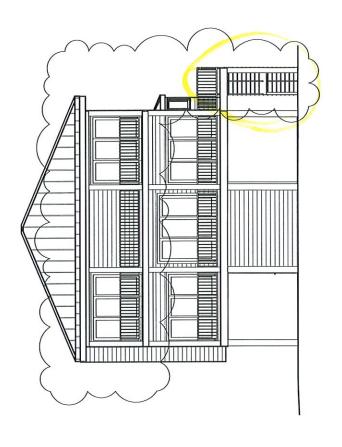
NEW FRONT ELEVATION 1/8" = 1'(11"x17" @ 100%) 1/4" = 1'(24"x36" @ 200%)

CURRENT FRONT ELEVATION 1/8" = 1" (11"×17" @ 100%) 1/4" = 1" (24"×36" @ 200%)



NEW RIGHT ELEYATION 1/8" = 1' (11"x17" @ 100%) 1/4" = 1' (24"x36" @ 200%)

CURRENT RIGHT ELEVATION
1/8" = 1' (11"x17" @ 100%)
1/4" = 1' (24"x36" @ 200%)

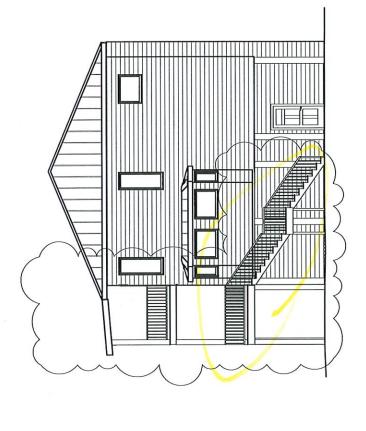




NEW REAR ELEVATION

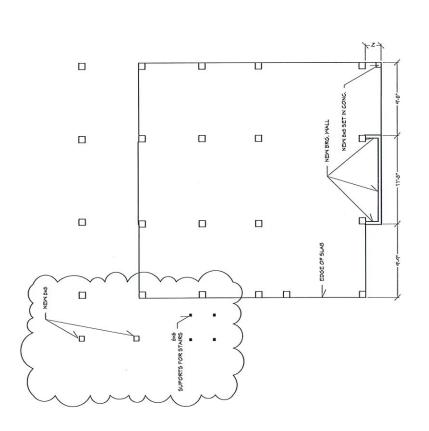
1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)

CURRENT REAR ELEVATION 1/8" = 1'(11"x17" @ 100%) 1/4" = 1'(24"x36" @ 200%)



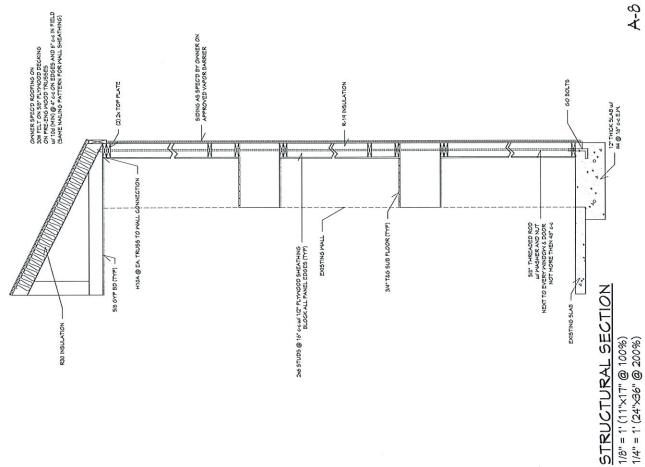
NEW LEFT ELEVATION 1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)

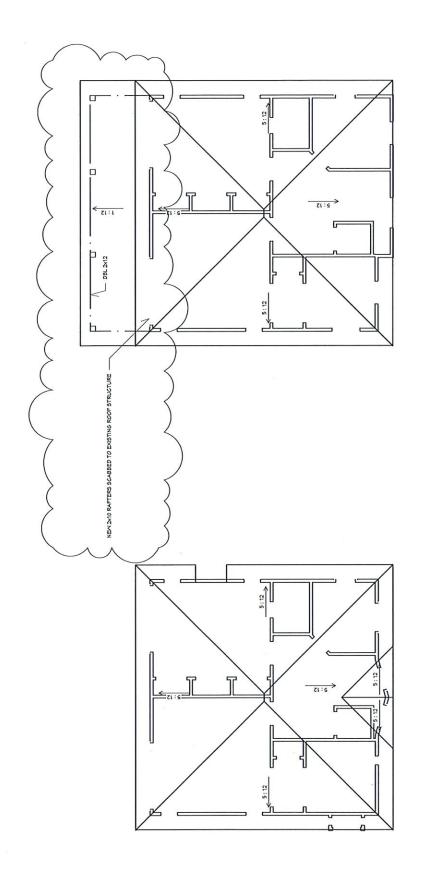
CURRENT LEFT ELEVATION 1/8" = 1" (11"×17" @ 100%) 1/4" = 1" (24"×36" @ 200%)



NEW FOUNDATION PLAN

1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)





NEW ROOF PLAN 1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)

CURRENT ROOF PLAN 1/8" = 1' (11"×17" @ 100%) 1/4" = 1' (24"×36" @ 200%)



COA + Signs 17 Ave D

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City of Apalachicola Planning & Zoning Application for Development/Site Plan Approval

Official Use Or	ily las la
Date Received:	3/25/50
Meeting Date:	4/8/24
Fees Due:	5000
Data Face Paid	2 /2/14

	Date Fees Paid: 3/22/29	
OWNER INFORMATION	CONTRACTOR INFORMATION	
Owner Apalachicola Dasis, LLC Address 134 13th 5t City Apalachicola State FL Zip32320 Phone (850)	Contractor Name Self State License # City License # Email Phone	
PROJEC	CT TYPE	
New Construction Addition Alteration/Renovation Relocation Demolition	Fence Repair Variance Certificate of Appropriateness Other	
PROPERTY IN	FORMATION	
Street Address (911 Address): 17 Avenue D City & State: Aprilachicola FL 2 Parcel ID #: 01-095 08W-8330-00D1-0060 AND Zoning District: C-I [V] Historic District FEMA Flood Zone: AE-13	Cip: 32320 6040 Block: DIE-2 Lot: 4,5,6,7,8,9 rict [] Non-Historic District	
OFFICIAL	USE ONLY	
Certificate of Appropriateness Required (Y) N Setback Requirements of Property: Front: Rear: Side: Corner Lot (Y)/N Street Sides: Lot Coverage: STAFF NOTES/RECOMMENDATIONS: - Meets LDC - weeds C.o. A.	This development request has been approved for a Certificate of Appropriateness (if applicable), zoning, land use, and development review by the City of Apalachicola Planning & Zoning Board and a building permit is authorized to be issued. City Staff	
· ·		
	Date Approved	

NOTE: This is a conceptual approval through the City based on our Land Development Code (LDC.) Please be aware that other documentation may be required by the Building Official.

Applicant Initial

Describe the proposed project and materials. Describe the proposed project in terms of size, affected architectural elements, materials, and relationship to the existing structure(s).						
architectural elements, m	aterials, and relationship	to the existing structure(s).	I			
Whereaft loso to	Window graphic to replace current OCBC graphics on Are Dside attached with decreption Whereast logo to replace current OCBC 1096 on topof Are D side of					
	terina.	BC 1096 01 104 11 11K	12 Side of			
Same on Comme						
All divensions	listed in descrip	tio- attached				
2 Donale signs, o	ne in front of door	1 5 1	n Contene side			
PROJECT SCOPE	MANUFACTURER	PRODUCT DESCRIPTION	FL PRODUCT APPROVAL#			
Siding			1			
y .						
Doors						
Windows	<u> </u>					
WILLIAMS						
Roofing						
Trim						
		TECHNICAL				
Foundation						
гоппанон						
Shutters						
		4				
Porch/Deck						
Fencing						
rending						
Driveways/Sidewalks						
~~~~						
Other	Must See	Viryl lettering				

NOTE: Please have a site plan prepared to turn in with your application. At minimum, the site plan needs to contain: a North arrow, surrounding streets, lot lines, lot dimensions, setbacks, current structure dimensions, proposed structure dimensions, fence locations, and fence heights. Applications requiring a Certificate of Appropriateness will also need to submit renderings/elevations of any proposed structures and note the materials proposed. More information may be requested by City Staff.

Signs

### CERTIFICATION

By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of application. I acknowledge that I understand and have complied with all of the submittal requirements and procedures and have read and understand the following:

- 1. I/We hereby attest to the fact that the above supplied property address(es), parcel numbers(s), and legal description(s) is(are) the true and proper identification of the area of this petition.
- 2. I/We authorize staff from the City of Apalachicola to enter onto the property in question during regular business hours in order to take photos which will be placed in the permanent file.
- 3. I/We understand that the COA review time period will not commence until the application is deemed complete by staff and may take up to 10 business days to process. I further understand that an incomplete application submittal may cause my application to be deferred to the next posted deadline date.
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- 6. I/We understand that all changes to the approved scope of work stated in a Certificate of Appropriateness or Development Order application have to be approved by the P&Z Board before work commences on those changes. There will be no charge for revisions. Making changes that have not been approved can result in a Stop Work Order being placed on the entire project and additional fees/penalties.
- 7. I/We understand that any decision of the P&Z Board may be appealed to the City Commission within 30 days after the decision by the P&Z Board; otherwise, the decision will be final.
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- 9. I/We understand that P&Z Board approval is permission to obtain a permit for work and installation as indicated. I certify that all work will be performed to meet standards of all laws regulating construction in this jurisdiction.
- 10. I/We understand that there will be no issuance of a Certificate of Appropriateness without the property owner obtaining Homeowner's Association approval (if required) prior to the P&Z Board Meeting and/or before the beginning of an work and in no way authorizes work that is in violation of any association rules or regulations.

3/22/24 DATE

SIGNATURE OF APPLICANT

### Owners, Builders, Developers

### PLASE NOTE:

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- 5. Land Development regulations can be found on the City of Apalachicola website @ www.cityofapalachicola.com.
- 6. Please note that if any shrubs are planted or any materials (concrete, gravel, etc.) are placed in the City Right of Way that there is a possibility of removal at no expense to the City.

It is our intent to save you time any money in your plan preparation! The City of Apalachicola Planning & Zoning Board is a seven-member citizen board that also sits as the City's Architectural Review Board. Our responsibilities include protecting the historical character of the City. By working with the Planning & Zoning Board to obtain a Certificate of Appropriateness, your development will not only proceed more smoothly, but will also enhance the City's architectural integrity and historical character of Apalachicola.

Bree Robinson City Planner (850)323-0985 brobinson@cityofapalachicola.com

Thank you, PLANNNG & ZONING BOARD CITY OF APALACHICOLA



### WATERCRAFT BREWING COMPANY SIGN PROPOSAL 17 Avenue D

Avenue D side, existing glass window 63.75 x 64.5"

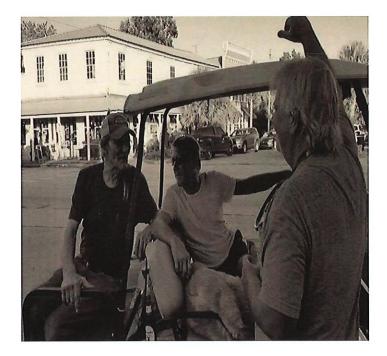
not a sign, ox

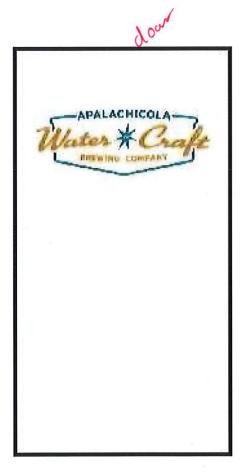
Replace current Oyster City with memorial photo of Stan, Dan, and Harry

Avenue D side, glass door 30.5 x 76" Background color to match existing building façade color, logo

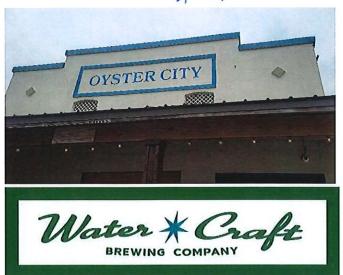
26" x12"

2.17 x1 = 2.17 st down





que D.







### Water * Craft BREWING COMPANY

Avenue D top façade, Commerce St top facade

Single letter VINYL signage, total width spanning 135". "W", starburst. "C" 18.67",

'BREWING COMPANY" 4.25"

11.25' × 1.6' = 17.5 SF

ow o

2 Dangle signs, printed front and back, one each on Avenue D and Commerce Street 36"x 16"





OK



## COA + Accessory Structure/Stormwater Best Management Practice 92 Ave E

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11	
1	100

### City of Apalachicola Planning & Zoning Application for Development/Site Plan Approval

Official Use Only

Date Received: 3/22/24

Meeting Date: 4/8/24

Fees Due: 990.

OWNER INFORMATION	CONTRACTOR INFORMATION				
	CONTRACTOR INFORMATION				
Owner KEUCH CURRY	Contractor Name				
Address 1620 HAWTHURUE LANE	State License # City License #				
City EASTPOINT State FL Zip 32328	Email				
Phone (673) 592-6112	Phone				
PROJECT TYPE					
New Construction	Fence				
Addition	Repair				
Alteration/Renovation	Certificate of Appropriateness				
Relocation	Other PECKENG, STREWSRK				
Demolition	STORM WATTER TREATMENT				
PROPERTY INFORMATION					
Street Address (911 Address): 42 AVENUE E.	20100				
City & State: <u>APALACHT (OLA, FL</u> Zip: <u>32320</u> Parcel ID #: <u>01-045-83W-8330-0030-0041</u> Block: <u>30</u> Lot: Sw 4+5					
Parcel ID #: 01-045-03w-0330-0030-0041 Block: 30 Lot: 5w 4+5  Zoning District					
FEMA Flood Zone: X AE					
OFFICIAL USE ONLY					
Certificate of Appropriateness Required Y/N	This development request has been approved for a				
Setback Requirements of Property:	Certificate of Appropriateness (if applicable), zoning,				
Front: 15 Rear: 25 Side: 15/5	land use, and development review by the City of				
Corner Lot? Y/N Street Sides: 19 Lot Coverage: 40/0+10% pervious decking	Apalachicola Planning & Zoning Board and a				
CTAPE NOTEC/DECOMMENDATIONS.	building permit is authorized to be issued.				
STAFF NOTES/RECOMMENDATIONS:					
- O/K - accessory structures = special exception					
- if application is "approvable", could	City Staff				
be a contingency to get special					
exception.	Date Approved				

aware that other documentation may be required by the Building Official.

A Please review all supplemental does. Plans are over lot Applicant Initial coverage allocation, but this application calls the impervious surface commended finition into question - see attached. Q's: Is this a true BMP? BMP's are exempt from impervious coverage reqs, but lot coverage? See attached!

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Describe the proposed project and materials. Describe the proposed project in terms of size, affected architectural elements, materials, and relationship to the existing structure(s).

STEENORY TO DYCLUDE LANDSAPTULO, DECKING, STORM WATER CHAMBERS.

SECONDARY STRUCTURE TO KNUDE A CARPORT AND ENCLOSED STORAGE SPACE

STEWORK BY WE WIE LAND, STUDIO, INC 850.370.0215 STRUCTURE BY ERC, ILL 850.323-1601

PROJECT SCOPE MANUFACTURER PRODUCT DESCRIPTION

FLPRODUCT APPROVAL#

Siding BOARD AND BATTEN HARDY PANEL

Doors 4-0 x 7-0

WINDOWS TRANSOM - ANDERSON COASTAL IMPACT

ROOTING STANDENG SEAM, STEEL/GALVANIZZED

Trim HARDY 1"x4"

Foundation CMU ON CONC. FOOTWL

Shutters

Porch/Deck & COMPOSETE DECKENG.

Fencing

Driveways/Sidewalks GRAVEL, PECKENG

Other NDS STORM CHAMBER

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March 21, 2014

SIGNATURE OF APPLICANT

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Bree Robinson
City Planner
(850)323-0985
brobinson@cityofapalachicola.com

Thank you,
PLANNNG & ZONING BOARD
CITY OF APALACHICOLA

Applicant Initial



### PROJECT INTRODUCTION:

Curry Residence | 92 Avenue E Apalachicola, FL 32320

Mr. & Mrs. Curry are new homeowners in Apalachicola. The current site has a very high lot coverage rate due to the previous owner's expansions and activity. They are requesting a simple structural carport for their car to protect it from the elements and enclosed shed. They would like to achieve this goal in the most ecologically responsible way possible while addressing the current nonconforming, impervious lot coverage.

### Project goals:

- + reduce impervious lot coverage within acceptable municipal requirements
- + address current drainage issues on site
- + improve storm water quality and overall site runoff
- + improve usable outdoor space
- + add native and naturalized planting

### Additional concerns for this site:

- current impervious lot coverage is approximately 48%
- drainage issues
- water pooling on site and overflowing off site at east corner
- existing impervious stone patio is set on compacted soil and gravel
- invasive plant species removal

Standard Apalachicola best management practices as outlined in the 'City of Apalachicola Guide to Specific Storm water Best Management Practices' highlight the use of detention ponds and vegetated swales. These traditional methods are not always applicable on a small residential scale- and are not applicable to this current site.

### PROPOSAL:

Please review landscape plans (by We Love Land Studio, Inc) and architecture plans (by ERC Construction, Ilc.) to follow.

Introduction to the site specific underground storm water infiltration system included in plans:

We are proposing a storm water infiltration system that will capture the storm water from the proposed carport/shed, clean it, store it, and allow it to infiltrate back into the soil on site to recharge the groundwater aquifer. This system, when installed, will improve water quality and reduce runoff. Since the existing site is sloped, stormwater runoff are increased. We can capture and treat more water with the structure in place than without. It will also take pressure off of the city's current storm water system and reduce the outflow of water volume, and pollutants, to the surrounding waterways. This system benefits everyone; the homeowner, the city, and the bay.

*A note to the board: The proposed system is considered a storm water best management practice throughout the country and in environmentally delicate areas adjacent to waterways here in Florida. (Please see attached NDS case study with design packet.) We believe the city can benefit tremendously through the responsible use of this practice. Whether implemented to retrofit existing sites, or utilized with new construction, it has the ability to retain, treat, and infiltrate the storm water produced on most sites.

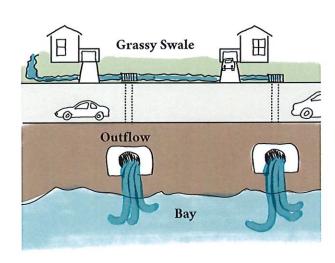
"Of primary importance to minimizing the effects of stormwater on water quality is the First Flush. This term describes the washing action that stormwater has on accumulated pollutants in a watershed. In the early stages of runoff the land surfaces, especially the impervious surfaces like streets and parking areas, are flushed clean by the stormwater. This creates a shock load of pollutants that are flushed into the nearby coastal waters.

Studies in Florida have determined that the <u>first one inch of runoff</u> generally carries 90% of the pollution from a storm. Treatment of the first flush is the key to proper stormwater management." - City of Apalachicola 'Guide to Site Specific Stormwater Best Management Practices' - Page 4

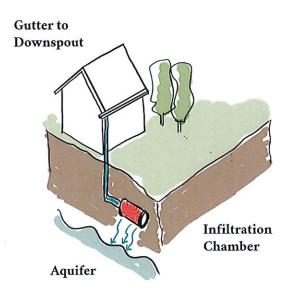
Not only does this system most effectively treat the 'first flush', it gives residents more flexibility within their property while simultaneously reducing the strain on the current city storm water drainage system and will reduce the contaminants entering the bay. Our goal with this document is to illustrate the benefits of the proposed system, so the city can find a responsible way to include it in the future overall city strategy of stormwater best management practices.

Thank you for your time and consideration.

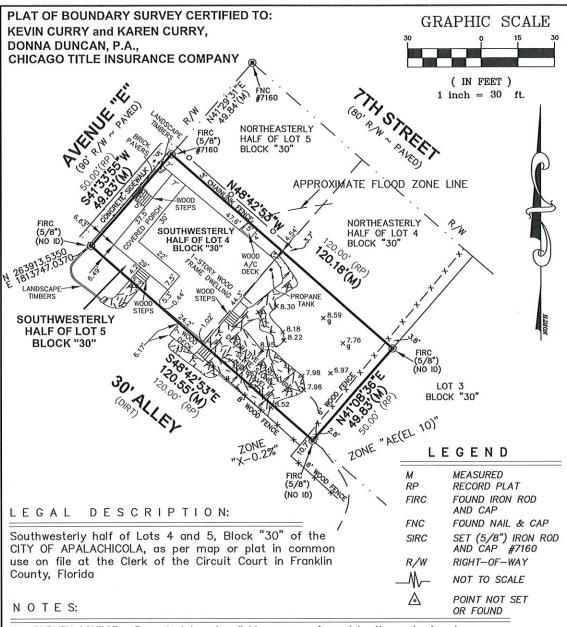
### SYSTEMS COMPARISON:



Current stormwater trajectory flows mostly above ground, or in pipes throughtout the city, before being expelled into the waterways. This process puts a majority of the 'first flush' directly into the bay. A small portion of this water recharges the aquifer through infiltration.



Underground infiltration chamber storm water system captures the water and treats the 'first flush' naturally before recharging the aquifer localized and on-site.



- 1. SURVEY SOURCE: Record plat and a field survey performed by the undersigned surveyor.
- 2. BEARING REFERENCE: ALL BEARINGS established using Florida Grid North datum.
- 3. NO IMPROVEMENTS have been located in this survey other than shown hereon.
- 4. There are NO VISIBLE ENCROACHMENTS other than those shown hereon.
- 5. This survey is dependent upon EXISTING MONUMENTATION.
- Not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.
- FLOOD ZONES and SETBACKS depicted hereon are not to be used for construction permitting purposes. All FLOOD ZONES and SETBACKS should be verified by the appropriate County Departments.

I hereby certifiy that this was performed under my responsible direction and supervision and the plat and description are true and accurate to the best of my knowledge and belief. The survey meets or exceeds the standards for practice for land surveying as established by the Florida Board of Professional Surveyors and Mappers (F.A.C. 5J—17.051/.052).

The undersigned surveyor has not been provided a current title opinion or obstract of matters affecting title or boundary to the subject property. It is possible there are deeds of records, unrecorded deeds, easements or other instruments which could affect the boundaries.

JAMES T. RODDENBERRY Surveyor and Mapper Florida Certificate No: 4261

### FLOOD ZONE INFORMATION:

Subject property is located in Zone "X-0.2%" and "AE (EL 10)" as per Flood Insurance Rate Map Community Panel No: 120089 0526F, index date: February 05, 2014, Franklin County, Florida.



### THURMAN RODDENBERRY & ASSOCIATES, INC

PROFESSIONAL SURVEYORS AND MAPPERS

P.O. BOX 100 • 125 SHELDON STREET • SOPCHOPPY, FLORIDA 32358

PHONE NUMBER: 859-951-2153 FXX NUMBER: 859-951-1183

LB 7118

DATE: 02/14/24	DRAWN BY: BB	N.B.682 PG.17	COUNTY: FRANKLIN
FILE: 05430.DWG	DATE OF LAST FIELD WORK: 02/13/24	CHECKED BY:	JOB NUMBER: 05-430



### Case Study

### NDS StormChamber™ System

### TRANSFORMING A SURFACE POND INTO USABLE LAND WITH UNDERGROUND CHAMBER SYSTEM

An existing single-family residence nestled on a beautiful waterfront property on the Ponce Inlet in Florida was going through a remodel and expansion. County regulations required new stormwater storage – primarily roof and hardscape drainage.

The contractor reached out to NDS to determine the best possible drainage solution for the homeowner, who wanted a system that was aesthetically pleasing and would complement the landscape and atmosphere of the yard. They didn't want a retention pond and were hoping for more usable green space.

An NDS representative was able to visit the jobsite and helped confirm an underground stormchamber solution would be ideal.

### NDS STORMCHAMBER™ SIZE PERFECT FOR RESIDENCE

One of the NDS StormChamber sizes is an 18 in. version. It is often the go-to solution for small residential applications since it's ideal for depth restrictions.

After assessing the site's exact needs, NDS Design Worx® services developed a StormChamber system layout, which married up to the overall site plan for the property. The placement of approximately 4 rows of 18 in. high chambers would need to be placed for a total of 1,300 cubic ft. of water storage capability.

Stormchambers are great for residential applications since they are a cost-effective way to store and infiltrate water. It's a simpler installation and less expensive than other types of underground stormwater management systems because it has no header pipe manifold to contend with, which is often required on competitive systems.

### PROJECT SUMMARY

PROIECT TYPE Infiltration

**PROPERTY** Residence

**STAKEHOLDERS** 

SiteOne

Mills Design Group Tom Anthony Construction

NDS PRODUCTS USED

StormChamber™ system units: (5) SC-1820-S-O, (19) SC-1820-M-O, (5) SC-1820-E-O, (2) SC-WFF-75



NDS StormChamber units are manufactured from thermoformed high-density weight polyethylene (HMWPE), provide a 100-year life expectancy and can handle H-20 loads.

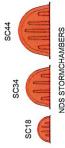
### **DESIGN WORX SERVICES A BENEFIT DURING INSTALLATION**

A pro-con meeting was held with the team to review the steps and make sure that the install would go well. An NDS rep was also on hand during construction of the new subsurface pond. Even with minor challenges related to excavating sandy soil, the contractor reported the installation was "quick and clean," and completed on schedule in less than two weeks.

This new underground system not only performs well during storms but has provided the homeowner with more usable green space in their backyard.

### NDS Design Worx Services Utilized:

- 1. Product specification
- 2. Drainage calculation
- 3. System layout
- 4. Installation instructions



### APALACHICOLA, FL **92 AVENUE E**

# NDS STORMCHAMBER SYSTEM SPECIFICATIONS

- CHAMBERS SHALL BE NDS STORMCHAMBER
- CHAMBERS SHALL BE ARCH SHAPED AND SHALL BE MANUFACTURED FROM HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE.
- CHAMBERS MEET OR EXCEED ASTM F2922 AND ASTM F2787. MEET AASHTO HS-20, HS-25 AND HL-93 LIVE LOADING PER AASHTO LRFD SECTION 12.
  - MANUFACTURED NOMINAL DIMENSIONS OF START, MIDDLE AND END CHAMBERS
    - SC18 3.17 FT WIDE X 18 INCHES TALL. SC34 5 FT WIDE X 34 INCHES TALL.
      - SC44 6.35 FT WIDE X 44 INCHES TALL
- MINIMUM COVER FOR SC18 AND SC34 IS 18 INCHES, MINIMUM COVER FOR SC44 IS 22 INCHES
- SEDIMENTRAP MANUFACTURED WITH HIGH MOLECULAR WEIGHT, HIGH DENSITY POLYETHYLENE.
- NON-WOVEN POLYPROPYLENE FILTER FABRIC TMG-40ZNWG BY TMPG OR APPROVED EQUAL
- WOVEN POLYPROPYLENE FILTER FABRIC 300HTM BY WINFAB OR APPROVED EQUAL.
- THE PERFORMANCE OF NDS STORMCHAMBER" IS DIRECTLY CORRELATED TO THE LOAD BEARING CAPACITY, PAD PERMEABILITY OF NATIVE SOIL; FROST-HEAVE POTENTIAL; VOLUME AND LOAD-RATING OF PROJECT TRAFFIC; INSTALLATION METHODS USED; AS WELL AS THE TYPE, GRADATION, AND THICKNESS OF THE SIRROUNDING AND OVERLAY ROOK.

# REQUIREMENTS FOR CONSTRUCTION EQUIPMENT

- ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE AND BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR. CONVEYORS OR EXCAVATORS SHOULD BE LOCATED SUCH THAT THEIR LOADS DO NOT INFLUENCE THE CHAMBERS SHOULD BE USED TO PLACE NDS RECOMMENDS 3 BACKFILL METHODS, STONESHOOTER LOCATED OFF THE CHAMBER BED, BACKFILL AS
- NO CONSTRUCTION EQUIPMENT ALLOWED ON TOP OF THE CHAMBER SYSTEM UNTIL MINIMUM STONE COVER REQUIREMENTS HAVE BEEN MET, 6-INCH FOR SC-34 AND 12-INCH FOR SC-44, ONLY THEN SHOULD A SKID STEER OR SMALL DOZER (D4) BE ALLOWED ON TOP.
- NO WHEEL LOADS SHOULD BE APPLIED OVER THE SYSTEM. ONCE THE MINIMUM STONE HAS BEEN PLACED EQUIPMENT CAN BE USED UNTIL A 12 INCHES OF COVER IS ACHIEVED. LIGHTWEIGHT TRACKED DOZERS WITH A MAXIMUM GROUND PRESSURE OF 1100 PSF ARE PERMITTED OVER THE STRUCTURE. OVER THE CROWN OF THE CHAMBERS, ONLY SMALL WALK BEHIND VIBRATORY COMPACTION
  - DOZERS MUST SPREAD STONE WORKING IN A DIRECTION PARALLEL WITH THE CHAMBER ROWS; NOT WORKING ACROSS THE CHAMBER ROWS, ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMCHAMBER STANDARD WARRANTY.
- ONCE 18"(457mm) OF COMPACTED MATERIAL IS OVER THE CHAMBERS, HIGHWAY VEHICLES OF HS-20 AND HS-25 CAN BE OPERATED OVER THE STRUCTURES.
- A FRONT END LOADER CAN BE OPERATED OVER THE STRUCTURES AS LONG AS THE MAXIMUM WHEEL LOAD DOES NOT EXCEED 16000 POUNDS. COMPACTING EQUIPMENT CAN BE OPERATED OVER THE STRUCTURES AS LONG AS THE DYNAMIC FORCE FROM THE DRUM DOES NOT EXCEED 20000 POUNDS AND THE GROSS VEHICLE WEIGHT DOES NOT EXCEED 12000 POUNDS.

# BACKFILL, HANDLING AND INSTALLATION REQUIREMENTS

- THIS DOCUMENT IS NOT A SUBSTITUTE FOR THE INSTALLATION GUIDE.
- STORMCHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE NDS STORMCHAMBER INSTALLATION GUIDE. 7
  - STORMCHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS. CONTACT NDS SPECIALIST 571-521-9538 OR LOCAL REPRESENTATIVE.
    - IN HOT WEATHER CONDITIONS, IF POSSIBLE, STORE ALL CHAMBERS AND BACKFILL STONE IN A SHADED AREA UNTIL THEY STEEM SE LAID OUT AND ALL UNTIL THEY STEEM BE LAID OUT AND ALL PIPES CONNECTED THE DAY PRIOR TO BACKFILING WITH STONE. WHEN TEMPERATURES ARE ABOVE 85°F, BACKFILLING SHOULD BE RESTRICTED TO COOLER MORNING PERIODS ONLY.
      - 3/4" TO 2" CLEAN, CRUSHED, WASHED, ANGULAR STONE AASHTO M43 DESIGNATION OF #3 OR #4 OR CRUSHED CONCRETE OF THE SAME SIZE, SEE ACCEPTABLE FILL MATERIAL TABLE ON PAGE 3. 5
- FOOTING OF CHAMBERS SHOULD BE CONNECTED WITH A DRYWALL SCREW WHEN OVERLAPPING AND INSTALLING. 6.
  - MINIMUM SPACING BETWEEN THE CHAMBER ROWS SC18 & SC34 = 6 INCHES, SC44 = 9 INCHES.

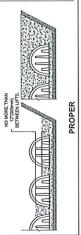
INLET, OUTLET, AND INSPECTION PIPES MUST BE INSERTED A MINIMUM OF 12 INCHES (300 mm) INTO CHAMBER.

STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING. 6

œ.

- PLACE THE BACKFILL MATERIAL IN 6-8 INCH LOOSE LIFTS AND COMPACT. USE MECHANICAL HAND TAMPERS OR APPROVED COMPACTING EQUIPMENT TO COMPACT ALL BACKFILL AND EMBANKMENT IMMEDIATELY ADJACENT TO EACH SIDE OF THE INSTALLATION AND OVER TOP OF THE INSTALLATION TO THE MINIMUM DEPTH SPECIFIED. 10.
  - PLACE BACKFILL SO THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANYTIME DURING THE BACKFILLING PROCESS (12 INCHES) Ξ.
- PERIMETER STONE MUST BE BROUGHT UP EVENLY WITH CHAMBER ROWS. PERIMETER MUST BE FULLY BACKFILLED WITH STONE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL. 12

### BACKFILL METHODS





PROJECT LOCATION: APALACHICOLA, FL : 92 AVENUE PROJECT NAME

STORMCHAMBER®

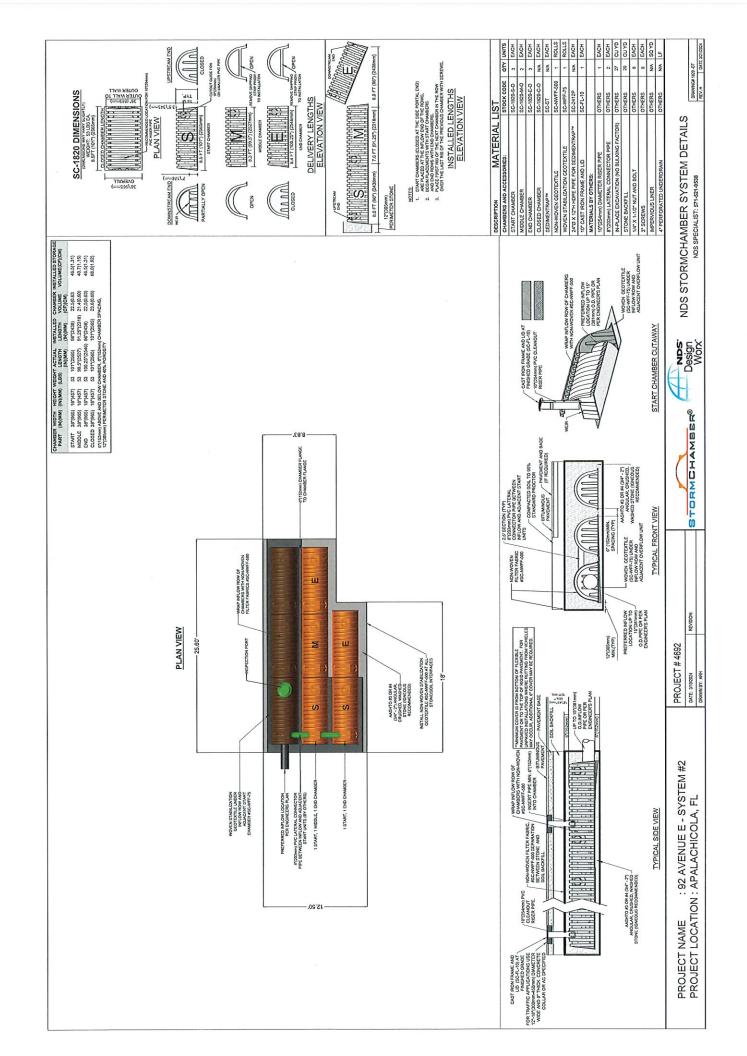
REVISION: 3/21/2024

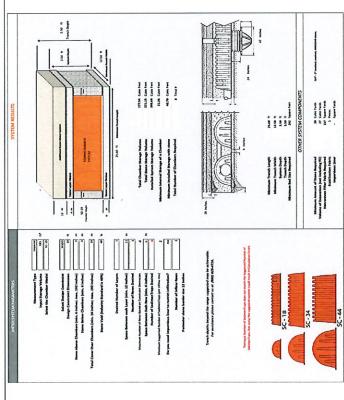
DATE: 3/19/2024 DRAWN BY: ARH

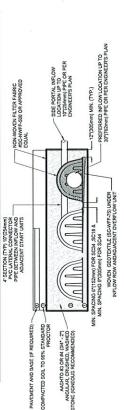
PROJECT # 4691 - 4692

Design Work

NDS STORMCHAMBER SYSTEM DETAILS NDS SPECIALIST: 571-521-9538







	ACCEPTABLE	ACCEPTABLE FILL MATERIALS: NDS STORMCHAMBER SYSTEMS	RMCHAMBER S'	YSTEMS
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATION	COMPACTION/DENSITY REQUIREMENT
4	FILL MATERAL FOR LAYER "VISTARTS FROM THE TOP OF THE "STAND TO THE BOTTOM OF FLEXIBLE PANEMINT OR UNPANED FINISHED GRADE ADOVE, NOTE THAT PANEMINT SUBBASE MAY BE PART OF THIS LAYER.	ANY SOILROCK MATERIALS, NATYLE SOILS OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.		PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
m	A STATE SHAPE SHAP	GRANLIA WEL-GRADE SOUNGORECATE MIXTHES; 39% FINE, MOST PAVINENT SUBBACE MATERALS GAN BE USED N LEU OF THIS LAYER,	AASHTO M145 OR AASHTO M43 AASHTO M43 #3:357, 4, 467, 5, 58, 57, 6,67,68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFFER 2" DISCHAIR OF MATERIAL OVER THE CHANGER IN OF IEST AND COUNTY THE OWN OFFER IN OFFER AND TO A MIN 1804 STANDARD PROJECT ON THE OWN OFFER DAY STANDARD PROJECT ON THE OWN OFFER DAY STANDARD OWN OFFER DAY STANDARD OWN OFFER DAY STANDARD OWN OFFER DAY STANDARD OWN OWN OFFER DAY STANDARD OWN OWN OFFER DAY STANDARD OWN
64	EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNTAIN STONE (1" LAYER) TO THE "3" LAYER ABOVE.	CLEAN, CRUBHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION 3-2 INCH [19-51mm]	AASHTO M43 - #3, 4	90% T99.
	FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION \$-2 INCH [19-51mm]	AASHTO M43 - #3,4	PLATE COMPACTOR OR ROLL TO ACHIEVE A 65% STANDARD PROCTOR DENSITY. T99 AASHTO.

## INSPECTION AND MAINTENANCE OF STORMCHAMBER SEDIMENTRAP ROW

STORMCHAMBER™ WITH SEDIMENTRAP™ ROW IS DESIGNED FOR EASE OF INSPECTION AND REDUCED LONG-TERM MAINTENANCE COST MONITORING T.S.S. BUILDUP IN A SEDIMENTRAP™ GAN BE DONE WITHOUT THE NEED FOR A THIRD PARTY AS THE TRAP SITS DIRECTLY BELOW THE OBSERVATION PORT. A CAMERA WITH LIGHT AND/OR LONG MEASURING STICK GAN SUCCESSFULLY INSPECT AND DETERMINE WHEN MANTENANCE IS NEEDED. AS NE

INSPECTION AND MAINTENANCE SCHEDULE

THE QUANTITY AND LOCATION OF INSPECTION PORTS VARY BY SITE. PLEASE REFER TO THE SITE PLAN AND LAYOUT TO CONFIRM INSPECTION PORT LOCATIONS. NEW INSTALLATIONS SHOULD BE INSPECTED QUARTERLY AND AFTER EACH LARGE STORM EVENT TO SEE HOW IN PERFORMS. IT IS RECOMMENDED THAT A LOGBOOK BE MAINTAINED SHOWING THE DEPTH OF WATER IN THE STORMCHAMBER AT EACH ODSERVATION IN ORDER TO DETERMINE THE RATE AT WHICH THE STORMCHAMBER SYSTEM DEWATERS AFTER RUNOFF PRODUCING STORM EVENTS. ONCE THE PERFORMANCE ANANOLE RESIDENCE OF THE STORMCHAMBER HAVE BEEN VERHIED. THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE IS REQUIRED. SEDIMENTRAP OR CHAMBER BOTTOM.

1: MAINTENANCE WITH SEDIMENTRAP - VACUUM TRUCK METHOD
REMOVIE LID FROM INSPECTIVON PORTS. MEASURE THE DEPTH OF SEDIMENT BUILD-UP IN THE SEDIMENTRAPS.IF
SEDIMENT BUILD-UP IN THE SEDIMENTRAP IS WITHIN 6 INCHES FROM THE TOP OF THE SEDIMENTRAP OR CHAMBER
BOTTOM THEN PROCEED TO MAINTENANCE STEPS BELOW. IF SEDIMENT BUILD-UP IS LESS THAN6 INCHES, LOG THE
RESULTS AND PLACE THE LIDS BACK ON.

- INSERT VACUUM TUBE THROUGH 10 INCH CLEAN OUT RISER.
   VACUUM TUBE WILL NEED TO REACH THE BOTTOM DEPTH OF SEDIMENTRAP (TYP. 7-10 FEET BELOW FINISHED GRADE).
   REMOVE SEDIMENT USING VACUUM TRUCK/EQUIPMENT UNTIL NO FURTHER SEDIMENT IS BEING REMOVED.
   INSPECT SEDIMENT BUILD-UP AGAIN TO ENSURE PROPER CLEANOUT.

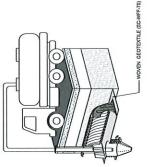
2: MAINTENANCE WITHOUT SEDIMENTRAP - WATER JET METHOD

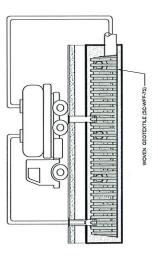
PERMOVE LID FROM INDSPECTION POOTS, MEASURE THE DEPTH OF SEDIMENT BUILD-UP ON THE UNDERLYING WOVEN
FABRIC UNDER THE CHAMBERS, IF SEDIMENT BUILD-UP ON THE BOTTOM IS GREATER THAN 3 INCHES THEN PROCEED
TO MAINTENANCE STEPS BELOW, IF SEDIMENT BUILD-UP IS LESS THAN 3 INCHES, LOG THE RESULTS AND PLACE THE LIDS BACK ON.

- REMOVE SEDIMENT FROM SEDIMENT ROW USING A HIGH PRESSURE WATER JET SYSTEM.
   PREFERRED EQUIPMENT REQUIRED SHOULD HAVE A FIXED FLOOR CLEANING NOZZLE (REAR FACING) WITH
  - A SPREAD OF AROUND 45 INCHES.

     APPLY AS MANY PASSES IN THE ROW UNTIL THE BACKFLUSH WATER IS CLEAN.

     VACUUM AREAS UNDER INSPECTION PORTS AND OUT OF ANY MANHOLES.





MAINTENANCE WITH SEDIMENTRAPS USING VACUUM TRUCK

MAINTENANCE WITHOUT SEDIMENTRAPS USING WATER JET

: 92 AVENUE E - SYSTEM #2 PROJECT NAME : 92 AVENUE E - SYST PROJECT LOCATION : APALACHICOLA, FL

PROJECT # 4692

DATE: 3/19/2024

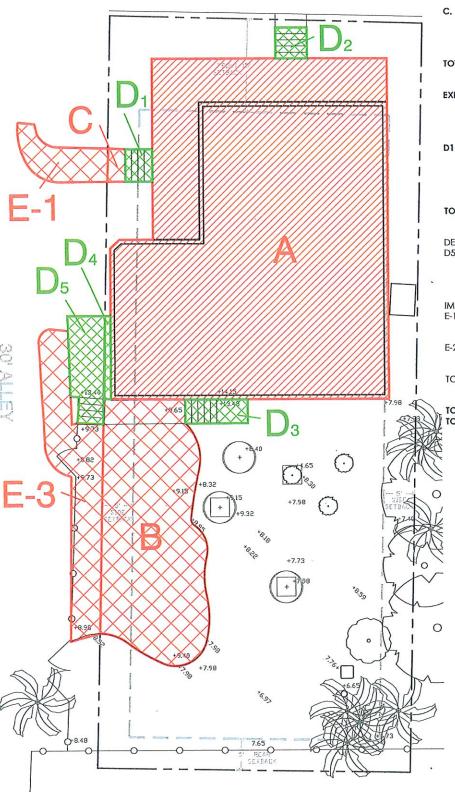
STORMCHAMBER® REVISION:

Design Worx

NDS STORMCHAMBER SYSTEM DETAILS NDS SPECIALIST: 571-521-0538

### AVENUE "E" / HWY 98

(90' R/W ~PAVED)



EXISTING IMPERVIOUS
AREA CALCULATIONS:
SOUTHWESTERLY HALF OF LOTS 4&5 BLOCK "30"

A. 1 STORY FRAME DWELLING, PORCHES & STAIRS -2,220 SF | 37%

DECORATIVE SLATE STONE -

- B. 634.79 SF | 10.58%
- C. 14.97 SF | 00.25%

TOTAL DECORATIVE SLATE STONE AREA: 649.76 SF | 10.83%

TOTAL EXISTING IMPERVIOUS AREA: 2,869.76 SF | 47.83%

EXISTING IMPERVIOUS AREA TO BE REMOVED: 649.76 SF | 10.83% (AREAS B & C)

EXISTING DECK AREA:

D1+D2+D3+D4 = 97.82 SF | 1.63% (10% MAX.)

*ALL EXISTING DECK WILL BE INSPECTED AND ADJUSTED (IF NECESSARY) TO HAVE A 1/8" GAP BETWEEN BOARDS

TOTAL IMPERVIOUS AREA TO REMAIN: 2,220 SF | 37%

DECK AREA LOCATED IN CITY R.O.W.:
D5 WOODEN PORCH & STAIRS
89.66 SF
*AREA E-2 IS DECK & PART OF A
HISTORIC STRUCTURE

IMPERVIOUS AREAS IN CITY R.O.W.: E-1 DECORATIVE STONE PATH 81.2 SF

E-2 DECORATIVE STONE PAVING 265 SF

TOTAL EXISTING IMPERVIOUS AREA IN R.O.W.: 346.2 SF

TOTAL EXISTING IMPERVIOUS AREA IN R.O.W. TO BE REMOVED: (E-1 & E-3) 346.2 SF

*TOTAL PROPERTY AREA LOT CALCULATIONS: BLOCK 30 SOUTHWESTERLY HALF OF LOTS 4&5 APPX. 50' x 120' = 6,000 SF

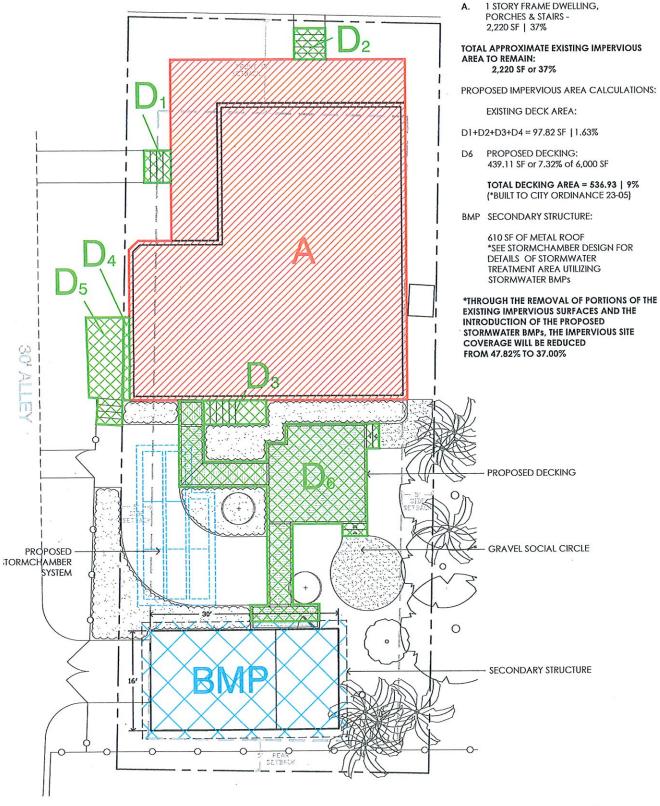
TOTAL AREA = 6,000 SF





### AVENUE "E" / HWY 98

(90' R/W ~PAVED)

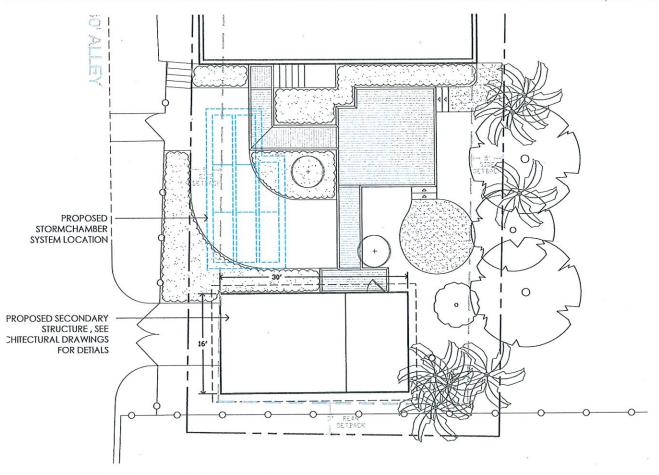


IMPERVIOUS AREA CALCULATIONS: SOUTHWESTERLY HALF OF LOTS 4&5 BLOCK "30"

*TOTAL PROPERTY AREA LOT CALCULATIONS: BLOCK 30 SOUTHWESTERLY HALF OF LOTS 4&5 APPX, 50' x 120' = 6,000 SF

TOTAL AREA = 6,000 SF





### NDSCAPE DESIGN- DESIGN CONCEPT & STORMWATER CALCULATIONS:

### SIGN CONCEPT-

sIGN CONCEPT
3 goal of the Storm water Best Management Practice at work for this project is to ensure the proposed secondary structure (16' x 30') does not have a negative storm water impact on the site.

3 structure has a metal roof, one open side (facing the alley) with screening on two sides, provides a covered parking space and an elevated enclosed storage area (approximately 10x16').

3 storm water best management practice concept utilized employs the use of underground storm water chambers that are designed and specified to capture the precipitation that falls on the w metal roof. Water Quality will be addressed by the proposed storm water chamber system. It is designed to treat the initial 1" of storm water runoff from the roof (610 SF) by filtering out and siment and contaminants. The entirety of the storm water that is coptured with initiate out from the system into the surrounding soil. This system has the capacity to treat the total storm water has the capacity to treat the total storm water and a contaminants. lume from a 2 yr (or 1" of rain for a 24 hr) storm event (or flood attenuation).

### **DRM WATER CALCULATIONS-**

### WATER QUALITY VOLUME CALCULATIONS:

Drainage Area (Square Feet / SF) -Rainfall Depth (Inches / in.) -610SF

Total Area of Metal Roof w/ 4:12 roof pitch and 1*-4" overhang Typical amount of Rainfall treated to ensure water quality in a 2yr. Storm event Generated from 1" of rainfall on Drainage Area

Required Volume (Cubic Feet / CF) -50.83CF

### GEOTECHNICAL DATA UTILIZED FOR STORMWATER CALCULATIONS:

Required Water Quality 50 88CF

Ksat - per Hour (infiltration rate provided by USDA Websoil Survey) 0.60"- 2.00"

*Geotechnical Data acquired from (USDA - Web Soil Survey & Site Soil Report)

### 2 YEAR / 24 HOUR STORM DATA:

Rainfall depth occurring in a 24 hour period Rainfall depth occurring per hour during storm event

0.25

*Data from the Soil Conservation Services Historic rainfall data, a 2 year 24 hour storm event is the design standard for stormwater infiltration systems

### FLOOD ATTENUATION CALCULATIONS:

Required Flood Attenuation Volume 305CF

Rainfall Volume x Time Duration x Cubic Foot Conversion x Total Proposed Stormwater Drainage Area (Metal Roof Area)

.25 inches per hour x 24 hours x 610 Square Feet

### SUMMARY OF REQUIRED STORMWATER VOLUMES TO BE TREATED:

Water Quality Treatment 50.88CF Flood Attenuation Volume

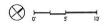
### NDS STORMCHAMBER CAPACITY SUMMARY:

Installed System Storage Capacity, see attached NDS StormChamber documents for further details. 398.69CF =

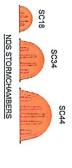
### RECOVERY TIME CALCULATIONS:

Total Recovery Time (Hours) =

Installed System Depth (Inches) / Infiltration rate (Inches per Hour) 30" / 0.60"- 2.00" per Hour (as per infiltration rate (Ksat) provided by USDA Websoll Survey) From 50 to 15 HRs =







### APALACHICOLA, FL 92 AVENUE E

# NDS STORMCHAMBER SYSTEM SPECIFICATIONS

- CHAMBERS SHALL BE NDS STORMCHAMBER
- DENSITY POLYETHYLENE. CHAMBERS SHALL BE ARCH SHAPED AND SHALL BE MANUFACTURED FROM HIGH MOLECULAR WEIGHT HIGH
- HL-93 LIVE LOADING PER AASHTO LRFD SECTION 12. CHAMBERS MEET OR EXCEED ASTM F2922 AND ASTM F2787. MEET AASHTO HS-20, HS-25 AND
- MANUFACTURED NOMINAL DIMENSIONS OF START, MIDDLE AND END CHAMBERS 
   SC18 3.17 FT WIDE X 18 INCHES TALL.
- SC34 5 FT WIDE X 34 INCHES TALL. SC44 6.35 FT WIDE X 44 INCHES TALL.
- MINIMUM COVER FOR SC18 AND SC34 IS 18 INCHES, MINIMUM COVER FOR SC44 IS 22 INCHES.
- 6 SEDIMENTRAP MANUFACTURED WITH HIGH MOLECULAR WEIGHT, HIGH DENSITY POLYETHYLENE
- 7 NON-WOVEN POLYPROPYLENE FILTER FABRIC TMG-40ZNWG BY TMPG OR APPROVED EQUAL
- THE PERFORMANCE OF NDS STORMCHAMBER' IS DIRECTLY CORRELATED TO THE LOAD BEARING CAPACITY, PLASTICITY, AND PERMEABILITY OF NATIVE SOIL; FROST-HEAVE POTENTIAL; VOLUME AND LOAD-RATING OF PROJECT TRAFFIC; INSTALLATION METHODS USED; AS WELL AS THE TYPE, GRADATION, AND THICKNESS OF WOVEN POLYPROPYLENE FILTER FABRIC 300HTM BY WINFAB OR APPROVED EQUAL THE SURROUNDING AND OVERLAY ROCK

# REQUIREMENTS FOR CONSTRUCTION EQUIPMENT

- NDS RECOMMENDS 3 BACKFILL METHODS, STONESHOOTER LOCATED OFF THE CHAMBER BED, BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE AND BACKFILL FROM OUTSIDE THE EXCAVATOR USING A LONG BOOM HOE OR EXCAVATOR. CONVEYORS OR EXCAVATORS SHOULD BE LOCATED SUCH THAT THEIR LOADS DO NOT INFLUENCE THE CHAMBERS SHOULD BE USED TO PLACE
- NO CONSTRUCTION EQUIPMENT ALLOWED ON TOP OF THE CHAMBER SYSTEM UNTIL MINIMUM STONE COVER REQUIREMENTS HAVE BEEN MET, 6-INCH FOR SC-18 AND SC-34 AND 12-INCH FOR SC-44, ONLY THEN SHOULD A SKID STEER OR SMALL DOZER (D4) BE AL
- NO WHEEL LOADS SHOULD BE APPLIED OVER THE SYSTEM. ONCE THE MINIMUM STONE HAS BEEN PLACED OVER THE CROWN OF THE CHAMBERS, ONLY SMALL WALK BEHIND VIBRATORY COMPACTION EQUIPMENT CAN BE USED UNTIL A 12 INCHES OF COVER IS ACHIEVED. LIGHTWEIGHT TRACKED DOZERS WITH A MAXIMUM GROUND PRESSURE OF 1100 PSF ARE PERMITTED OVER THE STRUCTURE.
- DOZERS MUST SPREAD STONE WORKING IN A DIRECTION PARALLEL WITH THE CHAMBER ROWS; NOT WORKING ACROSS THE CHAMBER ROWS. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMCHAMBER STANDARD WARRANTY.
- ONCE 18"(457mm) OF COMPACTED MATERIAL IS OVER THE CHAMBERS, HIGHWAY VEHICLES OF HS-20 AND HS-25 CAN BE OPERATED OVER THE STRUCTURES
- A FRONT END LOADER CAN BE OPERATED OVER THE STRUCTURES AS LONG AS THE MAXIMUM WHEEL LOAD DOES NOT EXCEED 16000 POUNDS, COMPACTING EQUIPMENT CAN BE OPERATED OVER THE STRUCTURES AS LONG AS THE DYNAMIC FORCE FROM THE DRUM DOES NOT EXCEED 20000 POUNDS AND THE GROSS VEHICLE VEIGHT DOES NOT EXCEED 12000 POUNDS.

# BACKFILL, HANDLING AND INSTALLATION REQUIREMENTS

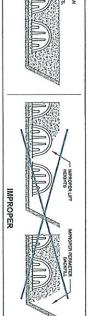
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ω

- IN HOT WEATHER CONDITIONS, IF POSSIBLE, STORE ALL CHAMBERS AND BACKFILL STONE IN A SHADED AREA UNTIL THEY ARE READY TO BE INSTALLED. OUR RECOMMENDATION IS THAT THE SYSTEM BE LAID OUT AND ALL PIPES CONNECTED THE DAY PRIOR TO BACKFILLING WITH STONE. WHEN TEIMPERATURES ARE ABOVE 85°F, BACKFILLING SHOULD BE RESTRICTED TO COOLER MORNING PERIODS ONLY.
- 3/4" TO 2" CLEAN, CRUSHED, WASHED, ANGULAR STONE AASHTO M43 DESIGNATION OF #3 OR #4 OR CRUSHED
- FOOTING OF CHAMBERS SHOULD BE CONNECTED WITH A DRYWALL SCREW WHEN OVERLAPPING AND INSTALLING CONCRETE OF THE SAME SIZE, SEE ACCEPTABLE FILL MATERIAL TABLE ON PAGE 3.
- MINIMUM SPACING BETWEEN THE CHAMBER ROWS SC18 & SC34 = 6 INCHES, SC44 = 9 INCHES.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND INLET, OUTLET, AND INSPECTION PIPES MUST BE INSERTED A MINIMUM OF 12 INCHES (300 mm) INTO CHAMBER PRESERVE ROW SPACING.
- 6 PLACE THE BACKFILL MATERIAL IN 6-8 INCH LOOSE LIFTS AND COMPACT. USE MECHANICAL HAND TAMPERS OR APPROVED COMPACTING EQUIPMENT TO COMPACT ALL BACKFILL AND EMBANKMENT IMMEDIATELY ADJACENT TO EACH SIDE OF THE INSTALLATION AND OVER TOP OF THE INSTALLATION TO THE MINIMUM DEPTH SPECIFIED
- 12 PLACE BACKFILL SO THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANYTIME DURING THE BACKFILLING PROCESS (12 INCHES) . PERIMETER STONE MUST BE BROUGHT UP EVENLY WITH CHAMBER ROWS, PERIMETER MUST BE FULLY BACKFILLED WITH STONE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL.

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### BACKFILL METHODS



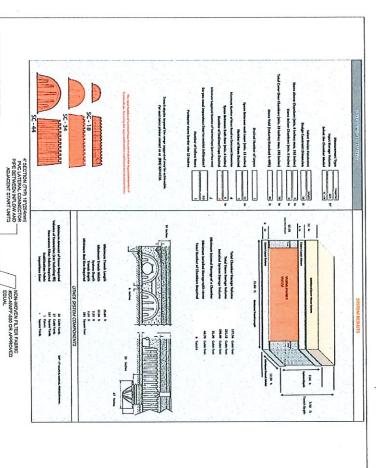
PROPER

PROJECT # 4691 - 4692

PROJECT NAME : 92 AVENUE E
PROJECT LOCATION : APALACHICOLA, FL







	ACCEPTABLE	ACCEPTABLE FILL MATERIALS: NDS STORMCHAMBER SYSTEMS	ğ	TORMCHAMBER SY
Т	MATERIAL LOCATION	DESCRIPTION	AASH1 CLAS	AASHTO MATERIAL CLASSIFICATION
4	FILL MATERIAL FOR LAYER WISTARTS FROM THE TOP OF THE ST LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAYED FINISHED ORADE ADDOWN, NOTE THAT PAVEMENT GUIDBASE MAY DE PART OF THIS LAYER.	ANY SOILROCK MATERIALS, NATIVE SOILS OR PER ENGINEER'S PLANS, GHECK PLANS FOR PAVEMENT SUBGRAGE REQUIREMENTS.		PREPARE PER ENGINEER'S PAVED INSTALLATIONS MAY STRINGENT MATERIAL AND PREPARATION REQUIREMEN
ω	FILL MATERIAL FOR LAYER TO STARTE BROW THE TOP OF THE EMBEDMENT STOME (72 LAYER) TO USE IN A START MATERIAL MAD VET THE TOP OF THIS CHAMBER. MATERIAL PAREMENT SUBBASE MAY BE A PART OF THIS LAYER.	GOANULAR WEIL-GRADED DOIL-MOREGATE MITTURES, 395 FRUSE, MOST PAUCEUT DURDANEE MITTURALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 A-1, A-2-4, A-3 OR AASHTO M43 #3; 357, 4, 467, 6,67,68, 7, 78, 8	AASHTO M145 A-1, A-2-4, A-3 OR AASHTO M43 #31, 357, 4, 407, 6, 50, 57, 6, 67, 58, 7, 78, 8, 80, 9, 10
N	EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNTAIN STONE ("1' LAYER) TO THE "3' LAYER ADOVE.	CLEAN, GRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION 3-2 INCH [19-51mm]	манто	AASHTO M43 - #3, 4 90% T99
-4	FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF CHAMBER.	CLEAN, CRUSHED, ANOULAR STONE, NOMINAL SIZE DISTRIBUTION \$-2 INCH [10-51mm]	AASHTO M43 - #3, 4	A3 - #3, A PLATE COMPACTOR OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.  T99 AASHTO.

INSPECTION AND MAINTENANCE OF STORMCHAMBER SEDIMENTRAP ROW
STORMCHAMBER** WITH SEDIMENTRAP** ROW IS DESIGNED FOR EASE OF INSPECTION AND REDUCED LONG-TERM
MAINTENANCE COST MONITORING T.S.S. BUILDUY IN A SEDIMENTRAP** CAN BE DONE WITHOUT THE NEED FOR A THIRD
PARTY AS THE TRAP SITS DIRECTLY BELOW THE OBSERVATION PORT. A CAMERA WITH LIGHT AND/OR LONG MEASURING
STICK CAN SUCCESSFULLY INSPECT AND DETERMINE WHEN MAINTENANCE IS NEEDED, AS NEEDED, SEDIMENT REMOVAL
WITH A VACUUM TRUCK REQUIRES LITTLE OR NO WATER JETTING AS WITH OTHER COMPETING SYSTEMS.

INSPECTION AND MAINTENANCE SCHEDULE

THE QUANTITY AND LOCATION OF INSPECTION PORTS VARY BY SITE, PLEASE REFER TO THE SITE PLAN AND LAYOUT TO THE QUANTITY AND LOCATION OF INSPECTION PORT LOCATIONS, NEW INSTALLATIONS SHOULD BE INSPECTED QUARTERLY AND AFTER EACH CONFIRM INSPECTION PORT LOCATIONS, NEW INSTALLATIONS SHOULD BE INSPECTED QUARTERLY AND AFTER EACH LARGE STORM EXENT TO SEE HOWIT PERFORMS. IT IS RECOMMENDED THAT A LOGBOOK BE MAINTAINED SHOWING THE DEPTH OF WATER IN THE STORMCHAMBER AT EACH OBSERVATION IN ORDER TO DETERMINE THE RATE AT WHICH THE STORMCHAMBER SYSTEM DEWATTERS AFTER RUNORE FIFFOOLDING STORM EVENTS, ONCE THE PERFORMANCE THE STORMCHAMBER HAVE BEEN VERHIED, THE MONITORING SOFBEDULE ÇAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE (SAN BE REQUIRED. ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE (SAN BE REQUIRED. ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE (SAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE (SAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE (SAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE (SAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA SUGGESTS THAT A MORE FREQUENT SCHEDULE (SAN BEDIMENTRAP OR CHAMBER BOTTOM.

1: MAINTENANCE WITH SEDIMENTRAP - VACUUM TRUCK METHOD
REMOVE LID FROM INSPECTION PORTS, MEASURE THE DEPTH OF SEDIMENT BUILD-UP IN THE SEDIMENTRAPS, IF REMOVE LID FROM INSPECTION PORTS, MEASURE THE DEPTH OF SEDIMENT BUILD-UP IN THE SEDIMENTRAP IS WITHIN 6 INCHES FROM THE TOP OF THE SEDIMENTRAP OR CHAMBER BOTTOM THEN PROCEED TO MAINTENANCE STEPS BELOW. IF SEDIMENT BUILD-UP IS LESS THANG INCHES, LOG THE BOTTOM THEN PROCEED TO MAINTENANCE STEPS BELOW. IF SEDIMENT BUILD-UP IS LESS THANG INCHES, LOG THE

- RESULTS AND PLACE THE LIDS BACK ON.

  INSERT VACUUM TUBE THROUGH 10 INCH CLEAN OUT RISER.

  VACUUM TUBE WILL NEED TO REACH THE BOTTOM DEPTH OF SEDIMENTRAP (TYP. 7-10 FEET BELOW FINISHED GRADE).

  REMOVE SEDIMENT USING VACUUM TRUCK/EQUIPMENT UNTIL NO FURTHER SEDIMENT IS BEING REMOVED.

  INSPECT SEDIMENT BUILD-UP AGAIN TO ENSURE PROPER CLEANOUT.

2: MAINTENANCE WITHOUT SEDIMENTRAP • WATER JET METHOD

REMOVE LID FROM INSPECTION PORTS, MEASURE THE DEPTH OF SEDIMENT BUILD-UP ON THE UNDERLYING WOVEN
FRABRIC UNDER THE CHAMBERS, IF SEDIMENT BUILD-UP ON THE BOTTOM IS GREATER THAN 3 INCHES THEN PROCIEED
TO MAINTENANCE STEPS BELOW. IF SEDIMENT BUILD-UP IS LESS THAN 3 INCHES, LOG THE RESULTS AND PLACE THE IDS BACK ON

- REMOVE SEDIMENT FROM SEDIMENT ROW USING A HIGH PRESSURE WATER JET SYSTEM.
  PREFERRED EQUIPMENT REQUIRED SHOULD HAVE A FIXED FLOOR CLEANING NOZZLE (REAR FACING) WITH
  A SPREAD OF AROUND 45 INCHES.
  A SPREAD OF AROUND 45 INCHES.
  PREPLY AS MANY PASSES IN THE ROW UNTIL THE BACKFLUSH WATER IS CLEAN.
  VACUUM AREAS UNDER INSPECTION PORTS AND OUT OF ANY MANHOLES.

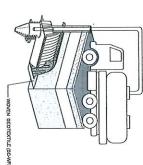
COMPACTED SOIL TO 95% STANDARD PROCTOR PAVEMENT AND BASE (IF REQUIRED)

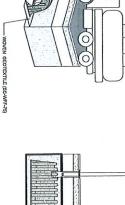
WOVEN DEOTEXTILE (SC-WFF-75) UNDER INFLOW ROW ANDADJACENT OVERFLOW UNIT

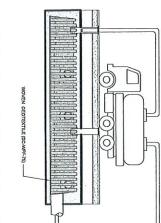
PREFERRED INFLOW LOCATION UP TO 30"(762mm) PIPE OR PER ENGINEER'S PLAN 2"(305mm) MIN. (TYP.)

- SIDE PORTAL INFLOW LOCATION UP TO 10"(254mm) PIPE OR PER ENGINEER'S PLAN

0







MAINTENANCE WITH SEDIMENTRAPS USING VACUUM TRUCK

MAINTENANCE WITHOUT SEDIMENTRAPS USING WATER JET

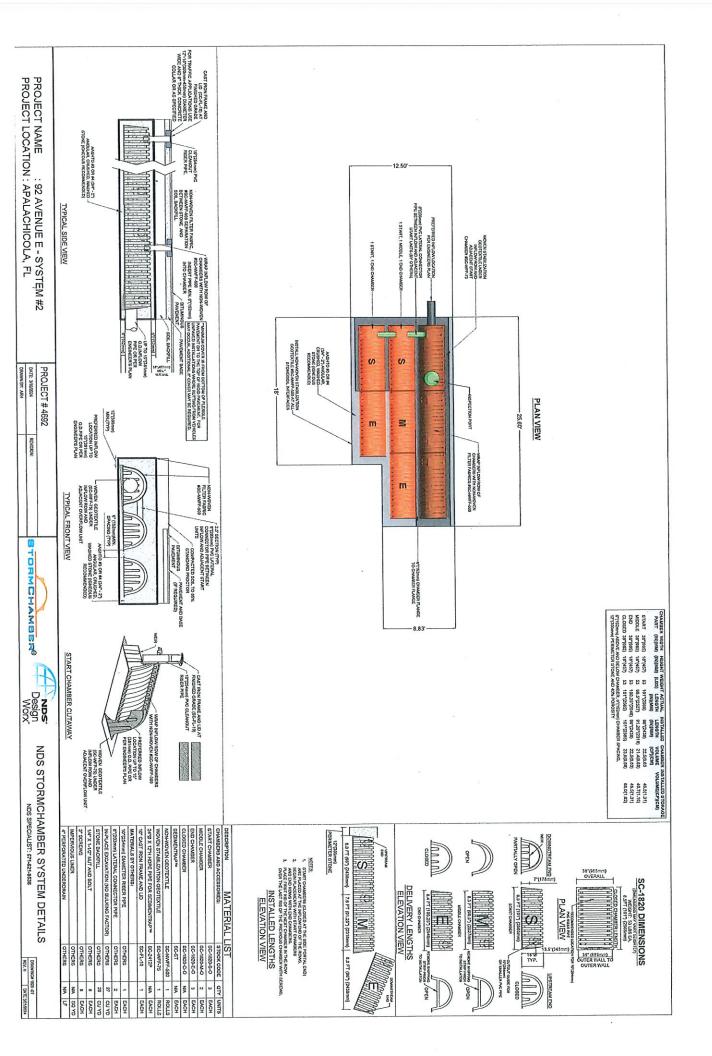


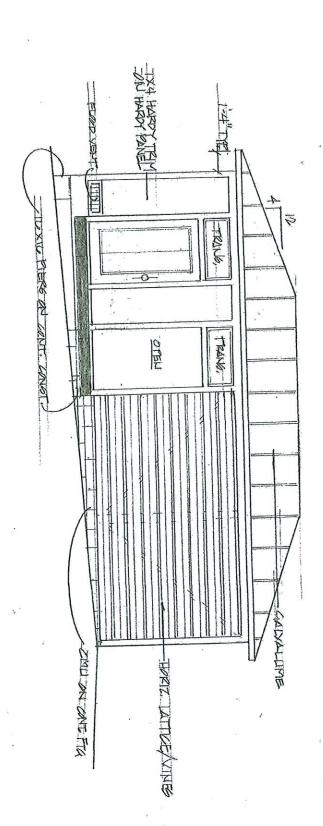
PROJECT # 4692

PROJECT NAME : 92 AVENUE E - SYSTEM #2
PROJECT LOCATION : APALACHICOLA, FL

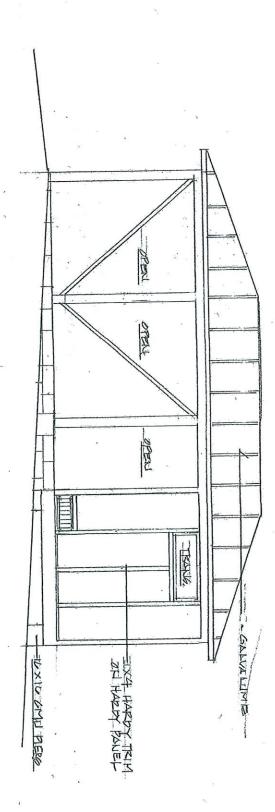
Design Worx

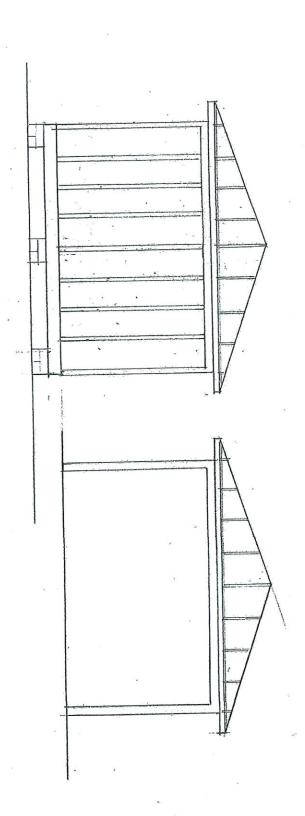
NDS STORMCHAMBER SYSTEM DETAILS NDS SPECIALIST: 571-521-9538

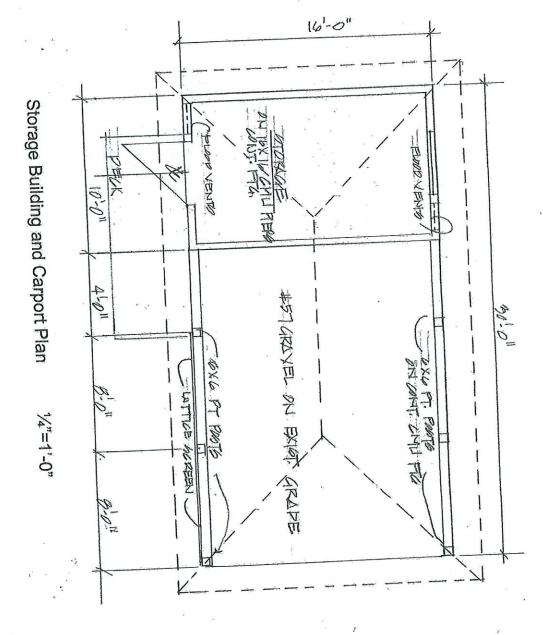












### Definitions/Code of Note:

Impervious surface coverage: Those hard surface man-made areas that do not allow, or minimally allow, the penetration of water, that reduce the natural rate or percolation of water or result in an increase in the natural quantity and rate of storm water runoff. Examples include but are not limited to roof tops, parking, clay, asphalt, concrete, brick, compacted gravel, paved recreational areas such as pools, tennis courts, and landscape pavers. Exceptions: Pervious decks as described herein and items identified on a site plan as a best management practice to treat stormwater shall be allowed within open space and not considered impervious. Pervious decks are defined as decks with a minimum spacing of ½ inch between decking boards. Pervious decks shall be limited to an additional ten percent additional total lot coverage (i.e. ten percent additional total lot coverage above the code maximum for impervious coverage applicable to each zoning category; e.g. if max impervious coverage is forty percent then a deck may be added which covers additional lot area up to a total of fifty percent lot coverage when adding the total impervious lot coverage and the pervious deck coverage). (LDC, Ch. 101, Art. I, Sec. 101-8 Definitions.)

**Storm water** management system: A surface water system that is designed and constructed or implemented to control discharges which are necessitated by rainfall events, incorporating methods to collect, convey, store, absorb, inhibit, treat, use, or reuse water to prevent or reduce flooding, over drainage, environmental degradation, and water pollution or otherwise affect the quantity and quality of discharges from the system.

### Stormwater best management practice (BMP): The term

"best management practices (BMP)" means those practices and principles designed to manage water from rainfall events, reduce nonpoint sources of pollution and in some cases, protect wildlife and habitat. Methods may include structural devices or nonstructural practices, such as, but not limited to compensatory storage, swales, gutters, rain barrels and rain gardens. A City of Apalachicola Guide to Site-Specific Stormwater Best Management Practices is available to download from the city's website.

Lot coverage means the area of the lot covered by the ground floor of all principal and accessory uses and structures, including all areas covered by the roof of such uses and structures, measured along the exterior faces of the walls, along the foundation wall line, between the exterior faces of supporting columns, from the centerline of walls separating two buildings or as a combination of the foregoing, whichever produces the greatest total ground coverage for such uses and structures. Lot coverage shall also include all impervious surfaces such as drives, parking areas, walkways, swimming pools, patios, terraces and the like.

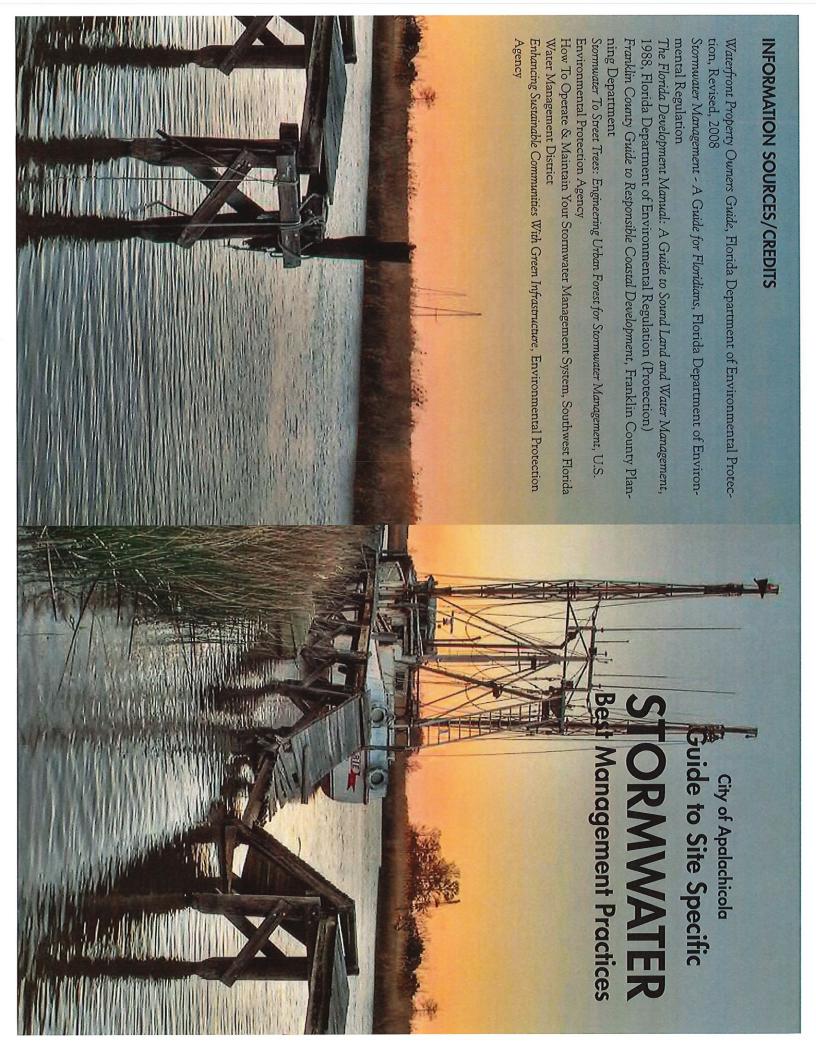
### Sec. 115-1. - City requirements.

- (1) Certain types of residential and commercial development trigger State stormwater permitting permits depending on size and type of proposed development. As an area of critical state concern, the city has adopted more stringent stormwater standards than state requirements. A more comprehensive overview of state permitting requirements and the relationship to the city standards may be found online at cityofapalachicola.com/building.Dept.cfm:
- a. Residential. Applications for all new residential development in special waterfront district or areas of special hazard (A&V zone) must include a stormwater management plan which may consist of a best management practice (BMP) as part of their site plan. Proposed improvements that increase lot coverage shall also provide for stormwater treatment by indicating the stormwater treatment best management practice that will be utilized.

### Sec. 111-272. - O/R office residential.

- (a) *District intent.* The provisions of the O/R district are intended to apply to areas with a specialized intensive residential character wherein a variety of housing types and compatible limited non-retail commercial, education, religious, recreation uses are permitted. This district shall occur in that area shown as office residential on the Official Land Use Map of Apalachicola.
- (b) Permitted uses and structures.
  - (1) Principal.
    - a. Single-family residential.
    - b. Two-family residential.
    - c. Professional offices and services.
    - d. Studios and galleries for photography, music, art, dance, vocal and drama.
    - e. Medical offices and services.
    - f. Bed and breakfasts.
  - (2) Accessory. Accessory uses and structures are considered incidental and subordinate to permitted principal and approved special exception uses and structures. Habitable accessory uses are not permitted. All accessory uses must be approved by special exception. Accessory uses are subject to the following requirements: the accessory use must be subordinate to the principal use; must be related to the principal use; is not a separate commercial or retail business; does not require separate signage; and does not increase traffic or parking beyond the principal use requirements. Additional restrictions governing accessory uses, including, but not limited to, size and parking may be determined by the planning and zoning board.
  - (3) *Special exceptions.* After public notice and hearing and appropriate conditions and safeguards, the planning and zoning board may permit as special exceptions:
    - a. Funeral homes.
    - b. Utilities substations.
    - c. Hospitals and clinics.
    - d. Public buildings.
    - e. Cemeteries.
    - f. Churches and church-sponsored businesses.
    - g. Schools.
    - h. Residential apartment units.
    - i. Child care centers.
- (c) Prohibited uses and structures.
  - (1) Mobile homes or housetrailers.

- (2) Establishments for the conduct of retail trade.
- (3) Storage yards or warehouses.
- (4) Any structure or use not of a nature specifically or provisionally permitted herein.
- (d) Development standards.
  - (1) Minimum lot or site size.
    - a. Single-family and other principal uses.
      - 1. Area: 6,000 square feet.
      - 2. Width: 60 feet.
      - 3. Depth: 100 feet.
    - b. Two-family.
      - 1. Area: 9,000 square feet.
      - 2. Width: 90 feet.
      - 3. Depth: 100 feet.
  - (2) Minimum building setbacks.
    - a. Front: 15 feet.
    - b. Side, interior lot: 7½ feet each side, or any combination of setbacks on each side that equals at least 15 feet, provided that no such setback shall be less than five feet.
    - c. Side, corner lot: 15 feet.
    - d. Rear: 25 feet.
  - (3) Minimum building size. Single-family dwelling: 800 square feet.
  - (4) Maximum building restrictions.
    - a. Lot coverage: 40 percent.
    - b. Permissible building height: 35 feet.
- (e) Applicable regulations.
  - (1) Parking regulations. See section 111-288.
  - (2) Special exceptions. Unless otherwise specified, special exceptions must comply with development standards for principal uses. If deemed appropriate by the planning and zoning board in order to grant a special exception, certain more stringent standards may be imposed. Any accessory use proposed as part of a special exception request must meet the following conditions: must not be for habitable purposes, must be subordinate to the principal use; must be related to principal use; is not a separate commercial or retail business; does not require separate signage and does not increase traffic or parking beyond the principal use requirements. Additional restrictions concerning accessory uses, including, but not limited to, size and parking may be determined by the planning and zoning board.





es, Apalachicola Planning Department, May 2015 Best Management Practic-Site Specific Stormwater City of Apalachicola

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Water Management District Michael Bateman, Northwest Florida

Rebecca Jetton, Mark Yelland, Florida

Department of Economic Opportunity

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## THE BIG PICTURE

behaviors have the potenpublic behaviors and activindividual, household, and pollution must consider efforts to control stormwater is generated from dispersed Because stormwater runoff tial to generate stormwater These common individual ities that can generate polyards, driveways, and roofsland surfaces—pavements, lution from these surfaces.



- Disposing of trash and Littering
- Disposing of pet-waste recyclables
- Applying lawn-chemicals
- Washing cars,
- driveways Changing motor-oil on impervious
- Household behaviors like disposing leftover paint and household chemicals

## COMMON SENSE TIPS

- the property and into surface and ground Excessive fertilizers and chemicals wash off not apply if rain is in the forecast. WHY? fertilizers when other methods fail. Do and only use pesticides, herbicides and ly - Follow package directions carefully, 1. Use Garden and Lawn Chemicals Wise-
- garden, not on paved surfaces. Keep irrigation water on the lawn and
- wash off the property into nearby waterallows runoff to soak into the soil and not will drain to vegetated areas. WHY? This or swales, and wash vehicles where water 3. Divert rain spouts to unpaved areas bodies after picking up pollutants
- add pollutants to surface waters if placed antifreeze to service stations to recycle yard debris will block drainage flows and or washed into storm drains. them. WHY? These products are toxic and Storm Drains. Take used motor oil and Don't Drain Used Motor Oil Into end up in your nearest waterbodies. less fertilizers. If placed in roads or swales nutrients to the soil so that you can use materials into roadways or swales. WHY? supplement fertilizers. Do not rake these pings. Use these materials as mulch to 4. Compost Leaves, Grass and Shrub Clip-These materials will decompose, returning
- antifreeze and other fluids that can end up can contaminate surface waters. vehicles reduce harmful emissions that also in the nearest waterbody. Well maintained WHY? To prevent leakage of motor oil, car inspected and maintained regularly. Service Your Car Regularly. Have your

# STRUCTURAL DETENTION BMPS - PONDS

irrigation and fire protection. tems are storage areas that maintain a planned permanent level of water even after stormwater tion systems and wetland treatments systems are likely to be the preferred BMPs. Detention sys-In areas with slowly percolating soils, high water tables and flat terrain, permanently wet detenbenefits including "lake-front" property, possibilities for recreation and wildlife habitat, water for discharge has ceased. If properly planned and constructed, wet detention areas provide multiple

## **DETENTION PONDS**

stormwater. Although wet ponds are not pond may be the BMP for managing your commonly used on residential lots, if your ble is near the surface, a wet detention an area where the water ta-If your property is located in

> pond may be good BMP. Detention ponds are more commonly used for to serve large property has a natural contour that forces areas, such as subdivisions or commercial water to drain into one or two locations, a developments.

> > directly into the water.





### quality if the soil or cleared debris is allowed to wash clearing and construction activities can degrade water greases from businesses and even household soaps, garwashed directly into the bay. Additionally, coastal land den fertilizers and pesticides can all harm aquatic life if Untreated stormwater is a source of petroleum from cars, asphalt from roads, chemicals and pollution to Apalachicola Bay. Oils and

significant land clearing, you will need to provide a plan ola River or Bay and you propose new construction or chicola Land Use Regulations, Section VIII) in the City or if you own property along the Apalachic-If you plan new commercial or large scale development from draining into the coastal waters. (City of Apalafor how you intend to keep untreated stormwater runoff

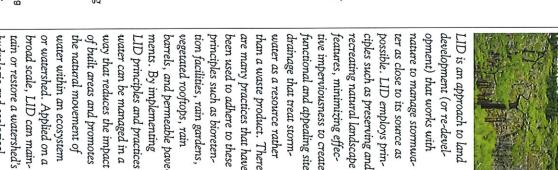
stormwater plan. Commercial or large scale residential or notifications from the Florida Department of Enviprojects are required to receive State permitting and/ the design and permitting approval process for your Management District. ronmental Protection and the Northwest Florida Water The type of development you propose will determine

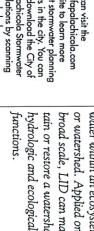
structure Low Impact Development (LID) measures to ensure that non-point pollution is treated before making meet the City's stormwater standards with Green Infraits way to area coastal waters. Small scale development adjacent to coastal waters can



efforts in the city. You can about stormwater planning Cityofapalachicola.com You can visit the also download the City of website to learn more Apalachicola Stormwater egulations by scanning







## THE FIRST FLUSH

Of primary importance to minimizing the effects of stormwater on water quality is the First Flush. This term describes the washing action that stormwater has on accumulated pollutants in a watershed. In the early stages of runoff the land surfaces, especially the impervious surfaces like streets and parking areas, are flushed clean by the stormwater. This creates a shock load of pollutants that are flushed into the nearby coastal waters.

Studies in Florida have determined that the first one inch of runoff generally carries 90% of the pollution from a storm. Treatment of the first flush is the key to proper stormwater management.

## BEST MANAGEMENT PRACTICES (BMPS)

mental Protection at (850) 245-7508 for call the Florida Department of Environinformation on such BMPs. You can downand Water Management contains specific ment Manual - Guide to Sound Land tions basins, trenches, pervious paving and considered the first line of defense and are scape planning. Nonstructural BMPs are good housekeeping techniques and land-Nonstructural measures are preventative categories - Nonstructural and Structural. pollution. BMPs are classified into two are methods used to reduce stormwater load that manual at www.dep.state.fl.us or subdivisions and require engineering to for commercial or large scale residential filters. Structural BMPs are generally used use. Structural controls include traditional the easiest methods for homeowners to Green Infrastructure (GI) site planning, in nature and include such concepts as Best Management Practices (BMPs) implement. The Florida Land Developfacilities such as detention ponds, reten-



# STRUCTURAL RETENTION BMPS - BASINS AND SWALES

Retention BMPs retain stormwater onsite, allowing it to infiltrate into the ground or to evaporate. These practices reduce the volume of stormwater and are the most effective for reducing stormwater pollution since the the first flush is not discharged to surface waters. Commonly used retention BMPs include retention basins and grassed swales.

## RETENTION BASINS

If you live in an area with sandy soils or where the water table is deep, you can create retention areas to treat stormwater. Retention areas are simply small depressions in your landscape where the water can pond for a short time before soaking into the ground or evaporating. These areas can be planted with appropriate native vegetation that helps maintain soil permeability, filter runoff and use less fertilizers/pesticides. These types of landscaped retention areas are also called "bioretention" practices.

## **GRASSED SWALES**

Swales, also called grassed
waterways, are one of the oldest
stormwater BMPs, and have been used
along streets and highways for years. A
swale is a man-made depression in the land
which should run parallel to the area to be
treated and the wetland. Proper placement
of a swale and berm system slows down the
rapid flow of stormwater runoff entering
water bodies. After the swale catches the
flow, it is held back by the berm. Impurities

sink to the bottom and the cleaner water lining the surface spills over when the swale becomes full. Slowly the stormwater evaporates and percolates through the soil. The percolation process cleanses stormwater runoff and helps recharge underground aquifers.

Swales are most effective in areas with good drainage and sufficient land to allow for adequate percolation. A swale should have gently sloping sides of at least three (3) feet horizontal to each one (1) foot vertical. These dimensions allow for easier maintenance which should only require mowing and periodic removal of trash and other debris.

Maintenance requirements for swales are not significantly greater than those for a normal lawn. However public education is essential, especially for residents who live in developments served by swales. Residents need to be informed about the benefits provided by their swale so they take pride in maintaining it and do not fill it in. Leaves, limbs and other vegetation, along with debris and oil should not be disposed of in the swale.



# **VEGETATION IS IMPORTANT TO STORMWATER MANAGEMENT**

Vegetation provides several benefits in managing stormwater. It absorbs the energy of rain, prevents erosion, maintains the soil's capacity to absorb water, promotes infiltration. Vegetation also slows the velocity of runoff, reducing peak discharge rate. Vegetation is especially important in reducing erosion and sedimentation during construction, By phasing and limiting the removal of vegetation, and by decreasing the area that is cleared and limiting the time bare land is exposed to rainfall, sedimentation at construction sites can be reduced by up to 90%.

## **VEGETATED BUFFERS**

size parcel of waterfront property, you may wish to consider a vegetated buffer between your property and the water as a filter for runoff. This vegetation helps reduce pollutants in surface and ground waters flowing into a waterbody.



## **RESHAPE OR CONTOUR**

Contouring or reshaping your property allows you to provide areas where water can pond temporarily and soak into the ground.



### TERRACING

If your property is steeply sloped, you may wish to incorporate the technique of terracing to minimize stormwater runoff from cascading down a steep yard. Terracing your yard can help slow down the water, minimizing the potential for erosion. Terracing can create dramatic views and broaden your yard's use for landscaping or gardening.



# SITE SPECIFIC STORMWATER BMPS FOR HOMEOWNERS

Depending on the lot size and lot coverage, there are several effective nonstructural and simple structural stormwater BMPs that can be built and used by property owners Some of the most popular methods include Guttering into Rain Barrels, Cisterns or Rain Gardens, Porous Paving, Vegetated Buffers, Contouring and Terracing.

### GUTTERING

One of the easiest methods of managing residential stormwater is through the use of guttering which is directed by down spouts to either your lawn or flower bed rather than to your driveway. Another variation on that method is to set up a rain barrel or cistern to capture your roof runoff and use it to irrigate your yard. This method of treatment is best used for small to medium residential lots where space is at a premium.

The Apalachicola National Estuarine Research Reserve offers classes periodically on how to build Rain Barrels and other Green Infrastructure BMPs. Contact them at 850-670-7708 to learn more.



## How To Build A Rain Barrel

store more water, double-size the stand and a plastic 55-gallon drum with a cover. Place gallons weighs 440 lbs.), so use 4x4 treated you'll need to elevate the barrel on a stand If you want to use a wand or a spray nozzle, drain valve. This installation will work if in the side near the bottom and screw in a the drum near a downspout, drill a hole lumber for the legs and secure everything for more water pressure. Water is heavy (55 you plan to run a soaker hose to your garden from plastic drums or trash cans. Start with It's pretty easy to build your own rain barrels add a second barrel. lags. If you have large gardens and want to with construction screws or stainless steel

Cut holes in the bottoms of the barrels with a 2-1/4-in. hole saw. Then screw in a 2-in. male threaded electrical conduit adapter. Squirt a thin bead of silicone caulk around the opening and screw on a threaded electrical PVC coupler to cinch the barrel between the two fittings Next, glue together sections of 2-in. PVC pipe, unions, reducers and valves. As long as you're at it, install an overflow pipe so you can direct the excess where you want it. Finally, cut a hole in one of the covers and mount a screen to filter out leaves and debris.

You can download complete instructions for how to build a rain barrel at http://www.epa.gov/region3/p2/make-rainbarrel.pdf

### RAIN GARDENS

A rain garden is a good option for homeowners with a medium to large lot with plenty of open space. You will want to gutter the rain at least 10 feet away from the house as this is a wet-detention form of stormwater management.

system. A rain garden also reduces the garden will have done its job. It will have overflow the rain garden and run into garden via a swale (a stone channel) or water rapidly seep into the soil. You direct garden bed that you plant with special that may otherwise run off into local amount of lawn chemicals and pet wastes tion and reduced the load on the sewer channeled water away from your foundathe storm sewer system. Even so, the rain especially heavy rainfall, excess water may it into the soil within a day. If there's an water and, when properly designed, drains plastic piping. The garden captures the the rainwater from the downspouts to the deep-rooted species. These plants help the A rain garden is basically a plant pond - a

Create the rain garden by building a berm in a low spot in the yard, then build swales to channel runoff from the gutters and higher parts of the yard. The water is then absorbed into the soil through the network of deep plant roots. Use a mix of plants adapted to your area and to the different water depths.

Learn more about how to build a rain garden by visiting: www.familyhandyman.com/garden/how-to-build-a-rain-garden-in-your-yard/view-all.

## How Big Should My Rain Garden Be?

a 2,400-sq.-ft. rectangular home with a you a 100-sq.-ft. ( $10 \times 10$  ft.) garden size. porosity can handle a 6-in.-deep (that is, of water—50 cu. ft. in this case. If your soil depth (1 in., or 1/12 ft.) to get the volume to each downspout. Multiply by rainfall approximately 600 sq. ft. of runoff going downspout at each corner, you'd have drains down the spout. For example, in calculate the rough area of the roof that fall from an average storm). To do this, feeds it during a 1-in. rainfall (the rainflow off the roof and down the spout that estimate the volume of water that would To determine the best size for your garden, 1/2 ft.) garden bed, dividing by 1/2 ft. gives





**POROUS PAVING** 

Porous paving blocks (or other pervious material such as uncompacted rock or shell) can be an effective stormwater management option for patios, driveways and pathways. As its name implies, this is a highly porous form of concrete. It's made from aggregate (small stones) and cement, which binds the aggregate together. However, unlike conventional concrete, pervious concrete contains little, if any, sand. This results in a substantial number of open spaces in the concrete, basically a lot of holes through which water can flow into the ground.

The purpose of porous concrete is to allow rain to soak into these areas rather than run off your property. Porous concrete is particularly suitable for driveways or patios. Properly installed, a driveway constructed with porous concrete can remain pervious and act as a retention area, thereby reducing stormwater volume and pollution load. However, porous concrete is only feasible and cost effective on sites with gentle slopes, permeable soils and relatively deep water tables.

## PERMEABLE CONCRETE

For patios or walkways, permeable concrete pavers may be a suitable option. The pavers are solid, but if they're spaced correctly, water drains between them. Pavers are placed over a bed of sand or gravel, which filters water before it percolates into the soil. Permeable pavers are made from concrete or cut stone and are available in several styles.

Most permeable paver blocks are designed to support vehicles, but are sufficiently open to allow water to drain through them. The spaces are filled with gravel or sand. Grass or low ground cover can grow in the open spaces, which helps reduce heat buildup.

Note: Pervious paving is considered lot coverage and is subject to the lot coverage restrictions identified in the zoning code district standards.

