



**TOWN OF REDINGTON BEACH
BOARD REGULAR MEETING AGENDA
Wednesday, March 4, 2020
6:30 P.M.**

Town Hall

Assembly Hall

- 1. CALL TO ORDER**
- 2. PLEDGE OF ALLEGIANCE**
- 3. ROLL CALL**
- 4. APPROVAL OF AGENDA**
- 5. PUBLIC FORUM: Non-Agenda Items Only NOTE:** A three minute time limit applies to all comments from the public on non-agenda items only. If a person wishes to address the Board of Commissioners, please fill out a "Speakers Card" and give it to the Town Clerk prior to the start of the meeting.

6. REPORTS

Public Safety	Vice Mayor Kornijtschuk
Building/Code	Commissioner Will
Public Works/Parks	Commissioner Steiermann
Finance	Commissioner Dorgan
Mayor	
Town Clerk	
Attorney Daigneault	
Boards & Committees	

7. CONSENT AGENDA

- A. Board Regular Meeting Minutes, February 19, 2020**
- B. Bill List for Day Ending February 28, 2020**

8. UNFINISHED BUSINESS

- A. 75th Anniversary Contract**
- B. Building Department Contract: Expires 3/31/2020**
- C. Final Reading: Ordinance 2019-10: An Ordinance of the Town of Redington Beach, Pinellas County, Florida, Amending the Town's Future Land Use Element Policy 1.8.1 to Increase the Permitted Impervious Surface Ratio in the Land Use Designations from 40 Percent to 65 Percent and Clarifying the Permitted Impervious Surface Ratio in the Residential/Office/Retail Future Land Use Designation, and Amending the Comprehensive Plan's Infrastructure Element Policy 2.1.2 to Prescribe Mitigating Measures to Be Employed to Ensure that Post-Development Runoff Rates, Providing for Severability; and Establishing an Effective Date.**
- D. Update on Grant Application: Lynn Burnett**



9. NEW BUSINESS

- A. **First Reading: Ordinance 2020-01: On Ordinance of the Town of Redington Beach, Pinellas County Florida, Amending the Town's 2008 Comprehensive Plan's Infrastructure Element to Incorporate Policies Related to and Adopting the Town's Ten Year Water Supply Facilities work Plan in Accordance with the Mandates Set Forth in Chapter 163, Florida Statutes, Specifically Section 163.3177 (6)(c)3, and Based on Updated Data and Analyses; Providing for Severability; and Establishing an Effective Date.**
- B. **First Reading: Ordinance 2020-02: An Ordinance of the Town of Redington Beach, Pinellas County, Florida, Amending the Town's 2008 Comprehensive Plan's Conservation and Coastal Management and Intergovernmental coordination Elements to Incorporate Goals, Objectives, and Policies Related to Mitigating the Effects of Climate Change, Sea Level Rise, Extreme High Tides, and Storm Surge, in Accordance with the Mandates set Forth in Chapter 163, Florida Statutes, Specifically Section 163.3178 (f)(1)-(4), and Based on Updated Data and Analyses; Providing for Severability; and Establishing an Effective Date.**
- C. **First Reading: Ordinance 2020-03: An Ordinance of the Town of Redington Beach, Pinellas County, Florida, Amending Town Code, chapter 18.5, Stormwater, By Creating and Inserting Article IV, Adopting a Standard Details Manual for Public Works and Private Property Improvements which Manual Established Standard Details for all Works within the Town's Public Rights of Way and for Collection, Retention and Treatment of Stormwater Runoff on Private Properties, Providing for Severability; and Establishing an Effective Date.**
- D. **Flood Insurance Discussion**

10. OTHER BUSINESS

11. ADJOURNMENT

Note: The Town of Redington Beach Board of Commissioners meet the First and Third Wednesday of each month beginning at 6:30 p.m.

The Town of Redington Beach Board of Commissioners may take action on any matter during this meeting, including items that are not set forth within this agenda.

Minutes of the Board of Commissioners meeting may be obtained from the Town Clerk's office. The meetings may be recorded. The Minutes are not transcribed verbatim. It is the policy of the Board of Commissioners to make "action minutes" of all meetings

Persons requiring a verbatim transcript of any Town meeting (for purposes of appeal or otherwise) should make arrangements to have a certified Court Reporter, at their own cost and expense, present at the meeting.

Persons who wish to appeal any decision made by the Board of Commissioners with respect to any matter considered at this meeting will need a record of the proceedings, and for such purpose may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based. (F.S 286.0105) **Notice Regarding Special Accommodations: (F.S. 286.26)**



TOWN OF REDINGTON BEACH, FLORIDA
BOARD REGULAR MEETING MINUTES
Wednesday, February 19, 2020
6:30 p.m.

Having been duly advertised as required by law, the **Regular Meeting** of the Board of Commissioners of the Town of Redington Beach, Florida, was held on **Wednesday, February 19, 2020, 6:30 p.m.**, in Redington Beach Town Hall at 105 164th Avenue, Redington Beach Florida.

Mayor Simons called the **Regular Meeting** to order and led the pledge of allegiance.

Roll Call

	Present	Absent
Commissioner Dorgan	X	
Commissioner Steiermann	X	
Commissioner Will	X	
Vice Mayor Kornijtschuk	X	
Mayor Simons	X	
Town Attorney Daigneault	X	
Town Clerk Clarke	X	

Agenda: A motion by Commissioner Steiermann and seconded by Vice Mayor Kornijtschuk to accept the agenda as presented. Motion passed with all ayes.

Public Forum: None

Public Safety

- Nothing to Report

Building

- Commissioner Will reported that we received the go ahead from Water and Navigation to begin the replacement of the outfall pipe in Friendship Park.

Public Works

- Nothing to Report

Finance

- Commissioner Dorgan reported that the town has received an update for flood insurance on the two building and is requesting that this be put on the next agenda for discussion.

Mayor

- Nothing to Report

Town Clerk

- Nothing to Report

Town Attorney

- Nothing to Report

Boards and Committees

- Nothing to Report

CONSENT AGENDA

- A. Board Regular Meeting Minutes, February 5, 2020**
- B. Bill list ending for Day ending February 14, 2020**

A motion by Commissioner Tom Dorgan and seconded by Vice Mayor Kornijtschuk to approve the consent agenda as presented. No public comment. Roll call vote was taken and motion passed with all ayes.

	Motion	Second	Aye	Nay	Absent
Commissioner Dorgan	X		X		
Commissioner Steiermann			X		
Commissioner Will			X		
Vice Mayor Kornijtschuk		X	X		
Mayor Simons			X		

UNFINISHED BUSINESS

- A. Resolution 2020-02: A Resolution of the Board of Commissioners of the Town of Redington Beach, Florida, Entering into an Agreement with Kloote Contracting, Inc. for the Completion of the Friendship Park Improvements Project, Project No. ITB 2019-01, and providing for an effective date.** Attorney Daigneault read the resolution by title. Bruce McLaughlin, Town Planner reported that the contractor is reviewing the contract and will meet with Commissioner Will and himself regarding the tree grates and the tax exemption status on Friday. A motion by Commissioner Will and seconded by Commissioner Steiermann to table this resolution until the next meeting. Motion passed with all ayes.
- B. 75th Anniversary Update:** Commissioner Steiermann thanked committee members, Kris Johanson, Lisa Miller, Toni Scarr, Gina Thurman of Florida Desitinations, and town clerk. It will be a day of fun filled activities. Kris Johanson gave an overview of the events to the commission. The cost is \$18,171.00, which includes a courtesy discount of \$5,000.00. She also reported that the RBPOA has agreed to donate \$3,000.00 towards the event and with the sale of commemorate beer mug sales, the cost to the town would be approximately \$14,296.00. It was the consensus of the commission to move forward with the 75th Celebration.
- C. Building Department Contract: Expires 3/31/2020:** Mayor Simons introduced Tom Walsh of Safebuilt. Mr. Walsh noted that the changes to the terms mirror the contract that North Redington Beach currently renewed. The contract is for three years with the option of two additional three year contracts. The permits fees will follow the county fees. After hour costs will be passed onto the contractor or homeowner, not the town. Also included is 20 hours of assistance with CRS, after the 20 hours it will be a cost to the town of \$100.00 per hour, unless the revenues are over \$210,000.00, then the services would be free. Also discussed was the town planner reviewing the zoning portion of the permitting. It was the consensus of the commission to have the contract include that Mr. McLaughlin review the zoning portion at the Safebuilt offices. Also reviewed was the professional liability insurance, the office hours and the

termination clause. The consensus of the commission was to have the modifications be made to the contract and execute this at the March 4th meeting.

New Business

Other Business

With no further business, a motion was made by Vice Mayor Kornijtschuk and seconded by Commissioner Will to adjourn. Regular meeting was adjourned at 7:00 p.m.

Adopted: , 2020

Missy Clarke, CMC, Town Clerk

INVOICE APPROVAL LIST BY FUND REPORT

Date: 02/28/2020

Time: 12:39 pm

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Town of Redington Beach

Fund/Dept/Acct	Vendor Name	Invoice #	Invoice Desc.	Check #	Due Date	Posting Date	Amount
Fund: 101 General Fund							
Dept: 512 Town Clerk							
101-512-512.420	Postage						
	PINELLAS COUNTY TAX COL	2020-02-27	2019 RE tax postage billing	0	02/19/2020	02/19/2020	74.97
							74.97
101-512-512.490	Advertising						
	TIMES PUBLISHING COMPAI	61500	LPA 2020-01, 02, 03	0	02/14/2020	02/14/2020	165.20
							165.20
101-512-512.510	Office Supplies						
	APEX OFFICE PRODUCTS	2024640-0	Toilet tissue	0	02/21/2020	02/21/2020	36.99
	APEX OFFICE PRODUCTS	2025812-0	Liquid hand soap, copy paper	0	02/25/2020	02/25/2020	99.97
	MAD BEACH PRINT SHOP	109455	Envelopes	0	02/25/2020	02/25/2020	140.00
							276.96
101-512-512.521	Document Reten						
	CHASE CARD SERVICES	5040677	Records disposal dump fee	0	02/14/2020	02/14/2020	10.00
							10.00
							Total Dept. Town Clerk: 527.13
Dept: 515 Comprehensive Planni							
101-515-515.310	Planning						
	BRUCE MCLAUGHLIN CONS	2020-02-28	2/14/2020-2/27/2020	0	02/28/2020	02/28/2020	530.40
							530.40
							Total Dept. Comprehensive Planning: 530.40
Dept: 521 Law Enforcement							
101-521-521.340	Law Enforcement						
	PINELLAS COUNTY SHERIFF	849882	Law Enf. March 2020	0	03/01/2020	03/01/2020	21,899.00
							21,899.00
							Total Dept. Law Enforcement: 21,899.00
Dept: 524 Protective Services							
101-524-524.310	Code Enforcement						
	PINELLAS COUNTY SHERIFF	819945	Code Enf. Dec. 2019	0	01/03/2020	01/03/2020	1,999.07
							1,999.07
							Total Dept. Protective Services: 1,999.07
Dept: 572 Parks and Recreation							
101-572-572.430	Utilities						
	DUKE ENERGY	60814-47178	2020-02-27 February 2020	0	02/27/2020	02/27/2020	15.49
	PINELLAS COUNTY UTILITIE	2020-02-27	12/4/19-2/4/2020	0	02/24/2020	02/24/2020	136.73
							152.22
101-572-572.510	Maintenance Eql						
	DOUDNA'S SEMINOLE MOW	224581	Mower Wheel assembly	0	02/25/2020	02/25/2020	99.99
	EVERGLADES FARM EQUIP	2020-02-27	Bal on tractor repair	0	02/27/2020	02/27/2020	29.46
							129.45
101-572-572.522	Gasoline & Oil						
	WEX BANK	792390	Unleaded	0	02/26/2020	02/26/2020	37.11
							37.11
							Total Dept. Parks and Recreation: 318.78
							Total Fund General Fund: 25,274.38

Fund: 400 Storm Water

Dept: 535 Storm Water

Date: 02/28/2020

Time: 12:39 pm

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Town of Redington Beach

Fund/Dept/Acct	Vendor Name	Invoice #	Invoice Desc.	Check #	Due Date	Posting Date	Amount
400-535-535.650	Engineering Expe						
	LTA ENGINEERS, LLC	1936	Eng. Svcs 10/26-12/15/19	0	12/19/2019	12/19/2019	1,837.83
							1,837.83
						Total Dept. Storm Water:	1,837.83
						Total Fund Storm Water:	1,837.83
						Grand Total:	27,112.21

2/26/2020

9127 PAYROLL	277.05
9128 PAYROLL	277.05
9129 PAYROLL	381.75
9130 PAYROLL	277.05
9131 PAYROLL	277.05
9132 PAYROLL	1,825.40
9133 PAYROLL	1,412.11
9134 PAYROLL	1,298.99
9135 PAYROLL	1,043.47
EFT Payroll Liabilities	3,108.89
EFT Retirement	2,248.33

12,427.14

MAYOR SIMONS

COMMISSIONER WILL

VICE MAYOR KORNIJTSCHUK

COMMISSIONER DORGAN

ATTEST:

COMMISSIONER STEIERMANN

Regular Meeting of March 4, 2020

Missy Clarke, CMC, Town Clerk

QUOTE #: 001 (rev 02/18/2020)
CLIENT: Town of Redington Beach



9170 Oakhurst Road, Suite 3
Seminole, FL 33776
Ph: 727-596-8824 / Fx: 727-596-8820

CONTRACT

DELIVERY: Saturday, April 18, 2020

ITEM: Picnic In The Park

Description



Celebrate Redington Beach's
rich history of the past 75 years
and the vibrant community that is Redington Beach today.

This family friendly day of celebration provides
Live Entertainment,
Games & Activities,
Barbecue & Beverages,
and, of course,
new experiences that make history of their own.

____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

Quote #001 (rev 02/18/2020)

Town of Redington Beach

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Live Entertainment (4 hours)

Four (4) Piece Nostalgia Band

Playing everything from old-time favorites to a mix of jazz and modern melodies.

Instrumentation:

Keyboard

Bass

Drum

Saxophone

Artistic Entertainment (4 hours)

Professional Face Painter

Includes 2 Director's Chairs & 1 Table

One 10x10 Tent

All necessary Paints and Designs

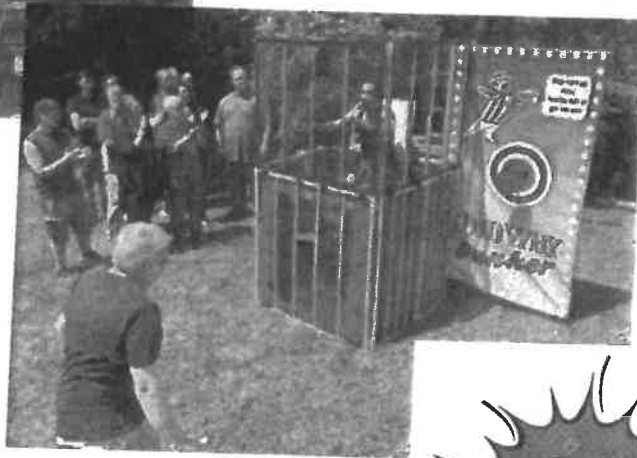
Signage

____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

Quote #001 (rev 02/18/2020)
Town of Redington Beach
Page 3



____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

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Carnival Games

(4 hours)

(see staff detail below)

One (1) Single Station Bungee Jump

One (1) Dunk Tank

One (1) Bounce House

Fun & Games

(4 hours)

(see staff detail below)

Two (2) Giant Jenga

Two (2) Giant Connect Four

Two (2) Corn Hole

Two (2) Tic Tac Toe

Four (4) Golf Putting Challenge

Equipment Rental

One (1) Stage 8ft x 12ft x 12inch tall

Black top w/ black skirting

*139 White Wood Folding Chairs with Padded Seat
(75pcs at stage front + 64 for banquet rounds)*

8 Banquet Round Tables with Tablecloth

8 Cocktail High Top Tables with Tablecloth

4 Additional Rectangle Tablecloths for Work Spaces

1 Lucite High Top Podium Table

____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

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Snack Menu

(4 hours)

*Fresh Popped Popcorn
Served from Popcorn Machine
(250ppl)*

*Cotton Candy
Spun on Location
(100ppl)*

*Ice Cream Bars & Ice Pops
(200pcs)*

Picnic Menu

(2 hours)

(serves 200ppl)

*Barbecue Chicken
cooked on location – whole cut chicken pieces*

Shredded BBQ Pork Sandwiches

Corn on the Cob

Creamy Cole Slaw

Mac N Cheese

*All Beef Hot Dogs
(75ppl)*

All necessary Condiments, Heavy Weight Paper Plates, Utensils, etc.

____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

Quote #001 (rev 02/18/2020)

Town of Redington Beach

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Bar Service

(4 hours)

(125ppl with alcohol)

(75ppl with non-alcohol)

Beer Service

Serving

Domestic Beer

Cider

Craft Beer

Soft Drinks – Coke, Diet, Sprite

Disposable Cups, Cocktail Napkins, Stir Sticks, Ice

Additional Beverage Service

(4 hours) (125ppl)

Beverage Station utilizing Dispensers of

Water

Iced Tea

Lemonade

____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

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Town of Redington Beach

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Event & Service Staff

(4 hours of program length, plus set and strike time)

1 Pit Master

1 Bar Tender

3 Food Service Staff

1 Fun & Games Attendant

1 Bungee Attendant

1 Bounce House Attendant

1 Dunk Tank Attendant

All necessary Set Up and Strike Staff

Additional Inclusions

Includes all necessary Gratuities & Delivery.

Total Program Cost ~~\$23,171.00~~ (courtesy discount) \$18,171.00

TERMS:

Rain Date: In the event of inclement weather, the above event may be moved to the next day (04/19/2020) with a minimum of 48-hours' notice for all program elements with the exception of Band and Face Painters which will be based on an availability basis. Florida Destinations will make every effort to replace these program elements with comparable alternates where possible.

Rental: The above items are quoted for rental and not for purchase.

Availability: All items are based on availability at time of execution of this Agreement.

Guarantee: The final guaranteed number of participants is due on April 3, 2020 by 3:00pm EST and is not subject to reduction. If no guarantee is received the expected number of participants used for calculating this quote will be used as the guarantee.

Deposits: Client Company will be invoiced for a deposit equal to 80% of the total program cost.

_____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

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Town of Redington Beach

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Final Payment: Client Company will be invoiced the balance of the program after completion of the events. Payment is due net 21 days.

Payment Method: The above costs are reflective of a 3% savings for payments made using Check or ACH/Wire Transfer. Payments made using Credit Cards are not eligible for this discount.

Cancellation: In the event that the Client Company cancels this Contract after the mutual execution of this Contract, the Client Company shall owe FD a penalty equal to 100% of the Total Program Cost set forth above less any prepaid amounts.

Electrical: The Client is responsible for all charges for electrical power. Where adequate power is not available in immediate area of above service, it is to be provide by Client. It is the responsibility of the Client to make arrangements for any additional electrical service.

Photo Images: Photo images are for sample purposes only. These images may vary slightly from delivered product.

Entertainment/Event Staff: Client to provide non-alcoholic beverages to entertainers/event staff on an as needed basis. Entertainers to take breaks as needed, included in overall time contracted and not to exceed 15 minutes per hour of entertainment.

Liability: Florida Destinations (FD) agrees to use its best efforts to prevent any loss to Client for the failure of proper performance by any third party. However, FD, its agents, employees and representatives shall not be liable or responsible to Client for any such failure.

Indemnity: The Client shall indemnify, defend and hold harmless FD, its agents, employees and representatives against any and all damages, claims, or other liability due to personal injury or death, or damage to property of FD or others, except for claims arising out of the sole gross negligent acts of FD. This indemnification shall include, but not limited to, any valid claims for negligence by FD or any of its suppliers, agents, employees and representatives and any valid claims relating to damage to FD contracted property or facilities. It is understood that the client agrees to pay full for any and all damages reasonably incurred by FD, its suppliers, agents, employees and representatives as a result of the liabilities aforesaid.

Controlling Law and Choice of Forum: The validity, interpretation, and performance of this Contract for products and services provided, shall be controlled by and construed under the laws of the State of Florida. Any suits, actions or proceedings arising out of

____ Client Initial

FD Initial _____

FLORIDA DESTINATIONS

Quote #001 (rev 02/18/2020)

Town of Redington Beach

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this Contract for products and services provided, shall be instituted in the state or federal courts in or governing the County of Pinellas, State of Florida.

Litigation: In the event litigation arises concerning this Contract, FD shall be entitled to recover its reasonable attorney's fees at a trial and at appellate level and all other cost and expenses reasonably incurred in connection with such litigation.

Limits: Under no circumstances shall the liability of FD exceed the amount paid by Client to FD for products and services provided in this Contract. Client further acknowledges and agrees that none of FD's directors, officers, employees, affiliates, representatives or agents shall be personally liable to Client for any debts or liabilities arising under or related to this Contract.

Severability: If any provision of this Contract is declared unenforceable by any court, it shall to that extent be deemed omitted, and the balance of this Contract shall be enforceable in accordance with its terms.

Equipment: Equipment/Items that are missing or broken beyond reasonable circumstances will be billed at replacement costs to, and due by, the below signed client company. With regard to outdoor events, it is recommended to cover entertainment and equipment by a canopy or roof as Client will be responsible for damages to equipment caused by inclement weather.

The contents of this Contract, and the policies set within, meet with the approval of FD and Client and, as an authorized representative, the signatory for each of FD and Client confirms that the arrangements are accurate as outlined.

ACCEPTED BY **Town of Redington Beach**

Client Signature Date

Print Name and Title of above Signatory

ACCEPTED BY **FLORIDA DESTINATIONS**

Florida Destinations Date

Client Initial

FD Initial_____

Initial Proposal Town of Redington Beach 75th Anniversary Celebration April 18, 2020

Town Park - Family Fun Event 12 noon - 4pm

Opening Ceremonies	
VFW Honor Guard	
Mayor's Opening Address	
Present Honorary Mayor for the Day to Oldest Resident	
Food, Entertainment and Games	\$ 18,171
4-piece Nostalgia Band - 40's, 50's, 60's music	
Stage, Sound System, Seating for 125	
Face Painting	
Bungee Jump	
Dunk Tank	
Bounce House	
Giant Jenga and Connect Four, Corn Hole, Tic Tac Toe	
Golf Putting Challenge	
Popcorn, Cotton Candy, Ice Cream Bars	
BBQ Chicken, Pulled Pork Sandwiches, Hot Dogs, 3 sides	
Domestic Beer, Craft Beer, Hard Cider	
Soft Drinks, Water, Tea, Lemonade	
Other Costs	
Graphics for new Town Logo; 350 Commemorative Beer Mugs	\$ 2,150
Frames, printing, etc for historical presentation	TBD
Sash and Framed Proclamation for Oldest Resident	TBD
Signage celebrating 75 years	TBD
Plaque commemorating 75 years	TBD
Offsetting Cost	
RBPOA Donation	\$ 3,000
Estimated Profit from Beer Mug sales	\$ 3,500
Estimated Cost to Town of Redington Beach	\$ 13,821

Beach Park - Beach Strut and Bonfire 6pm to 10pm

Beach Strut - award for Best Hat/Umbrella/Costume	TBD
Lightning Jack Steel Drums 6pm - 10pm	\$ 250
Sheriff's Deputy to direct traffic and provide security	\$ 225
Estimated Cost to Town of Redington Beach	\$ 475

\$ 14,296

Optional Expense

Bomber Girls \$ 300

**PROFESSIONAL SERVICES AGREEMENT
BETWEEN TOWN OF REDINGTON BEACH
AND M.T. CAUSLEY, LLC**

This Professional Services Agreement ("Agreement") is made and entered into by and between the Town of Redington Beach, ("Municipality") and M.T. Causley, LLC, a whole subsidiary of SAFEbuilt, LLC, ("Consultant"). Municipality and Consultant shall be jointly referred to as "Parties".

RECITALS

WHEREAS, Municipality is seeking a consultant to perform the services listed in Exhibit A – List of Services, ("Services"); and

WHEREAS, Consultant is ready, willing, and able to perform Services.

NOW THEREFORE, for good and valuable consideration, the sufficiency of which is hereby acknowledged, Municipality and Consultant agree as follows:

1. SCOPE OF SERVICES

Consultant will perform Services in accordance with codes, amendments and ordinances adopted by the elected body of Municipality. The qualified professionals employed by Consultant will maintain current certifications, certificates, licenses as required for Services that they provide to Municipality in accordance with State of Florida, Chapter 468, Florida Statutes. Consultant is not obligated to perform services beyond what is contemplated by this Agreement.

2. CHANGES TO SCOPE OF SERVICES

Any changes to Services between Municipality and Consultant shall be made in writing that shall specifically designate changes in Service levels and compensation for Services. Both Parties shall determine a mutually agreed upon solution to alter services levels and a transitional timeframe that is mutually beneficial to both Parties. No changes shall be binding absent a written Agreement or Amendment executed by both Parties.

3. FEE STRUCTURE

In consideration of Consultant providing services, Municipality shall pay Consultant for Services performed in accordance with Exhibit B – Fee Schedule for Services.

4. INVOICE & PAYMENT STRUCTURE

Consultant will invoice Municipality on a monthly basis and provide all necessary supporting documentation. All payments are due to Consultant within 30 days of Consultant's invoice date. Payments owed to Consultant but not made within sixty (60) days of invoice date shall bear simple interest at the rate of one and one-half percent (1.5%) per month. If payment is not received within ninety (90) days of invoice date, Services will be discontinued until all invoices and interest are paid in full. Municipality may request, and Consultant shall provide, additional information before approving the invoice. When additional information is requested Municipality will identify specific disputed item(s) and give specific reasons for any request. Undisputed portions of any invoice shall be due within 30 days of Consultants invoice date, if additional information is requested, Municipality will submit payment within thirty (30) days of resolution of the dispute.

5. TERM

This Agreement shall be effective on the latest date on which this Agreement is fully executed by both Parties. The initial term of this Agreement shall be for three (3) years with two (2) additional three (3) year renewal terms.

6. TERMINATION

Either Party may terminate this Agreement, or any part of this Agreement upon ninety (90) days written notice, with or without cause and with no penalty or additional cost beyond the rates stated in this Agreement. In case of such termination, Consultant shall be entitled to receive payment for work completed up to and including the date of termination within thirty (30) days of the termination.

All structures that have been permitted, a fee collected, and not yet expired at the time of termination may be completed through final inspection by Consultant if approved by Municipality. Consultant's obligation is met upon completion of final inspection or permit expiration, provided that the time period to reach such completion and finalization does not exceed ninety (90) days. Alternately, Municipality may exercise the option to negotiate a refund for permits where a fee has been collected but inspections have not been completed. The refund will be prorated according to percent of completed construction as determined by Consultant and mutually agreed upon by all Parties. No refund will be given for completed work.

7. FISCAL NON-APPROPRIATION CLAUSE

Financial obligations of Municipality payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available in accordance with the rules, regulations, and resolutions of Municipality, and other applicable law. Upon the failure to appropriate such funds, this Agreement shall be terminated.

8. MUNICIPALITY OBLIGATIONS

Municipality shall timely provide all data information, plans, specifications and other documentation reasonably required by Consultant to perform Services. Municipality grants Consultant full privilege, non-exclusive, non-transferable license to use all such materials as reasonably required to perform Service.

9. PERFORMANCE STANDARDS

Consultant shall perform the Services using that degree of care, skill, and professionalism ordinarily exercised under similar circumstances by members of the same profession practicing or performing the substantially same or similar services. Consultant represents to Municipality that Consultant retains employees that possess the skills, knowledge, and abilities to competently, timely, and professionally perform Services in accordance with this Agreement. Municipality's sole remedy and Consultant's sole obligation in the event of failure to perform Services in accordance with the terms of this Section shall be re-performance of the services by Consultant.

10. INDEPENDENT CONTRACTOR

Consultant is an independent contractor, and neither Consultant, nor any employee or agent thereof, shall be deemed for any reason to be an employee or agent of Municipality. As Consultant is an independent contractor, Municipality shall have no liability or responsibility for any direct payment of any salaries, wages, payroll taxes, or any and all other forms or types of compensation or benefits to any personnel performing services for Municipality under this Agreement. Consultant shall be solely responsible for all compensation, benefits, insurance and employment-related rights of any person providing Services hereunder during the course of or arising or accruing as a result of any employment, whether past or present, with Consultant, as well as all legal costs including attorney's fees incurred in the defense of any conflict or legal action resulting from such employment or related to the corporate amenities of such employment.

Consultant and Municipality agree that Consultant will be free to contract for similar service to be performed for other employers while under contract with Municipality. Consultant is not an agent or employee of Municipality and is not entitled to participate in any pension plan, insurance, bonus or similar benefits Municipality provides for its employees. Consultant shall determine all conditions of employment including hours, wages, working conditions, discipline, hiring and discharge or any other condition of employment. Consultant employees are not subject to the direction and control of Municipality. Any provision in this Agreement that may appear to give Municipality the right to direct Consultant as to the details of doing the

work or to exercise a measure of control over the work means that Consultant will follow the direction of the Municipality as to end results of the work only.

11. ASSIGNMENT

Neither party shall assign all or part of its rights, duties, obligations, responsibilities, nor benefits set forth in this Agreement to another entity without the written approval of both Parties; consent shall not be unreasonably withheld. Notwithstanding the preceding, Consultant may assign this Agreement to its parent, subsidiaries or sister companies (Affiliates) without notice to Municipality. Consultant may subcontract any or all of the services to its Affiliates without notice to Municipality. Consultant may subcontract any or all of the services to other third parties provided that Consultant gives Municipality prior written notice of the persons or entities with which Consultant has subcontracted. Consultant remains responsible for any Affiliate's or subcontractor's performance or failure to perform. Affiliates and subcontractors will be subject to the same performance criteria expected of Consultant. Performances clauses will be included in agreements with all subcontractors to assure quality levels and agreed upon schedules are met.

12. INDEMNIFICATION

To the fullest extent permitted by law, Consultant shall defend, indemnify, and hold harmless Municipality, its elected and appointed officials, employees and volunteers and others working on behalf of Municipality, from and against any and all third-party claims, demands, suits, costs (including reasonable legal costs), expenses, and liabilities ("Claims") alleging personal injury, including bodily injury or death, and/or property damage, but only to the extent that any such Claims are caused by the negligence of Consultant or any officer, employee, representative, or agent of Consultant. Consultant shall have no obligations under this Section to the extent that any Claim arises as a result of Consultants compliance with Municipal law, ordinances, rules, regulations, resolution, executive orders or other instructions received from Municipality.

To the fullest extent permitted by law and without waiver of sovereign immunity, Municipality shall defend, indemnify, and hold harmless Consultant, its officers, employees, representatives, and agents, from and against any and all Claims alleging personal injury, including bodily injury or death, and/or property damage, but only to the extent that such Claims are caused by (a) the negligence of, or material breach of any obligation under this Agreement by, Municipality or any officer, employee, representative, or agent of Municipality or (b) Consultant's compliance with Municipal law, ordinances, rules, regulations, resolutions, executive orders or other instructions received from Municipality. If either Party becomes aware of any incident likely to give rise to a Claim under the above indemnities, it shall notify the other and both Parties shall cooperate fully in investigating the incident.

13. LIMITS OF LIABILITY

EXCEPT ONLY AS MAY BE EXPRESSLY SET FORTH HEREIN, CONSULTANT EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES OR ANY KIND, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ERROR-FREE OPERATION, PERFORMANCE, ACCURACY, OR INFRINGEMENT. IN NO EVENT SHALL CONSULTANT OR MUNICIPALITY BE LIABLE TO ONE ANOTHER FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL, RELIANCE, EXEMPLARY, OR SPECIAL DAMAGES INCLUDING WITHOUT LIMITATION, DAMAGES FOR LOST PROFITS, LOST REVENUES, LOST DATA OR OTHER INFORMATION, OR LOST BUSINESS OPPORTUNITY, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, INDEMNITY, NEGLIGENCE, WARRANTY, STRICT LIABILITY, OR TORT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY OTHER THAN WITH RESPECT TO PAYMENT OF OBLIGATIONS FOR SERVICES. IN NO EVENT SHALL THE LIABILITY OF MUNICIPALITY OR CONSULTANT UNDER THIS AGREEMENT FROM ANY CAUSE OF ACTION WHATSOEVER (REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT OR UNDER ANY OTHER LEGAL THEORY, AND WHETHER ARISING BY NEGLIGENCE, INTENDED CONDUCT, OR OTHERWISE) EXCEED THE LESSOR OF THE AMOUNT OF FEES PAID TO CONSULTANT PURSUANT TO THIS AGREEMENT, OR THE AVAILABLE LIMITS OF INSURANCE UNDER THE POLICIES OF INSURANCE SPECIFIED IN THIS AGREEMENT.

INSURANCE

- A. Consultant shall procure and maintain and shall cause any subcontractor of Consultant to procure and maintain, the minimum insurance coverages listed below throughout the term of this Agreement. Such coverages shall be procured and maintained with forms and insurers acceptable to Municipality. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.
- B. Worker's compensation insurance to cover obligations imposed by applicable law for any employee engaged in the performance of work under this Agreement, and Employer's Liability insurance with minimum limits of one million dollars (\$1,000,000) bodily injury each accident, one million dollars (\$1,000,000) bodily injury by disease – policy limit, and one million dollars (\$1,000,000) bodily injury by disease – each employee. Worker's compensation coverage in "monopolistic" states is administered by the individual state and coverage is not provided by private insurers. Individual states operate a state administered fund of workers compensation insurance which set coverage limits and rates. Monopolistic states: Ohio, North Dakota, Washington, Wyoming.
- C. Commercial general liability insurance with minimum combined single limits of one million dollars (\$1,000,000) each occurrence and two million dollars (\$2,000,000) general aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage, personal injury (including coverage for contractual and employee acts), blanket contractual, independent Consultant's, and products. The policy shall contain a severability of interest provision and shall be endorsed to include Municipality and Municipality's officers, employees, and consultants as additional insureds.
- D. Professional liability insurance with minimum limits of one million dollars (\$1,000,000) each claim and two million dollars (\$2,000,000) general aggregate.
- E. Automobile Liability: If performance of this Agreement requires use of motor vehicles licensed for highway use, Automobile Liability Coverage is required that shall cover all owned, non-owned, and hired automobiles with a limit of not less than \$1,000,000 combined single limit each accident.
- F. Municipality shall be named as an additional insured on Consultant's insurance coverage.
- G. Prior to commencement of Services, Consultant shall submit certificates of insurance acceptable to Municipality.

14. THIRD PARTY RELIANCE

This Agreement is intended for the mutual benefit of Parties hereto and no third-party rights are intended or implied.

15. OWNERSHIP OF DOCUMENTS

Except as expressly provided in this Agreement, Municipality shall retain ownership of all work product and deliverables created by Consultant pursuant to this Agreement and all records, documents, notes, data and other materials required for or resulting from the performance of Services hereunder shall not be used by Consultant for any purpose other than the performance of Services hereunder without the express prior written consent of Municipality. All such records, documents, notes, data and other materials shall become the exclusive property of Municipality when Consultant has been compensated for the same as set forth herein, and Municipality shall thereafter retain sole and exclusive rights to receive and use such materials in such manner and for such purposes as determined by it. Notwithstanding the preceding, Consultant may use the work product, deliverables, applications, records, documents and other materials required for or resulting from the Services, all solely in anonymized form, for purposes of (i) benchmarking of Municipality's and others performance relative to that of other groups of customers served by Consultant; (ii) sales and marketing of existing and future Consultant services; (iii) monitoring Service performance and making improvements to the Services. For the avoidance of doubt, Municipality Data will be provided to third parties only on an anonymized basis and only as part of a larger body of anonymized data. If this Agreement expires or is terminated for any reason, all records, documents, notes, data and other materials maintained or stored in Consultant's secure proprietary software pertaining to Municipality will be exported into a CSV file and

become property of Municipality. Notwithstanding the preceding, Consultant shall own all rights and title to any Consultant provided software and any improvements or derivative works thereof.

Upon reasonable prior written notice, Municipality and its duly authorized representatives shall have access to any books, documents, papers and records of Consultant that are related to this Agreement for the purposes of audit or examination, other than Consultant's financial records, and may make excerpts and transcriptions of the same at the cost and expense of Municipality.

16. CONSULTANT ACCESS TO RECORDS

Parties acknowledge that Consultant requires access to Records in order for Consultant to perform its obligations under this Agreement. Accordingly, Municipality will either provide to Consultant on a daily basis such data from the Records as Consultant may reasonably request (in an agreed electronic format) or grant Consultant access to its Records and Record management systems so that Consultant may download such data. Data provided to or downloaded by Consultant pursuant to this Section shall be used by Consultant solely in accordance with the terms of this Agreement.

17. CONFIDENTIALITY

Consultant shall not disclose, directly or indirectly, any confidential information or trade secrets of Municipality without the prior written consent of Municipality or pursuant to a lawful court order directing such disclosure.

18. CONSULTANT PERSONNEL

Consultant shall employ a sufficient number of experienced and knowledgeable employees to perform Services in a timely, polite, courteous and prompt manner. Consultant shall determine appropriate staffing levels and shall promptly inform Municipality of any reasonably anticipated or known employment-related actions which may affect the performance of Services. Additional staffing resources shall be made available to Municipality when assigned employee(s) is unavailable.

19. DISCRIMINATION & ADA COMPLIANCE

Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, age, sex, disability, national origin or any other category protected by applicable federal or state law. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notice to be provided by an agency of the federal government, setting forth the provisions of Equal Opportunity laws. Consultant shall comply with the appropriate provisions of the Americans with Disabilities Act (the "ADA"), as enacted and as from time to time amended, and any other applicable federal regulations. A signed certificate confirming compliance with the ADA may be requested by Municipality at any time during the term of this Agreement.

20. PROHIBITION AGAINST EMPLOYING ILLEGAL ALIENS

Consultant is registered with and is authorized to use and uses the federal work authorization program commonly known as E-Verify. Consultant shall not knowingly employ or contract with an illegal alien to perform work under this Agreement and will verify immigration status to confirm employment eligibility. Consultant shall not enter into an agreement with a subcontractor that fails to certify to Consultant that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement. Consultant is prohibited from using the E-Verify program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

21. SOLICITATION/HIRING OF CONSULTANT'S EMPLOYEES

During the term of this Agreement and for one year thereafter, Municipality shall not solicit, recruit or hire, or attempt to solicit, recruit or hire, any employee or former employee of Consultant who provided services

to Municipality pursuant to this Agreement ("Service Providers"), or who interacted with Municipality in connection with the provision of such services (including but not limited to supervisors or managers of Service Providers, customer relations personnel, accounting personnel, and other support personnel of Consultant). Parties agree that this provision is reasonable and necessary in order to preserve and protect Consultant's trade secrets and other confidential information, its investment in the training of its employees, the stability of its workforce, and its ability to provide competitive building department programs in this market. If any provision of this section is found by a court or arbitrator to be overly broad, unreasonable in scope or otherwise unenforceable, Parties agree that such court or arbitrator shall modify such provision to the minimum extent necessary to render this section enforceable. In the event that Municipality hires any such employee during the specified period, Municipality shall pay to Consultant a placement fee equal to 25% of the employee's annual salary including bonus.

22. NOTICES

Any notice under this Agreement shall be in writing and shall be deemed sufficient when presented in person, or sent, pre-paid, first class United States Mail, or delivered by electronic mail to the following addresses:

If to Municipality:	If to Consultant:
Missy Clark, Town Clerk Town of Redington Beach 105 164 th Avenue Redington Beach, FL 33708	Tom Walsh, Regional Operations Manager M.T. Causley, LLC 18001 Gulf Blvd Redington Shores, FL 33708 Mike Causley M.T. Causley, LLC 866 Ponce de Leon Blvd, 2nd Floor Coral Gables, FL 33134

23. FORCE MAJEURE

Any delay or nonperformance of any provision of this Agreement by either Party (with the exception of payment obligations) which is caused by events beyond the reasonable control of such party, shall not constitute a breach of this Agreement, and the time for performance of such provision, if any, shall be deemed to be extended for a period equal to the duration of the conditions preventing such performance.

24. DISPUTE RESOLUTION

In the event a dispute arises out of or relates to this Agreement, or the breach thereof, and if said dispute cannot be settled through negotiation, Parties agree first to try in good faith to settle the dispute by mediation, before resorting to arbitration, litigation, or some other dispute resolution procedure. The cost thereof shall be borne equally by each Party.

25. ATTORNEY'S FEES

In the event of dispute resolution or litigation to enforce any of the terms herein, each Party shall pay all its own costs and attorney's fees.

26. AUTHORITY TO EXECUTE

The person or persons executing this Agreement represent and warrant that they are fully authorized to sign and so execute this Agreement and to bind their respective entities to the performance of its obligations hereunder.

27. CONFLICT OF INTEREST AND ETHICS REQUIREMENTS

This Agreement is subject to State of Florida Code of Ethics. Agreement may be subject to the Town of Redington Beach's Code of Ethics and investigation and/or audit by Inspector General. Accordingly, there are

prohibitions and limitation on the employment of Municipal officials and employees and contractual relationships providing a benefit to the same.

28. PUBLIC RECORDS

Pursuant to section 119.071, Florida Statutes, Consultant shall comply with Florida's Public Records Act, Chapter 119, Florida Statutes, and agrees to:

- A. Keep and maintain all public records that ordinarily and necessarily would be required by Municipality to keep and maintain in order to perform Services under this Agreement.
- B. Upon request from Municipality's custodian of public records, provide copies to Municipality within a reasonable time and public access to said public records on the same terms and conditions that Municipality would provide the records and at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
- C. Ensure that said public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.
- D. Meet all requirements for retaining said public records and transfer, at no cost, to Municipality all said public records in possession of Consultant upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt from Chapter 119, Florida Statutes, disclosure requirements. All records stored electronically must be provided to Municipality in a format that is compatible with the information technology systems of Municipality.

E. IF CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Clerk Office: Missy Clarke, CMC Address: 105 164th Avenue East Redington Beach, FL 33708	Phone: 727.391.3875 Email: townclerk@townofredingtonbeach.com
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29. GOVERNING LAW AND VENUE

This Agreement shall be construed under and governed by the laws of the State of Florida and all services to be provided will be provided in accordance with applicable federal, state and local law, without regard to its conflict of laws provisions.

30. COUNTERPARTS

This Agreement and any amendments may be executed in one or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. For purposes of executing this Agreement, scanned signatures shall be as valid as the original.

31. ELECTRONIC REPRESENTATIONS AND RECORDS

Parties hereby agree to regard electronic representations of original signatures as legally sufficient for executing this Agreement and scanned signatures emailed by PDF or otherwise shall be as valid as the original. Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

32. WAIVER

Failure to enforce any provision of this Agreement shall not be deemed a waiver of that provision. Waiver of any right or power arising out of this Agreement shall not be deemed waiver of any other right or power.

33. ENTIRE AGREEMENT

This Agreement, along with attached exhibits, constitutes the complete, entire and final agreement of the Parties hereto with respect to the subject matter hereof, and shall supersede any and all previous communications, representations, whether oral or written, with respect to the subject matter hereof. Invalidity of any of the provisions of this Agreement or any paragraph sentence, clause, phrase, or word herein or the application thereof in any given circumstance shall not affect the validity of any other provision of this Agreement.

The undersigned have caused this Agreement to be executed in their respective names on the dates hereinafter enumerated.


Michael T. Causley
M.T. Causley, LLC – A SAFEbuilt Company

February 20, 2020

Date

Signature

Date

Name and Title
Town of Redington Beach

(Balance of page left intentionally blank)

EXHIBIT A – LIST OF SERVICES

1. LIST OF SERVICES

Building Official Services

- ✓ Manage and help administer the department and report to Municipality's designated official
- ✓ Be a resource for Consultant team members, Municipal staff, and applicants
- ✓ Help guide citizens through the complexities of the codes in order to obtain compliance
- ✓ Monitor changes to the codes including state or local requirements and determine how they may impact projects in the area and make recommendations regarding local amendments
- ✓ Assist Municipal staff in revising and updating municipal code to comply with adopted requirements
- ✓ Provide Building Code interpretations for final approval
- ✓ Oversee our quality assurance program and will make sure that we are meeting our agreed upon performance measurements and your expectations
- ✓ Provide training for our inspectors on Municipality adopted codes and local amendments as needed
- ✓ Oversee certificate of occupancy issuance to prevent issuance without compliance of all departments
- ✓ Attend staff and council meetings as mutually agreed upon
- ✓ Responsible for reporting for Municipality – frequency and content to be mutually agreed upon
- ✓ Responsible for client and applicant satisfaction
- ✓ Work with Municipal staff to establish and/or refine building department processes
- ✓ Issue stop-work notices for non-conforming activities – as needed

Building, Electrical, Plumbing, and Mechanical Inspection Services

- ✓ Consultant utilizes an educational, informative approach to improve the customer's experience.
- ✓ Perform code compliant inspections to determine that construction complies with approved plans
- ✓ Meet or exceed agreed upon performance metrics regarding inspections
- ✓ Provide onsite inspection consultations to citizens and contractors while performing inspections
- ✓ Return calls and emails from permit holders in reference to code and inspection concerns
- ✓ Identify and document any areas of non-compliance
- ✓ Leave a copy of the inspection ticket and discuss inspection results with site personnel

Plan Review Services

- ✓ Provide plan review services electronically or in the traditional paper format
- ✓ Review plans for compliance with adopted building codes, local amendments or ordinances
- ✓ Be available for pre-submittal meetings by appointment
- ✓ Coordinate plan review tracking, reporting, and interaction with applicable departments
- ✓ Provide feedback to keep plan review process on schedule
- ✓ Communicate plan review findings and recommendations in writing
- ✓ Return a set of finalized plans and all supporting documentation
- ✓ Provide review of plan revisions and remain available to applicant after the review is complete

Permit Technician Services

- ✓ Provide qualified individuals to perform the functions of this position
- ✓ Facilitate the permitting process from initial permit intake to final issuance of permit
- ✓ Review submittal documents and request missing information to ensure packets are complete
- ✓ Provide front counter customer service as necessary
- ✓ Answer questions concerning the building process and requirements at the counter or over the phone
- ✓ Form and maintain positive relationships with Municipal staff and maintain a professional image
- ✓ Determine permit fees based on County fee schedule as established by ordinance, if requested
- ✓ Work with Municipal Clerk to facilitate Freedom of Information Act (FOIA) requests, if requested
- ✓ Provide inspection scheduling and tracking to ensure code compliance
- ✓ Act as an office resource to inspectors in the field

- ✓ Process applications for Municipal Boards and Commissions – if requested
- ✓ Provide input, tracking and reporting to help increase efficiencies

Floodplain Management Services

- ✓ Facilitate and assist with the floodplain oversight program as established by Municipality
- ✓ Assist Municipality with Municipal CRS audit and provide assistance on improving Municipal CRS rating
- ✓ Assist in the preparation of annual re-certification statements for continuing program compliance
- ✓ Review elevation certificates for new construction projects
- ✓ Assist the Municipality on all required flood plain documentation and elevation certificates before issuance of certificate of occupancy
- ✓ Assess current practices to help ensure Municipality is credited with eligible CRS program elements and maintain or improve current classification rating
- ✓ Provide assistance with the establishment of a Program for Public Information (PPI) to increase public awareness and earn higher CRS program ratings to reduce flood insurance premiums

2. TIME OF PERFORMANCE

- ✓ Services will be performed during normal business hours excluding Municipal holidays.
- ✓ Building Official will be on-site at the Municipal offices Monday and Friday or as mutually agreed upon
- ✓ Permit Technician will be available five (5) days a week; Monday – Friday for eight (8) hours a day
- ✓ Inspectors will be dispatched on an as-needed basis
- ✓ Consultants representative(s) will be on-site weekly based on activity levels
- ✓ Consultants representative(s) will be available by cell phone and email
- ✓ Consultants representative(s) will meet with the public by appointment
- ✓ Additional Inspectors will be dispatched on an as-needed basis

Deliverables			
INSPECTION SERVICES	Perform inspections received from the Municipality prior to 4:00 pm next business day		
TWO HOUR INSPECTION WINDOW	Provide a two-hour window of time that the permit holder can expect to have their inspection performed – Upon request only		
MOBILE RESULTING	Provide our inspectors with field devices to enter results immediately		
PRE-SUBMITTAL MEETINGS	Provide pre-submittal meetings to applicants by appointment		
PLAN REVIEW TURNAROUND TIMES	Provide comments within the following timeframes: Day 1 = first full business day after receipt of plans and all supporting documents		
	<u>Project Type:</u>	<u>First Comments</u>	<u>Second Comments</u>
	✓ Single-family within	5 business days	5 business days or less
	✓ Multi-family within	10 business days	5 business days or less
	✓ Small commercial within (under \$2M in valuation)	10 business days	5 business days or less
	✓ Large commercial within	20 business days	10 business days or less
APPLICANT SATISFACTION	Put a survey in place that allows applicants to provide feedback on their experience throughout the process		

EXHIBIT B – FEE SCHEDULE FOR SERVICES

1. FEE SCHEDULE

- ✓ Municipality will promptly notify Consultant of any revisions or amendments to County Fee Schedule
- ✓ Municipality will periodically review its County Fee Schedule and valuation tables and make adjustment to reflect increases in the cost incurred by Consultant in providing Services
- ✓ Consultant fees for Services provided pursuant to this Agreement will be as follows:

Service Fee Schedule:	
Building Department Services	100% of County Permit Fee as established by ordinance or resolution
Zoning Reviews	
– Small Exterior Projects	\$35.00/application
– New Construction/Addition	\$160.00/application
After Hours/Emergency Services	\$100.00 per hour – two (2) hour minimum
Natural Disaster Services	
– Plan Review	– \$100.00 per hour – two (2) hour minimum
– Inspections	– \$100.00 per hour – two (2) hour minimum
– Additional plans examiners and inspectors from other areas relocated to perform plan review and inspection services	– \$100.00 per hour – two (2) hour minimum plus expenses, i.e. lodging, meals, etc.
CRS	
– More than 20 hours per year and permit fees are less than \$210,000.00	– \$100 hour– two (2) hour minimum
– Permit fees equal to or more than \$210,000.00	– No charge

Additional Services requested by the Municipality may be provided based on the hourly rates detailed on the following page.

ENGINEERING			
Associate, Engineering (VI)	190.00		
Director, Engineering (V)	175.00		
Project Manager (IV)	150.00		
Project Engineer (III)	130.00		
Engineer (II)	110.00		
Jr. Engineer (I)	100.00		
Senior CADD Tech Manager	115.00		
CADD Technician	95.00		
Permit Administrator	90.00		
DATA TECH DEVELOPMENT			
Associate, Data Tech Dev.	165.00		
GIS Coordinator	145.00		
GIS Specialist	125.00		
Multi-Media 3D Developer	115.00		
GIS Technician	100.00		
Sr. Applications Developer	165.00		
Applications Developer	135.00		
Network Administrator	155.00		
System Support Specialist	115.00		
IT Support Specialist	85.00		
GOVERNMENTAL SERVICES			
Associate, VP	190.00		
Director of Code Enforcement	145.00		
Director of Building Code	145.00		
Project Manager	145.00		
Grants Administrator	125.00		
Code Enforcement Field Supervisor	110.00		
Code Enforcement Field Inspector	90.00		
Building Official	115.00		
Building Plans Reviewer	90.00		
Building Inspector	90.00		
Permit Processor	75.00		
SURVEYING			
Associate, Surveying	165.00		
Senior Registered Surveyor	145.00		
Survey Crew	135.00		
Registered Surveyor	130.00		
Survey Coordinator	105.00		
CADD Technician	95.00		
3D Laser Scanner	355.00		
Hydrographic Survey Crew	330.00		
G.P.S. Survey Crew	155.00		
Sub-meter G.P.S	75.00		
Soft Dig (per hole)	480.00		
Utility Locates (per hour)	205.00		
LANDSCAPE ARCHITECT			
Associate, Landscape Architect	165.00		
Senior Landscape Architect	135.00		
Environmental Administrator	125.00		
Landscape Architect	120.00		
Environmental Specialist	105.00		
Landscape CADD Technician	95.00		
Environmental Assistant	90.00		
Landscape Inspector/Arborist	105.00		
Landscape Designer	120.00		
Landscape Site Plan Reviewer	135.00		
INDOOR AIR QUALITY SERVICES			
Sr. Environmental Scientist	125.00		
Environmental Scientist	100.00		
CONSTRUCTION			
Associate, Construction	165.00		
Construction Management Director	135.00		
Construction Manager	125.00		
Senior Inspector	100.00		
Inspector	90.00		
Construction Coordinator	90.00		
EMERGENCY MANAGEMENT			
Director	145.00		
Planner	105.00		
Assistant Planner	90.00		
PLANNING			
Associate, Planning	175.00		
Director of Planning	150.00		
Planning Administrator	150.00		
Planning Manager	145.00		
Senior Planner	125.00		
Planner	105.00		
Assistant Planner	90.00		
EXPERT WITNESS			
Principal/Associate	330.00		
Registered Engineer/Surveyor	280.00		
Project Engineer	230.00		

ORDINANCE 2019-10

AN ORDINANCE OF THE TOWN OF REDINGTON BEACH, PINELLAS COUNTY, FLORIDA, AMENDING THE TOWN'S COMPREHENSIVE PLAN'S FUTURE LAND USE ELEMENT POLICY 1.8.1 TO INCREASE THE PERMITTED IMPERVIOUS SURFACE RATIO IN THE RESIDENTIAL URBAN (RU) AND RESIDENTIAL MEDIUM (RM) FUTURE LAND USE DESIGNATIONS FROM 40 PERCENT TO 65 PERCENT AND CLARIFYING THE PERMITTED IMPERVIOUS SURFACE RATIO IN THE RESIDENTIAL/OFFICE/RETAIL FUTURE LAND USE DESIGNATION, AND AMENDING THE COMPREHENSIVE PLAN'S INFRASTRUCTURE ELEMENT POLICY 2.1.2 TO PRESCRIBE MITIGATING MEASURES TO BE EMPLOYED TO ENSURE THAT POST-DEVELOPMENT RUNOFF RATES DO NOT EXCEED PRE-DEVELOPMENT RUNOFF RATES, PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, Section 163, Part II, Florida Statutes, establishes the requirements of the Community Planning Act and governs local government comprehensive planning and land development regulation; and

WHEREAS, The Town of Redington Beach adopted its Comprehensive Plan in October 1989, and has periodically revised and amended the Plan in order to ensure it remains current and responds to current needs and opportunities; and

WHEREAS, The Building Official and Town Planner of the Town of Redington Beach recommend that the Comprehensive Plan be amended to update the impervious surface ratio requirement to be congruent with those of surrounding towns and clarify application of same; and

WHEREAS, The Building Official and Town Planner of the Town of Redington Beach recommend that the Comprehensive Plan be amended to include requirements for mitigation of runoff rates relative to development; and

WHEREAS, The Planning Board of the Town of Redington Beach, acting in its capacity as Local Planning Agency, recommends the proposed changes; and

WHEREAS, the Board of Commissioners of the Town of Redington Beach desires to implement the recommendations of the Planning Board to amend the Comprehensive Plan;

NOW THEREFORE BE IT ORDAINED, by the Commissioners of the Town of Redington Beach, Florida, in its regular meeting duly assembled on this ____ day of _____, 2020,

that:

Section 1. Policy 1.8.1 of Objective 1.8 of Goal 1 of the Future Land Use Element is amended to read as follows:

Policy 1.8.1

The Town of Redington Beach hereby adopts these land use categories as those which shall govern development within the community pursuant to ~~Section 9J-5.006(3)(c)7., Florida Administrative Code~~ Florida law. These land use categories shall be consistent with the primary and secondary uses listed in the ~~Pinellas Planning Council Forward Pinellas~~ Countywide Plan Rules, except where the secondary uses are omitted.

1. Residential Urban (RU)

a. Purpose – The Residential Urban land use category is intended for residential uses up to 7.5 dwelling units per acre not restricted by dwelling unit type that are, or may be developed, in an urban low density residential manner.

b. Primary uses – Single-family residential.

c. Density – Up to 7.5 dwelling units per acre.

d. Maximum impervious surface ratio is ~~40~~ 65 percent.
Compliance with Infrastructure Element Policy 2.1.2. and the land development regulations that implement said policy is required.

2. Residential Medium (RM)

a. Purpose – The Residential Medium land use category is intended for residential uses up to 15.0 dwelling units per acre not restricted by dwelling unit type.

b. Primary Uses – Residential

c. Residential Density - up to 15.0 dwelling units per acre.

d. Maximum impervious surface ratio is ~~40~~ 65 percent.
Compliance with Infrastructure Element Policy 2.1.2. and the land development regulations that implement said policy is required.

3. Residential/Office/Retail (R/O/R)

a. Purpose – The R/O/R land use category is intended for moderate intensity residential uses up to 15.0 dwelling units per acre, office, and community commercial uses including transient accommodations within permanent structures. All activities associated with these uses including storage and display, must be wholly contained within permanent structures. Such uses are suitable in

1 areas with a full range of urban services and high degree of
2 accessibility to residents of the service area

3 b. Primary Uses – Residential; office; community
4 commercial uses; transient accommodations within
5 permanent structures. Retail activities shall be limited to
6 those that serve the day-to-day commercial needs (e.g.,
7 restaurants, convenience goods and services, and personal
8 and professional services).

9 c. Secondary Uses – Institutional; Recreation/Open Space;
10 Transportation/Utility; Ancillary non-residential uses,
11 including storage and display, associated with a primary
12 use and wholly contained within permanent structures.

13 d. Density and Intensity Standards

14 Residential and Transient Accommodations - Up to 15
15 dwelling units per acre

16 Maximum residential impervious surface ratio is 65
17 percent. Compliance with Infrastructure Element Policy
18 2.1.2. and the land development regulations that implement
19 said policy is required.

20 Maximum non-residential impervious surface ratio is 85
21 percent. Compliance with Infrastructure Element Policy
22 2.1.2. and the land development regulations that implement
23 said policy is required.

24 ~~Non-residential Uses – Impervious Surface Ratio (ISR) not~~
25 ~~to exceed .85~~

26 Non-residential Uses - Floor Area Ratio (FAR) not to
27 exceed .40

28 Mixed Use – Shall not exceed, in combination, the
29 respective number of units per acre and floor area ratio
30 permitted, when allocated in their respective proportion to
31 the land area of the property.

32
33
34 **Section 2.** Policy 2.1.2 of Objective 2.1 of Goal 2 of the Infrastructure Element is amended to
35 read as follows:

36
37 Policy 2.1.2

38 Ensure that the developer or owner of any new development or
39 redevelopment site is responsible for the on-site management of
40 stormwater runoff so that post-development runoff rates, volumes,
41 and pollutant loads do not exceed predevelopment conditions.

42 The land development regulations implementing this Policy shall:

1. reaffirm the Building Official's authority to enforce this Policy;
2. provide that the Building Official may confer with engineers and with professionals in other relevant fields to provide comprehensive review and approval of drainage plans and specifications for any project that increases the impervious surface ratio on the subject property.
3. The drainage design, construction and inspection requirements shall be consistent with the Town's land development regulations, and with the Pinellas County Stormwater Manual (February 1, 2017).
4. More generally, the goals of stormwater management are to minimize the adverse effects of urban development on communities, watersheds, water bodies, wetlands, floodplains and other natural systems. These goals should be applied to redevelopment situations so that existing stormwater conditions are appropriately improved with reconstruction. More specifically, these goals include:
 - a. Reducing pollutant concentrations and loadings to a level to ensure that discharges do not cause or contribute to violations of State water quality standards.
 - b. Preventing or reducing on-site and off-site flooding.
 - c. Maintaining or restoring the hydrologic integrity of wetlands and aquatic habitats.
 - d. Maintaining and promoting groundwater recharge.
 - e. Promoting the reuse of rainfall and stormwater.
 - f. Minimizing erosion and sedimentation.
 - g. Accounting for impacts to the project based on sea level rise projections.
5. The Town shall adopt, implement and maintain a Standard Details Manual to supplement the Pinellas County Stormwater Manual in order to provide guidance and criteria to the design and building community for best management practices unique to the Town's character.

Section 3. The portions of the Town's Comprehensive Plan lawfully adopted and not expressly altered by this Ordinance remain in full force and effect.

Section 4. If any section, subsection, sentence, clause, provision or word of this Ordinance is held unconstitutional or otherwise legally invalid, same shall be severable and the remainder of this Ordinance shall not be affected by such invalidity, such that any remainder of the Ordinance shall withstand any severed provision, as the Board of Commissioners would have adopted the Ordinance and its regulatory scheme even absent the invalid part.

Section 5. The effective date of this Ordinance, if the plan amendment adopted hereby is not timely challenged, shall be the date the state land planning agency posts a notice of intent determining that this amendment is in compliance. If the amendment is timely challenged, or if

the state land planning agency issues a notice of intent determining that this amendment is not in compliance, this amendment shall become effective on the date the state land planning agency or the Administration Commission enters a final order determining this adopted amendment to be in compliance. No development orders, development permits, or development dependent on this amendment may be issued or commence before it has become effective.

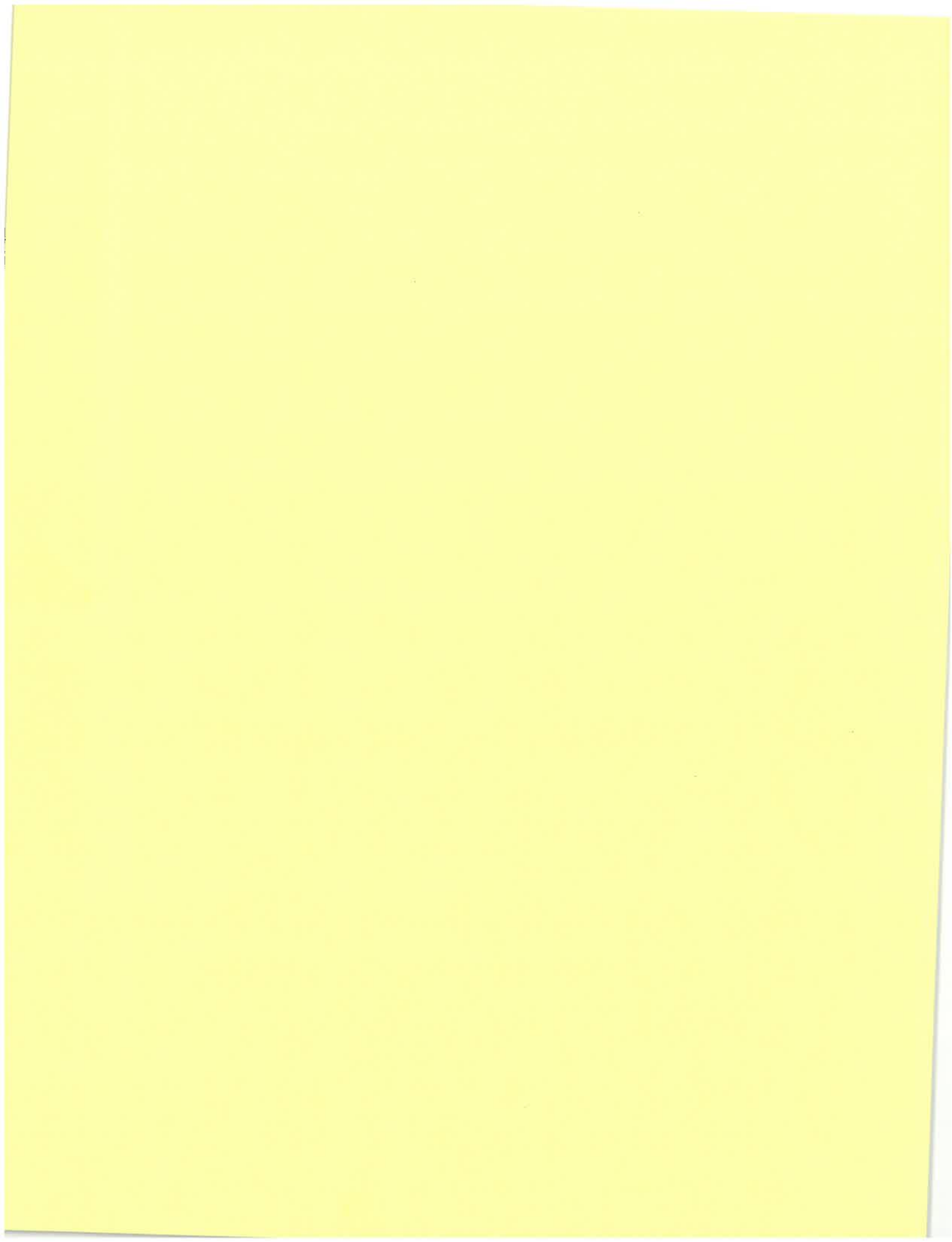
PASSED AND ADOPTED by the Board of Commissioners of the Town of Redington Beach, Pinellas County, Florida, on this ____ day of _____, 2020.

ATTEST:

Missy Clarke, CMC Town Clerk

Nick Simons, Mayor

	Motion	Seconded	Aye	Nay	Absent
Vice-Mayor Kornijtschuk					
Commissioner Dorgan					
Commissioner Steiermann					
Commissioner Will					
Mayor Simons					





FLORIDA MUNICIPAL SERVICES

18001 Gulf Blvd.
Redington Shores, FL 33708
(727) 202-6825

Meeting Date: March 4, 2020
Advertised Public Hearing
Agenda Item ____

February 27, 2020

MEMORANDUM

TO: Honorable Mayor and Members, Town of Redington Beach Board of Commissioners

FROM: Darin Cushing, CBO, CFM, Building Official
R. Bruce McLaughlin, AICP, MCIP, Town Planner

SUBJECT: Impervious Surface Ratio Issue: Comprehensive Plan Amendment (CPA)

EXECUTIVE SUMMARY

The Impervious Surface Ratio (ISR) for the Town is set in the Comprehensive Plan at 40%. In 2019 this Board increased the ISR to 65% subject to the imposition of mitigation techniques. The Comprehensive Plan Amendment making this change has been reviewed by the State and other affected agencies which offered no objections or recommendations and the Amendment is now ready for final adoption. **STAFF RECOMMEND FINAL ADOPTION OF AN ISR OF 65% SUBJECT TO THE INCLUSION OF PRESCRIPTIVE MITIGATION REQUIREMENTS IN THE PLAN AND IMPLEMENTING LAND DEVELOPMENT REGULATIONS.**

BACKGROUND

Applicant	Town of Redington Beach
Affected Area	Entire Town

February 27, 2020

THE ISSUE

To establish the appropriate Impervious Surface Ratio for the Town's residential areas to permit reasonable use of the residential properties while minimizing the negative impacts of stormwater generation.

HISTORY

Since the 1989 adoption of a new Comprehensive Plan pursuant to the 1985 Growth Management Act, the permitted ISR in the Town's residential areas was 0.40 or 40%. In 2016, the then Building Official recommended increasing the permitted ISR to 0.65 to be more in line with the permitted ISRs in other Beach communities.

The Town attempted to implement the Building Official's recommendation through the adoption of Ordinances 2016-04 purporting to amend the ISR in the Comprehensive Plan's residential designations and 2016-08 amending Town Code Section 6.103. Ordinance 2016-04 never lawfully took effect because the Town was not then permitted to amend its Comprehensive Plan having failed to prepare an Evaluation and Appraisal Report as required by § 163.3191, Florida Statutes, because the notice and hearing for Ordinance 2016-04 were inadequate and because Ordinance 2016-04 was never submitted to the State for approval.¹ In summary, permitted ISRs are:

1989 - August, 2016	0.40
August 2016 - July, 2017 ²	0.65
July, 2017 - present	0.40

In the summer of 2018, the Planning Board, acting without a staff recommendation because of staff's ambivalence on the issue, recommended to the Town Board that the Comprehensive Plan Amendment attempted by Ordinance 2016-04 be readopted. By the time this proposal reached the Town Board in November, 2018:

- Staff had had the benefit of an additional three months of casual observation of the conditions in the Town, particularly through the "rainy season;"
- The storm surge from Hurricane Michael caused substantial street flooding, even without a rainfall event;

¹ Whether or not there were enactment issues with Ordinance 2016-08 has not been examined since the governing Comprehensive Plan policy was never lawfully amended.

² Ordinance voidable if not void *ab initio*. Issues with enacting ordinance identified in July, 2017, and enforcement reverted to 0.40.

February 27, 2020

- A squall line that passed rapidly over the Town in the early afternoon of October 26, 2018, dropped 0.23" of rain ³ on the Town and left significant areas of standing water;
- Staff, along with a highly qualified stormwater engineer, toured the entire Town on October 26, 2018, renewing our observations of the stormwater issues in the Town;
- The Town has embarked on the pursuit of flood mitigation funding from the Southwest Florida Water Management District, the Tampa Bay Estuary Program and, perhaps, the Federal Emergency Management Agency, and the success of these funding applications could be adversely affected by the increase in the permitted impervious surface ratio;
- The 2016 increase in the impervious surface ratio, beyond the status of the ISR, was determined to be clearly procedurally invalid.

Based on the foregoing, Staff's ambivalence on the topic of the appropriate impervious surface ratio was resolved and Staff then firmly recommended against increasing the impervious surface ratio above the lawfully established 0.40 ratio. The Town Board concurred and rescinded the effort to increase the permitted ISR to 0.65 with the result that the lawful ISR in the Town's residential areas remains 0.40.

It should be noted that the Town also engaged in some deliberation as to where the permitted ISR should be established: in the Comprehensive Plan or in the implementing land development regulations? Staff and the Planning Board/Local Planning Agency recommended that the permitted ISR remain a Comprehensive Plan policy. As previously noted, land use planning principles, ⁴ consider a comprehensive plan to be akin to a jurisdiction's constitution while the land development regulations that implement the plan are like the statutes implementing a constitution.

One problem exacerbating this analysis is that the enforcement of the 0.40 ISR established in the 1989 Comprehensive Plan has been uneven. Over the years, Building Officials working directly for the Town, for Pinellas County and for Florida Municipal Services have overlooked the ISR limit and have permitted construction at higher ISRs. Further, some homeowners have, after the Certificate of Occupancy or Certificate of Completion has been issued, added impervious surface to their properties by constructing walkways, decks, etc.

IN 2019, the Town commissioned a study by Global Cartographics, LLC, of the existing ISRs

3

http://www.theweathercollector.com/?gclid=CjwKCAjwyOreBRAYEiwAR2mSkhUdF0xS8AH2TRUf72fVFd_UjubXtkGDgGmV0TzVLRa3mqw82tSABBoC_18QA_vD_BwE

⁴ Echoed in case law: *e.g., Citrus County v. Halls River Development*, 8 So.3d 413 (Fla. 5th DCA 2009).

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throughout the Town. The result of this study is that the average ISR in the Town is 0.52. The analysis mapping, a summary of the analysis and the distribution of ISRs are shown in Appendix A.⁵

NOTICE

The Clerk's office will advise as to the notice given of this advertised public hearing.

AUTHORITY

Pursuant to §§ 4 and 5 of the Town Charter, the Town is governed by the Board of Commissioners which may exercise all powers available to a municipality under the Constitution and laws of the State of Florida. Those powers include preparing and adopting (via § 15-56 of the Town Code), a comprehensive plan for the Town and, therefore, amendments to said Plan.

Concomitant with the power to adopt a comprehensive plan comes the authority to otherwise fully comply with Part II, Chapter 163, Florida Statutes, the Community Planning Act.⁶ Included in this authority is the authority to amend the Comprehensive Plan in accordance with Florida Law.

With respect to the contents of a comprehensive plan, Florida law sets forth the following as mandatory components of a plan:

(a) A future land use plan element designating proposed future general distribution, location, and extent of the uses of land for residential uses, commercial uses, industry, agriculture, recreation, conservation, education, public facilities, and other categories of the public and private uses of land. The approximate acreage and ~~provided for the general knowledge of the community~~ **intensity of use shall be** provided for each future land use category. The element shall establish the long-term end toward which land use programs and activities are ultimately directed.

1. **Each future land use category** must be defined in terms of uses included, and **must include standards** to be followed in the control and distribution of population

⁵ Distribution graphic courtesy resident Steve Wotovich, based on the draft Global Cartographics report.

⁶ Formerly known as the Local Government Comprehensive Planning and Land Development Regulation Act.

February 27, 2020

densities and **building and structure intensities**. The proposed distribution, location, and extent of the various categories of land use shall be shown on a land use map or map series which shall be supplemented by goals, policies, and measurable objectives.

2. The future land use plan and plan amendments shall be based upon surveys, studies, and data regarding the area, as applicable, including:

...

d. The availability of water supplies, public facilities, and **services**.

Section 163.3177(3)(a), F.S., [Emphasis Added]

In addition, the statute mandates that a comprehensive plan include:

(c) A general sanitary sewer, solid waste, **drainage**, potable water, and natural groundwater aquifer recharge element correlated to principles and guidelines for future land use, indicating ways to provide for future potable water, **drainage**, sanitary sewer, solid waste, and aquifer recharge protection requirements for the area. The element may be a detailed engineering plan including a topographic map depicting areas of prime groundwater recharge.

Section 163.3177(3)(c), F.S., [Emphasis Added]

Accordingly, the contents of Ordinance 2019-10 are essentially mandated by state law.

Ordinance 2019-10 also updates the reference to the Countywide Planning Agency from its historic name of the Pinellas Planning Council to its current name of Forward Pinellas. The Ordinance also deletes the reference to the now repealed § 9J-5, Florida Administrative Code. As noted above, the mandatory components of a comprehensive plan remain established in Chapter 163, Florida Statutes, but the former implementing rules found in § 9J-5, F.A.C., were repealed as part of the 2011 revisions to the Growth Management Act.

ANALYSIS

The Planning Board has endorsed an Impervious Surface Ratio of 0.65 (65%). The Town Board has also endorsed a 0.65 ISR.

The Planning Board's endorsement was contingent on the inclusion in the Town's regulations of prescriptive mitigation measures that will ensure that a higher ISR does not lead to a lower level of service (LoS) in the Town's stormwater system. Further, as part of maintaining the current

February 27, 2020

LoS it is the consensus of the Planning Board that:

- The Comprehensive Plan policy prohibiting post-development runoff from exceeding pre-development runoff be maintained and enforced;
- The Comprehensive Plan policy requiring the Town's stormwater system to accommodate the 25-year, 24-hour peak storm event must remain effective;
- No runoff may enter a neighboring property;
- No runoff may enter Boca Ciega Bay;
- No runoff may enter a public right-of-way except through the designated stormwater system; and
- Full compliance with SWFWMD, FDEP and CoE standards is maintained.

Notwithstanding the endorsements to date, subject to the above *caveats*, it is important to understand the impact of this change so that the need for the prescriptive mitigation measures is also fully understood as part of the data and analysis supporting the amendment.

COMPREHENSIVE PLAN CONSISTENCY

Although the initial determination of internal consistency of a comprehensive plan amendment with the balance of the plan is the responsibility of the local planning agency, this Board should also make a similar finding. In Pinellas County that finding should also include a finding of consistency with the Countywide Comprehensive Plan.

The Countywide Comprehensive Plan does not establish a maximum ISR for residential uses in the future land use designations applicable to the Town's residential areas. Therefore, there will be no direct conflict between a higher ISR in the Town's Comprehensive Plan and the Countywide Plan. For non-residential uses in these future land use designations, the permitted Countywide ISR is 0.75, so the subject proposal is consistent with this standard.

Although the final opinion will come from Forward Pinellas, there do not appear to be any Countywide Rules or Countywide Strategies with which the proposed amendment would be inconsistent.

Beyond changing the called-out ISRs in Future Land Use Element Policy 1.8.1, the following policies must be considered as part of the discussion and determination of the appropriate ISR for the Town. (All **bold** emphasis added.)

Future Land Use Element

Policy 1.1.2

Residential areas shall be located and designed to protect life

February 27, 2020

and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, and noise.

Policy 3.1.4

The land development regulations shall contain specific and detailed provisions required to implement this comprehensive plan, which, at a minimum:

...

4. Ensure that all development is consistent with Federal Flood Insurance regulations;

...

7. Provide for drainage and stormwater management, based on the minimum criteria established by the Southwest Florida Water Management District, the Town of Redington Beach or other appropriate governmental agencies;

...

10. Provide provisions for the control of erosion and runoff from construction sites.

11. Promote green building techniques and materials.

Infrastructure Element

Goal 2: To endeavor to provide an efficient drainage system which protects human life, minimizes property damage, and **improves** stormwater quality and **on-site retention**.

Objective 2.1

The Town shall seek to improve the stormwater drainage system located within its municipal boundaries.

Policy 2.1.1

Ensure that **surface cover vegetation loss during construction is minimized or replaced** to reduce erosion and flooding.

Policy 2.1.2

Ensure that the developer or owner of any new development or redevelopment site is responsible for the on-site management of stormwater runoff **so that post-development runoff rates, volumes, and pollutant loads do not exceed predevelopment conditions.**

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Policy 2.1.3

Future drainage outfalls associated with either new development or redevelopment, shall be designed to prevent the direct discharge of runoff into Boca Ciega Bay or the Gulf of Mexico.

Policy 2.1.4

Implement the town's Watershed Management Plan in conjunction with the Southwest Florida Water Management District to address existing drainage and flooding conditions.

Objective 2.2

All development within the Town of Redington Beach shall meet the adopted level-of-service standard for stormwater drainage.

Policy 2.2.1

All development activity shall adhere to the level-of-service standard for drainage requirements of the 25 year, 24 hour rainfall storm design standard.

Policy 2.2.2

New development, redevelopment, and rehabilitation shall meet and maintain the standards established by the Florida Department of Environmental Regulation for the Outstanding Florida Waters and Aquatic Preserve designations of Boca Ciega Bay that require an additional fifty percent storage and treatment on site.

Policy 2.2.3

The following management techniques shall be used to reduce stormwater runoff:

1. Expansion and regular maintenance of retention swales adjacent to town roadways;
2. Use of front, rear and side lot line swales for new construction or redevelopment;
3. Use of erosion and runoff control devices during construction; and [sic]

Policy 2.2.4

The land development regulations shall continue to enforce provisions which, at a minimum, protect natural drainage features found within the Town as follows:

1. All applications for development approval within those areas identified as coastal high hazard area shall undergo

February 27, 2020

- site plan review;
2. **The flood-carrying and flood storage capacity of the 100-year floodplain shall be maintained;**
 3. Development along Boca Ciega Bay shall maintain adequate setbacks to maintain any existing areas of natural coastal/marine habitat;
 4. The prevention of erosion, retardation of runoff and protection of natural functions and values of the floodplain shall be considered while promoting public usage; and
 5. The Town shall require development or redevelopment proposals to be consistent with the performance standards regulating development within the designated floodplain.

Objective 2.3

The Town shall take positive steps to implement its Watershed Management Plan.

Policy 2.3.1

The Town shall assess existing conditions and recommend modifications or cures to **relieve existing drainage problems.**

Policy 2.3.2

Consistent with budget allocations, the Town shall continue to retrofit the existing drainage system in conjunction with the Southwest Florida Water Management District.

Conservation and Coastal Management Element

Objective 1.1

The Town shall protect the quality and quantity of surface and groundwater.

Policy 1.1.3

The Town shall enforce the required standards and regulations set forth in the Pinellas Aquatic Preserve Management Plan to protect and enhance the water quality of Boca Ciega Bay. [Document may not exist]

Policy 1.2.2

The Town shall protect the natural functions of the 100-year floodplain so that the flood carrying and flood storage capacity are maintained.

February 27, 2020

Policy 1.2.4

The Town shall enforce land development regulations which recognize the limitations of development on a barrier island (e.g.,

100-year floodplain, vulnerability to tropical storms, topography and soil conditions).

Objective 1.9

The Town of Redington Beach shall coordinate with the State of Florida and other local jurisdictions in an effort to maintain the Outstanding Florida Waters designation on Boca Ciega Bay.

Policy 1.9.1

No new point sources shall be permitted to discharge from the Town of Redington Beach into Boca Ciega Bay or the Gulf of Mexico, or into ditches or canals that flow into the bay and gulf.

Policy 1.9.2

In order to reduce non-point source pollutant loadings, the *Watershed Management Plan* shall follow the regulations set out in the Florida Administrative Code. [Document may not exist]

Policy 1.4.1

Require that all new development preserve, or relocate on site, a minimum of 25 percent of the native vegetation on site. This should not be interpreted to allow development in wetland areas.

Intergovernmental Coordination Element

Policy 2.2.12

Coordinate with those communities and counties lying within the boundaries of the Tampa Bay S.W.I.M. Plan 1988 in implementation of the Surface Water Improvement Management Program for Tampa Bay.

Policy 2.3.1

The Town shall be involved in proceedings to develop joint planning and management programs with the neighboring municipalities for hurricane evacuation, provision of public access, provision of infrastructure, **controlling stormwater**, protection of wetland vegetation and coordinating efforts to protect species with special status.

February 27, 2020

Policy 2.3.2

Through the Pinellas Planning Council or other appropriate governmental mechanism, the Town shall coordinate with neighboring municipalities and the County to protect estuaries which are within the jurisdiction of more than one local government; including methods for coordinating with other local governments to ensure adequate sites for water-dependent uses, preventing estuarine pollution, **controlling surface water runoff**, protecting living marine resources, reducing exposure to natural hazards, and ensuring public access.

Capital Improvements Element (as amended)

CIE Policy 1.5.5

- b. Prior to approval of a building permit or its functional equivalent, the Town shall examine that part of the Town's drainage system that will be directly impacted by the new development to determine whether adequate stormwater drainage capacity will be available to serve the new development no later than the anticipated date of issuance of certificate of occupancy or its functional equivalent.

As far as is relevant, these policies align with the standards of the *Community Rating System*,⁷ and the fulfillment of these policies will enhance the Town's CRS rating and potentially have a positive effect on flood insurance rates in the Town. For example, strict adherence to the post-development runoff not exceeding the pre-development runoff, can earn the Town 755 CRS points towards an attainable 4,500 CRS points (17%).

The proposed amendments to Infrastructure Element Policy 2.1.2,⁸ and the adoption by Ordinance of the referenced land development regulations: the *Pinellas County Stormwater Manual*, and a local Standard Details Manual, along with the mitigation requirements of the proposed Comprehensive Plan Amendment, will ensure that the impacts of the higher ISR are appropriately mitigated.

As pointed out previously, based on the analysis above, Staff does not believe that an increased

⁷ E.g., Federal Emergency Management Agency, *National Flood Insurance Program Community Rating System: A Local Official's Guide to Saving Lives, Preventing Property Damage, and Reducing the Cost of Flood Insurance*, FEMA Publication B573, Author, Washington, DC, 2018

⁸ Prepared by Lynn Townsend Burnett.

February 27, 2020

ISR, **without the prescriptive mitigation requirements**, would be consistent with the balance of the Comprehensive Plan, particularly the highlighted policies above. However, with the imposition of the prescriptive mitigation requirements, as drafted by the Town's special stormwater engineer, Staff is of the opinion that the Plan will be internally consistent after the adoption of Ordinance 2019-10.

The Planning Board concurred with this analysis.

STATE REVIEW

Pursuant to the requirements of the Community Planning Act, (Part II, Chapter 163, Florida Statutes), Ordinance 2019-10 was referred to the Florida Department of Economic Opportunity, several other State agencies, SWFWMD, and the Town's neighboring municipalities for review. These reviews resulted in an Objections, Recommendations and Comments (ORC) Report (Appendix F).

The ORC report contained no Objections or Recommendations, but did contain two comments about overdue submittals to the State. These submittals are on the same agenda as this matter (albeit for a continuance in one instance), and thus are being addressed.

The absence of objections or recommendations constitutes tentative state approval of Ordinance 2019-10 and it can now be adopted on second reading.

RECOMMENDATION

STAFF RECOMMENDS THAT ORDINANCE 2019-10 BE ADOPTED ON SECOND AND FINAL READING.

APPENDIX F
OBJECTIONS, RECOMMENDATIONS AND COMMENTS REPORT

Ron DeSantis
GOVERNOR



Ken Lawson
EXECUTIVE DIRECTOR

January 17, 2020

The Honorable James Simons
Mayor, Town of Redington Beach
Town Hall, 105 164 Avenue
Redington Beach, Florida 33708

Dear Mayor Simons:

The Department of Economic Opportunity ("Department") has completed its review of the proposed comprehensive plan amendment for the Town of Redington Beach (Amendment No. 19-02ER), which was received and determined complete on November 21, 2019. We have reviewed the proposed amendment in accordance with the state coordinated review process set forth in Sections 163.3184(2) and (4), Florida Statutes (F.S.), for compliance with Chapter 163, Part II, F.S.

The attached Objections, Recommendations, and Comments Report outlines our findings concerning the amendment. The Department does not identify any objections to the proposed amendment. However, the Department is providing two comments. The comments are offered to assist the local government but will not form the basis for a determination of whether the amendment, if adopted, is "In Compliance" as defined in Section 163.3184(1)(b), F.S. Copies of comments received by the Department from reviewing agencies, if any, are also enclosed.

The Town should act by choosing to adopt, adopt with changes, or not adopt the proposed amendment. For your assistance, we have enclosed the procedures for adoption and transmittal of the comprehensive plan amendment. **The second public hearing, which shall be a hearing on whether to adopt one or more comprehensive plan amendments, must be held within 180 days** of your receipt of the Department's attached report, or the amendment will be deemed withdrawn unless extended by agreement with notice to the Department and any affected party that provided comment on the amendment pursuant to Section 163.3184(4)(e)1., F.S.

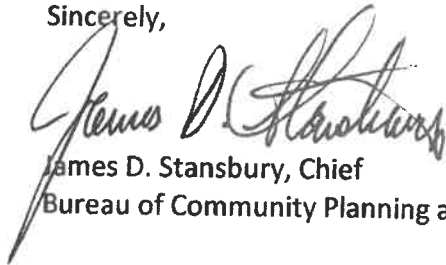
Florida Department of Economic Opportunity | Caldwell Building | 107 E. Madison Street | Tallahassee, FL 32399
850.245.7105 | www.FloridaJobs.org
www.twitter.com/FLDEO | www.facebook.com/FLDEO

An equal opportunity employer/program. Auxiliary aids and service are available upon request to individuals with disabilities. All voice telephone numbers on this document may be reached by persons using TTY/TTD equipment via the Florida Relay Service at 711.

The Honorable James Simons, Mayor
January 17, 2020
Page 2 of 2

Department staff is available to assist the Town to address the comments. If you have any questions related to this review, please contact Valerie James, Planning Analyst, by telephone at (850) 717-8493 or by email at valerie.james@deo.myflorida.com.

Sincerely,



James D. Stansbury, Chief
Bureau of Community Planning and Growth

JDS/vj

Enclosures: Objections, Recommendations, and Comments Report
Procedures for Adoption
Reviewing Agency Comments

cc: R. Bruce McLaughlin, AICP, MCIP, Town Planner, Town of Redington Beach
Sean T. Sullivan, Executive Director, Tampa Bay Regional Planning Council

**Objections, Recommendations and Comments Report
Proposed Comprehensive Plan Amendment
Town of Redington Beach 19-02ER**

The Department has identified two comments regarding the Town of Redington Beach's proposed comprehensive plan amendment. The comments are provided below, along with recommended actions the Town could take to resolve issues of concern. Comments are offered to assist the local government and will not form the basis for a compliance determination.

Department staff has discussed the basis of the report with Town staff and is available to assist the Town to address the comments.

Objections: None.

Comment 1: Peril of Flood Requirements

The proposed Amendment 19-02ER is the Town of Redington Beach's third round of Evaluation and Appraisal based amendments. The Town has yet to address Section 163.3178(2)(f)1-6, F.S., relating to the peril of coastal flooding including the related impacts of sea-level rise. However, the Town acknowledges that this issue is overdue and that a transmittal hearing on this issue is tentatively set for March 6, 2020. In the meantime, the Town should consider coordinating with the Tampa Bay Regional Planning Council in order to address the requirements in Section 163.3178(2)(f)1-6, F.S. Goals, objectives and policies that were adopted by other local governments in the region are available from the Department upon request.

Comment 2: Water Supply Plan Update

Section 163.3177(6)(c)3, F.S., requires local governments to update the Ten-Year Water Supply Facility Work Plan within 18 months of the respective water management district's approval of its Regional Water Supply Plan (RWSP). The Town has yet to address this statutory requirement. However, the Town staff has indicated that the Town will address this issue and that a transmittal public hearing has been tentatively set for March 6, 2020. In the meantime, the Town should consider coordinating with the Southwest Florida Water Management District in order to prepare an update to its Water Supply Facility Work Plan.

SUBMITTAL OF ADOPTED COMPREHENSIVE PLAN AMENDMENTS

FOR STATE COORDINATED REVIEW

Section 163.3184(4), Florida Statutes

NUMBER OF COPIES TO BE SUBMITTED: Please submit three complete copies of all comprehensive plan materials, of which one complete paper copy and two complete electronic copies on CD ROM in Portable Document Format (PDF) to the Department of Economic Opportunity and one copy to each entity below that provided timely comments to the local government: the appropriate Regional Planning Council; Water Management District; Department of Transportation; Department of Environmental Protection; Department of State; the appropriate county (municipal amendments only); the Florida Fish and Wildlife Conservation Commission and the Department of Agriculture and Consumer Services (county plan amendments only); and the Department of Education (amendments relating to public schools); and for certain local governments, the appropriate military installation and any other local government or governmental agency that has filed a written request.

SUBMITTAL LETTER: Please include the following information in the cover letter transmitting the adopted amendment:

_____ Department of Economic Opportunity identification number for adopted amendment package;

_____ Summary description of the adoption package, including any amendments proposed but not adopted;

_____ Ordinance number and adoption date;

_____ Certification that the adopted amendment(s) has been submitted to all parties that provided timely comments to the local government;

_____ Name, title, address, telephone, FAX number and e-mail address of local government contact;

_____ Letter signed by the chief elected official or the person designated by the local government.

ADOPTION AMENDMENT PACKAGE: Please include the following information in the amendment package:

_____ In the case of text amendments, changes should be shown in strike-through/underline format;

_____ In the case of future land use map amendment, an adopted future land use map, in **color format**, clearly depicting the parcel, its existing future land use designation, and its adopted designation;

_____ A copy of any data and analyses the local government deems appropriate.

Note: If the local government is relying on previously submitted data and analysis, no additional data and analysis is required;

_____ Copy of executed ordinance adopting the comprehensive plan amendment(s);

Suggested effective date language for the adoption ordinance for state coordinated review:

"The effective date of this plan amendment, if the amendment is not timely challenged, shall be the date the state land planning agency posts a notice of intent determining that this amendment is in compliance. If the amendment is timely challenged, or if the state land planning agency issues a notice of intent determining that this amendment is not in compliance, this amendment shall become effective on the date the state land planning agency or the Administration Commission enters a final order determining this adopted amendment to be in compliance. No development orders, development permits, or development dependent on this amendment may be issued or commence before it has become effective. "

_____ List of additional changes made in the adopted amendment that the Department of Economic Opportunity did not previously review;

_____ List of findings of the local governing body, if any, that were not included in the ordinance and which provided the basis of the adoption or determination not to adopt the proposed amendment;

_____ Statement indicating the relationship of the additional changes not previously reviewed by the Department of Economic Opportunity to the ORC report from the Department of Economic Opportunity.

From: Plan Review
To: Eubanks, Ray; DCPexternalagencycomments
Cc: Plan Review
Subject: [EXTERNAL] - Redington Beach 19-2ER Proposed
Date: Thursday, December 19, 2019 4:33:04 PM
Attachments: Image002.png

To: Ray Eubanks, DEO Plan Review Administrator

Re: Redington Beach 19-2ER – State Coordinated Review of Proposed Comprehensive Plan Amendment

The Office of Intergovernmental Programs of the Florida Department of Environmental Protection (Department) has reviewed the above-referenced amendment package under the provisions of Chapter 163, Florida Statutes. The Department conducted a detailed review that focused on potential adverse impacts to important state resources and facilities, specifically: air and water pollution; wetlands and other surface waters of the state; federal and state-owned lands and interest in lands, including state parks, greenways and trails, conservation easements; solid waste; and water and wastewater treatment.

Based on our review of the submitted amendment package, the Department has found no provision that, if adopted, would result in adverse impacts to important state resources subject to the Department's jurisdiction.

Please submit all future amendments by email to plan.review@floridadep.gov. If your submittal is too large to send via email or if you need other assistance, contact Lindsay Weaver at (850) 717-9037.

Lindsay Weaver





Florida Department of Transportation

RON DESANTIS
GOVERNOR

11201 N. McKinley Drive
Tampa, Florida 33612

KEVIN J. THIBAUT P.E.
SECRETARY

November 22, 2019

Mr. Bruce McLaughlin, AICP, MCIP
Town Planner
18001 Gulf Boulevard
Redington Shores, FL 33708

Re: Redington Beach Comprehensive Plan Amendment 19-02ER

Dear Mr. McLaughlin:

Pursuant to Section 163.3184(3), Florida Statutes (F.S.), in its role as a reviewing agency as identified in Section 163.3184(1)(c), F.S., the Florida Department of Transportation (FDOT) reviewed proposed amendment 19-02ER.

Background: State Road 699 (Gulf Boulevard) extends through the barrier island Town of Redington Beach located between North Redington Beach and Madeira Beach. The Town (205 acres in size) is predominately residential, followed by preservation and recreation/open spaces uses. A significant increase in development and population is not anticipated. The 2010 population was 1,590 (Bureau of Economic and Business Research). SR 699 (Gulf Boulevard) runs through the Town.

Proposal: The City amended the Future Land Use Element (FLUE) policy 1.8.1 to increase impervious surface ratio in the Residential Urban (RU) and Residential/Medium (RM) categories from 40 percent to 65 percent; clarify maximum impervious surface ratio in the Residential/Office/Retail (R/O/R) Plan category for residential is 65 percent and nonresidential is 85 percent; amending the Infrastructure Element policy 2.1.2 to ensure that new development and/or redevelopment comply with prescriptive requirements for post-development vs. pre-development runoff rates.

Comment: FDOT determined the proposed amendment has no impact on important state transportation resources or facilities within its jurisdiction.

Mr. Bruce McLaughlin, AICP, MICP
November 22, 2019
Page 2

Thank you for the opportunity to review this amendment. Please ensure that we receive a copy of the adopted version. Should you have any questions please do not hesitate to contact me at 813-975-6429 or at Daniel.santos@dot.state.fl.us.

Sincerely,



Daniel C. Santos, AICP
Transportation Planning Supervisor

cc: Ray Eubanks, Plan Processing Administrator, DEO
Waddah Farah, PDA Administrator, FDOT District 7
Lindsey Mineer, LGCP Coordinator, FDOT District 7

TOWN OF REDINGTON BEACH
TOWN BOARD OF COMMISSIONERS

PUBLIC HEARINGS
MARCH 4, 2020

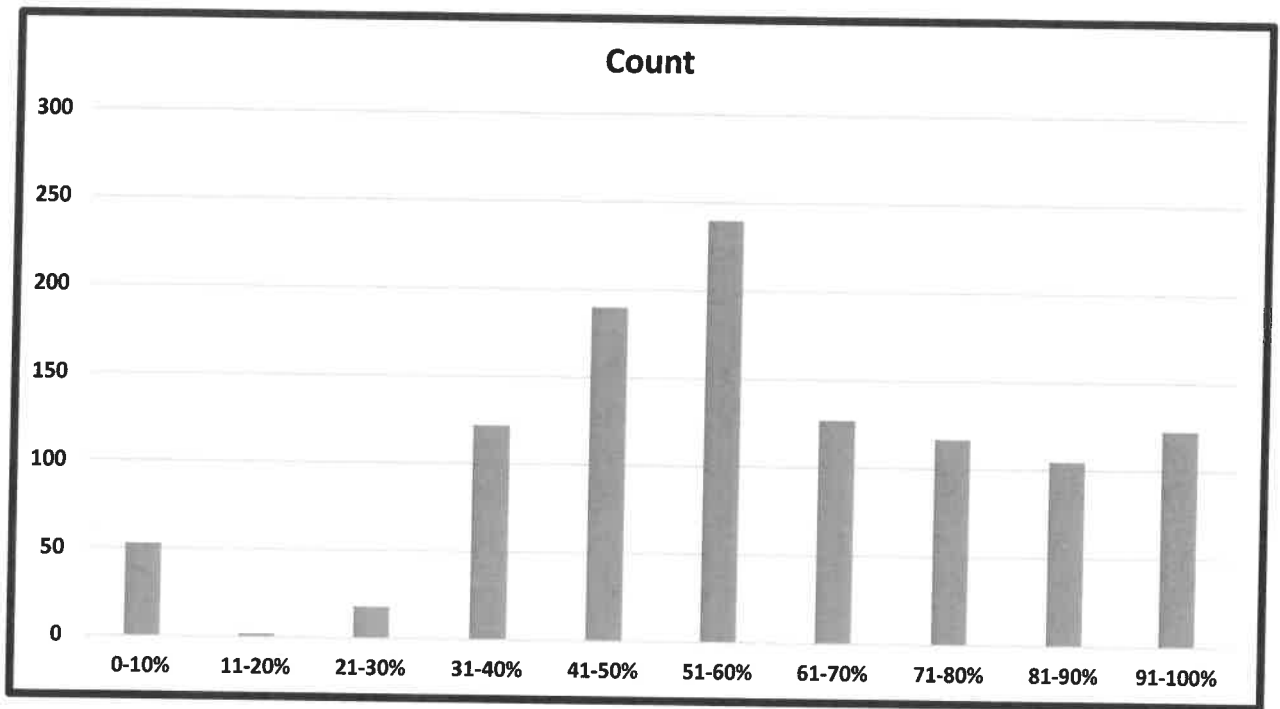
APPENDICES TO STAFF REPORTS

ORDINANCES 2019-10, 2020-03

APPENDICES

- A. ISR DISTRIBUTION
- B. IMPERVIOUS SURFACE IMPACT ANALYSIS
- C. BUILDING ENVELOPES
- D. 0.40 ISR
- E. 0.65 ISR

APPENDIX A
ISR DISTRIBUTION



APPENDIX B
ISR CALCULATIONS

APPENDIX B ISR CALCULATIONS

Site Impact

Definition

Impervious surface is a measure of use intensity. The control of impervious surfaces ensures continued absorption of rainwater, aids in the control of stormwater runoff, and implements the policies of the Future Land Use and Infrastructure Elements of the Comprehensive Plan. In addition to higher impervious surface ratios leading to more runoff, the higher runoff carries with it pollutants of various sorts.

In Redington Beach,¹ an impervious surface is defined as:

Impervious surface. A surface that has been compacted or covered with a layer of material so that it is highly resistant to or prevents infiltration by stormwater. It includes: surfaces such as limerock, or clay, as well as most conventionally surfaced streets, roofs, sidewalks, parking lots, and other similar surfaces.

Redington Beach Code, Appendix A, § 15.

It should be noted that this is a very narrow definition of impervious surface. While it has been construed to include pavers, there are several other features that are not considered impervious. These include swimming pools, (on the theory that a full pool is completely impervious); wooden decks, (at least prorated); recreation facilities; large, stationary lawn furniture and flagpole bases. Some codes also include gravel as impervious surface.

Runoff Coefficients

A runoff coefficient is a dimensionless coefficient relating the amount of runoff to the amount of precipitation received. It is expressed as a ratio of runoff to rainfall. Areas with low infiltration and high impervious areas will have higher runoff coefficients while areas with good infiltration and low impervious areas will have lower runoff coefficients.

Typical runoff coefficients are:

Single family residential area, generally	0.30 - 0.50
Lawns (flat, sandy soils)	0.05 - 0.10

¹ Consistent with most of the Barrier Island local government definitions.

Drives and walks	0.75 - 0.85
Roofs	0.75 - 0.95

Calculation

On the following page is a table setting forth the runoff calculation for a typical 6,000 square foot lot with an 1,800 square foot house. The rainfall is a Pinellas County datum for the 25-year, 24-hour peak storm event.

The runoff at a 0.65 ISR is 7.66 cubic feet per second greater than the runoff at a 0.40 ISR. That is approximately 7 2/3 basketballs per second.

Site Utilization

A change in the permitted ISR will not change the building envelope of the houses built on each lot but it could affect the bulk of the houses, (Appendix C). The Town does not have a maximum permitted floor area ratio, so a higher ISR will permit bulkier houses. However, each house² will still have to meet the 20 foot front setback, the 7.5 foot side setbacks and the rear yard of 15 feet for inland lots and 25 feet for Intracoastal fronting lots. There is also an immutable maximum height of 30 feet above the base flood elevation. Appendix D is photographs of a Redington Beach house built at a lawful ISR of 0.40 and Appendix E is photographs of a house in another jurisdiction built at an ISR of 0.645.

Other Considerations

Land Values

Staff examined the land values for single family dwellings in the municipalities whose single family properties are entirely on the barrier islands. While there were too many confounding variables to draw a definitive conclusion, there appears to be a correlation between higher ISRs and higher land values.

This correlation bears out the representation of a leading advocate for the higher ISRs. It also establishes that complying with the proposed prescriptive mitigation measures is cost feasible.

² Except for the west side of Gulf Boulevard which is subject to its own varying regulations.

APPENDIX C
BUILDING ENVELOPE EXAMPLES

Intracoastal Lot 60' wide x 100' deep = 6000 sq ft

REAR SETBACK 60'w X 25'd = 1,500 sq ft

**Side
Set-
back
7.5'w
x 55'd=
412.5sq ft**

Building Envelope

45'w X 55' d = 2,475 sq ft

IMPERVIOUS SURFACE

RATIO OF .4125

**Side
Set-
back
7.5'w
x 55'd=
412.5sq ft**

100'

FRONT SETBACK 60'w X 20'd = 1,200 sq ft

R.O.W. 60'w X 15'd

60'

Intracoastal double Lot 120' wide x 100' deep = 12,000 sq ft

REAR SETBACK 120'w X 25'd = 3000 sq ft

Building Envelope
105'w X 55' d = 5,775 sq ft
IMPERVIOUS SURFACE
RATIO OF .48

Side
Set-
back
7.5'w
X 55'd=
412.5sq ft

Side
Set-
back
7.5'w
X 55'd=
412.5sq ft

100'

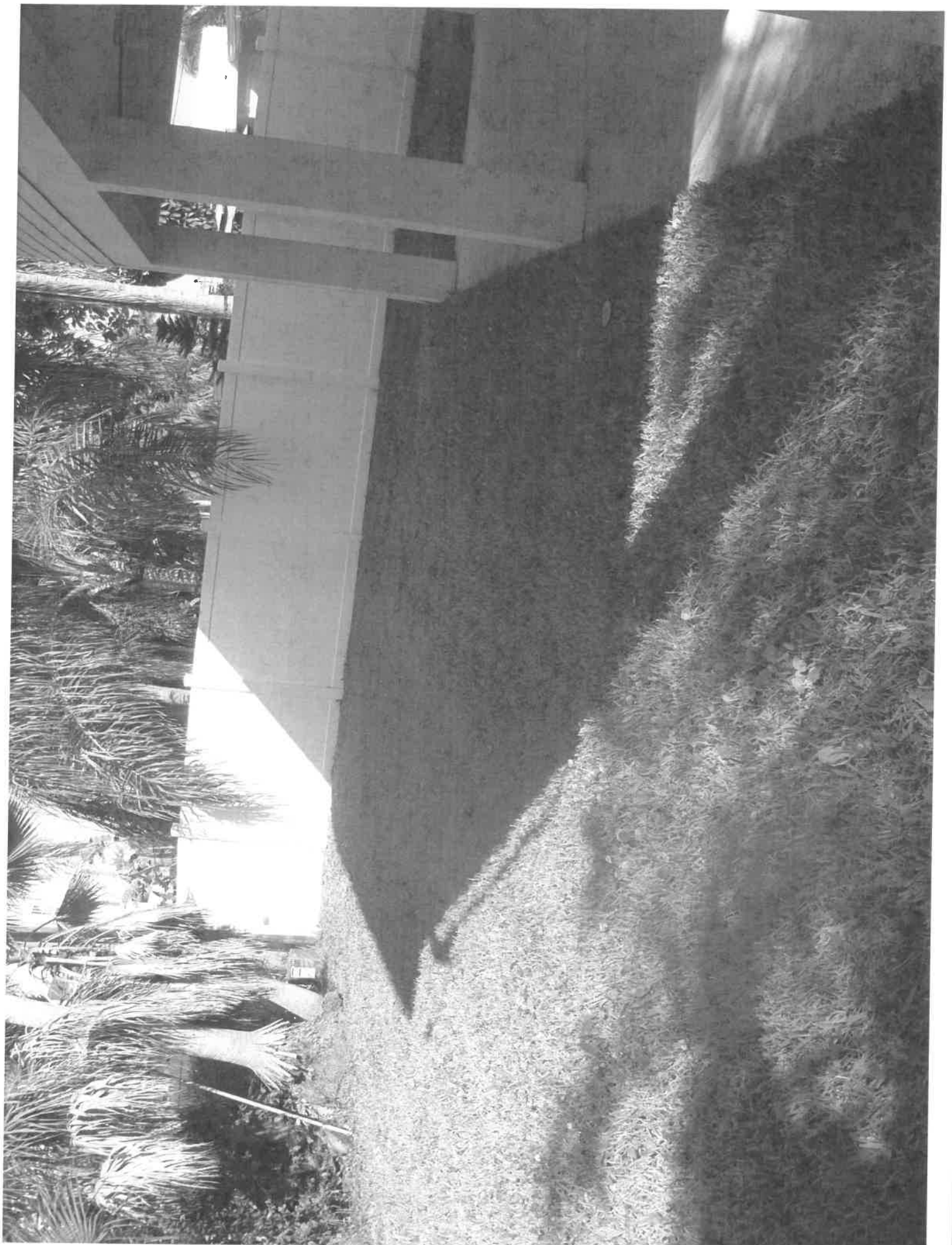
FRONT SETBACK 120'w X 20'd = 2,400 sq ft

APPENDIX D
0.40 ISR





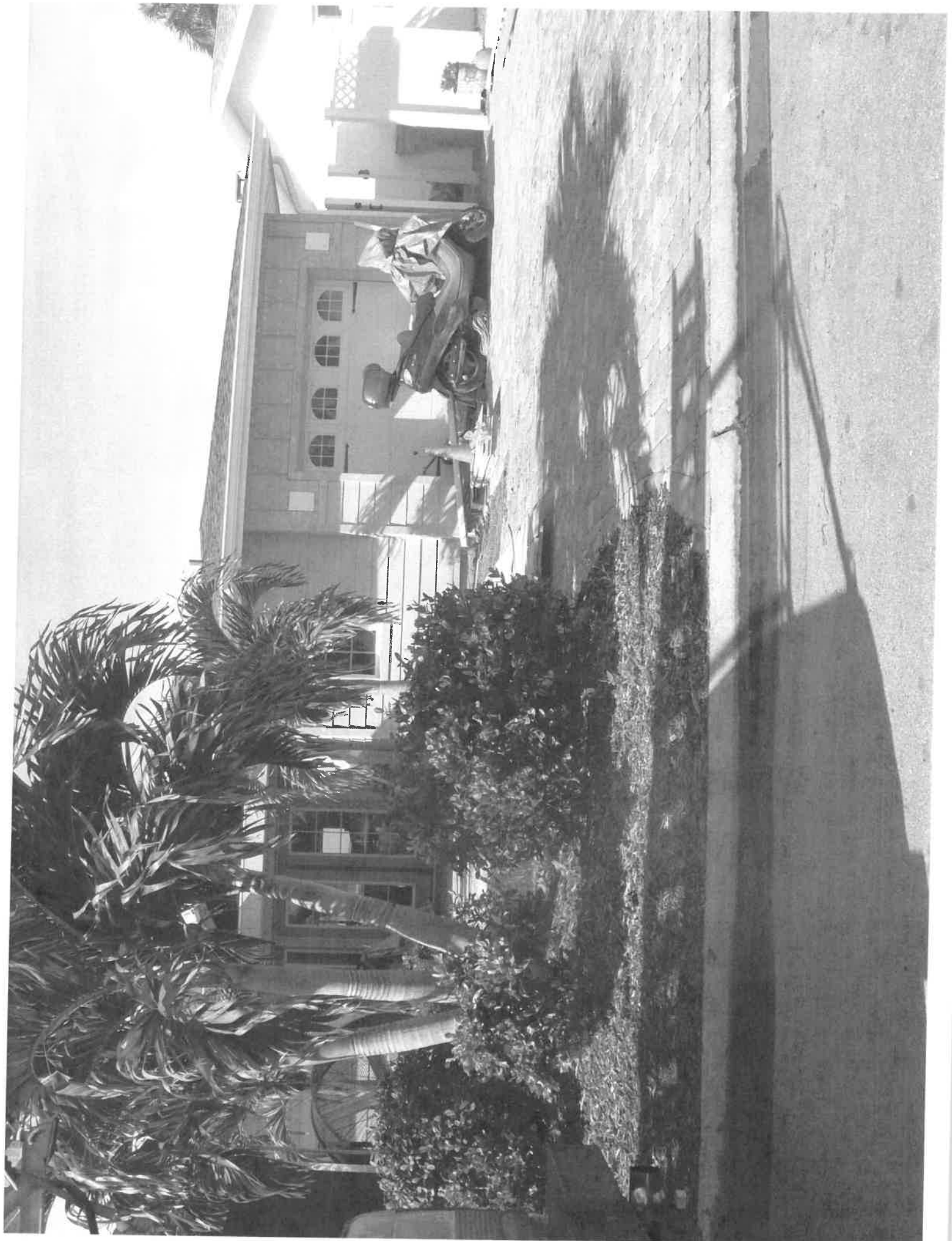




APPENDIX E
0.65 ISR









FLORIDA MUNICIPAL SERVICES

18001 Gulf Blvd.
Redington Shores, FL 33708
(727) 202-6825

Meeting Date: March 4, 2020

Agenda Item ____

ADVERTISED PUBLIC HEARING

February 27, 2020

MEMORANDUM

TO: Honorable Mayor and Members, Town of Redington Beach, Board of Commissioners

FROM: Darin Cushing, CBO, CFM, Building Official
R. Bruce McLaughlin, AICP, MCIP, Town Planner

SUBJECT: Ordinance 2020-01, Water Supply Facilities Work Plan

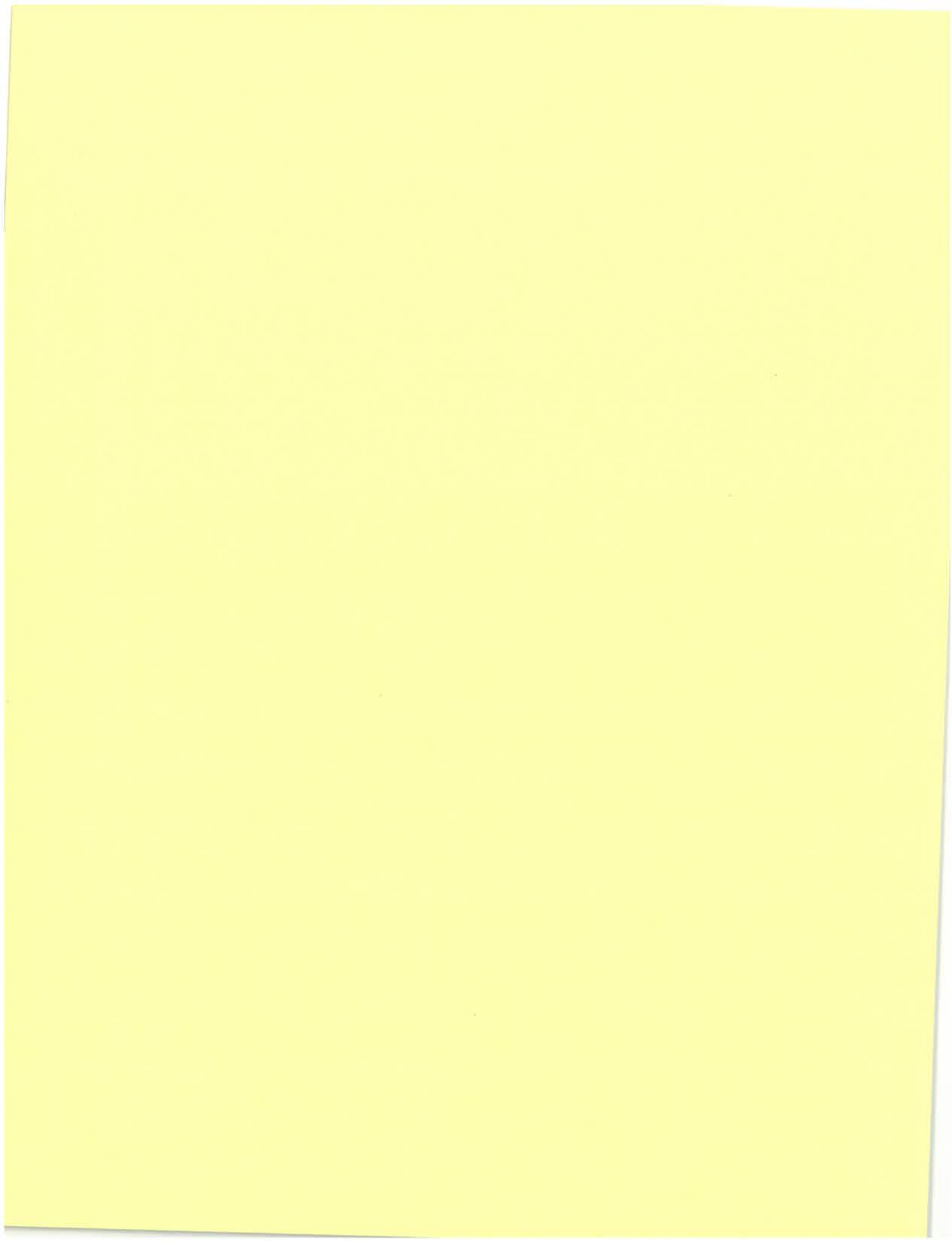
As noted in the State's Objections, Recommendations and Comments (ORC) Report on Ordinance 2019-10, the Town's Water Supply Facilities Work Plan is overdue. The Plan and an adopting Comprehensive Plan Amendment are in process but other, more urgent, projects have preempted work on this document.

Also, the current agenda contains three closely related items: Ordinances 2019-10, increasing the permitted Impervious Surface Ratio in the Town, 2020-02, incorporating state-mandated "Peril of Flood" policies into the Town's Comprehensive Plan, and 2020-03 adopting the Standard Details Manual required by Ordinance 2019-10. These three items also involve the Town's special stormwater engineer and may also require longer than usual public hearings.

ACCORDINGLY, STAFF RESPECTFULLY REQUESTS THE BOARD TO OPEN THE PUBLIC HEARING ON ORDINANCE 2020-01 (so as to preserve the notice) AND THEN CONTINUE THE HEARING TO A DATE, TIME AND PLACE CERTAIN.

DC/RBMcL/m

C:\Red Bch\Town Board\2020-03-04\RB TB 2020-03-04 WSF.wpd





September 27th, 2019

TECHNICAL STAFF REPORT

TO: Honorable Mayor and Members, Town of Redington Beach Board of Commissioners

FROM: Lynn Burnett, PE, CFM

SUBJECT: Proposed Ordinance 2020-02: Peril of Flood Comprehensive Plan Amendment

Based on our experience with the staff comments and correspondence with the Department of Economic Opportunity, we have provided a draft template for the Peril of Flood Comprehensive Plan Amendment. A few important aspects of this process are as follows:

163.3164 Community Planning Act; definitions.—As used in this act:

- (1) “Adaptation action area” or “adaptation area” means a designation in the coastal management element of a local government’s comprehensive plan which identifies one or more areas that experience coastal flooding due to extreme high tides and storm surge, and that are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning.
- **DEO will require the Adaptation Action Area (AAA) designation be defined.**
 - **DEO is looking for policies and objectives that will be or are already being implemented. The Town Standard Details Manual will meet this expectation.**

The Ordinance 2020-02 and proposed addition of Goal 4 to the Conservation and Coastal Management Element are provided to meet each of the six statutory requirements and provide the basis for implementation through the Town Standard Details Manual and Capital Improvement Projects initiated by the Town.



FLORIDA MUNICIPAL SERVICES

18001 Gulf Blvd.
Redington Shores, FL 33708
(727) 202-6825

Meeting Date: March 4, 2020

Advertised Public Hearing

Agenda Item ____

February 27, 2020

MEMORANDUM

TO: Honorable Mayor and Members, Town of Redington Beach, Board of Commissioners

FROM: Darin Cushing, CBO, CFM, Building Official
R. Bruce McLaughlin, AICP, MCIP, Town Planner

SUBJECT: Proposed Ordinance 2020-02: Peril of Flood Comprehensive Plan Amendment: (Technical Staff Report to be provided by Lynn Burnett, PE, the Town's Special Stormwater Engineer)

EXECUTIVE SUMMARY

In 2015, the Florida Legislature adopted Chapter 2015-69, Laws of Florida, which requires every local government with a Comprehensive Plan Coastal Management Element to amend said Element which must now include policies related to the "Peril of Flood." Proposed Ordinance 2020-02 fulfills the statutory mandate in C. 2015-69. The Ordinance was found by the Planning Board to be internally consistent with the balance of the Plan and was recommended for approval. **STAFF RECOMMENDS THAT ORDINANCE 2020-02 BE ADOPTED ON FIRST READING FOR TRANSMITTAL TO THE STATE.**

BACKGROUND

Applicant	Town of Redington Beach
Affected Area	Entire Town

February 27, 2020

THE ISSUE

To come into compliance with state law by inserting mandatory policies into the Town Comprehensive Plan's Conservation and Coastal Management Element related to the "Peril of Flood."

HISTORY

In 2015, a local senator, Senator Brandes, introduced Senate Bill 1094 which had two components: mandating the inclusion of "Peril of Flood" policies in the Coastal Management Element of the comprehensive plans of coastal communities, and amending legislation related to flood insurance, elevation certificates and related issues. The law is found as Appendix A, but the final legislative summary of the law bears reproduction here:

Section 1 amends s. 163.3178(2)(f), F.S., to require local governments when drafting their comprehensive coastal management plans to:

- Include development and redevelopment principles, strategies, and engineering solutions that reduce the flood risk in coastal areas which results from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise.
- Encourage the use of best practices development and redevelopment principles, strategies, and engineering solutions that will result in the removal of coastal real property from flood zone designations established by the FEMA.
- Identify site development techniques and best practices that may reduce losses due to flooding and claims made under flood insurance policies issued in this state.
- Be consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R. part 60.
- Require construction activities seaward of the coastal construction control lines established pursuant to s. 161.053, F.S., be consistent with ch. 161, F.S.
- Encourage local governments to participate in the National Flood Insurance Program Community Rating System

February 27, 2020

administered by the Federal Emergency Management Agency to achieve flood insurance premium discounts for their residents.

The Bill went through the normal legislative process, including reviews by the Senate Rules, Community Affairs, and Banking and Insurance Committees, and by the House. The Bill passed the House by a vote of 89 - 26 and passed the Senate unanimously. It was affirmatively approved by then Governor Scott on May 21, 2015.

NOTICE

The Clerk's office will advise as to the notice given of this advertised public hearing.

AUTHORITY

The Peril of Flood policies will take the form of a Comprehensive Plan Amendment (and perhaps an amendment to the Town's land development regulations).

Pursuant to §§ 4 and 5 of the Town Charter, the Town is governed by the Board of Commissioners which may exercise all powers available to a municipality under the Constitution and laws of the State of Florida. Those powers include preparing and adopting (via § 15-56 of the Town Code), a comprehensive plan for the Town and, therefore, amendments to said Plan.

Concomitant with the power to adopt a comprehensive plan comes the authority to otherwise fully comply with Part II, Chapter 163, Florida Statutes, the Community Planning Act.¹ Included in this authority is the authority to amend the Comprehensive Plan in accordance with Florida Law.

The governing statute (§ 163.3178)(2)(f) requires the Coastal Management Element to include:

- (f) A redevelopment component that outlines the principles that must be used to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise. The component must:
 - 1. Include development and redevelopment principles, strategies, and engineering solutions that reduce the flood risk in coastal areas which results from high-tide events, storm surge, flash floods, stormwater runoff, and the

¹ Formerly known as the Local Government Comprehensive Planning and Land Development Regulation Act.

related impacts of sea-level rise.

2. Encourage the use of best practices development and redevelopment principles, strategies, and engineering solutions that will result in the removal of coastal real property from flood zone designations established by the Federal Emergency Management Agency.

3. Identify site development techniques and best practices that may reduce losses due to flooding and claims made under flood insurance policies issued in this state.

4. Be consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R. part 60.

5. Require that any construction activities seaward of the coastal construction control lines established pursuant to s. 161.053 be consistent with chapter 161.

6. Encourage local governments to participate in the National Flood Insurance Program Community Rating System administered by the Federal Emergency Management Agency to achieve flood insurance premium discounts for their residents.

ANALYSIS

See LTA Staff Report on this item and on the Standard Details Manual, Agenda Item *

PLANNING BOARD REVIEW

The Town's Planning Board, acting as the Local Planning Agency, has reviewed Ordinance 2020-02, found it to be internally consistent with the balance of the Town's Comprehensive Plan, and recommended its approval.

RECOMMENDATION

THAT THE TOWN BOARD ADOPT ORDINANCE 2020-02 ON FIRST READING FOR THE PURPOSE OF TRANSMITTAL TO THE STATE.

APPENDIX A
CHAPTER 2015-69, LAWS OF FLORIDA

CHAPTER 2015-69

Committee Substitute for Committee Substitute for Committee Substitute for Senate Bill No. 1094

An act relating to the peril of flood; amending s. 163.3178, F.S.; specifying requirements for the coastal management element required for a local government comprehensive plan; creating s. 472.0366, F.S.; defining terms; requiring a surveyor and mapper to submit a copy of each elevation certificate that he or she completes to the Division of Emergency Management within a specified period beginning on a specified date; authorizing the redaction of certain personal information from the copy; amending s. 627.715, F.S.; authorizing flexible flood insurance; specifying coverage requirements; deleting a provision that prohibits supplemental flood insurance from including excess coverage over any other insurance covering the peril of flood; revising the information that must be prominently noted on a certain page of a flood insurance policy; requiring the Office of Insurance Regulation to require an insurer to provide an appropriate credit or refund to affected insureds if the office determines that a rate of the insurer is excessive or unfairly discriminatory; revising the notice that must be provided to and acknowledged by an applicant for flood coverage from an authorized or surplus lines insurer if the applicant's property is receiving flood insurance under the National Flood Insurance Program; allowing an authorized insurer to request a certification from the office which indicates that a policy, contract, or endorsement issued by the insurer provides coverage for the peril of flood which equals or exceeds the flood coverage offered by the National Flood Insurance Program; specifying requirements for such certification; authorizing such insurer or its agent to reference or include the certification in specified advertising, communications, and documentation; providing that misrepresenting that a flood policy, contract, or endorsement is certified is an unfair or deceptive act; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Paragraph (f) of subsection (2) of section 163.3178, Florida Statutes, is amended to read:

163.3178 Coastal management.—

(2) Each coastal management element required by s. 163.3177(6)(g) shall be based on studies, surveys, and data; be consistent with coastal resource plans prepared and adopted pursuant to general or special law; and contain:

(f) A redevelopment component ~~that~~ which outlines the principles ~~that~~ must ~~which shall~~ be used to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise. The component must:

1. Include development and redevelopment principles, strategies, and engineering solutions that reduce the flood risk in coastal areas which results from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise.

2. Encourage the use of best practices development and redevelopment principles, strategies, and engineering solutions that will result in the removal of coastal real property from flood zone designations established by the Federal Emergency Management Agency.

3. Identify site development techniques and best practices that may reduce losses due to flooding and claims made under flood insurance policies issued in this state.

4. Be consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R. part 60.

5. Require that any construction activities seaward of the coastal construction control lines established pursuant to s. 161.053 be consistent with chapter 161.

6. Encourage local governments to participate in the National Flood Insurance Program Community Rating System administered by the Federal Emergency Management Agency to achieve flood insurance premium discounts for their residents.

Section 2. Section 472.0366, Florida Statutes, is created to read:

472.0366 Elevation certificates; requirements for surveyors and mappers.—

(1) As used in this section, the term:

(a) “Division” means the Division of Emergency Management established within the Executive Office of the Governor under s. 14.2016.

(b) “Elevation certificate” means the certificate used to demonstrate the elevation of property which has been developed by the Federal Emergency Management Agency pursuant to federal floodplain management regulation and which is completed by a surveyor and mapper.

(2) Beginning January 1, 2017, a surveyor and mapper shall, within 30 days after completion, submit to the division a copy of each elevation certificate that he or she completes. The copy must be unaltered, except that the surveyor and mapper may redact the name of the property owner.

Section 3. Section 627.715, Florida Statutes, is amended to read:

627.715 Flood insurance.—An authorized insurer may issue an insurance policy, contract, or endorsement providing personal lines residential

coverage for the peril of flood on any structure or the contents of personal property contained therein, subject to this section. This section does not apply to commercial lines residential or commercial lines nonresidential coverage for the peril of flood. This section also does not apply to coverage for the peril of flood that is excess coverage over any other insurance covering the peril of flood. An insurer may issue flood insurance policies, contracts, or endorsements on a standard, preferred, customized, or supplemental basis.

(1)(a)1. Standard flood insurance must cover only losses from the peril of flood, as defined in paragraph (b), equivalent to that provided under a standard flood insurance policy under the National Flood Insurance Program. Standard flood insurance issued under this section must provide the same coverage, including deductibles and adjustment of losses, as that provided under a standard flood insurance policy under the National Flood Insurance Program.

2. Preferred flood insurance must include the same coverage as standard flood insurance but:

a. Include, within the definition of "flood," losses from water intrusion originating from outside the structure that are not otherwise covered under the definition of "flood" provided in paragraph (b).

b. Include coverage for additional living expenses.

c. Require that any loss under personal property or contents coverage that is repaired or replaced be adjusted only on the basis of replacement costs up to the policy limits.

3. Customized flood insurance must include coverage that is broader than the coverage provided under standard flood insurance.

4. Flexible flood insurance must cover losses from the peril of flood, as defined in paragraph (b), and may also include coverage for losses from water intrusion originating from outside the structure which is not otherwise covered by the definition of flood. Flexible flood insurance must include one or more of the following provisions:

a. An agreement between the insurer and the insured that the flood coverage is in a specified amount, such as coverage that is limited to the total amount of each outstanding mortgage applicable to the covered property.

b. A requirement for a deductible in an amount authorized under s. 627.701, including a deductible in an amount authorized for hurricanes.

c. A requirement that flood loss to a dwelling be adjusted in accordance with s. 627.7011(3) or adjusted only on the basis of the actual cash value of the property.

d. A restriction limiting flood coverage to the principal building defined in the policy.

e. A provision including or excluding coverage for additional living expenses.

f. A provision excluding coverage for personal property or contents as to the peril of flood.

5.4. Supplemental flood insurance may provide coverage designed to supplement a flood policy obtained from the National Flood Insurance Program or from an insurer issuing standard or preferred flood insurance pursuant to this section. Supplemental flood insurance may provide, but need not be limited to, coverage for jewelry, art, deductibles, and additional living expenses. Supplemental flood insurance does not include coverage for the peril of flood that is excess coverage over any other insurance covering the peril of flood.

(b) "Flood" means a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties, at least one of which is the policyholder's property, from:

1. Overflow of inland or tidal waters;
2. Unusual and rapid accumulation or runoff of surface waters from any source;
3. Mudflow; or
4. Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined in this paragraph.

(2) ~~Any limitations on Flood coverage deductibles and or policy limits pursuant to this section, including, but not limited to, deductibles,~~ must be prominently noted on the policy declarations page or face page.

(3)(a) An insurer may establish and use flood coverage rates in accordance with the rate standards provided in s. 627.062.

(b) For flood coverage rates filed with the office before October 1, 2019, the insurer may also establish and use such rates in accordance with the rates, rating schedules, or rating manuals filed by the insurer with the office which allow the insurer a reasonable rate of return on flood coverage written in this state. Flood coverage rates established pursuant to this paragraph are not subject to s. 627.062(2)(a) and (f). An insurer shall notify the office of any change to such rates within 30 days after the effective date of the change. The notice must include the name of the insurer and the average statewide percentage change in rates. Actuarial data with regard to such rates for flood coverage must be maintained by the insurer for 2 years after the effective date of such rate change and is subject to examination by the office. The office may require the insurer to incur the costs associated with an examination.

Upon examination, the office, in accordance with generally accepted and reasonable actuarial techniques, shall consider the rate factors in s. 627.062(2)(b), (c), and (d), and the standards in s. 627.062(2)(e), to determine if the rate is excessive, inadequate, or unfairly discriminatory. If the office determines that a rate is excessive or unfairly discriminatory, the office shall require the insurer to provide appropriate credit to affected insureds or an appropriate refund to affected insureds who no longer receive coverage from the insurer.

(4) A surplus lines agent may export a contract or endorsement providing flood coverage to an eligible surplus lines insurer without making a diligent effort to seek such coverage from three or more authorized insurers under s. 626.916(1)(a). This subsection expires July 1, 2017.

(5) In addition to any other applicable requirements, an insurer providing flood coverage in this state must:

(a) Notify the office at least 30 days before writing flood insurance in this state; and

(b) File a plan of operation and financial projections or revisions to such plan, as applicable, with the office.

(6) Citizens Property Insurance Corporation may not provide insurance for the peril of flood.

(7) The Florida Hurricane Catastrophe Fund may not provide reimbursement for losses proximately caused by the peril of flood, including losses that occur during a covered event as defined in s. 215.555(2)(b).

(8) An agent must, upon receiving ~~obtaining~~ an application for flood coverage from an authorized or surplus lines insurer for a property receiving flood insurance under the National Flood Insurance Program, ~~must~~ obtain an acknowledgment signed by the applicant before placing the coverage with the authorized or surplus lines insurer. The acknowledgment must notify the applicant that, if the applicant discontinues coverage under the National Flood Insurance Program which is provided at a subsidized rate, the full risk rate for flood insurance may apply to the property if the applicant such insurance is later seeks to reinstate coverage obtained under the National Flood Insurance program.

(9) With respect to the regulation of flood coverage written in this state by authorized insurers, this section supersedes any other provision in the Florida Insurance Code in the event of a conflict.

(10) If federal law or rule requires a certification by a state insurance regulatory official as a condition of qualifying for private flood insurance or disaster assistance, the Commissioner of Insurance Regulation may provide the certification, and such certification is not subject to review under chapter 120.

(11)(a) An authorized insurer offering flood insurance may request the office to certify that a policy, contract, or endorsement provides coverage for the peril of flood which equals or exceeds the flood coverage offered by the National Flood Insurance Program. To be eligible for certification, such policy, contract, or endorsement must contain a provision stating that it meets the private flood insurance requirements specified in 42 U.S.C. s. 4012a(b) and may not contain any provision that is not in compliance with 42 U.S.C. s. 4012a(b).

(b) The authorized insurer or its agent may reference or include a certification under paragraph (a) in advertising or communications with an agent, a lending institution, an insured, or a potential insured only for a policy, contract, or endorsement that is certified under this subsection. The authorized insurer may include a statement that notifies an insured of the certification on the declarations page or other policy documentation related to flood coverage certified under this subsection.

(c) An insurer or agent who knowingly misrepresents that a flood policy, contract, or endorsement is certified under this subsection commits an unfair or deceptive act under s. 626.9541.

Section 4. This act shall take effect July 1, 2015.

Approved by the Governor May 21, 2015.

Filed in Office Secretary of State May 21, 2015.

1
ORDINANCE 2020-02

AN ORDINANCE OF THE TOWN OF REDINGTON BEACH, PINELLAS COUNTY, FLORIDA, AMENDING THE TOWN'S 2008 COMPREHENSIVE PLAN'S CONSERVATION AND COASTAL MANAGEMENT AND INTERGOVERNMENTAL COORDINATION ELEMENTS TO INCORPORATE GOALS, OBJECTIVES AND POLICIES RELATED TO MITIGATING THE EFFECTS OF CLIMATE CHANGE, SEA LEVEL RISE, EXTREME HIGH TIDES, AND STORM SURGE, IN ACCORDANCE WITH THE MANDATES SET FORTH IN CHAPTER 163, FLORIDA STATUTES, SPECIFICALLY SECTION 163.3178(f)(1)-(4), AND BASED ON UPDATED DATA AND ANALYSES; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, Section 163, Part II, Florida Statutes, establishes the requirements of the Community Planning Act and governs local government comprehensive planning and land development regulation; and

WHEREAS, The Town of Redington Beach adopted its Comprehensive Plan in October 1989, and has periodically revised and amended the Plan in order to ensure it remains current and responds to current needs and opportunities; and

WHEREAS, the Town Board of Commissioners desires to adopt development and redevelopment principles and strategies that reduce the risk of flooding from sea level rise, extreme high tides and storm surge, and

WHEREAS, the Town Board of Commissioners wishes to include a redevelopment component in its Coastal Management and Conservation Element of its Comprehensive Plan that specifically complies with Section 163.3178, F.S. and

WHEREAS, the Town has reviewed the proposed amendments to the Comprehensive Plan and said proposed amendments were reviewed by the Town's Local Planning Agency (LPA) at a duly advertised public hearing which determined such amendments to be consistent with the Comprehensive Plan; and

WHEREAS, the Town Board of Commissioners has agreed with the recommendations of the Local Planning Agency that the proposed amendments comply with the requirements of Chapter 163, Florida Statutes, and that the proposed amendments are consistent with the Comprehensive Plan; and

WHEREAS, The Building Official and Town Planner of the Town of Redington Beach recommended that the Comprehensive Plan be amended to include Goals, Objectives and

Policies related to high tide events, storm surge, flash floods, stormwater runoff and sea-level rise; and

WHEREAS, the Board of Commissioners of the Town of Redington Beach desires to implement the recommendations of the Planning Board to adopt Comprehensive Plan policies related to the peril of flood.

NOW THEREFORE BE IT ORDAINED, by the Commissioners of the Town of Redington Beach, Florida, in its regular meeting duly assembled on this ____ day of ____, 2020:

Section 1. Section 3.6 of the Town's Comprehensive Plan, the Conservation and Coastal Management Element, as adopted by Ordinance 08-12 amended by the insertion of Goal 4 and its implementing Objectives and Policies to read as follows:

CCME GOAL 4: Protect and enhance the Town's natural and built environment to avoid or withstand the effects of climate change, rising sea level, extreme high tides and storm surge to ensure net zero loss of buildable properties.

CCME Objective 4.1

Increase the Town's resiliency to the impacts of climate change and rising sea levels by developing and implementing adaption strategies and measures in order to protect human life, natural systems and resources and public infrastructure, services, and public and private property.

CCME Policy 4.1.1:

Based on rising seas data as they evolve and associated vulnerabilities, to allow for flexible adjustments, preserve future strategic adaptation implementation options to maintain maximum resiliency in response to new risks and vulnerabilities; the Town will take advantage of new emerging data and technological opportunities. The Town's basis for measuring sea level rise shall be as per the Recommended Projection of Sea Level Rise in the Tampa Bay Region, as may be revised from time-to-time by the Tampa Bay Climate Science Advisory Panel.

CCME Policy 4.1.2

The Town will identify public investments and infrastructure at risk to sea level rise and other climate related impacts. The Town will assess the vulnerability to public facilities and services, including but not limited to County water and waste water facilities, stormwater systems, roads, bridges, governmental buildings, transit infrastructure and other assets.

Evaluation Measure: Collaborating with regional partners, Town shall identify public

investments, infrastructure, and assets at risk from rising sea levels by 2020. Thereafter, this assessment will be performed every five (5) years.

CCME Policy 4.1.3

As per Section 163.3164(1) and Section 163.3177(6)(g)(10), Florida Statutes, an Adaptation Action Area (AAA) is an optional designation within the coastal management element of a local government's comprehensive plan which identifies one or more areas that experience coastal flooding due to extreme high tides and storm surge, and that are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure and adaptation planning.

The entire Town is hereby designated as an AAA, as all areas meet considerations for AAA designation, which include the following:

- a. Areas which experience tidal flooding, storm surge, or both;
- b. Areas which have a hydrological connection to coastal waters;
- c. Locations which are within areas designated as evacuation zones for storm surge; and
- d. Other areas impacted by stormwater/flood control issues.

CCME Policy 4.1.4

The Town will develop and implement adaptation strategies for areas vulnerable to coastal flooding, tidal events, storm surge, flash floods, stormwater runoff, salt water intrusion and other impacts related to climate change or exacerbated by sea level rise, with the intent to increase the community's adaptability and resiliency capacities.

The Town will include areas which experience tidal flooding, storm surge, or both as the priority for development and implementation of adaption strategies. Other areas will be included as the second priority for the development and implementation of adaptation strategies.

CCME Policy 4.1.5

Adaptation strategies may apply to the following:

- a. Public infrastructure planning, siting, construction, replacement, operation and maintenance;
- b. Emergency management;
- c. Stormwater management;
- d. Land Development Regulations;
- e. Building Codes;
- f. Comprehensive Planning; and
- g. Other functions

CCME Policy 4.1.6

AAAs adaptation strategy options include:

- a. Protection: Strategies that involve "hard" and "soft" structurally defensive measures to mitigate impacts of rising seas in order to decrease vulnerability while allowing structures and infrastructure to remain unaltered. Two examples are shoreline armoring and beach re-nourishment. Protection strategies may be targeted for areas of a community that are location-dependent and cannot be significantly altered or relocated, such as areas of historical significance, or water-dependent uses.
- b. Accommodation: Strategies that do not act as a barrier, but rather alter the design through measures such as elevation or stormwater improvements, to allow the structure of infrastructure system to stay intact. Rather than preventing flooding or inundation, these strategies aim to reduce potential risks.
- c. Management Strategies: Strategies that involve the actual removal of existing development, their possible relocation to other areas, and/or prevention of further development in high-risk areas.
- d. Avoidance: Strategies that involve ensuring development does not take place in areas subject to coastal hazards associated with sea level rise or where the risk is low at present but will increase over time.
- e. Environmental sustainability strategies.
- f. Other options.

CCME Policy 4.1.7

The Town shall pursue funding sources for the implementation of AAA adaptation strategies including the following:

- a. Federal and State grants and technical expertise assistance (in-kind)
- b. Local Stormwater Utility Fees and CIP (Capital Improvement Plan) prioritization
- c. Prioritization/Private Partnerships
- d. Pinellas County Local Mitigation Strategy (Hazard Mitigation Grant Program)
- e. Other sources

CCME Policy 4.1.8

The Town shall integrate AAAs into existing and future Town processes and Town-wide plans and documents which may include:

- a. Strategic Plan;
- b. Sustainability Plan;
- c. Resiliency Plan;
- d. Transportation Master Plan in conjunction with Forward Pinellas;
- e. Stormwater Master Plan;
- f. All Hazards Transportation Recovery Plan;
- g. Land Development Regulations;
- h. Capital Improvement Plan;
- i. Local Mitigation Strategy;
- j. Agreements with Public or Private Utility and Infrastructure Providers;

- k. Agreements with Public Health Providers;
- l. Interlocal Agreements with Other Government Agencies; and
- m. Other processes, plans and documents.

CCME Policy 4.1.9

The Town shall align and be consistent with, to the extent possible, relevant and current national, state, and regional adaptation strategy documents such as the Recommended Projection of Sea Level Rise in the Tampa Bay Region, UF/GEO Plan Center's Sea Level Scenario Sketch Planning Tool, and The President's Climate Action Plan as well as other regional strategic plans, disaster mitigation plans, water management plans, transportation/transit plans, and climate change plans.

CCME Policy 4.1.10

The Town shall participate in, when appropriate, coordinated governmental, non-governmental and other appropriate agencies' proposed application requests for funding adaptation implementation projects.

CCME Policy 4.1.11

The Town shall collaborate and coordinate with appropriate local, regional, State, and national governmental agencies, to the extent possible, toward the implementation of AAA adaptation strategies and to identify risks, vulnerabilities and opportunities associated with coastal hazards and the impacts from sea level rise.

CCME Objective 4.2

The Town will encourage the use of best practices development and redevelopment principles, strategies, and engineering solutions that will result in the removal of coastal real property from flood zone designations established by the Federal Emergency Management Agency.

CCME Policy 4.2.1

As procurement opportunities arise (such as though the use of grants or tax deed sales) the Town will consider acquiring for use as public open space, severe repetitive loss properties which have sustained repeated flood losses, thereby reducing potential losses due to flooding.

CCME Policy 4.2.2

Continue site plan review for new construction with the requirement that the minimum first floor elevation for habitable space in residential and commercial buildings be at least at the Town of Redington Beach Freeboard, which is above the minimum FEMA requirement, to allow for maximum protection during flood conditions and from sea level rise.

CCME Objective 4.3

The Town will identify site and development techniques and best practices that may reduce losses due to flooding and claims made under flood insurance policies issued in the State of Florida.

CCME Policy 4.3.1

Maximize unpaved landscape to allow for more stormwater infiltration.

CCME Policy 4.3.2

Encourage planting of vegetation that is highly water absorbent, can withstand the marine environment and the impacts of tropical storm winds, and incorporate provisions for the care and maintenance of trees and plants into the Town's Land Development Code.

CCME Policy 4.3.3

The Town shall support development measures which integrate innovative climate adaptation and mitigation designs such as low impact development (LID) practices to better manage storm water runoff.

CCME Policy 4.3.4

Incorporate stormwater storage and infiltration into all infrastructure replacement activities.

CCME Policy 4.3.5

The Town will adopt a Town Standard Details Manual for guidance on approved means and methods of construction and redevelopment on private properties and within public rights of way. Manual will be adopted by Resolution and reviewed on a bi-annual basis with updates as needed.

CCME Policy 4.3.6

The Town will implement a capital improvement program to install and maintain tide control valves on all Town owned and maintained outfall pipes.

CCME Policy 4.3.7

The Town shall encourage private developments to adopt and implement a capital improvement program to install and maintain tide control valves on all privately owned and maintained outfall pipes.

CCME Policy 4.3.8

The Town shall assess the natural shoreline areas vulnerable to sea level rise and adopt standard means and methods to protect and preserve the upland areas immediately adjacent to these areas in cooperation with FDEP, ACOE and SWFWMD.

CCME Objective 4.4

The Town will be consistent with or more stringent than, the flood resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R. part 60.

CCME Policy 4.4.1

The Town will review its Land Development Code and other related codes, and amend as necessary, to ensure will that the Town's development regulations applicable to development and redevelopment in the Town will consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable floodplain management regulations set forth in 44 C.F.R. part 60.

Section 2. The portions of the Town's Comprehensive Plan lawfully adopted and not expressly altered by this Ordinance remain in full force and effect.

Section 3. If any section, subsection, sentence, clause, provision or word of this Ordinance is held unconstitutional or otherwise legally invalid, same shall be severable and the remainder of this Ordinance shall not be affected by such invalidity, such that any remainder of the Ordinance shall withstand any severed provision, as the Board of Commissioners would have adopted the Ordinance and its regulatory scheme even absent the invalid part.

Section 4. The effective date of this Ordinance, if the plan amendment adopted hereby is not timely challenged, shall be the date the state land planning agency posts a notice of intent determining that this amendment is in compliance. If the amendment is timely challenged, or if the state land planning agency issues a notice of intent determining that this amendment is not in compliance, this amendment shall become effective on the date the state land planning agency or the Administration Commission enters a final order determining this adopted amendment to be in compliance. No development orders, development permits, or development dependent on this amendment may be issued or commence before it has become effective.

PASSED AND ADOPTED by the Board of Commissioners of the Town of Redington Beach, Pinellas County, Florida, on this _____ day of _____, 2020.

ATTEST:

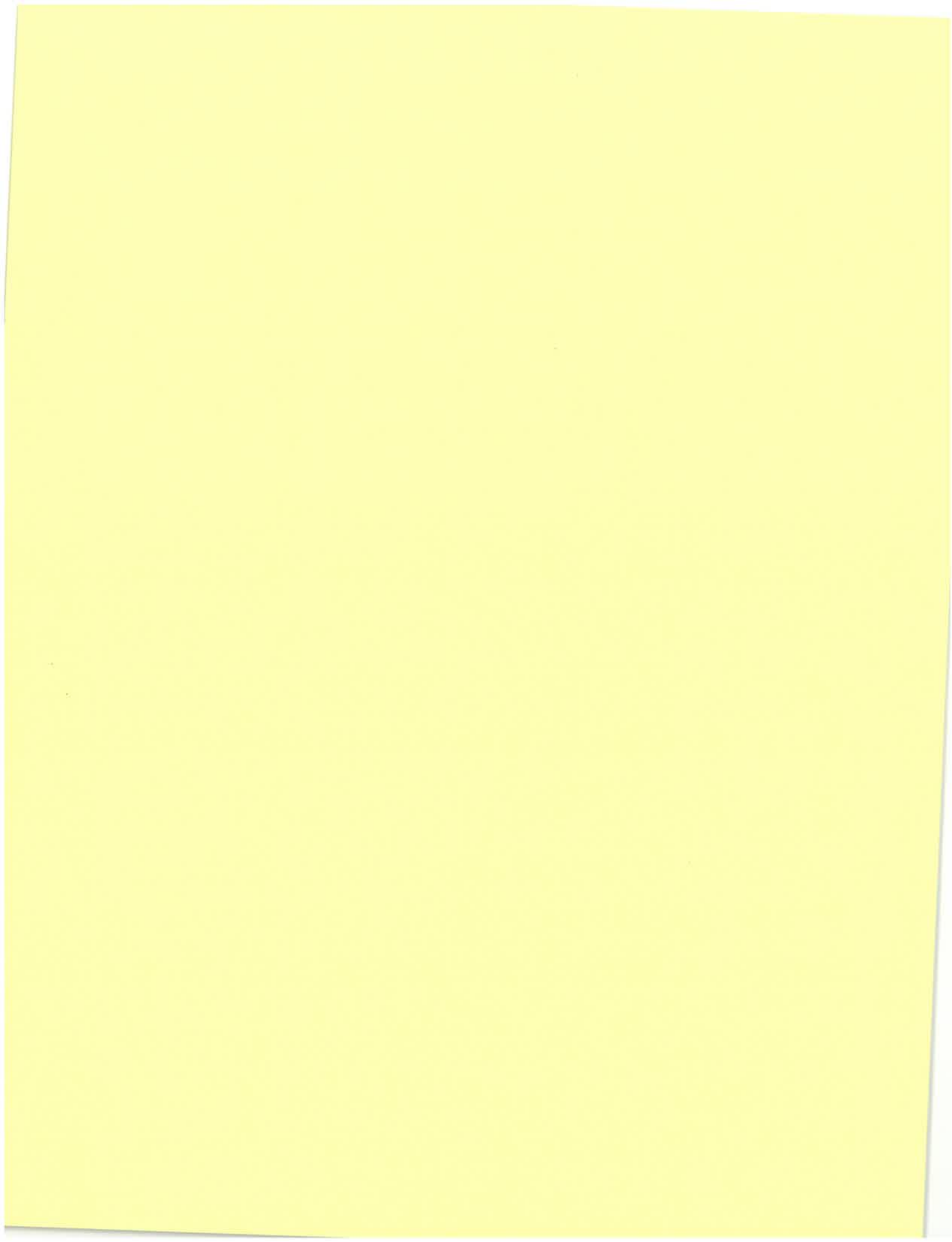
Missy Clarke, CMC Town Clerk

Nick Simons, Mayor

	Motion	Seconded	Aye	Nay	Absent
Vice-Mayor Kornijtschuk					

		8				
Commissioner Dorgan						
Commissioner Steiermann						
Commissioner Will						
Mayor Simons						

LTB/RBMcL/m
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September 27TH, 2019

TECHNICAL STAFF REPORT

TO: Honorable Mayor and Members, Town of Redington Beach Board of Commissioners

FROM: Lynn Burnett, PE, CFM

SUBJECT: Proposed Ordinance 2020-03: Impervious Surface Ratio (ISR)
Prescriptive Mitigation Measures and Procedures: Town Standard
Details Manual

The Town's current Land Development Code Chapter 6, Article III, Division 1, Sec. 6-59 outlines the requirements for all new development and redevelopment as follows:

Sec. 6-59. - Stormwater drainage.

- (a) All applicants for a permit for commercial, residential and lot improvements shall be required to submit a site and drainage plan, signed and sealed by a Florida licensed engineer. Upon completion of any development project the applicant shall furnish the city with a certificate of compliance stating that the project has been constructed and conforms to the approved stormwater management system plans and this chapter before a certificate of occupancy or completion is issued. The site and drainage plan shall conform to meet the standards as set forth herein and shall ensure through plans submitted for review and approval the standards as set forth in the following:
- (1) *Grade line defined.* For the purpose of this section, the term "grade line" is defined as the highest point on the crown of the road which borders on the lot or combination of lots; on corner lots, the highest point on the crowns of the intersecting roads.
 - (2) *Lot grading.* The proposed minimum lowest floor elevation of all structures shall be included on the construction plans. The lowest floor elevation shall be at least twelve inches above the crown of the road unless deviation is required by the existing topography as shown by a survey of the property. Lot grading shall provide drainage to the street and not cause drainage to flow onto adjacent properties or cause drainage ponding on adjacent property. Grading plans shall be submitted to the Town Building Official for review and approval.
 - a. The lot grade of individual lots shall be shown on the construction plans. No lot grading shall result in an adverse impact on adjacent or off-site property.
 - b. As part of the building permit application for any accessory structure where impervious surface is added or where a lot's contours are proposed to be altered for an area over 500 square feet a plan addressing the lot grading shall be required. These types of permits include, but are not limited to, additions, pools, slabs.
 - c. Except for minimum grading as described in subsection (2) above, (existing elevations shall be provided with the site plan), stem wall construction. or for building envelopes, no fill shall be allowed.

- (3) *Drainage requirements.* Design plan must show existing and proposed elevations for building and lot corners. Design plans shall also provide proposed elevations at the property line, adjacent to each corner of the proposed building. A final elevation survey will be due, and must be approved. Prior to the issuance of a certificate of occupancy. The following criteria shall be met:
 - a. Finished floor elevation shall be a minimum of 12 inches above crown of the road.
 - b. Development shall treat the first one inch of rainfall or handle the first one-half inch of runoff in an off-line retention system. Design calculations shall be consistent with State of Florida Department of Transportation Drainage Handbook and Southwest Florida Water Management District Environmental Resource Permit Applicant's Handbook Volume II, latest editions.
 - c. Front, rear and side slopes shall be a minimum of .25 percent, and shall not exceed a maximum of eight percent.
 - d. Rear swales shall drain to side swales, and side swales shall drain to the street on each lot, and shall function independently from all adjoining lots.
 - e. All drainage to the street shall be with a .25 percent (min.) slope side swale.
 - f. Roof gutters and leaders are required, and the leaders must empty into a swale or site French drain or infiltration trench and terminate in a bubbler.
 - g. Lot grading shall maintain historical flow paths and prevent the accumulation of water, nor may the lot grading create excessive runoff onto adjacent properties.
 - h. Lots within the Velocity Zone, the 100-year floodplain, and in-fill lots will require drainage and acceptable grade transitions to adjacent lot elevations, as approved by the building official.
- (4) *Permeable and pervious materials.* Rocking or placement of other acceptable permeable materials on the lot area is an acceptable method of landscaping and may be used in conjunction with lot grading and swales provided permeable and pervious materials do not exceed the allowable impervious lot coverage set in the Future Land Use Element of the Adopted Comprehensive Plan after the runoff co-efficient for impervious materials are taken into consideration. Furthermore, no impermeable underlining shall be allowed. The permeable and pervious materials are required to allow for maximum on-site drainage percolation.
- (5) *Compliance with state regulations.* All new developments must be consistent with the SWFWMD, the Florida Building Code, local ordinance, town zoning setback requirements, and other applicable state, federal, and local regulations.
- (6) *Swales.* New lot and subdivision developments and redevelopments shall use front, rear and side lot line swales as called for in subsection (3) above.
- (7) *Control of runoff during construction.* New developments shall utilize erosion/runoff control devices during construction. While development activity is underway and after it is completed, the characteristics of stormwater runoff shall approximate the rate, volume, quality and timing of that which occurred under the site's natural unimproved or existing state. Best management practices plan for stormwater and sediment control during the project; this includes, but is not limited to:
 - (i) A washed shell soil tracking prevention device across the city right-of-way;
 - (ii) Silt fencing around the perimeter of the property and/or stored material;
 - (iii) Turbidity control features in canals;

- (iv) Location of groundwater discharge and filtration methods to be used to control siltation.
- (b) *National Pollutant Discharge Elimination System (NPDES) permits.* All persons shall comply with section 6-66 of this chapter as applicable. Any person who holds a NPDES permit issued by any authorized governmental agency, other than the city, shall provide a copy of such permit to the town no later than 15 calendar days after issuance of such permit.
- (c) *Penalties for violation.* It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this article. Whenever the authorized enforcement agency designee finds that a person has violated a prohibition or failed to meet a requirement of this article, the authorized enforcement agency designee may order compliance by written notice of violation to the responsible person, and may proceed with code enforcement procedures as provided in chapter 2, administration, article III, Code Enforcement, of this Code. If the nature of the violation is determined to be a danger to the life, health, safety or welfare of the public, the town may take steps to abate the violation after notice to the property owner as provided by law.
 - (1) If abatement of a violation and/or restoration of affected property are required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator, including reimbursement for all fees and costs.
 - (2) If a person has violated or continues to violate the provisions of this article, the authorized enforcement agency designee may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation, in addition to any other remedy allowed by law or through code enforcement proceedings.
 - (3) In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this article is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

(Ord. No. 2015-02, §§ 2, 3, 9-15-15; Ord. No. 2016-02, § 2, 4-19-16)

Sec. 6-66. - Compliance with NPDES requirements.

- (a) *Compliance standards.*
 - (1) New building construction within any zoning district in the town shall conform to the provisions of the National Pollution Discharge Elimination System (NPDES) requirements of the United States Environment Protection Agency as more specifically set forth in the NPDES permit issued to the town.
 - (2) The town's certified stormwater management inspector shall, at all times during building construction or development, ensure that construction and contractors maintain a system for control of construction site erosion, sediment and water run-off.
 - a. Each building site plan for construction shall be reviewed to include the system or method to be used by the contractor to eliminate or control erosion and sediment at the construction site and potential pollution of the town's stormwater collection system.

- b. The certified stormwater management inspector shall periodically inspect each construction site to ensure that the site does not cause erosion or sediment that may result in a discharge into the stormwater system.
 - c. The certified stormwater management inspector shall maintain detailed records of all site plans and inspections of construction sites in the town for compliance with the town's NPDES Permit, and shall report such data to the Florida Department of Environmental Protection Agency for NPDES reporting purposes.
 - d. The certified stormwater management inspector shall report to the mayor all notices of violation or stop work orders issued by the certified stormwater management inspector to any contractor or property owner for non-compliance with the provisions of this section.
- (b) *Enforcement.*

- (1) *Stop-work order; other penalty.* In the event that any person holding a site development permit pursuant to this Code violates the terms of the permit, or implements site development in such a manner as to materially adversely affect the health, welfare or safety of persons residing or working in the neighborhood or at the development site so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the certified stormwater management inspector shall issue a "stop-work" order upon ascertainment of any violation of this section or other law pertaining hereto until such time as the condition that caused the "stop-work" order has been, in the opinion of the certified stormwater management inspector, corrected.
- (2) *Violation and penalties.* No person shall construct, enlarge, alter, repair or maintain any grading, excavation or fill, or cause the same to be done, contrary to or in violation of any of the terms of this Code. Any person violating any of the provisions of this section of this Code shall be deemed guilty of a misdemeanor, and each day during which any violation of any of the provisions of this section of this Code is committed, continued or permitted, shall constitute a separate offense. Upon conviction of any such violation, such person, partnership or corporation shall be punished as provided for elsewhere in this Code for misdemeanors of the third degree. In addition to any other penalty authorized by this section, any person, partnership or corporation convicted of violating any of the provisions of this section of this Code shall be required to bear the cost and expense of restoring the site to a condition acceptable to the certified stormwater management inspector in conformity with provisions of this section of this Code, and shall pay to the town all costs of enforcement of the provisions hereof, including reasonable attorneys fees.

(Ord. No. 2004-01, 3-2-04)

The Town's Level of Service Design Storm Event as adopted by the Town Comprehensive Plan is the 25-year, 24-hour storm event which equates to 9 inches of rainfall over a 24 hour period.

The Pinellas County Stormwater Manual further establishes the Goals of Stormwater Management (Section 2.3)

(a) General goals of stormwater management

The ultimate stormwater management goal is to maintain the predevelopment stormwater characteristics of a site or watershed after development (Section 62-40.431(2), F.A.C.). More generally, the goals of stormwater management are to minimize the adverse effects of urban development on communities, watersheds, water bodies, wetlands, floodplains and other natural systems. These goals should be applied to redevelopment situations so that existing stormwater conditions are appropriately improved with reconstruction. More specifically, these goals include:

1. Reducing pollutant concentrations and loadings to a level to ensure that discharges do not cause or contribute to violations of State water quality standards.
2. Preventing or reducing on-site and offsite flooding.
3. Maintaining or restoring the hydrologic integrity of wetlands and aquatic habitats.
4. Maintaining and promoting groundwater recharge.
5. Promoting the reuse of rainfall and stormwater.
6. Minimizing erosion and sedimentation.
7. Account for impacts to the project based on sea level rise projections.

The calculations and data required to demonstrate compliance with these goals can be complicated and difficult to verify compliance without the appropriate technical expertise and computer modeling necessary to verify accuracy of the submitted data.

It is in the best interest of the Town Officials and Property Owners to have a prescriptive method that can be applied to each lot without requiring a professional engineer to design and model each lot proposed for development or redevelopment.

While there is not a “one size fits all” silver bullet, there are prescriptive methods that have been successfully implemented on other barrier islands in the Gulf of Mexico. It is our professional recommendation that the Board consider the following Standard Details as an acceptable Prescriptive Method with voluntary implementation by the property owner. The Prescriptive Method would exempt the property owner/applicant from being required to hire a professional engineer to sign and seal the required Drainage Plan (Ref. LDC Sec. 6-59.(a)) and would expedite the review process while ensuring future success of the Town and Pinellas County Stormwater Manual Goals.

ATTACHMENTS:

- **EXHIBIT A: STANDARD DETAILS MANUAL**
- **EXHIBIT A-1: EXCERPTS FROM PINELLAS COUNTY STORMWATER MANUAL**



FLORIDA MUNICIPAL SERVICES

18001 Gulf Blvd.
Redington Shores, FL 33708
(727) 202-6825

Meeting Date: March 4, 2020
Advertised Public Hearing
Agenda Item ____

February 27, 2020

MEMORANDUM

TO: Honorable Mayor and Members, Town of Redington Beach Board of Commissioners

FROM: Darin Cushing, CBO, CFM, Building Official
R. Bruce McLaughlin, AICP, MCIP, Town Planner

SUBJECT: Proposed Ordinance 2020-03: Impervious Surface Ratio (ISR) Issue: Standard Details Manual:
(Technical Staff Report on the specifics of the Standard Details Manual to be provided by Lynn Burnett, PE, the Town's Special Stormwater Engineer)

EXECUTIVE SUMMARY

The ISR for the Town, set in the Comprehensive Plan, is being increased to 65%, based on extensive discussions by this Board, the Planning Board and with the public. Staff recommended approval of the increased ISR subject to requiring prescriptive mitigation measures within the Plan and the Land Development Regulations to maintain consistency with all relevant Plan policies and to mitigate the impacts of the increased ISR. Those mitigation measures are required by the CPA increasing the ISR. Ordinance 2020-03 creates those measures. **STAFF RECOMMENDS ADOPTING ORDINANCE 2020-03 ON FIRST READING.**

BACKGROUND

Applicant	Town of Redington Beach
Affected Area	Entire Town

February 27, 2020

THE ISSUE

To minimize the negative impacts of an increased Impervious Surface Ratio for the Town's residential areas while permitting reasonable use of all residential properties.

HISTORY

Since the 1989 adoption of a new Comprehensive Plan pursuant to the 1985 Growth Management Act, the permitted ISR in the Town's residential areas was 0.40 or 40%. In 2016, the then Building Official recommended increasing the permitted ISR to 0.65 to be more in line with the permitted ISRs in other Beach communities.

The Town attempted to implement the Building Official's recommendation through the adoption of Ordinances 2016-04 purporting to amend the ISR in the Comprehensive Plan's residential designations and 2016-08 amending Town Code Section 6.103 to increase the permitted ISR in the Town's land development regulations. Ordinance 2016-04 never lawfully took effect because the Town was not then permitted to amend its Comprehensive Plan having failed to prepare an Evaluation and Appraisal Report, because the notice and hearing for Ordinance 2016-04 were inadequate and because Ordinance 2016-04 was never submitted to the State for approval.¹ In summary, permitted ISRs are:

1989 - August, 2016	0.40
August 2016 - July, 2017 ²	0.65
July, 2017 to present	0.40

In the summer of 2018, the Planning Board, acting without a staff recommendation because of staff's ambivalence on the issue, recommended to the Town Board that the Comprehensive Plan Amendment attempted by Ordinance 2016-04 be readopted. By the time this proposal reached the Town Board in November, 2018:

- Staff had had the benefit of an additional period of casual observation of the conditions in the Town, particularly through the "rainy season;"

¹ Whether or not there were enactment issues with Ordinance 2016-08 has not been examined since the governing Comprehensive Plan policy was never lawfully amended.

² Ordinance voidable if not void *ab initio*. Issues with enacting ordinance identified in July, 2017, and enforcement reverted to 0.40.

February 27, 2020

- The storm surge from Hurricane Michael caused substantial street flooding, even without a rainfall event;
- A squall line that passed rapidly over the Town in the early afternoon of October 26, 2018, dropped 0.23" of rain ³ on the Town and left significant areas of standing water;
- Staff, along with a highly qualified stormwater engineer, toured the entire Town on October 26, 2018, renewing our observations of the stormwater issues in the Town;
- The Town has embarked on the pursuit of flood mitigation funding from the Southwest Florida Water Management District, the Tampa Bay Estuary Program and, perhaps, the Federal Emergency Management Agency, and the success of these funding applications could be adversely affected by an unmitigated increase in the permitted impervious surface ratio;
- Staff conclusively determined that the 2016 increase in the impervious surface ratio was clearly procedurally invalid.

Based on the foregoing, Staff's ambivalence on the topic of the appropriate impervious surface ratio was resolved and Staff then firmly recommended against increasing the impervious surface ratio above the lawfully established 0.40 ratio. The Town Board concurred and rescinded the effort to increase the permitted ISR to 0.65 with the result that the lawful ISR in the Town's residential areas remains 0.40.

One problem exacerbating this analysis is that the enforcement of the 0.40 ISR established in the 1989 Comprehensive Plan has been uneven. Over the years, Building Officials working directly for the Town, for Pinellas County and for Florida Municipal Services have overlooked the ISR limit and have permitted construction at higher ISRs. Further, some homeowners have, after the Certificate of Occupancy or Certificate of Completion had been issued, improperly added impervious surface to their properties by constructing walkways, decks, etc.

In 2019, the Town commissioned a study by Global Cartographics, LLC, of the existing ISRs throughout the Town. The result of this study is that the average ISR in the Town is 0.52. The distribution of ISRs is shown in Appendix A. ⁴ (See separate volume.)

3

http://www.theweathercollector.com/?gclid=CjwKCAjwyOreBRAYEiwAR2mSkhUdF0xS8AH2TRUf72fVFd_UjubXtkGDgGmV0TzVLrA3mqw82tSABBoC_18QAvD_BwE

⁴ Courtesy resident Steve Wotovich, based on the draft Global Cartographics report.

February 27, 2020

NOTICE

The Clerk's office will advise as to the notice given of this advertised public hearing.

AUTHORITY

Pursuant to §§ 4 and 5 of the Town Charter, the Town is governed by the Board of Commissioners which may exercise all powers available to a municipality under the Constitution and laws of the State of Florida. Those powers include preparing, adopting and amending land development regulations, including the regulation of stormwater management, drainage and related issues, and including requiring prescriptive measures to mitigate the impacts of higher ISRs.

ANALYSIS

Both the Planning Board and the Town Board have endorsed an Impervious Surface Ratio of 0.65 (65%), subject to the establishment of the mitigating measures now proposed in the Standard Details Manual to be adopted by Ordinance 2020-03. The prescriptive mitigation measures that will ensure that a higher ISR does not lead to a lower level of service (LoS) in the Town's stormwater system. Further, as part of maintaining the current LoS it seems to be the consensus that:

- The Comprehensive Plan policy prohibiting post-development runoff from exceeding pre-development runoff be maintained and enforced;
- The Comprehensive Plan policy requiring the Town's stormwater system to accommodate the 25-year, 24-hour peak storm event must remain effective;
- No runoff may enter a neighboring property;
- No runoff may enter Boca Ciega Bay;
- No runoff may enter a public right-of-way except through the designated stormwater system; and
- Full compliance with SWFWMD, FDEP and CoE standards is maintained.

Although the decision to increase the ISR, subject to the mitigation measures to be established in the Standard Details Manual proposed to be adopted by Ordinance 2020-03 and now pending before this Board as this matter, has been made, it will be useful to bring back to the Board the analysis that established the reason for concern with the original ISR increase and that supports the recommendation for the adoption of the Standard Details Manual.

February 27, 2020

These analyses are found in the appendices provided in a separate document.

COMPREHENSIVE PLAN CONSISTENCY

The Countywide Comprehensive Plan does not establish a maximum ISR for residential uses in the future land use designations applicable to the Town's residential areas. Therefore, there will be no direct conflict between a higher ISR in the Town's Comprehensive Plan and the Countywide Plan and no need for mitigation in that context. For non-residential uses in these future land use designations, the permitted Countywide ISR is 0.75, so the subject proposal is consistent with this standard.

The principal Town Comprehensive Plan requirement for Ordinance 2020-03 and the Standard Details Manual adopted thereby is the prescription for the Manual found in Ordinance 2019-10, adopting the Comprehensive Plan Amendment which increased the permitted ISR. This prescription mandates:

[Infrastructure Element] Policy 2.1.2

Ensure that the developer or owner of any new development or redevelopment site is responsible for the on-site management of stormwater runoff so that post-development runoff rates, volumes, and pollutant loads do not exceed predevelopment conditions. The land development regulations implementing this Policy shall:

1. reaffirm the Building Official's authority to enforce this Policy;
2. provide that the Building Official may confer with engineers and with professionals in other relevant fields to provide comprehensive review and approval of drainage plans and specifications for any project that increases the impervious surface ratio on the subject property.
3. The drainage design, construction and inspection requirements shall be consistent with the Town's land development regulations, and with the Pinellas County Stormwater Manual (February 1, 2017).
4. More generally, the goals of stormwater management are to minimize the adverse effects of urban development on communities, watersheds, water bodies, wetlands, floodplains and other natural systems. These goals should be applied to redevelopment situations so that existing stormwater conditions are appropriately improved with reconstruction. More specifically, these goals include:

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- a. Reducing pollutant concentrations and loadings to a level to ensure that discharges do not cause or contribute to violations of State water quality standards.
 - b. Preventing or reducing on-site and off-site flooding.
 - c. Maintaining or restoring the hydrologic integrity of wetlands and aquatic habitats.
 - d. Maintaining and promoting groundwater recharge.
 - e. Promoting the reuse of rainfall and stormwater.
 - f. Minimizing erosion and sedimentation.
 - g. Accounting for impacts to the project based on sea level rise projections.
5. The Town shall adopt, implement and maintain a Standard Details Manual to supplement the Pinellas County Stormwater Manual in order to provide guidance and criteria to the design and building community for best management practices unique to the Town's character.

Further, approval of Ordinance 2020-03 and the incorporated Standard Details Manual is essential to ensure that the Comprehensive Plan Amendment effected by Ordinance 2019-10 does not create inconsistencies with the following other policies in the Town's adopted Comprehensive Plan: (All **bold** emphasis added.)

Future Land Use Element

Policy 1.1.2

Residential areas shall be located and designed to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, and noise.

Policy 3.1.4

The land development regulations shall contain specific and detailed provisions required to implement this comprehensive plan, which, at a minimum:

4. **Ensure that all development is consistent with Federal Flood Insurance regulations;**

...

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7. Provide for drainage and stormwater management, based on the minimum criteria established by the Southwest Florida Water Management District, the Town of Redington Beach or other appropriate governmental agencies;

...

10. Provide provisions for the control of erosion and runoff from construction sites.

11. **Promote green building techniques and materials.**

Infrastructure Element

Goal 2: To endeavor to provide an efficient drainage system which protects human life, minimizes property damage, and **improves** stormwater quality and **on-site retention**.

Objective 2.1

The Town shall seek to improve the stormwater drainage system located within its municipal boundaries.

Policy 2.1.1

Ensure that **surface cover vegetation loss during construction is minimized or replaced** to reduce erosion and flooding.

Policy 2.1.2

Ensure that the developer or owner of any new development or redevelopment site is responsible for the on-site management of stormwater runoff **so that post-development runoff rates, volumes, and pollutant loads do not exceed predevelopment conditions.**

Policy 2.1.3

Future drainage outfalls associated with either new development or redevelopment, shall be designed to prevent the direct discharge of runoff into Boca Ciega Bay or the Gulf of Mexico.

Policy 2.1.4

Implement the town's Watershed Management Plan in conjunction

February 27, 2020

with the Southwest Florida Water Management District to address existing drainage and flooding conditions.

Objective 2.2

All development within the Town of Redington Beach shall meet the adopted level-of-service standard for stormwater drainage.

Policy 2.2.1

All development activity shall adhere to the level-of-service standard for drainage requirements of the 25 year, 24 hour rainfall storm design standard.

Policy 2.2.2

New development, redevelopment, and rehabilitation shall meet and maintain the standards established by the Florida Department of Environmental Regulation for the Outstanding Florida Waters and Aquatic Preserve designations of Boca Ciega Bay that require an additional fifty percent storage and treatment on site.

Policy 2.2.3

The following management techniques shall be used to reduce stormwater runoff:

1. Expansion and regular maintenance of retention swales adjacent to town roadways;
2. Use of front, rear and side lot line swales for new construction or redevelopment;
3. Use of erosion and runoff control devices during construction; and [*sic*]

Policy 2.2.4

The land development regulations shall continue to enforce provisions which, at a minimum, protect natural drainage features found within the Town as follows:

1. All applications for development approval within those areas identified as coastal high hazard area shall undergo site plan review;

February 27, 2020

2. **The flood-carrying and flood storage capacity of the 100-year floodplain shall be maintained;**
3. Development along Boca Ciega Bay shall maintain adequate setbacks to maintain any existing areas of natural coastal/marine habitat;
4. The prevention of erosion, retardation of runoff and protection of natural functions and values of the floodplain shall be considered while promoting public usage; and
5. The Town shall require development or redevelopment proposals to be consistent with the performance standards regulating development within the designated floodplain.

Objective 2.3

The Town shall take positive steps to implement its Watershed Management Plan.

Policy 2.3.1

The Town shall assess existing conditions and recommend modifications or cures to **relieve existing drainage problems.**

Policy 2.3.2

Consistent with budget allocations, the Town shall continue to retrofit the existing drainage system in conjunction with the Southwest Florida Water Management District.

Conservation and Coastal Management Element

Objective 1.1

The Town shall protect the quality and quantity of surface and groundwater.

Policy 1.1.3

The Town shall enforce the required standards and regulations set forth in the Pinellas Aquatic Preserve Management Plan to protect and enhance the water quality of Boca Ciega Bay. [Document may not exist]

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Policy 1.2.2

The Town shall protect the natural functions of the 100-year floodplain so that the flood carrying and flood storage capacity are maintained.

Policy 1.2.4

The Town shall enforce land development regulations which recognize the limitations of development on a barrier island (e.g.,

100-year floodplain, vulnerability to tropical storms, topography and soil conditions).

Objective 1.9

The Town of Redington Beach shall coordinate with the State of Florida and other local jurisdictions in an effort to maintain the Outstanding Florida Waters designation on Boca Ciega Bay.

Policy 1.9.1

No new point sources shall be permitted to discharge from the Town of Redington Beach into Boca Ciega Bay or the Gulf of Mexico, or into ditches or canals that flow into the bay and gulf.

Policy 1.9.2

In order to reduce non-point source pollutant loadings, the *Watershed Management Plan* shall follow the regulations set out in the Florida Administrative Code. [Document may not exist]

Policy 1.4.1

Require that all new development preserve, or relocate on site, a minimum of 25 percent of the native vegetation on site. This should not be interpreted to allow development in wetland areas.

Intergovernmental Coordination Element

Policy 2.2.12

Coordinate with those communities and counties lying within the boundaries of the Tampa Bay S.W.I.M. Plan 1988 in implementation of the Surface Water Improvement Management Program for Tampa Bay.

Policy 2.3.1

The Town shall be involved in proceedings to develop joint planning and management programs with the neighboring municipalities for hurricane evacuation, provision of public access, provision of infrastructure, **controlling stormwater**, protection of wetland vegetation and coordinating efforts to protect species with special status.

Policy 2.3.2

Through the Pinellas Planning Council or other appropriate governmental mechanism, the Town shall coordinate with neighboring municipalities and the County to protect estuaries which are within the jurisdiction of more than one local government; including methods for coordinating with other local governments to ensure adequate sites for water-dependent uses, preventing estuarine pollution, **controlling surface water runoff**, protecting living marine resources, reducing exposure to natural hazards, and ensuring public access.

Capital Improvements Element (as amended)

CIE Policy 1.5.5

- b. Prior to approval of a building permit or its functional equivalent, the Town shall examine that part of the Town's drainage system that will be directly impacted by the new development to determine whether adequate stormwater drainage capacity will be available to serve the new development no later than the anticipated date of issuance of certificate of occupancy or its functional equivalent.

As far as is relevant, these policies align with the standards of the *Community Rating System*,⁵ and the fulfillment of these policies will enhance the Town's CRS rating and potentially have a positive effect on flood insurance rates in the Town. For example, strict adherence to the post-

⁵ E.g., Federal Emergency Management Agency, *National Flood Insurance Program Community Rating System: A Local Official's Guide to Saving Lives, Preventing Property Damage, and Reducing the Cost of Flood Insurance*, FEMA Publication B573, Author, Washington, DC, 2018

February 27, 2020

development runoff not exceeding the pre-development runoff, can earn the Town 755 CRS points towards an attainable 4,500 CRS points (17%).

The pending amendments to Infrastructure Element Policy 2.1.2, (Ordinance 2019-10) ⁶ and the adoption by Ordinance of the referenced land development regulations: the *Pinellas County Stormwater Manual*, and the local Standard Details Manual at issue herein, along with the mitigation requirements of the proposed Comprehensive Plan Amendment, will ensure that the impacts of the higher ISR are appropriately mitigated.

As pointed out previously, based on the analysis above, Staff does not believe that an increased ISR, **without the prescriptive mitigation requirements**, would have been consistent with the balance of the Comprehensive Plan, particularly the highlighted policies above. However, with the imposition of the prescriptive mitigation requirements, as drafted by the Town's special stormwater engineer, Staff is of the opinion that the Plan will be internally consistent and thus the adoption of the Standard Details Manual is an essential component of increasing the permitted ISR in the Town..

PLANNING BOARD/LOCAL PLANNING AGENCY RECOMMENDATION

On February 26, 2020, the Town's Planning Board, sitting as the Local Planning Agency, reviewed Ordinance 2020-03, **FOUND THE ORDINANCE TO BE CONSISTENT WITH THE TOWN'S COMPREHENSIVE PLAN AND RECOMMENDED ITS APPROVAL.**

RECOMMENDATION

THAT ORDINANCE 2020-03 BE ADOPTED ON FIRST READING.

DC/RBMcL/m
C:\Red Bch\Town Board\2020-03-04\RB TB 2020-03-04 SDM.wpd

⁶ Prepared by Lynn Burnett.

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PROPOSED ORDINANCE 2020-03

AN ORDINANCE OF THE TOWN OF REDINGTON BEACH, PINELLAS COUNTY, FLORIDA, AMENDING TOWN CODE, CHAPTER 18.5, STORMWATER, BY CREATING AND INSERTING ARTICLE IV, ADOPTING A STANDARD DETAILS MANUAL FOR PUBLIC WORKS AND PRIVATE PROPERTY IMPROVEMENTS WHICH MANUAL ESTABLISHES STANDARD DETAILS FOR ALL WORKS WITHIN THE TOWN'S PUBLIC RIGHTS OF WAY AND FOR COLLECTION, RETENTION AND TREATMENT OF STORMWATER RUNOFF ON PRIVATE PROPERTIES, PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, Section 163, Part II, Florida Statutes, establishes the requirements of the Community Planning Act and governs local government comprehensive planning and land development regulation; and

WHEREAS, The Town of Redington Beach adopted its Comprehensive Plan in October 1989, and has periodically revised and amended the Plan in order to ensure it remains current and responds to current needs and opportunities; and

WHEREAS, by Ordinance 2019-10, the Town Amended its Comprehensive Plan to permit an Impervious Surface Ratio of 0.65 (65%) in the Town's Residential Designations; and

WHEREAS, Ordinance 2019-10 also requires the adoption of a Standard Details Manual to establish mitigation techniques to mitigate the higher runoff created by the increased permitted Impervious Surface Ratio; and

WHEREAS, The Building Official and Town Planner of the Town of Redington Beach recommended that the Comprehensive Plan be amended to update the impervious surface ratio requirement subject to the adoption of a Standard Details Manual to create mitigating requirements for stormwater management; and

WHEREAS, The Planning Board of the Town of Redington Beach, acting in its capacity as Local Planning Agency, recommends the adoption of the Standard Details Manual; and

WHEREAS, the Board of Commissioners of the Town of Redington Beach desires to implement the recommendations of the Planning Board to adopt a Standard Details Manual;

NOW THEREFORE BE IT ORDAINED, by the Commissioners of the Town of

Redington Beach, Florida, in its regular meeting duly assembled on this ____ day of _____, 2020,

Section 1. Chapter 18.5 of the Town Code of the Town of Redington Beach is amended by the insertion of Article IV, Standard Details Manual, to read as follows:

ARTICLE IV. STANDARD DETAILS MANUAL

Sec. 18.5-40. Adopted.

The Standard Details Manual for the Town of Redington Beach, Attached as Exhibits A and -A-1 to Ordinance 2020-03 is adopted as the Standard Details Manual for the Town and shall have the full force and effect of law.

Sec. 18.5-41. Enforcement by Building Official.

The Building Official is charged with the enforcement of the Standard Details Manual and of Comprehensive Plan Infrastructure Element Policy 2.1.2 as adopted by Ordinance 2019-10.

Sec. 18.5-42. Professional Assistance to Building Official.

The Building Official may confer with engineers and with professionals in other relevant fields to provide comprehensive review and approval of drainage plans and specifications for any project that increases the impervious surface ratio on the subject property.

Section 2. If any section, subsection, sentence, clause, provision or word of this Ordinance is held unconstitutional or otherwise legally invalid, same shall be severable and the remainder of this Ordinance shall not be affected by such invalidity, such that any remainder of the Ordinance shall withstand any severed provision, as the Board of Commissioners would have adopted the Ordinance and its regulatory scheme even absent the invalid part.

Section 3. This Ordinance shall become effective immediately upon final passage and adoption.

PASSED AND ADOPTED by the Board of Commissioners of the Town of Redington Beach, Pinellas County, Florida, on this ____ day of _____, 2020.

ATTEST:

Missy Clarke, CMC Town Clerk

Nick Simons, Mayor

	Motion	Seconded	Aye	Nay	Absent
Vice-Mayor Kornijtschuk					
Commissioner Dorgan					
Commissioner Steiermann					
Commissioner Will					
Mayor Simons					

EXHIBIT A

TOWN OF REDINGTON BEACH

TOWN STANDARD DETAILS MANUAL



February 24, 2020

SUBSTANTIAL EFFORT HAS BEEN MADE TO ENSURE THE INFORMATION CONTAINED IN THESE STANDARDS IS ACCURATE. HOWEVER, THE CITY OF HOLMES BEACH CANNOT ACCEPT RESPONSIBILITY FOR ANY ERRORS OR OVERSIGHTS IN THE USE OF THE MATERIAL OR IN THE PREPARATION OF THE ENGINEERING PLANS. THIS PUBLICATION IS INTENDED FOR USE BY PROFESSIONAL PERSONNEL COMPETENT TO EVALUATE THE SIGNIFICANCE AND LIMITATIONS OF ITS CONTENTS AND BE ABLE TO ACCEPT RESPONSIBILITY FOR THE APPLICATION OF THE MATERIAL IT CONTAINS.

THE DESIGNER MUST RECOGNIZE THAT NO HANDBOOK OR CODE CAN SUBSTITUTE FOR EXPERIENCED ENGINEERING JUDGEMENT. SOME OF THE RECOMMENDATIONS ARE UNDER FURTHER REVIEW AND MAY BE UPDATED LATER. USERS OF THESE STANDARDS ARE ENCOURAGED TO OFFER COMMENTS TO CITY OF HOLMES BEACH PUBLIC WORKS DEPT ON THE CONTENTS OF THIS PUBLICATION AND SUGGESTIONS FOR CHANGES IN FUTURE EDITIONS.

THESE STANDARDS ARE UNDER CONSTANT REVIEW AND ARE SUBJECT TO CHANGES APPROVED BY THE SUPERINTENDENT OF PUBLIC WORKS AND CITY ENGINEER. THE SUPERINTENDENT OF PUBLIC WORKS SHALL INTERPRET THESE STANDARDS, AS NEEDED, FOR APPLICATION AND RESOLUTION OF CONFLICTS.

NOTE: ALL CONSTRUCTION AND STANDARDS REFERENCED WITHIN SHALL MEET OR EXCEED F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST REVISION) AND F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST REVISION), UNLESS OTHERWISE NOTED.

TOWN OF REDINGTON BEACH		DISCLAIMER SHEET	1.0
REV.BY	DATE		
DATE OF ADOPTION			

GENERAL INDEX

<u>SECTION</u>		<u>SHEET NO. SERIES</u>
100	DRIVEWAYS	100.0
200	CURB & GUTTER, DRAINAGE STRUCTURES, PIPE	200.0
300	SIDEWALKS	300.0
400	ROADS	400.0
500	TRAFFIC SUPPLEMENTAL SPECIFICATIONS	500.0
600	RESERVED	600.0
700	LOT DRAINAGE SPECIFICATIONS	700.0
800	RESERVED	800.0

TOWN OF REDINGTON BEACH

REV.BY	DATE	
		DATE OF ADOPTION

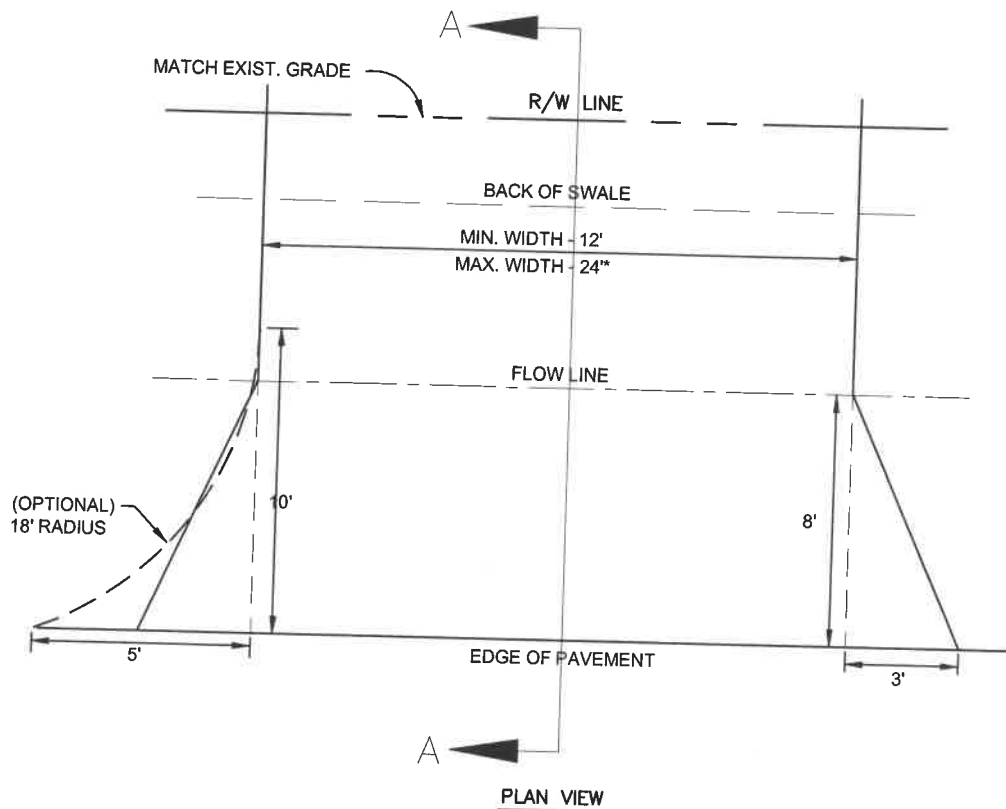
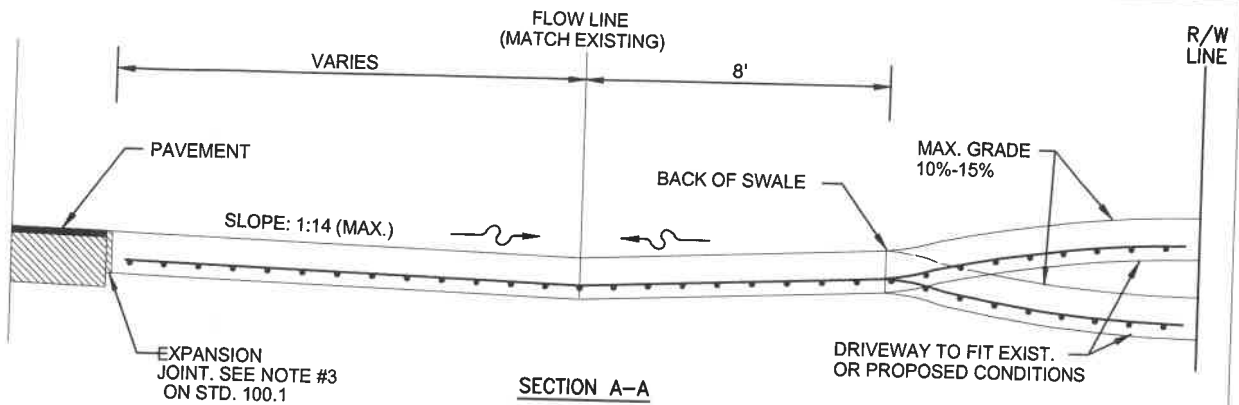
GENERAL INDEX

2.0

DRIVEWAYS INDEX

	<u>SHEET NO.</u>
100 DRIVEWAYS	100.0
	100.1
A. RESIDENTIAL DRIVEWAY - SWALE	101.0
B. RESIDENTIAL DRIVEWAY - CURB	101.1
C. CURB CUT & TRANSITION W/T- FLARE FOR RESIDENTIAL DRIVEWAY	101.2
D. COMMERCIAL & INDUSTRIAL DRIVEWAY	101.3
E. TYPICAL DRIVEWAY, PIPE CROSS SECTION	102.0
F. MITERED END SECT. FOR ELIPTICAL, SINGLE AND MULTIPLE PIPES	102.1
G. MITERED END SECT. FOR ROUND, SINGLE AND MULTIPLE PIPES	102.2
H. DRIVEWAY PIPE/MITERED END SECTION	103.0
I. FILTER FABRIC JACKET	104.0
J. PERVIOUS/PERMEABLE DRIVEWAY OPTIONS WITHIN CITY RIGHTS OF WAY	105.0

TOWN OF REDINGTON BEACH		DRIVEWAY INDEX	100.0
REV.BY	DATE		
DATE OF APPROVAL _____			



* For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:

- 30' total at the R/W line
- 30% of the front footage as defined on the survey (or field measurements, 36' max.)

- CONSTRUCT WITH 6" REINFORCED CONCRETE (3,000 psi @ 28 DAYS) WITH 6"x6" #10 MESH OR FIBERMESH FROM EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE.
- DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ABOVE.
- EXISTING DRAINAGE FLOWLINE TO BE MAINTAINED. PIPING MAY BE REQUIRED AT THE COUNTY'S DISCRETION.
- 3'x8' FLARED APRON IS MINIMAL, OR 18' RADIUS.
- CITY ENGINEER A=OR SUPERINTENDENT OF PUBLIC WORKS MAY APPROVE THE USE OF A SWALE DRIVE, IF ON-SITE CONDITIONS ARE FAVORABLE.

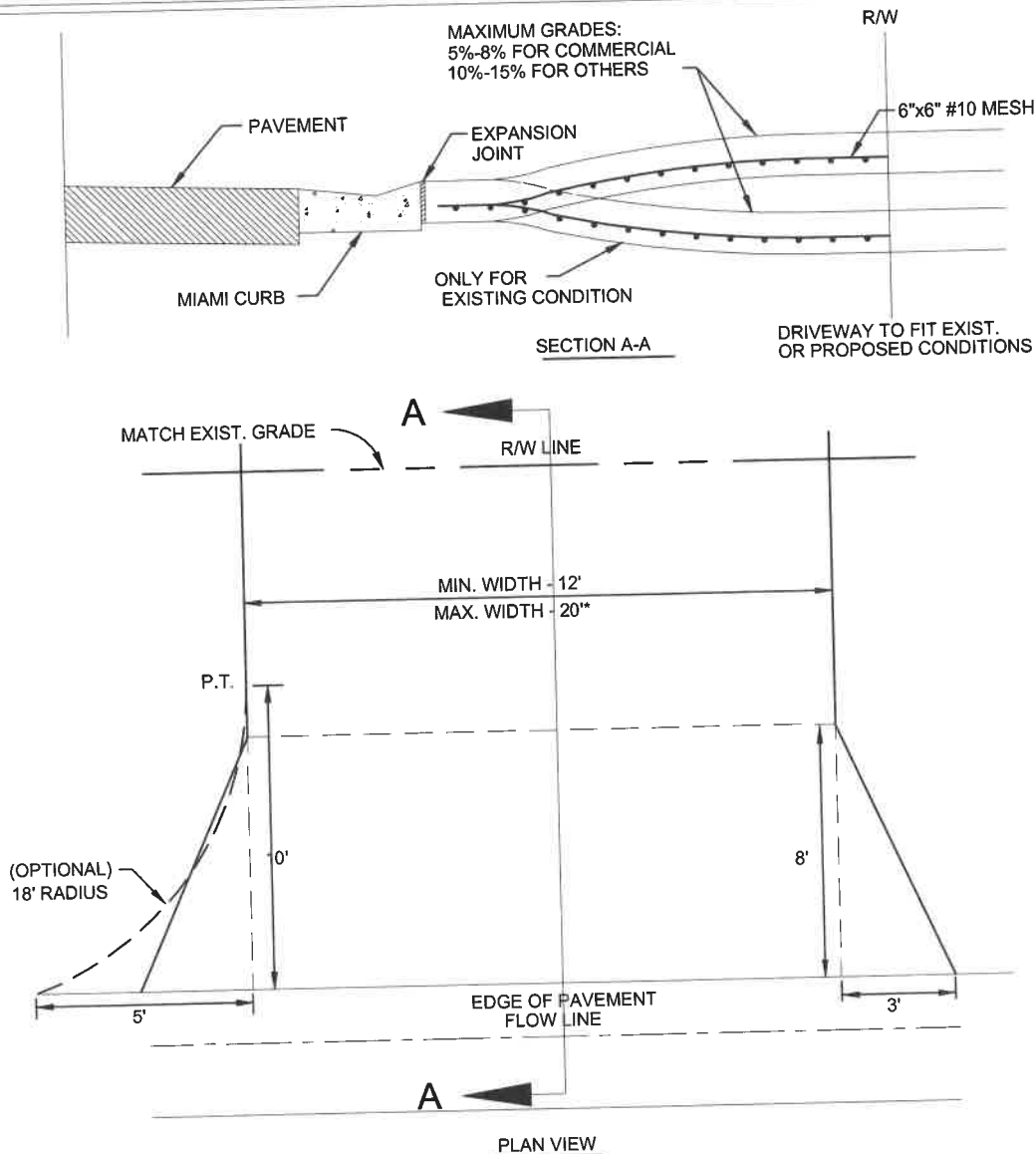
TOWN OF REDINGTON BEACH

REV. BY	DATE	

DATE OF APPROVAL

RESIDENTIAL
(SWALE DRIVE)

101.0



* For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:

- a.) 30' total at the R/W line
- b.) 30% of the front footage as defined on the survey (or field measurement, 36' max.)

* OR AS OTHERWISE DETERMINED BY LDC. SECTION 8.15.B.3.b

- (A) CONSTRUCT WITH 6" REINFORCED CONCRETE 3000 PSI @ 28 DAYS, 6"x6" #10 WIRE MESH FROM BACK OF CURB- TO R/W LINE.
- (B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ON PREVIOUS PAGE (STD. 101.0)
- (C) MAINTAIN EXISTING DRAINAGE FLOWLINE. FOR PIPING SPECIFICATIONS REFER TO F.D.O.T. STANDARD SPECIFICATIONS SECTION 430. SEE NOTE 4, PAGE 100.1. SEE SECTION 200- DRAINAGE (STD. 200.0, 202.5).
- (D) 3'x8' FLARE OR 18' RADIUS WITH CURB TRANSITION (TRANSITION FROM TYPE "F" CURB TO MIAMI CURB) SEE STD. 102.2 NO CHANGE WITH 3' VALLEY CROSSINGS - SEE STDS. 201.0, 201.1, 201.2, 201.4, 201.5, 201.6.
- (E) EXPANSION JOINT 0.50" PREFORMED JOINT FILLER OR APPROVED ALTERNATE, DRIVES WIDER THAN 12' (BEYOND FLARE) PLACE JOINT ON 10' CENTER.
- (F) LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

TOWN OF REDINGTON BEACH

**RESIDENTIAL
(CURB DRIVE)**

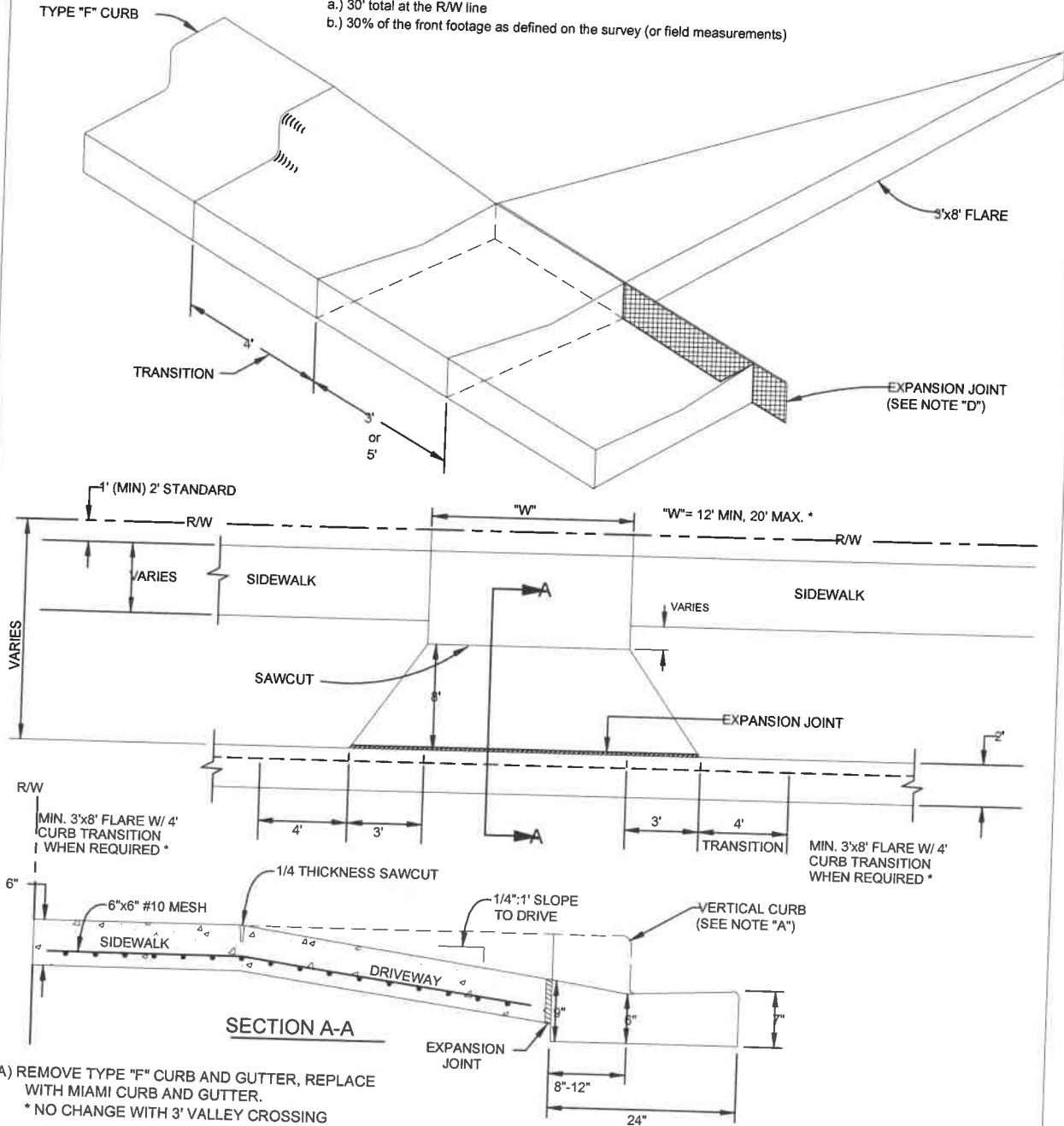
101.1

REV.BY	DATE

DATE OF APPROVAL _____

TYPE "F" CURB For * driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:

- 30' total at the R/W line
- 30% of the front footage as defined on the survey (or field measurements)



A) REMOVE TYPE "F" CURB AND GUTTER, REPLACE WITH MIAMI CURB AND GUTTER.
* NO CHANGE WITH 3' VALLEY CROSSING

B) REMOVE EXISTING SIDEWALK, REPLACE WITH 6" CONCRETE, 6"x6" #10 MESH 3000 PSI AT 28 DAYS.

C) DRIVEWAY CONSTRUCTED WITH 6" CONCRETE WITH 6"x6" #10 MESH OR FIBERMESH, 3000 PSI AT 28 DAYS

D) EXPANSION JOINT 1/2" PREFORMED JOINT FILLER PER FDOT SECTION 932-1.1 OR APPROVED ALTERNATE

E) 5' SIDEWALK ON LOCAL STREETS, 5' SIDEWALK ON THOROUGHFARES. MIXED USE PATHS MAY REQUIRE 8' SIDEWALKS PER LAND DEVELOPMENT CODE.

F) SAWCUT (1/4 THICKNESS MINIMUM) ON 10' CENTERS. IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS.

* OR AS DETERMINED BY LDC. SECTION 8.15B3b

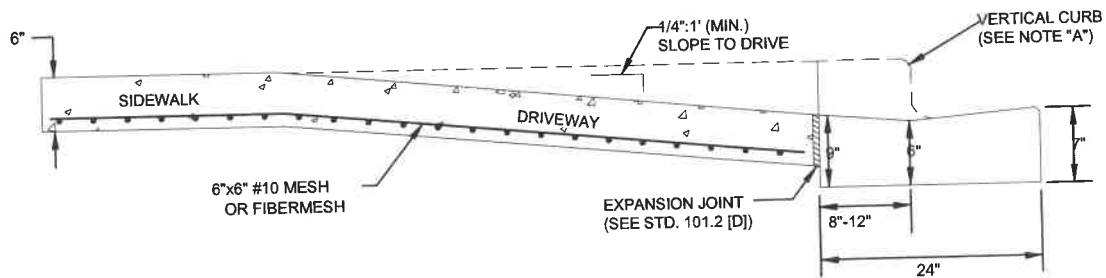
TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

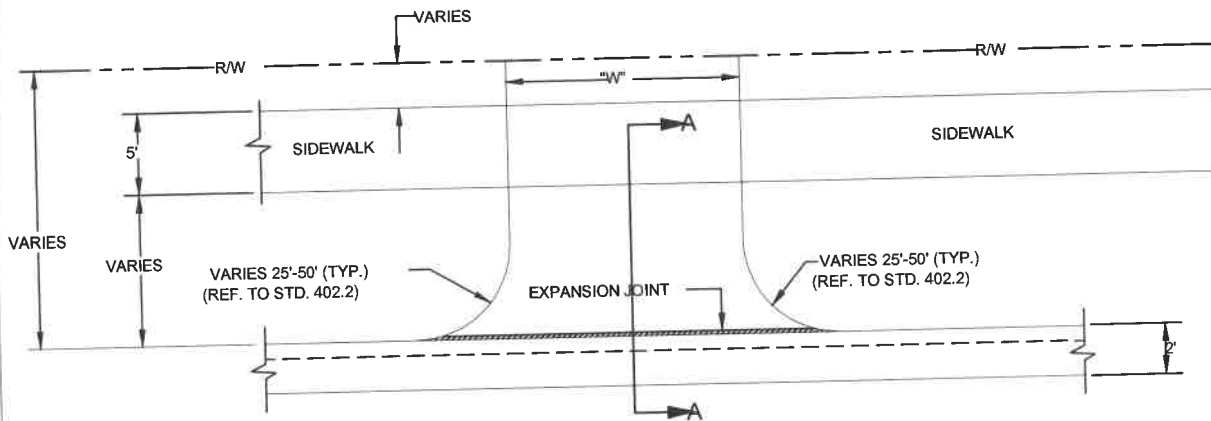
CURB CUT & TRANSITION W/ T-FLARE FOR RESIDENTIAL DRIVES

101.2



SECTION A-A

NOTE: WIDTH PER LDC. SECTION 8.15B3b



PLAN VIEW

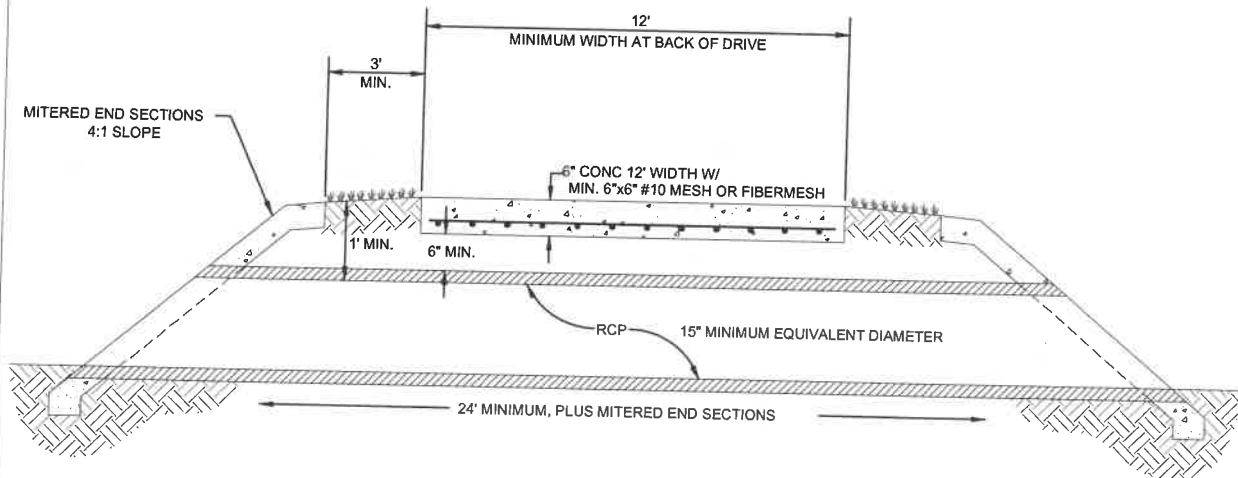
- A) IF REPLACING VERTICAL CURB AND GUTTER, REPLACE WITH MIAMI CURB AND GUTTER.
* NO CHANGE WITH 3' VALLEY CROSSING
- B) SIDEWALK, CONSTRUCT WITH 6" CONCRETE, 6"x6" #10 MESH OR FIBERMESH, 3000 PSI AT 28 DAYS.
- C) DRIVEWAY CONSTRUCTED WITH 6" CONCRETE WITH 6"x6" #10 MESH OR FIBERMESH, 3000 PSI AT 28 DAYS.
- D) EXPANSION JOINT 1/2" PREFORMED JOINT FILLER PER FDOT SECTION 932-1.1 OR APPROVED ALTERNATE.
* IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS
- E) 5' SIDEWALK ON LOCAL STREETS, 5' SIDEWALK ON THOROUGHFARES.
(MIXED USE PATHS MAY REQUIRE 8' SIDEWALKS PER LAND DEVELOPMENT CODE.)

TOWN OF REDINGTON BEACH

**COMMERCIAL &
INDUSTRIAL DRIVE**

101.3

REV. BY	DATE	
		DATE OF APPROVAL



TYPICAL DRIVEWAY

VARIABLES: C.M.P. WILL NOT BE ALLOWED WITHIN THE RIGHT-OF-WAY.
R.C.P. WILL REQUIRE A MINIMUM 6" OF COVER BENEATH BOTTOM OF DRIVEWAY, FOR A TOTAL OF 1' OF COVER. HDPE PIPE IS ACCEPTABLE IN LIEU OF RCP.
ALTERNATIVE DRIVEWAY MATERIALS MAY BE UTILIZED IN ACCORDANCE WITH THESE STANDARDS.

- NOTE: 1) GRADES AND LOCATIONS MUST BE REVIEWED AND APPROVED BY PUBLIC WORKS FOR ALL PIPE INSTALLATIONS
- 2) ACTUAL REQUIRED PIPE DIAMETER WILL BE BASED ON THE FLOW RATE REQUIRED TO PASS THROUGH PIPE SO AS NOT TO IMPOUND WATER UPSTREAM.
- 3) PIPE SIZE TO BE DETERMINED AND APPROVED BY PUBLIC WORKS.

TOWN OF REDINGTON BEACH

REV.BY	DATE

DATE OF APPROVAL _____

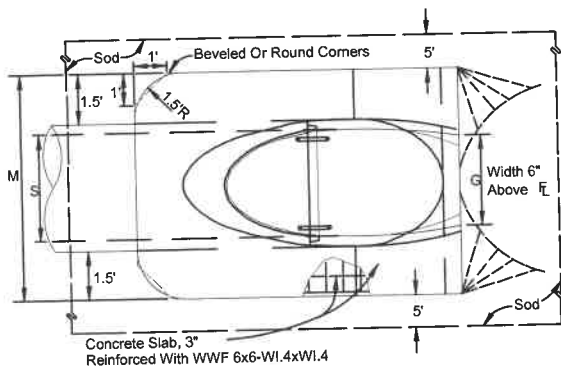
TYPICAL DRIVEWAY
PIPE CROSS SECTION

102.0

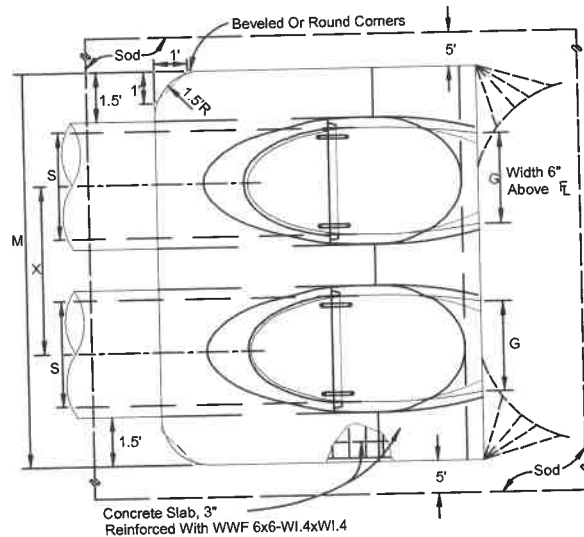
ELLIPTICAL PIPE

DIMENSIONS & QUANTITIES

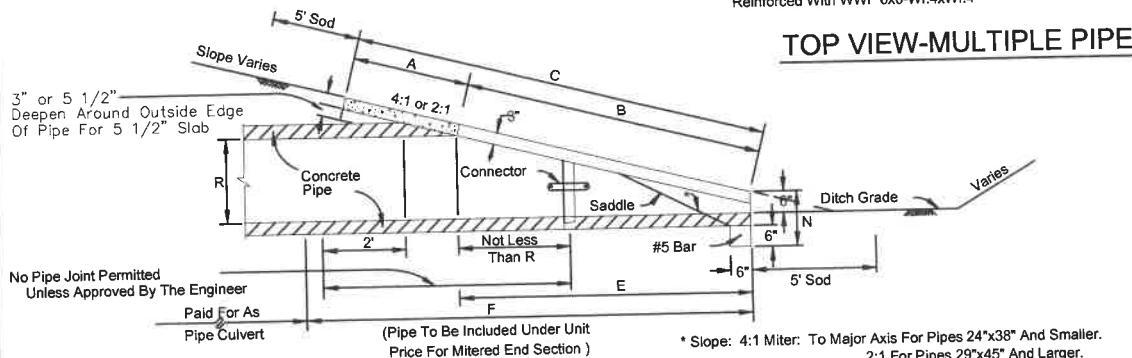
	Rise R	Span S	X	A	B	C	E	F	G	M			
										Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
2:1 Slope	12"	18"	2'-10"	1.97'	1.62'	3.59'	1.56'	4'	1.50'	4.92'	7.75'	10.58'	13.42'
	14"	23"	3'-4"	2.01'	1.99'	4.00'	1.89'	5'	1.90'	5.38'	8.71'	12.04'	15.38'
	19"	30"	4'-0"	2.11'	2.92'	5.03'	2.73'	6'	2.37'	6.04'	10.04'	14.04'	18.04'
	24"	38"	5'-0"	2.20'	3.85'	6.05'	3.56'	7'	2.85'	6.79'	11.79'	16.79'	21.79'
	29"	45"	5'-11"	2.34'	4.79'	7.13'	4.39'	8'	3.19'	7.50'	13.42'	19.33'	25.25'
	34"	53"	7'-0"	2.43'	5.72'	8.15'	5.23'	9'	3.57'	8.25'	15.25'	22.25'	29.25'
	38"	60"	7'-10"	2.52'	6.46'	8.98'	5.89'	9'	3.95'	8.92'	16.75'	24.58'	32.42'
	43"	68"	8'-11"	2.62'	7.39'	10.01'	6.73'	10'	4.28'	9.67'	18.58'	27.50'	36.42'
	48"	76"	9'-11"	2.71'	8.33'	11.04'	7.56'	11'	4.59'	10.42'	20.33'	30.25'	40.17'
	53"	83"	10'-8"	2.80'	9.26'	12.06'	8.39'	12'	4.77'	11.08'	21.75'	32.42'	43.08'
58"	91"	11'-8"	2.90'	10.19'	13.09'	9.23'	13'	5.01'	11.83'	23.50'	35.17'	46.83'	
4:1 Slope	12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	4.92'	7.75'	10.58'	13.42'
	14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	5.38'	8.71'	12.04'	15.38'
	19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	6.04'	10.04'	14.04'	18.04'
	24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	6.79'	11.79'	16.79'	21.79'
	29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	7.50'	13.42'	19.33'	25.25'
	34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	8.25'	15.25'	22.25'	29.25'
	38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	8.92'	16.75'	24.58'	32.42'
	43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	9.67'	18.58'	27.50'	36.42'
	48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	10.42'	20.33'	30.25'	40.17'
	53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	11.08'	21.75'	32.42'	43.08'
58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	11.83'	23.50'	35.17'	46.83'	



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



SECTION

TOWN OF REDINGTON BEACH

REV.BY	DATE
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DATE OF APPROVAL _____

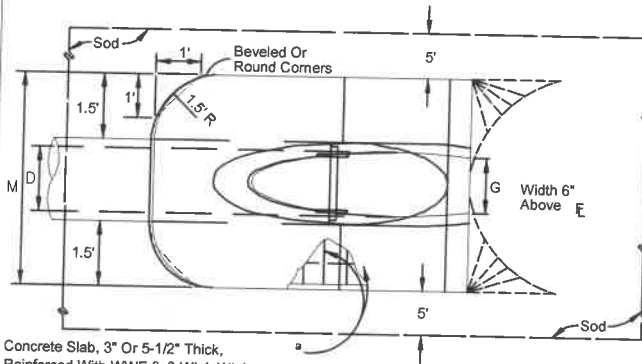
MITERED END SECTION FOR ELLIPTICAL, SINGLE, AND MULTIPLE PIPES

102.1

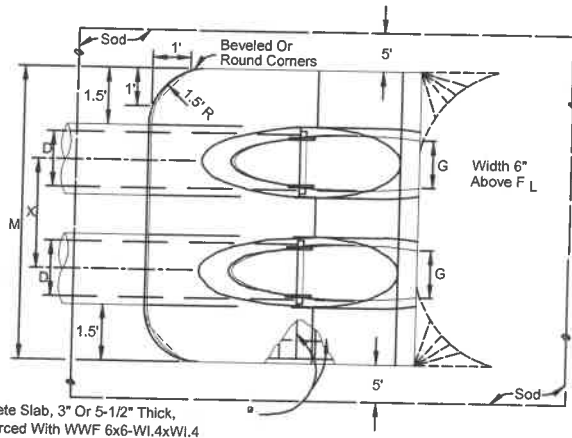
ROUND PIPE

DIMENSIONS AND QUANTITIES

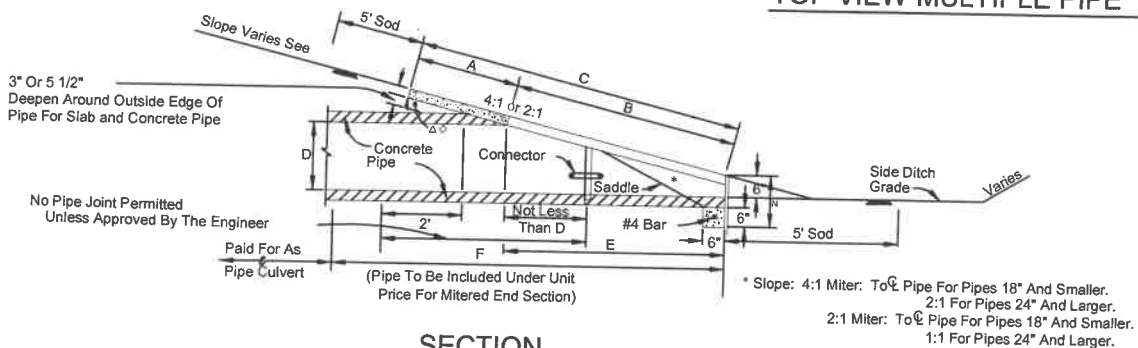
	D	X	A	B	C	E	F	G	M			
									Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
2:1 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	4.63'	7.21'	9.79'	12.37'
	18"	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	4.92'	7.75'	10.58'	13.42'
	24"	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	5.50'	8.92'	12.33'	15.75'
	30"	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	6.08'	10.33'	14.58'	18.83'
	36"	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	6.67'	11.75'	16.83'	21.92'
	42"	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	7.25'	13.25'	19.25'	25.25'
	48"	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	7.83'	14.58'	21.33'	28.08'
	54"	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	8.42'	16.08'	23.75'	31.42'
	60"	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	9.00'	17.50'	26.00'	34.50'
	66"	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	9.58'	18.75'	27.92'	37.08'
4:1 Slope	72"	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	10.16'	20.16'	30.16'	40.16'
	15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	7.21'	9.79'	12.37'
	18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	7.75'	10.58'	13.42'
	24"	3'-5"	2.53'	7.18' Δ	9.71'	7.03' Δ	11'	1.73'	5.50'	8.92'	12.33'	15.75'
	30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	10.33'	14.58'	18.83'
	36"	5'-1"	2.87'	11.31' $\diamond$	14.18'	11.03' $\diamond$	15'	2.24'	6.67'	11.75'	16.83'	21.92'
	42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	13.25'	19.25'	25.25'
	48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	7.83'	14.58'	21.33'	28.08'
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	16.08'	23.75'	31.42'
	60"	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00'	17.50'	26.00'	34.50'
	66"	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	9.58'	18.75'	27.92'	37.08'
	72"	10'-0"	3.91'	22.68'	26.59'	23.03'	27'	3.30'	10.16'	20.16'	30.16'	40.16'



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



SECTION

TOWN OF REDINGTON BEACH

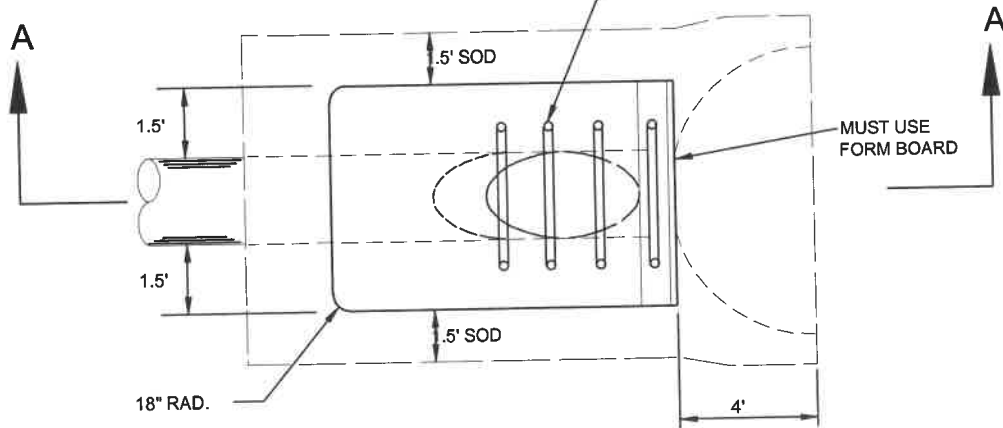
REV.BY	DATE

DATE OF APPROVAL

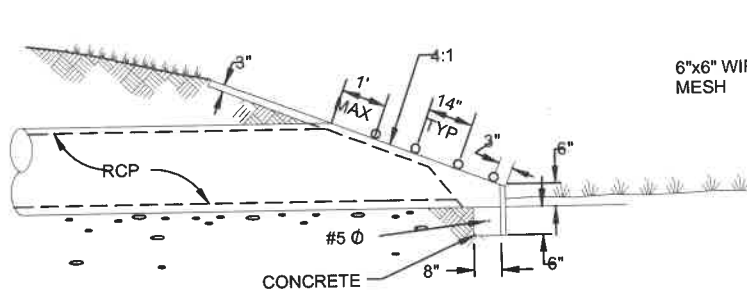
MITERED END
SECTION FOR ROUND,
SINGLE & MULTIPLE
PIPES

102.2

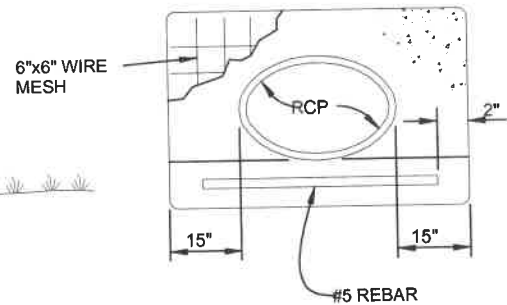
NOTE: ON SIDE DRAIN M.E.S., BARS ONLY TO BE USED ON ROUND PIPE 30" IN DIA. & GREATER, ELLIPTICAL PIPE 19" X 30" & GREATER, AND ARCH PIPE 35" X 24" OR GREATER. FOR BAR SIZE SEE F.D.O.T. INDEX NO. 273



PLAN VIEW



SECTION A-A

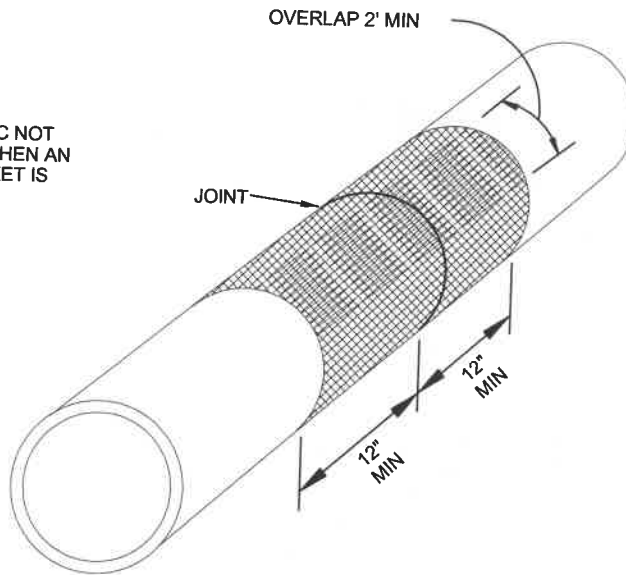


END VIEW

SOD TO BE PLACED 1.5 FT AROUND THE PERIMETER OF THE WALL, SOD TO BE BAHIA; ST. AUGUSTINE SOD WHERE THERE IS TIDAL, HEAVY CONCENTRATION OF SALT, OR SURROUNDING PROPERTY IS ST. AUGUSTINE.

TOWN OF REDINGTON BEACH			DRIVEWAY AND ROAD PIPE MITERED END SECTION	103.0
REV.BY	DATE			
		DATE OF APPROVAL		

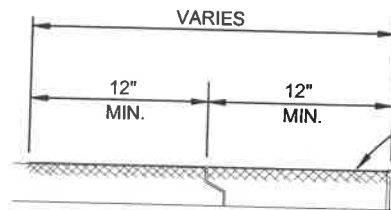
NOTE: FILTER FABRIC NOT
REQUIRED WHEN AN
O-RING GASKET IS
USED.



ISOMETRIC VIEW

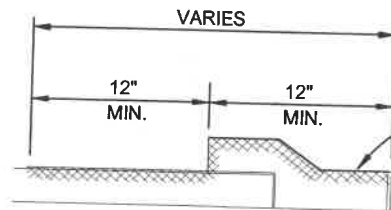
NOTE: FILTER FABRIC MATERIAL
MUST MEET THE FOLLOWING
ASTM REQUIREMENTS:

ASTM D 4595
ASTM D 4632
ASTM D 4533
ASTM D 4833
ASTM D 4491



BUTT JOINT

WOVEN OR NON-WOVEN
FILTER FABRIC
NOTE: NOT NECESSARY
WITH O-RING GASKET



BELL JOINT

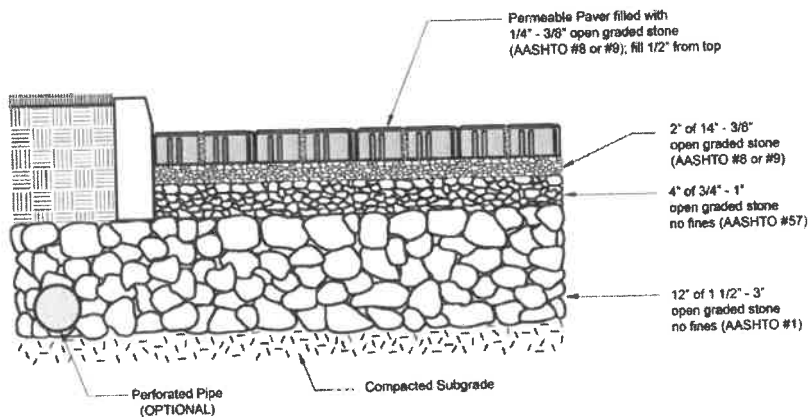
WOVEN OR NON-WOVEN
FILTER FABRIC

TOWN OF REDINGTON BEACH

REV.BY	DATE	
		DATE OF APPROVAL

**FILTER FABRIC
JACKET**

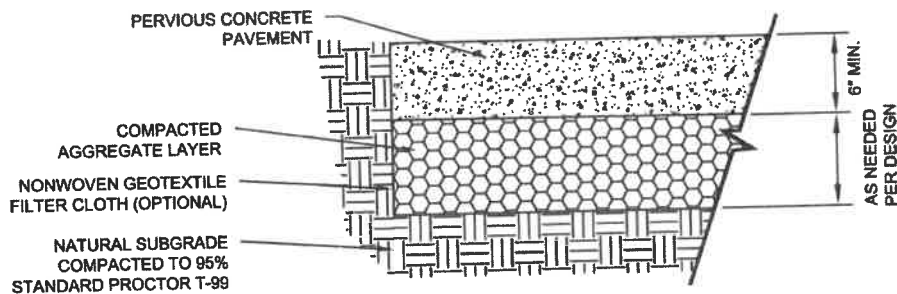
104.0



1. 6" POURED CONCRETE BOND BAND SHALL BE INSTALLED WHERE CURB IS NOT PRESENT WITH 3/4" REVEAL AT EDGE OF TRAVEL WAY.
2. 6" POURED CONCRETE BOND BAND SHALL BE INSTALLED ON ALL OUTSIDE EDGES WHERE NO EXISTING OR NEW SOLID STRUCTURE IS PRESENT TO HOLD PAVERS IN PLACE.
3. ALL PAVERS WITHIN TRAFFIC AREAS MUST BE TRAFFIC BEARING.
4. A RIGHT OF WAY USE PERMIT AND AN APPROVED LICENSE AGREEMENT MUST BE OBTAINED IF PAVERS ARE TO BE INSTALLED IN CITY RIGHT OF WAY.
5. PAVES INSTALLATION SPECIFICATIONS APPLY TO PUBLIC AND PRIVATE IMPROVEMENTS EXCEPT FOR NON-TRAFFIC BEARING SIDEWALKS CONSTRUCTED ENTIRELY ON PRIVATE PROPERTY.
6. DRIVEWAY REPAIRS DUE TO FUTURE RIGHT OF WAY UTILITY AND/OR ROAD WORK ARE THE FULL RESPONSIBILITY OF THE OWNER.

PERMEABLE PAVER INSTALLATION DETAIL

N.T.S.



1. FOR USE IN PARKING AREAS AND LOW VOLUME ACCESSWAYS ONLY.
2. ENGINEER OF RECORD SHALL SUBMIT PERVIOUS PAVEMENT DESIGN AND SPECIFICATIONS BASED ON THE SITE SPECIFIC SOIL CONDITIONS, STORMWATER STORAGE REQUIREMENTS AND THE ANTICIPATED TRAFFIC LOADINGS.
3. PERVIOUS CONTRACTORS SHALL BE NRMCA CERTIFIED CRAFTSMEN.
4. PERVIOUS PRODUCER/SUPPLIERS AND TESTING FIRMS SHALL USE NRMCA CERTIFIED TECHNICIANS.
5. POROUS ASPHALT MAY BE USED AS AN ALTERNATIVE MATERIAL AS DESIGNED BY THE EOR.
6. A RIGHT OF WAY USE PERMIT AND AN APPROVED LICENSE AGREEMENT MUST BE OBTAINED IF PAVERS ARE TO BE INSTALLED IN CITY RIGHT OF WAY.
7. DRIVEWAY REPAIRS DUE TO FUTURE RIGHT OF WAY UTILITY AND/OR ROAD WORK ARE THE FULL RESPONSIBILITY OF THE OWNER

PERVIOUS CONCRETE PAVEMENT DETAIL

N.T.S.

TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

PAVER AND
PERVIOUS CONCRETE

105.0

CURB & GUTTER AND DRAINAGE STRUCTURES & PIPE INDEX

	<u>SHEET NO.</u>
200 CURB & GUTTER, DRAINAGE	200.0
A. CURB & GUTTER (CONTROL SHEET)	201.0
1. TYPE "A" MIAMI CURB & GUTTER	201.1
2. TYPE "F"	201.2
3. MODIFIED TYPE "AB"	201.3
4. TYPE "D"	201.4
5. INVERTED CROWN GUTTER	201.5
6. VALLEY CROSSING	201.6
B. DRAINAGE (CONTROL SHEET)	202.0
1. TYPICAL CONCRETE BLOCK BOX	202.1
2. CURB INLET	202.2
3. DROP INLET	202.3
4. NON TRAFFIC BEARING GRATE INLET	202.4
5. TRAFFIC BEARING GRATE INLET	202.5
6. ACCESS COVER FOR STORMWATER JUNCTION BOX (PRIVATE)	203.0
7. ACCESS COVER FOR STORMWATER JUNCTION BOX (PUBLIC)	203.1
8. ACCESS COVER FOR CATCH BASIN AND THROAT INLET (PUBLIC)	203.2
9. UNDERDRAIN GENERAL NOTES	204.0
10. UNDERDRAIN TYPICAL LAYOUT	204.1
11. UNDERDRAIN CLEANOUTS (FLEXIBLE & RIGID)	204.2
12. STORM SEWER PIPE - GENERAL NOTES	205.0
13. CONCRETE BLOCK HEADWALL	205.1

TOWN OF REDINGTON BEACH

REV. BY	DATE

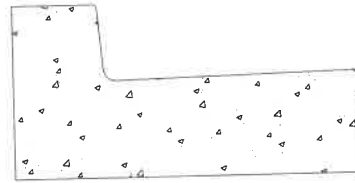
DATE OF APPROVAL _____

**CURB & GUTTER,
DRAINAGE
STRUCTURES
& PIPE INDEX**

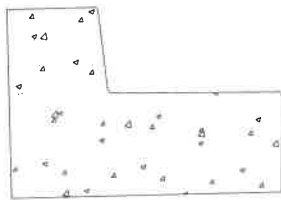
200.0



TYPE "A"
MIAMI CURB & GUTTER
STD. 201.1



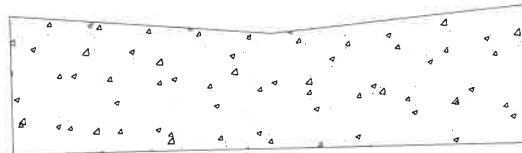
TYPE "F"
CURB & GUTTER
STD. 201.2



TYPE "AB"
MODIFIED CURB & GUTTER
STD. 201.3



TYPE "D"
CURB
STD. 201.4



INVERTED CROWN
CURB & GUTTER
STD. 201.5

1. ALL CURB & GUTTER SHALL PROVIDE A 0.125" TO 0.25" CONTRACTION JOINT AT 10' CENTERS.
2. ALL CURB & GUTTER SHALL BE CONSTRUCTED IN COMPLIANCE WITH FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.
3. TOP OF FINISHED PAVEMENT SHALL BE 0.25" ABOVE LIP OF GUTTER, LOW SIDE.

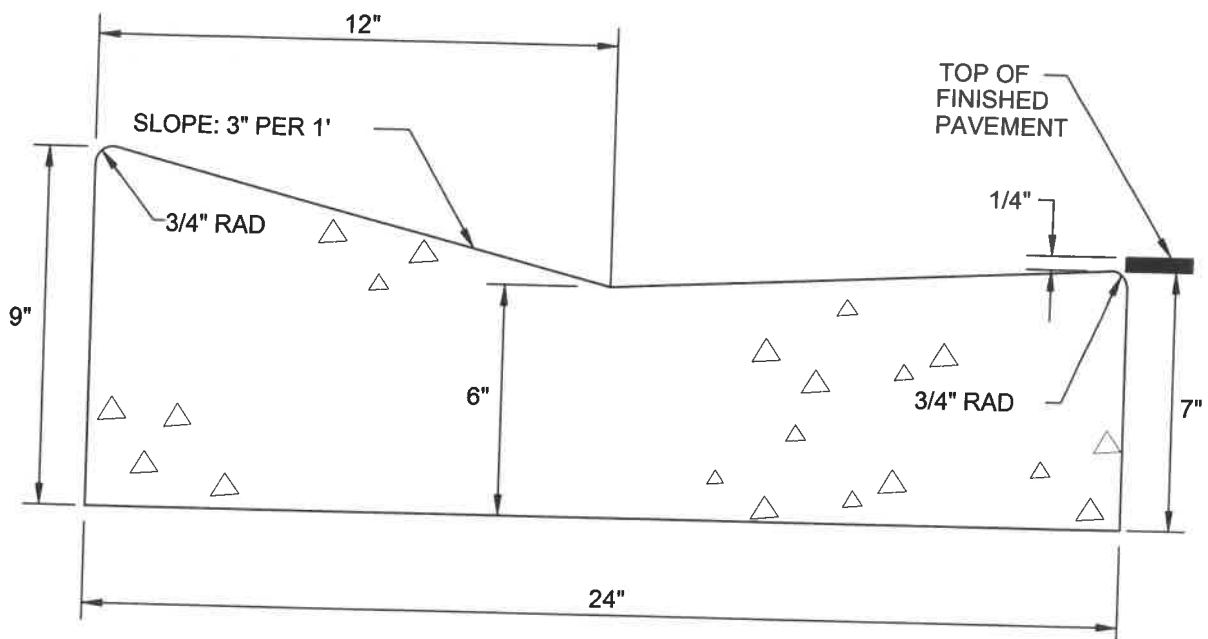
TOWN OF REDINGTON BEACH

REV.BY	DATE

DATE OF APPROVAL

CURB & GUTTER
CONTROL SHEET

201.0



TYPE "A"
MIAMI CURB & GUTTER

- A) CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.
- B) CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

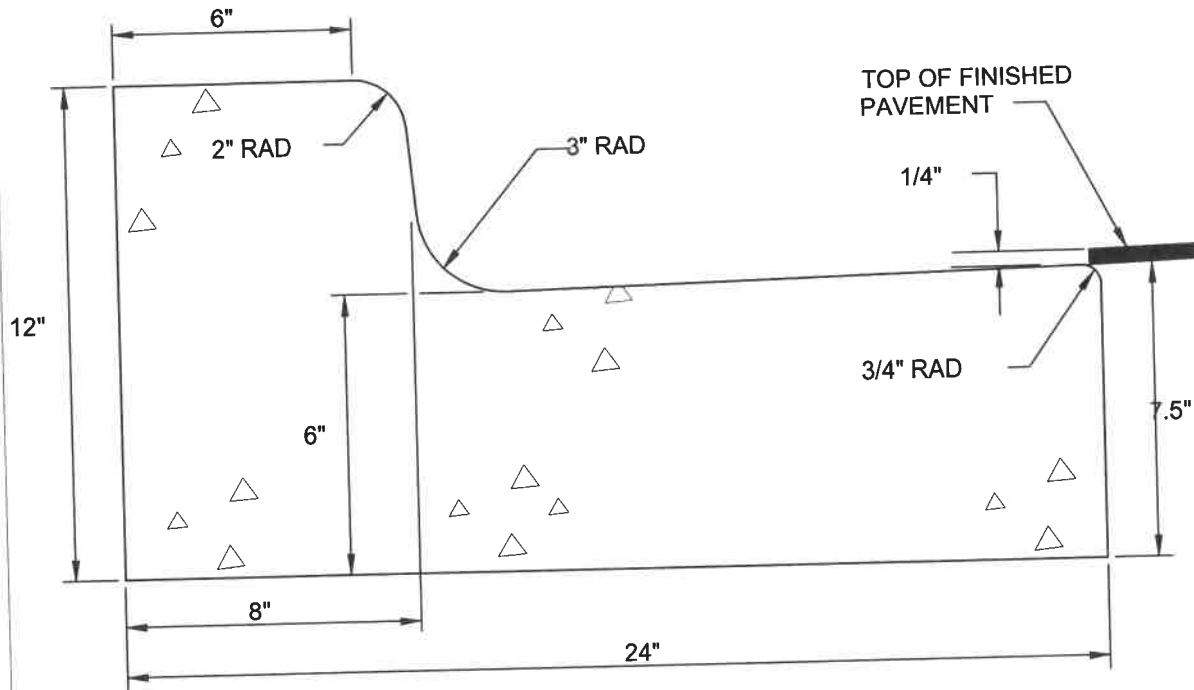
TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

TYPE A
MIAMI
CURB & GUTTER

201.1



TYPE "F" BARRIER CURB & GUTTER

A) CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.

B) CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

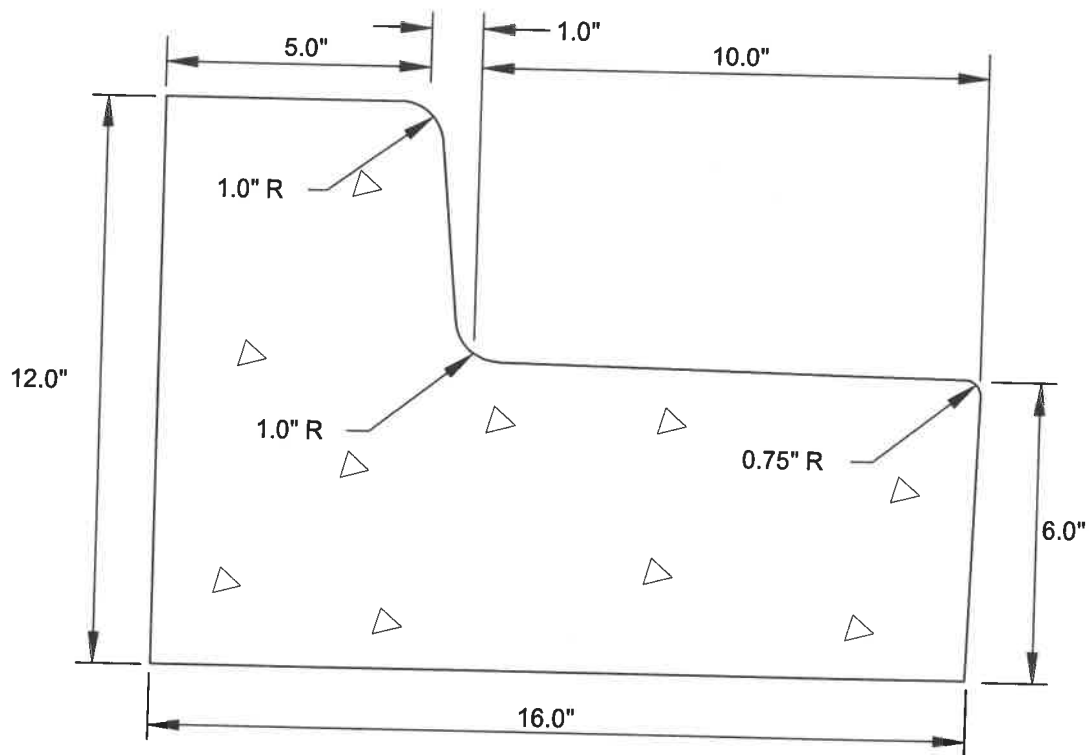
TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

TYPE F
CURB & GUTTER

201.2



TYPE "AB"
MODIFIED CURB & GUTTER

- A) CLASS 1 CONCRETE 3,000 PSI AT 28 DAYS.
- B) CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS STANDARDS INDEX NO. 300, LATEST REVISION.

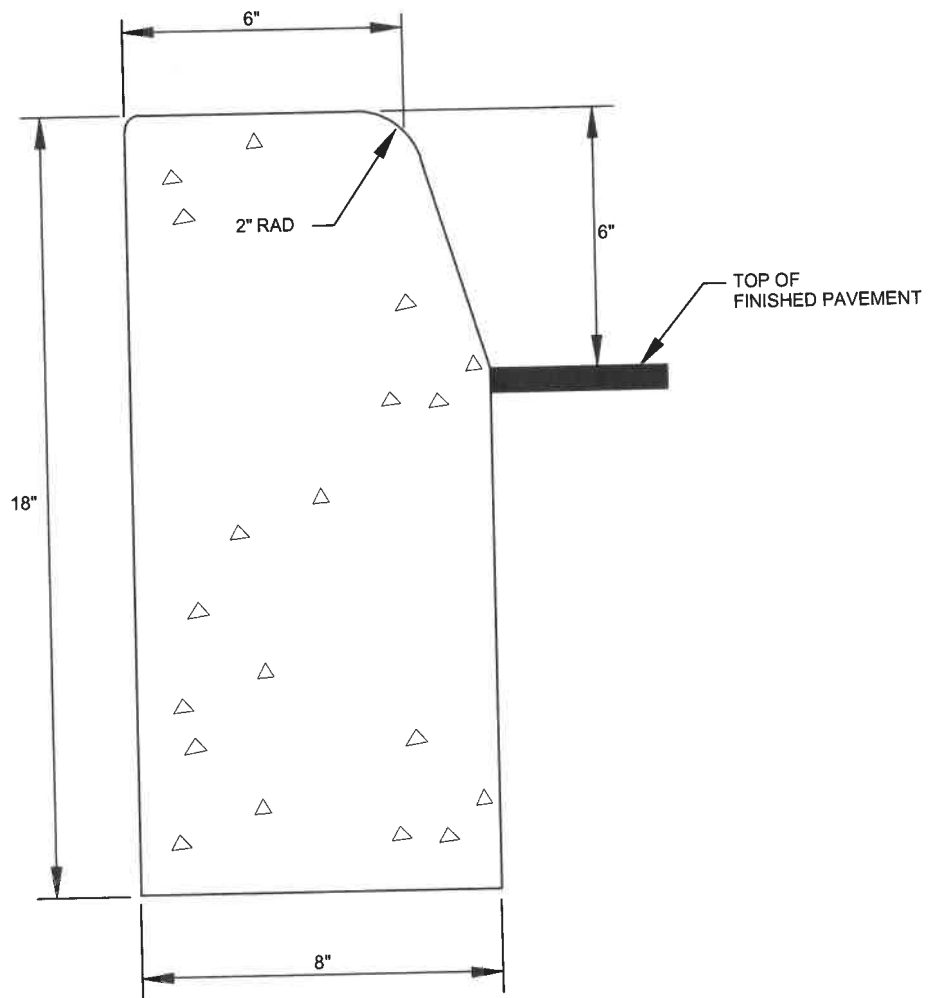
TOWN OF REDINGTON BEACH

REV.BY	DATE

DATE OF APPROVAL _____

**TYPE "AB" MODIFIED
CURB & GUTTER**

201.3



TYPE "D"
HIGH BACK CURB

A) CLASS 1 CONCRETE, 3,000 P.S.I. AT 28 DAYS.

B) CURB SHALL MEET THE SPECIFICATIONS ESTABLISHED BY F.D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

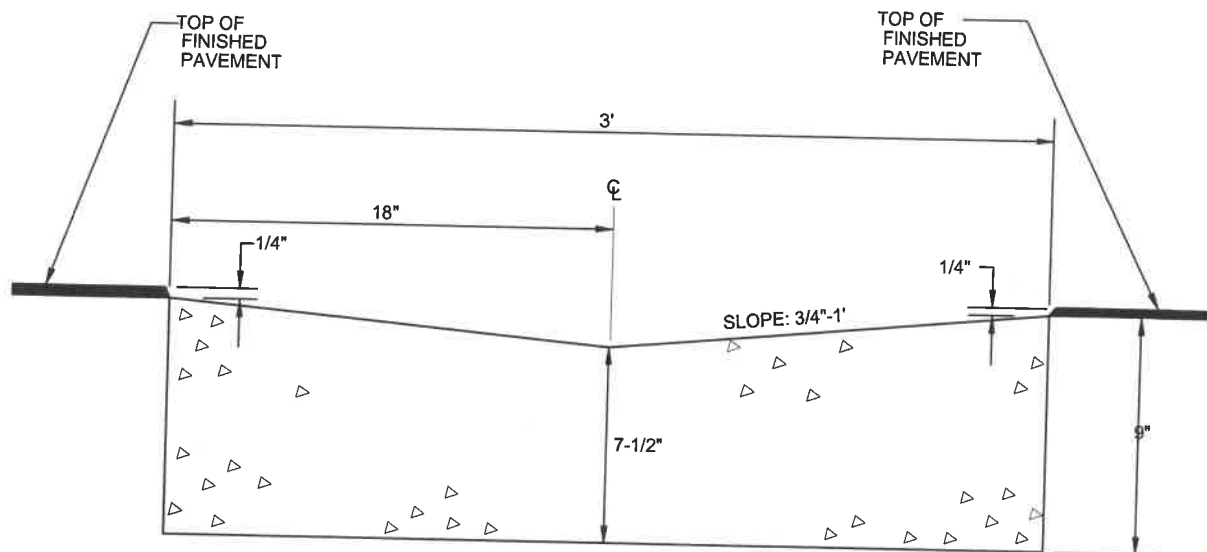
TOWN OF REDINGTON BEACH

REV.BY DATE

DATE OF APPROVAL

TYPE D CURB

201.4



INVERTED CROWN GUTTER

- A) CLASS 1 CONCRETE, 3,000 P.S.I. AT 28 DAYS.
- B) CURB SHALL MEET SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS, PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.
- C) SEE SHEET 401.9 FOR INVERTED CROWN APPLICATION.

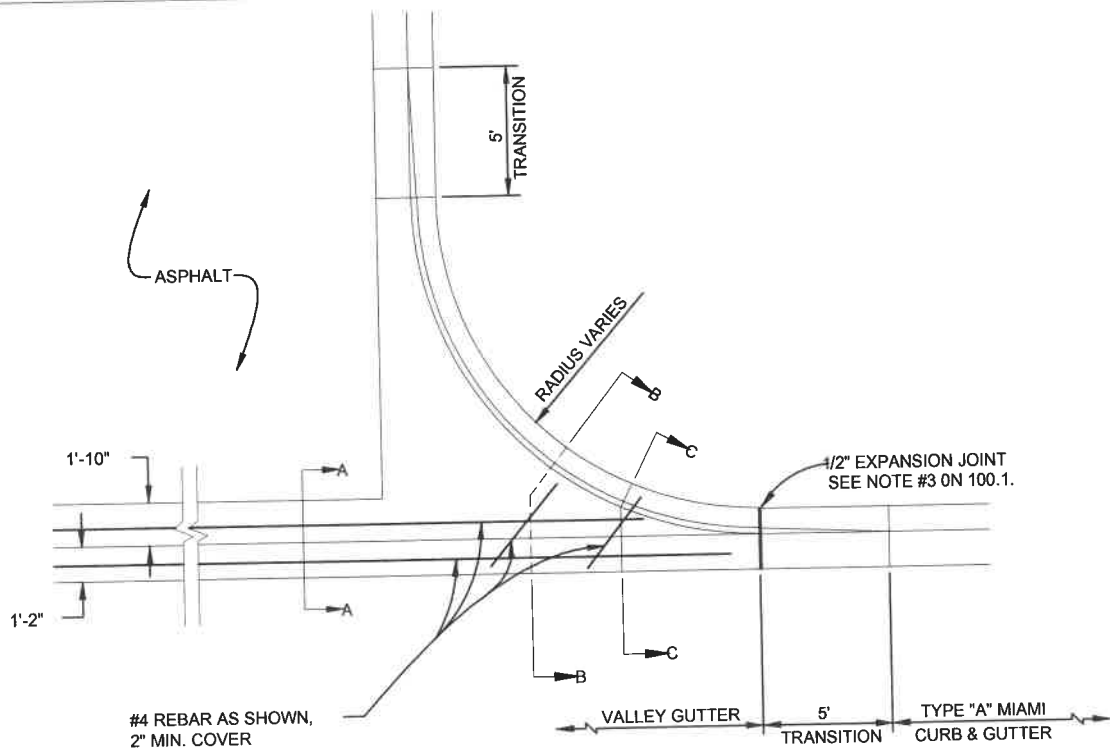
NOTE: THIS TYPICAL SECTION SHALL BE CONSIDERED FOR PRIVATE ROAD USAGE ONLY! IT MUST BE APPROVED THRU THE PLANNING & TRANSPORTATION DEPARTMENTS, JOINTLY.

TOWN OF REDINGTON BEACH

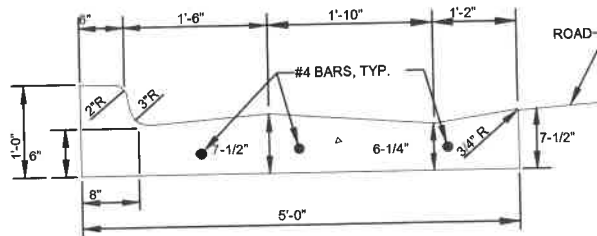
REV.BY	DATE	
		DATE OF APPROVAL

INVERTED CROWN

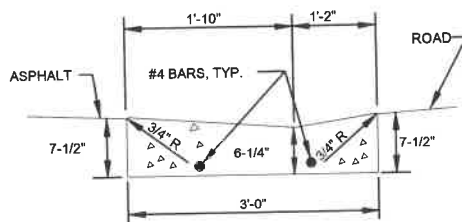
201.5



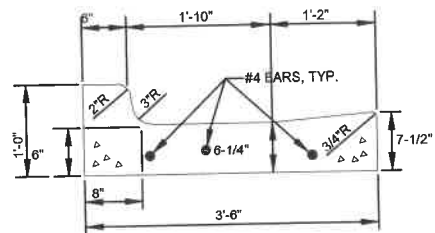
PLAN VIEW



SECTION "B-B"



SECTION "A-A"



SECTION "C-C"

3' VALLEY CROSSING

* CLASS 1 CONCRETE, 3,000 P.S.I. AT 28 DAYS.

TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

VALLEY CROSSING

201.6

GENERAL NOTES

1. ALL REFERENCED STANDARDS SHALL BE LATEST REVISION.
2. CONCRETE SHALL BE CLASS "1" AS SPECIFIED IN SECTION 345 OF F.D.O.T. SPECIFICATIONS
3. SEE SECTION 425-2.2 "MORTAR" OF FLORIDA D.O.T. SPECIFICATIONS.
4. IRON CASTING SHALL BE AS SPECIFIED IN SECTION 962-8 OF F.D.O.T. SPECIFICATIONS. SEE SECTION 425-5.
5. ALL REINFORCEMENT STEEL SHALL BE AS SPECIFIED IN SECTIONS 415 & 931.1 OF F.D.O.T. SPECIFICATIONS.
6. SEE FLORIDA D.O.T. SPECIFICATIONS FOR GRATINGS.
7. SEE FLORIDA D.O.T. SPECIFICATIONS FOR SECTION 125 "EXCAVATION FOR STRUCTURES."
8. PRECAST TOP AND BOTTOM TO BE F.D.O.T. STANDARDS WITH MINIMUM TRAFFIC BEARING 8" THICKNESS.
9. ALL STORMWATER PIPE SHALL BE INSTALLED BEHIND THE CURB OR EDGE OF PAVEMENT AND WITHIN THE RIGHT OF WAY AND WITHIN THE DRAINAGE EASEMENTS.
10. THE FOLLOWING IS THE DRAINAGE STRUCTURE WALL MINIMUM THICKNESS:

PRECAST

NON-TRAFFIC 6"

BLOCK

8" EITHER WAY

NOTE: FOR DRAINAGE STRUCTURES WITH PIPE DIAMETERS UP TO AND INCLUDING 24".
6" PRECAST WALLS ARE ACCEPTABLE FOR TRAFFIC BEARING.

DIMENSION INDEX

PIPE SIZE	TYPE	"C"	"D"	"E"	"F"	"G"	"H"
15"	RCP	2'8"	4'	5'	4'	5'4"	6'4"
12"x18"	RCP	"	"	"	"	"	"
18"	RCP	"	"	"	"	"	"
14"x23"	RCP	"	"	"	"	"	"
24"	RCP	3'4"	4'8"	5'8"	"	"	"
19"x30"	RCP	4'	5'4"	6'4"	"	"	"
30"	RCP	"	"	"	"	"	"
24"x38"	RCP	5'	6'4"	7'4"	"	"	"
36"	RCP	5'	6'4"	"	"	"	"
66"	RCP	8'5"	9'9"	10'9"	4'8"	6'0"	7'0"

TOWN OF REDINGTON BEACH

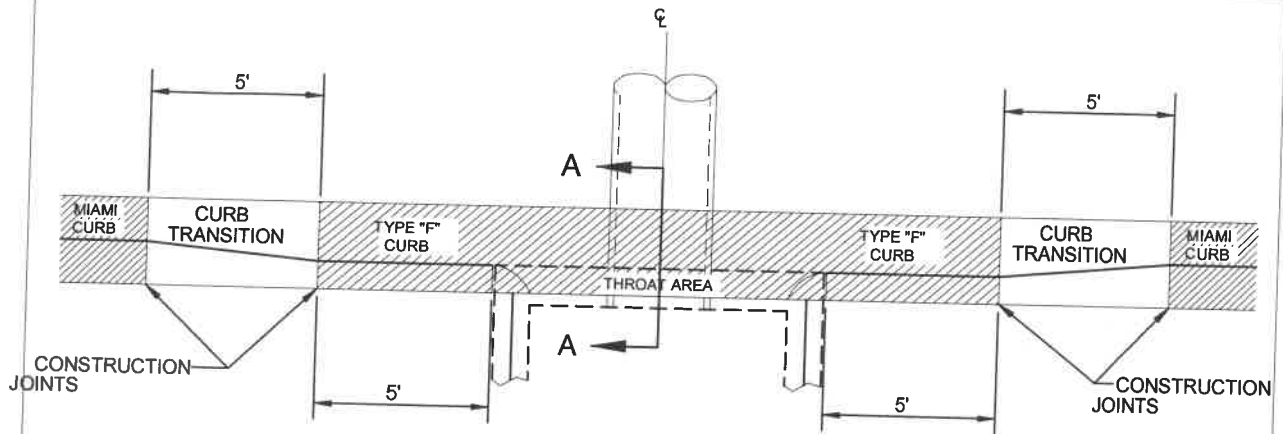
REV. BY	DATE

DATE OF APPROVAL _____

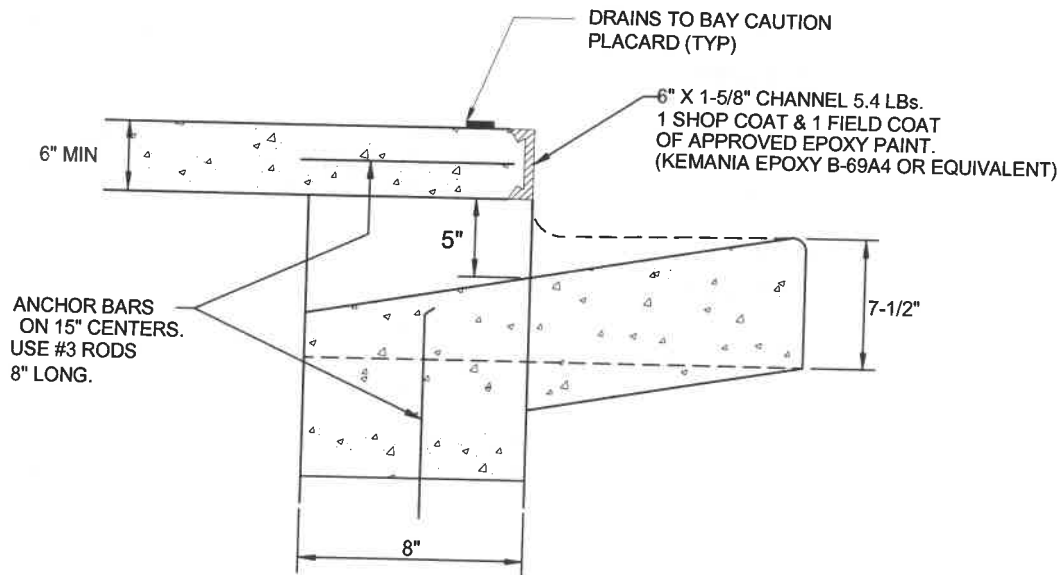
**DRAINAGE
CONTROL SHEET**

202.0

TOWN OF REDINGTON BEACH		TYPICAL CONC. BLOCK BOX	202.1
REV.BY	DATE		
DATE OF APPROVAL			



PLAN VIEW



SECTION A-A

- A) USE STANDARD CATCH BASIN & JUNCTION BOX DIMENSION INDEX (SHEET # 202.0) DETAILS AND COVER (SHEET # 202.6).
- B) SEE CURB & GUTTER INDEX (SHEET # 201.0) FOR APPLICABLE CURB TYPE.
- C) SEE SHEET # 202.0 "GENERAL NOTES" FOR APPLICABLE INFORMATION.
- D) PRECAST BOXES AS SPECIFIED IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (2006) ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE DIRECTOR OR HIS DESIGNEE.
- E) ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

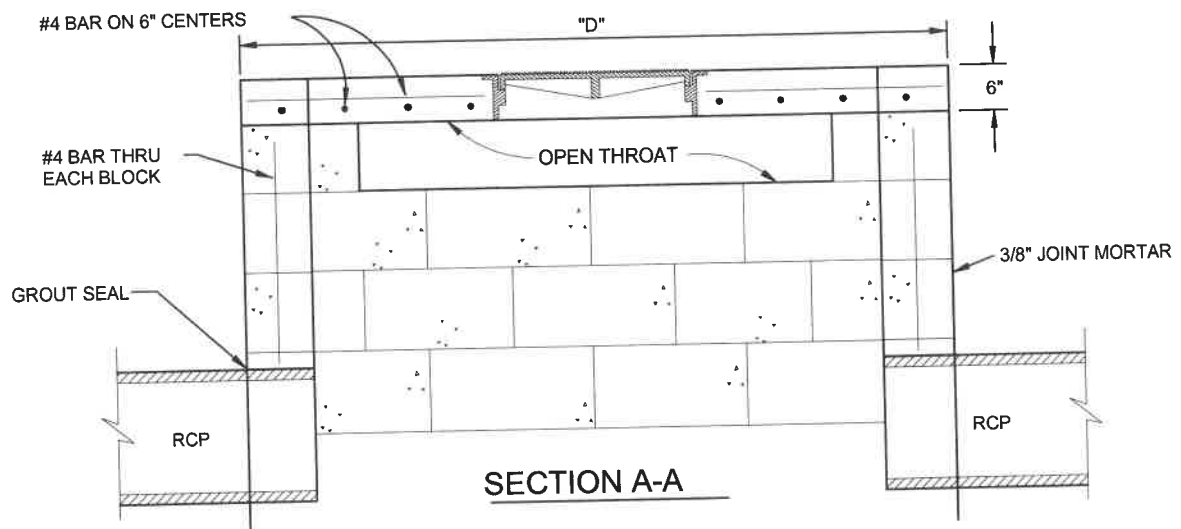
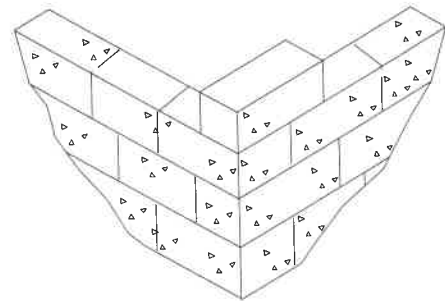
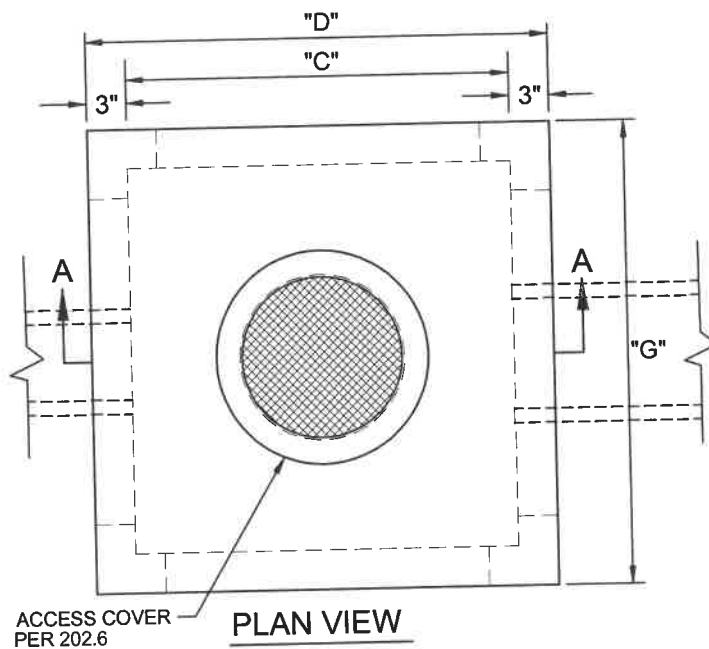
TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL _____

CURB INLET

202.2



- A) DROP INLET IS NOT DESIGNED TO BE SUBJECTED TO VEHICULAR TRAFFIC.
- B) NUMBER OF SIDES OPEN FOR DRAINAGE DEPENDS UPON FLOW VOLUME REQUIREMENTS.
- C) THE FOLLOWING MATERIALS SHALL BE AS SPECIFIED IN FLORIDA D.O.T. SPEC'S., 2000. SEC 346 CONCRETE, SEC 962-8 IRON CASTING, SEC 931-1 REINFORCED STEEL.
- D) FILL BLOCKS WITH 3,000 P.S.I. CONCRETE (EACH CELL), USE #4 ROD IN EACH BLOCK, 16" O/C.
- E) USE #4 ROD ON 6" CENTERS BOTH WAYS ON LID.
- F) SEE SHEET # 202.0 GENERAL NOTES AND DIMENSIONS INDEX, ALSO SHEET 202.1 TYP. CONC. BOX.
- G) PRECAST BOXES TO F.D.O.T. SPECIFICATIONS ARE AN ACCEPTABLE ALTERNATE.
- H) INVERT TO BE GROUTED (SEE 202.1).
- I) PRECAST BOXES AS SPECIFIED IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- J) ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL

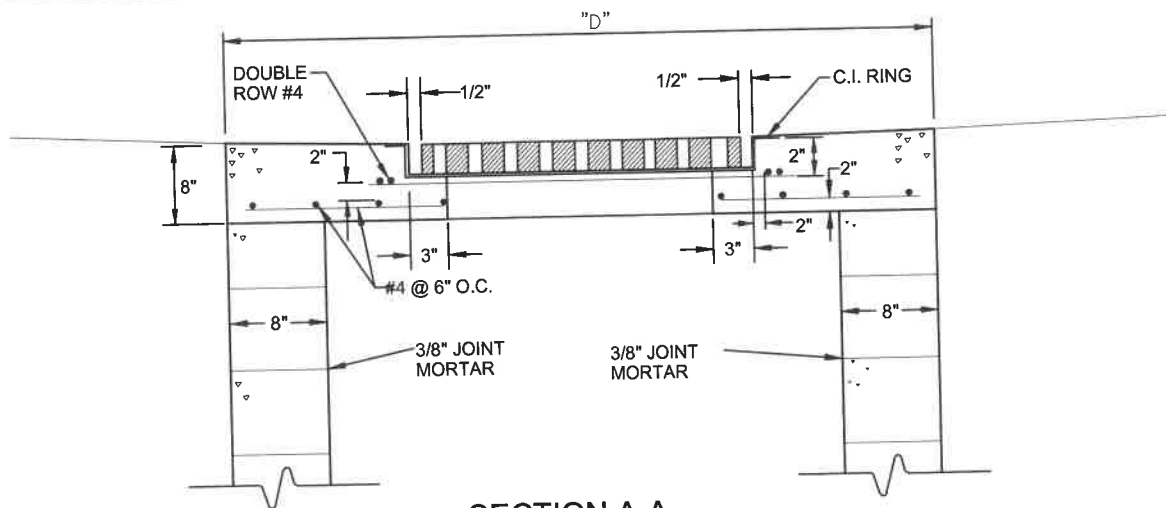
**THROAT DETAIL
FOR DROP INLET**

202.3

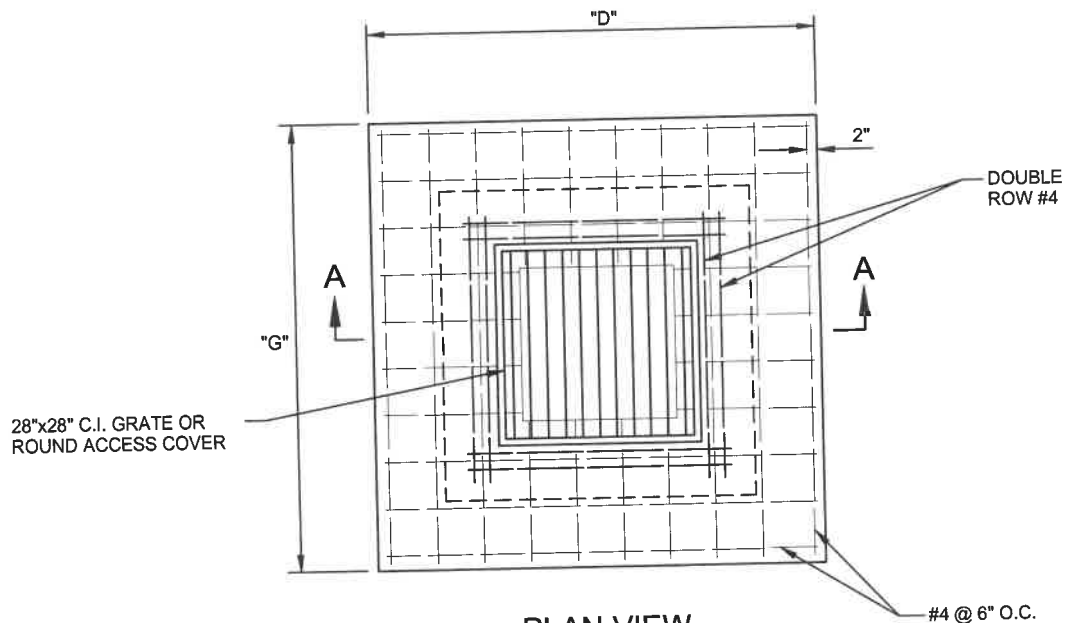


H) ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

REV.BY	DATE	DATE OF APPROVAL



SECTION A-A



PLAN VIEW

NOTE: DIMENSIONS "D" & "G" PER SECTION 202.0

- A) ALTERNATE C.I. GRATES, 18"X 24", 24"X 24", 28"X 36" OR ACCESS COVER (202.6).
- B) 8" TRAFFIC BEARING LID W/ REINFORCING C.I. RING & DOUBLE ROW OF #4 REBAR.
- C) FOLLOWING MATERIALS ARE SPECIFIED IN FLORIDA D.O.T. SPEC'S., 2000. SEC 346 CONCRETE, SEC 962-8 IRON CASTING, SEC 931-1 REINFORCED STEEL.
- D) FILL BLOCKS WITH 3,000 P.S.I. CONCRETE (EACH CELL), USE #4 ROD IN EACH BLOCK, 16" O/C.
- E) USE #4 ROD ON 6" CENTERS BOTH WAYS ON LID. (SEE 202.3 E)
- F) SEE SHEET # 202.0 GENERAL NOTES AND DIMENSIONS INDEX, ALSO SHEET 202.1 TYP. CONC. BOX.
- G) INVERT TO BE GROUTED (SEE 202.1).
- H) PRECAST BOXES AS SPECIFIED IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- I) ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

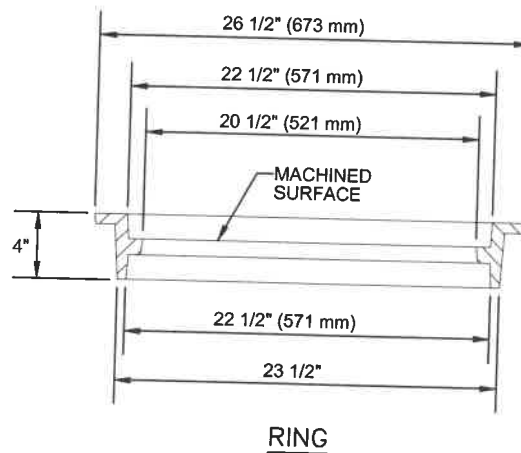
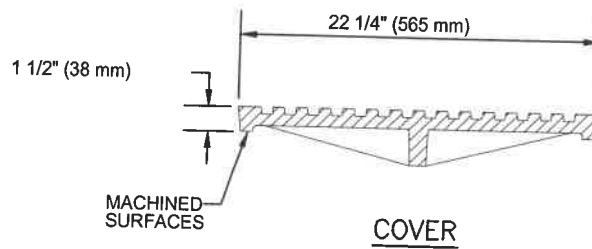
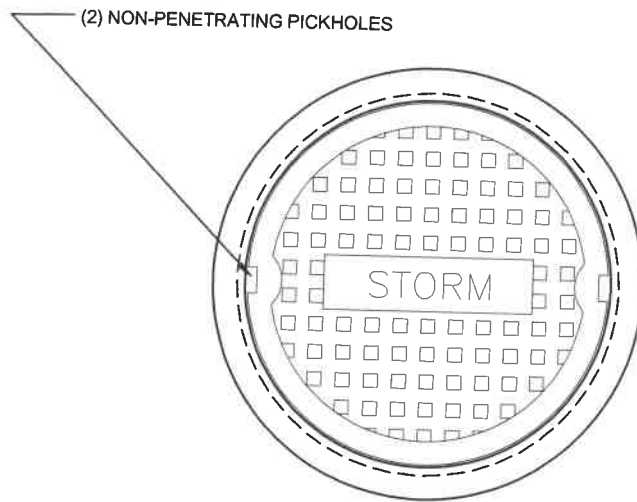
TOWN OF REDINGTON BEACH

**TRAFFIC BEARING
BOX LID**

202.5

REV. BY	DATE

DATE OF APPROVAL



USF 1110 RING & PROPOSED COVER

NOTE:

- 1 - MATERIAL; ASTM-A48 CLASS 30B GRAY IRON.
- 2 - COVER WEIGHT: 105 LBS. APPROX.
- 3 - RING WEIGHT: 90 LBS. APPROX.

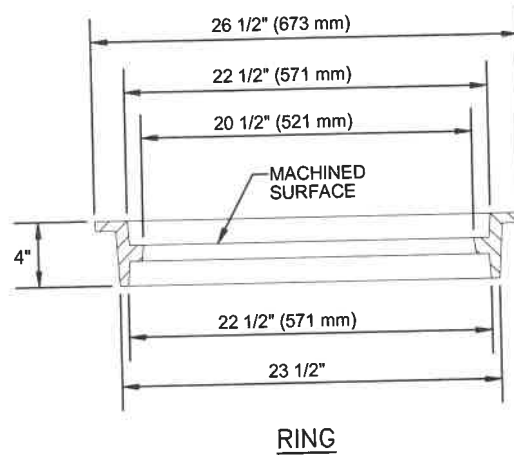
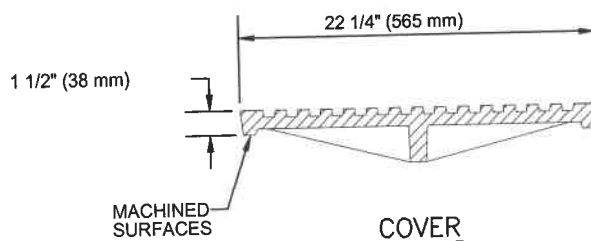
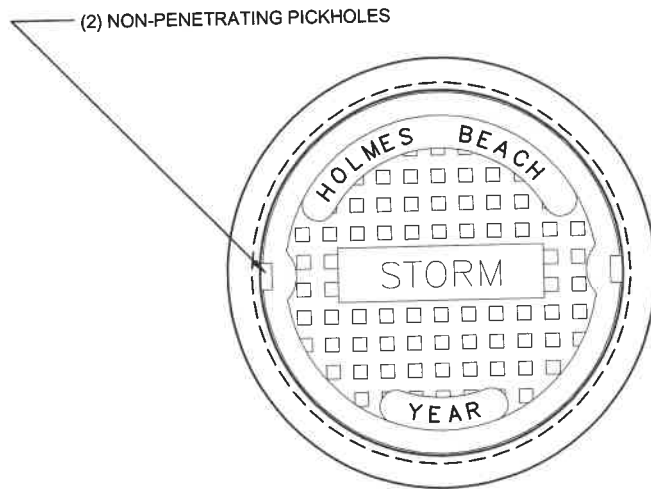
TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL

ACCESS COVER
FOR STORMWATER
JUNCTION BOX
(PRIVATE)

203.0



USF 1110 RING & PROPOSED COVER

NOTE:

- 1 - MATERIAL; ASTM-A48 CLASS 30B GRAY IRON.
- 2 - COVER WEIGHT: 105 LBS. APPROX.
- 3 - RING WEIGHT: 90 LBS. APPROX.

TOWN OF REDINGTON BEACH

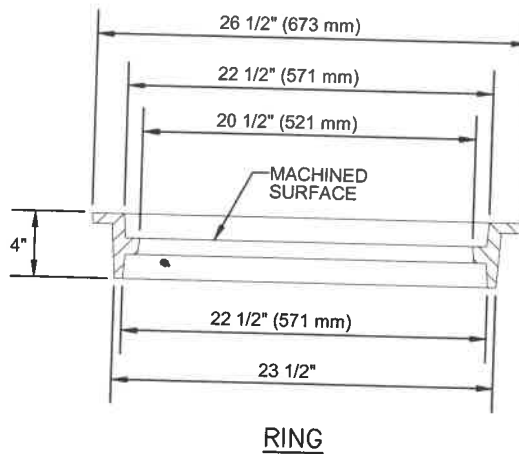
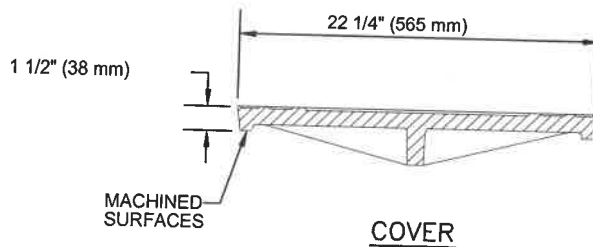
REV.BY DATE

DATE OF APPROVAL

ACCESS COVER
FOR STORMWATER
JUNCTION BOX
(PUBLIC)

203.1

(2) NON-PENETRATING PICKHOLES



USF 1110 RING & PROPOSED COVER

NOTE:

- 1 - MATERIAL; ASTM-A48 CLASS 30B GRAY IRON.
- 2 - COVER WEIGHT: 105 LBS. APPROX.
- 3 - RING WEIGHT: 90 LBS. APPROX.

TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL _____

ACCESS COVER
FOR CATCH BASIN
& THROAT INLET
(PUBLIC)

203.2

UNDERDRAIN

1. CORRUGATED POLYETHYLENE TUBING

CORRUGATED POLYETHYLENE TUBING WITH A FILTER FABRIC WRAP, UNLESS OTHERWISE NOTED, MAY BE USED FOR UNDERDRAIN APPLICATIONS ASSOCIATED WITH ROADWAY CONSTRUCTION PROVIDING THE FOLLOWING SPECIFICATIONS ARE MET:

- A) THE CORRUGATED POLYETHYLENE TUBING SHALL MEET THE REQUIREMENTS OF ASTM F-405.
- B) THE CORRUGATED POLYETHYLENE TUBING SHALL HAVE A FILTER FABRIC SOCK MEETING F.D.O.T. SPEC. 948-3, LATEST REVISION. IF PERFORATIONS IN PIPE ARE LESS THAN 3/4", THEN FILTER FABRIC SOCK MAY BE OMITTED.
- C) THE ENVELOPE MATERIAL SURROUNDING THE TUBING SHALL BE CRUSHED STONE OR WASHED SHELL. THE THICKNESS OF THE ENVELOPE MATERIAL SHALL BE EQUAL TO OR GREATER THAN THE DIAMETER OF THE TUBING, PLUS 12".
- D) CORRUGATED POLYETHYLENE TUBING SHALL NOT BE ACCEPTABLE UNDER ROADWAYS.
- E) EXTRA CARE SHALL BE TAKEN DURING PLACEMENT TO MAINTAIN PROPER LINE AND GRADE, TO BE PLACED W/ SLOPE OF ROAD.
- F) A CLEAN-OUT SHALL BE CONSTRUCTED AT THE END OF EACH RUN OF UNDERDRAIN. MAXIMUM SPACING EVERY 100 FEET.
- G) SOD 3' AROUND 18" CONC. SQUARE.

*NOTE: TRANSPORTATION DIRECTOR OR HIS DESIGNEE'S APPROVAL IS REQUIRED FOR THE USE OF FLEXIBLE UNDERDRAIN PIPE.

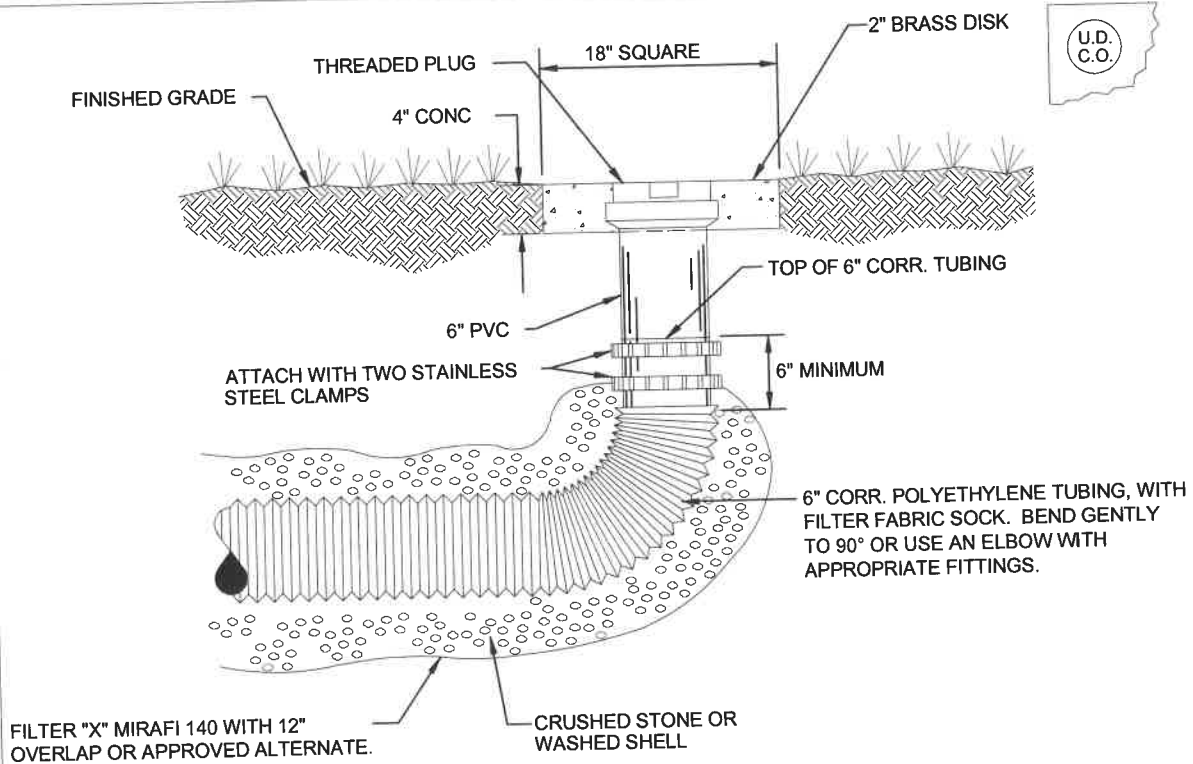
TOWN OF REDINGTON BEACH

REV.BY DATE

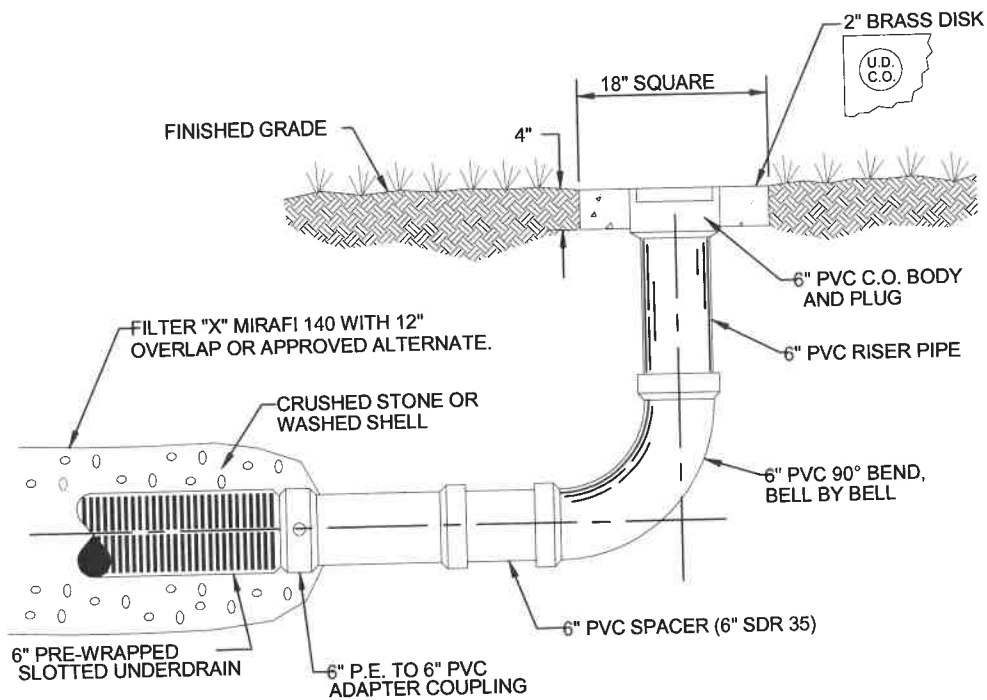
DATE OF APPROVAL

UNDERDRAIN
GENERAL NOTES

204.0



**UNDERDRAIN CLEAN-OUT DETAIL
CORRUGATED POLYETHYLENE TUBING**



UNDERDRAIN CLEAN-OUT DETAIL - RIGID

* MAXIMUM SPACING EVERY 100 FEET.

TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

**UNDERDRAIN
CLEAN-OUTS
(FLEXIBLE & RIGID)**

204.2

METAL STORM SEWER PIPE, GENERAL NOTES

- A. SHALL MEET REQUIREMENTS OF SECTION 430 AND 943 OF THE F.D.O.T.'s LATEST REVISION/UPDATE SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ITS SUPPLEMENT. ALL PIPE SHALL BE TYPE 'A', FULLY BITUMINOUS COATED.
- B. SHALL HAVE GASKETED WATER TIGHT JOINTS AT ALL LOCATIONS.
- C. SHALL HAVE THE PROJECT SITE TESTED BY A CERTIFIED LAB FOR pH, RESISTIVITY, SULFATES AND CHLORIDES. TESTS SHALL BE IN ACCORDANCE WITH FLORIDA METHOD OF TEST FM 5-550, 551, 552 & 553 AND SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR REVIEW.
- D. SHALL HAVE A MINIMUM COVER OF 18".
- E. SHALL NOT BE ALLOWED WITHIN THE ROAD RIGHT-OF-WAY OR CARRY RIGHT-OF-WAY RUNOFF.
- F. ALL STORMWATER PIPE SHALL BE INSTALLED BEHIND THE CURB OR EDGE OF PAVEMENT AND WITHIN THE RIGHT OF WAY.

HDPE STORM SEWER PIPE GENERAL NOTES

- A. HDPE SHALL MEET CURRENT F.D.O.T. STANDARD SPECIFICATIONS.
- B. MINIMUM COVER - 9" (TOP OF PIPE TO BOTTOM OF RIDGED PAVEMENT OF DRIVEWAY)
- 15" (TOP OF PIPE TO BOTTOM OF FLEXIBLE BASE OF DRIVEWAY)
- C. SIZES ARE LIMITED TO CURRENT F.D.O.T. STANDARD SPECIFICATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER OR SUPERINTENDENT OF PUBLIC WORKS.
- D. HDPE PIPE IS NOT ALLOWED UNDER ROADWAY. UNLESS OTHERWISE APPROVED BY CITY ENGINEER OR SUPERINTENDENT OF PUBLIC WORKS.

FIBER OR WIRED REINFORCED CONC. PIPE, GENERAL NOTES

- A. FRCP SHALL MEET CURRENT F.D.O.T. STANDARD SPECIFICATIONS. UNLESS OTHERWISE APPROVED BY CITY ENGINEER OR SUPERINTENDENT OF PUBLIC WORKS.
- B. SIZES LIMITED TO F.D.O.T. CURRENT STANDARD SPECIFICATIONS.

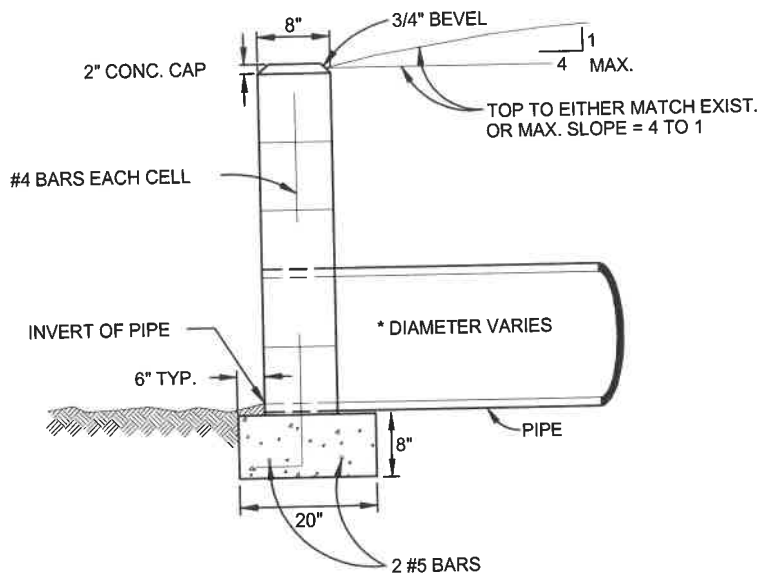
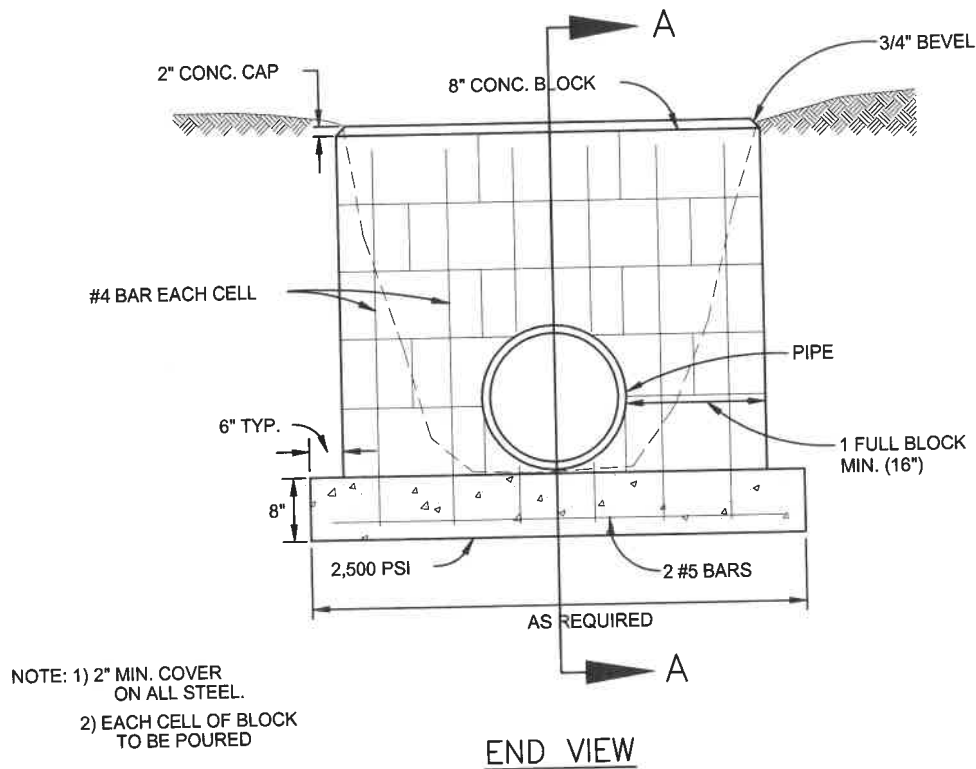
TOWN OF REDINGTON BEACH

REV.BY	DATE	

DATE OF APPROVAL _____

**STORM SEWER PIPE
GENERAL NOTES**

205.0



TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

CONCRETE BLOCK
HEADWALL

205.1

SIDEWALKS INDEX

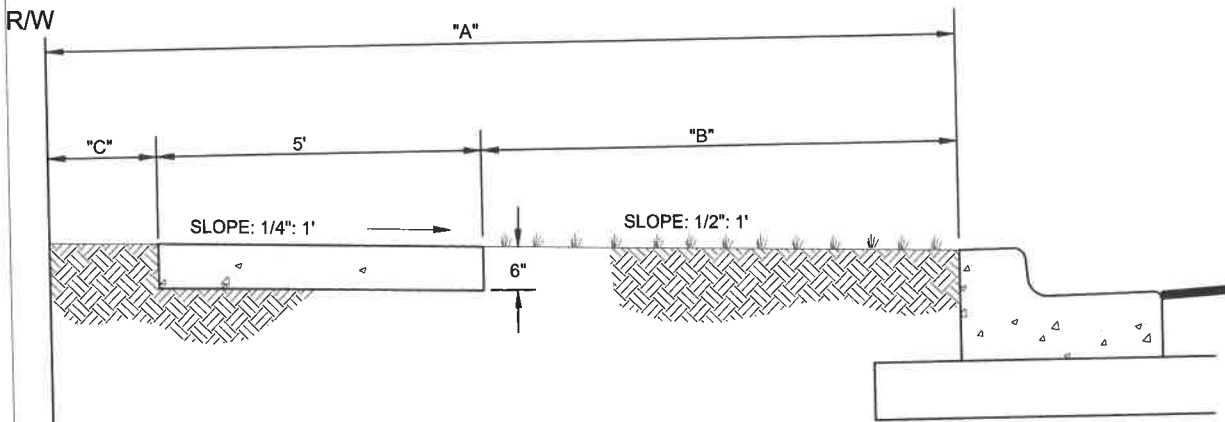
	<u>SHEET NO.</u>
300 SIDEWALKS	300.0
A. GENERAL NOTES	301.0
SIDEWALK REQUIREMENTS	301.1
HANDICAPPED RAMP SHEET #1	302.1
HANDICAPPED RAMP SHEET #2	302.2
CURB RAMP DETECTABLE WARNINGS	302.3

TOWN OF REDINGTON BEACH

REV.BY	DATE	DATE OF APPROVAL

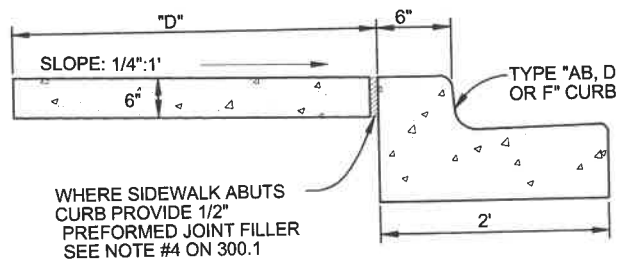
SIDEWALKS
INDEX

300.0



A= BACK OF CURB TO R/W (VARIES)
 B= UNPAVED AREA (VARIES). REFER TO
 F.D.O.T. GREEN BOOK, TABLE 3-12, LATEST REVISION.
 C= VARIES, SEE 401 SERIES

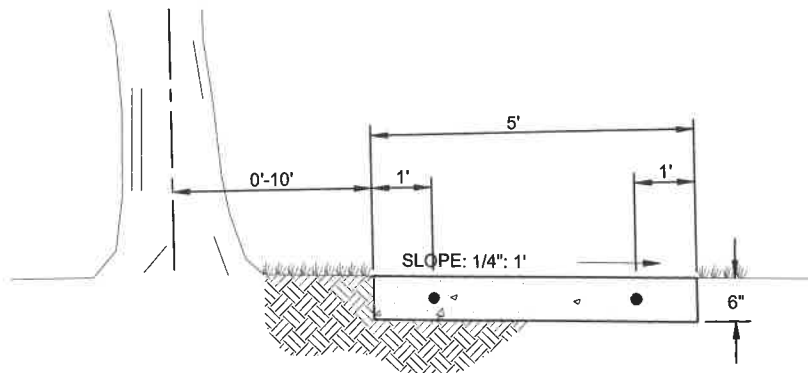
TYPICAL SIDEWALK LOCATION



D= SIDEWALK WIDTH SHALL BE 6" STANDARD, WHERE WALK ABUTS TYPE "AB, D OR F" CURB. WHERE SPEED LIMIT IS 25 MPH OR LESS, WIDTH CAN BE 5'-6".

* SEE SHEET 300.1 "GENERAL NOTES" FOR FURTHER INFORMATION

ALTERNATE SIDEWALK LOCATION



SIDEWALK LOCATION CLOSE TO TREES

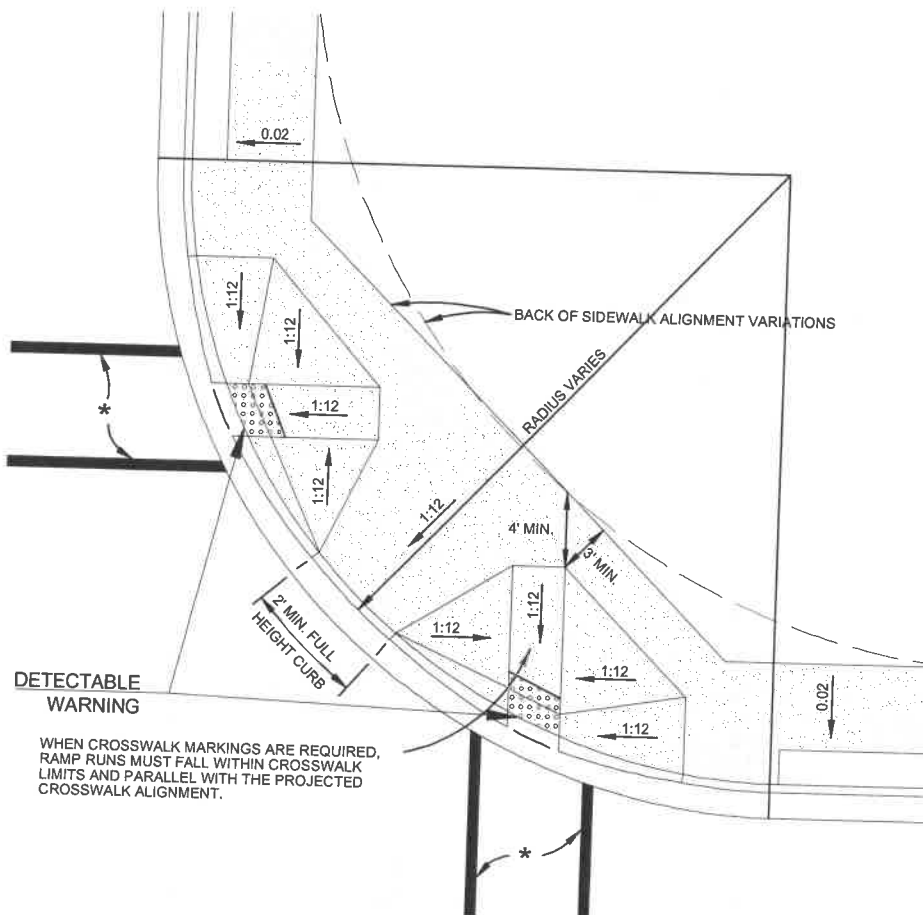
TOWN OF REDINGTON BEACH

REV.BY DATE

DATE OF APPROVAL

SIDEWALK
 REQUIREMENTS

301.1



* CROSSWALK WIDTHS AND CONFIGURATION VARY; MUST CONFORM TO FDOT INDEX NO. 17344 AND 17346.

- 1) CURB CUT RAMPS ARE TO BE LOCATED AS SHOWN ON PLANS.
- 2) SEE SHEETS # 300.1 "GENERAL NOTES" & # 301.2 "HANDICAPPED RAMP" SHT 2 FOR FURTHER REQUIREMENTS.
- 3) RADIUS OF CURB VARIES AS FOLLOWS:
 - A) 25' RAD. LOCAL STREET WITH ALLEY.
 - B) 25' RAD. LOCAL STREET WITH LOCAL STREET.
 - C) 35' RAD. LOCAL STREET WITH THOROUGHFARE OR COLLECTOR.
 - D) 50' RAD. THOROUGHFARE WITH THOROUGHFARE
- 4) CURB RADIUS SHOULD BE A MINIMUM OF 50' WHERE INDUSTRIAL AND BUS TRAFFIC (5% OR MORE) IS ANTICIPATED ON LOWER CLASSIFICATION ROADWAYS.
- 5) BOTH LOCATION OPTIONS FOR HANDICAPPED RAMP ARE SHOWN. ENGINEER MAY SELECT EITHER, WHICHEVER FITS THE SITUATION.

NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

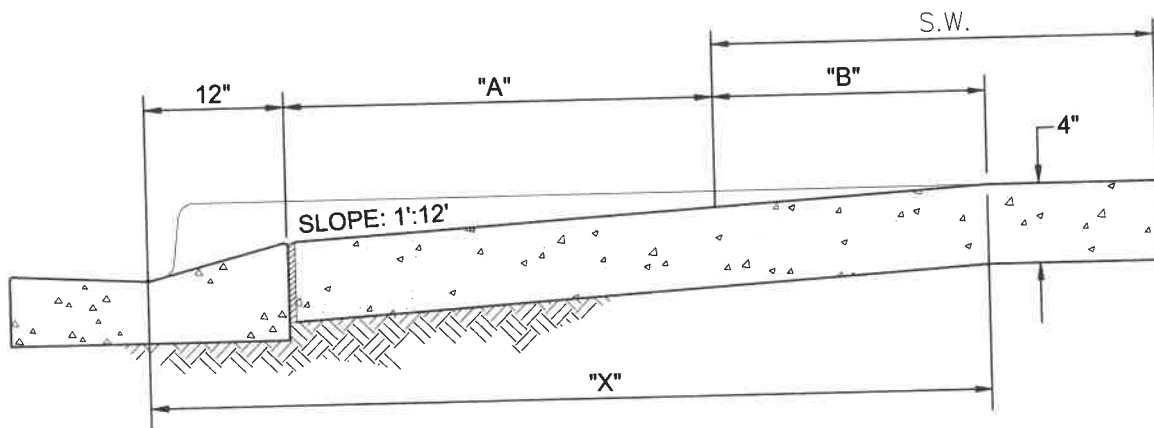
TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL

HANDICAPPED
RAMP SHEET 1

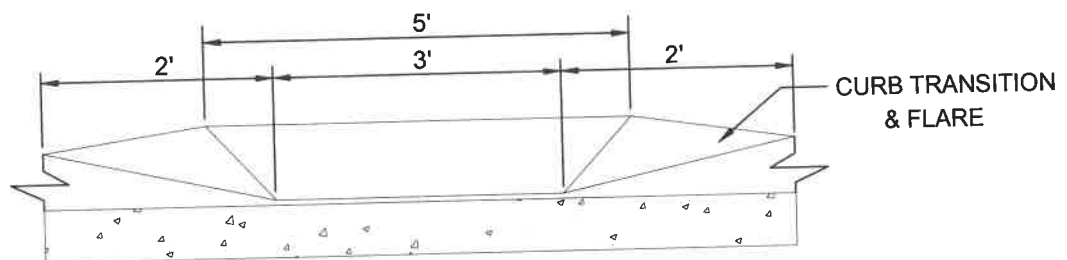
302.1



SECTION A-A

(SEE SHEET 301.0)

S.W.= SIDEWALK	"A"	S.W.+ A + 10"	"X"	"B"
5'	0	5.8'	5.8'	5'
6'	0	6.8'	6.8'	6'
7'	0	7.8'	7.3'	6.5'
8'	0	8.8'	7.3'	6.5'
5'	2'	7.8'	7.8'	5'
5'	2.5'	8.3'	8.1'	4.8'
5'	3'	8.8'	8.2'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5'	10.8'	9.1'	3.1'



SECTION B-B

(SEE SHEET 301.0)

NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

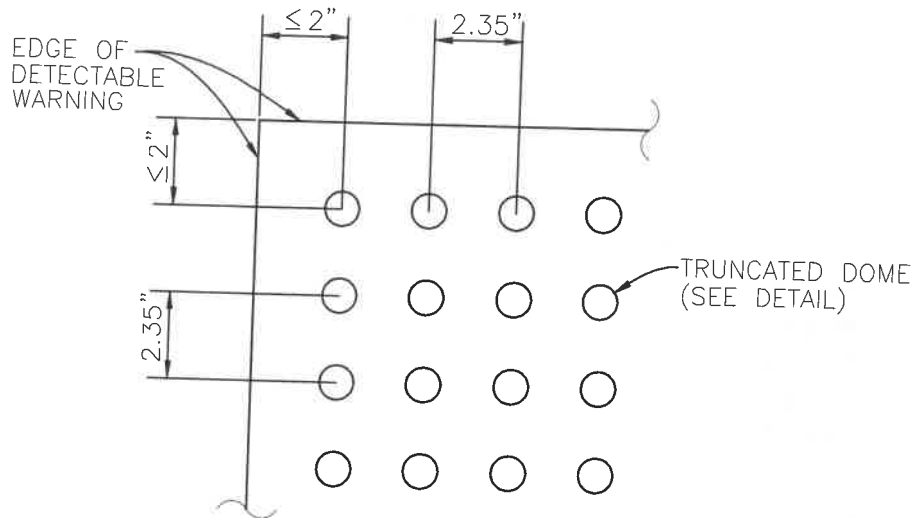
TOWN OF REDINGTON BEACH

REV. BY DATE

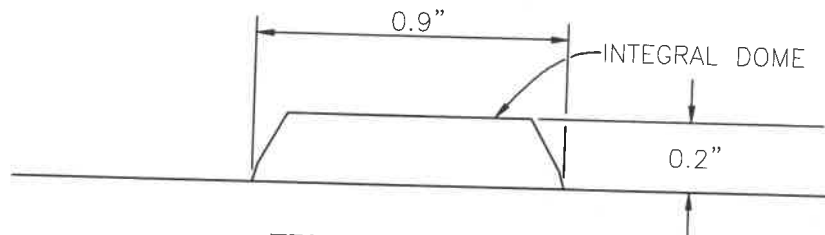
DATE OF APPROVAL

HANDICAPPED
RAMP SHEET 2

302.2



PLAN VIEW



TRUNCATED DOME

CURB RAMP DETECTABLE WARNING DETAIL

NOTES:

DETECTABLE WARNINGS ON WALKING SURFACES

THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCH, A HEIGHT OF NOMINAL 0.2 INCH AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCH AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.

THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70%. CONTRAST IN PERCENT IS DETERMINED BY:

$$\text{CONTRAST} = [(B1-B2)/B1] \times 100$$

WHERE B1 = LIGHT REFLECTANCE VALUE (LRV) OF THE LIGHTER AREA AND B2 = LIGHT REFLECTANCE VALUE (LRV) OF THE DARKER AREA.

NOTE THAT IN ANY APPLICATION BOTH WHITE AND BLACK ARE NEVER ABSOLUTE; THUS, B1 NEVER EQUALS 100 AND B2 IS ALWAYS GREATER THAN 0.

TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL _____

**CURB RAMP
DETECTABLE
WARNINGS**

302.3

ROAD STANDARD INDEX

SHEET NO.

400 ROAD STANDARDS

400.0

A. GENERAL NOTES

400.1 & 400.2

1. RESERVED

401.0

2. RESERVED

401.1

3. RESERVED

401.2

4. RESERVED

401.3

5. RESERVED

401.4

6. RESERVED

401.5

7. RESERVED

401.6

8. TYPICAL LOCAL RESIDENTIAL SWALE CROSSING

401.7

9. TYPICAL LOCAL RESIDENTIAL CURB CROSSING

401.8

10. TYPICAL LOCAL SHELL ROAD

401.9

11. RESERVED

401.10

12. RESERVED

401.11

13. MINIMUM CURB RADIUS

402.0

14. MINIMUM CLEAR ZONE WIDTHS

402.1

15. MEDIAN REQUIREMENTS

402.2

16. LOCAL TO THOROUGHFARE INTERSECTION
SEPARATION REQUIREMENTS

402.3

17. RESERVED

402.4

18. DRIVEWAY SETBACK DISTANCE

402.5

B. SOIL CEMENT SPECIFICATIONS

403.0

C. CEMENT TREATED BASE

403.1

D. UTILITY ROAD CUT REPLACEMENT

403.2

E. ROAD CONNECTION DETAIL

403.3

G. TYPICAL RESIDENTIAL STREET ROUNDABOUT

404.0

H. SPEED TABLE DETAIL

405.0

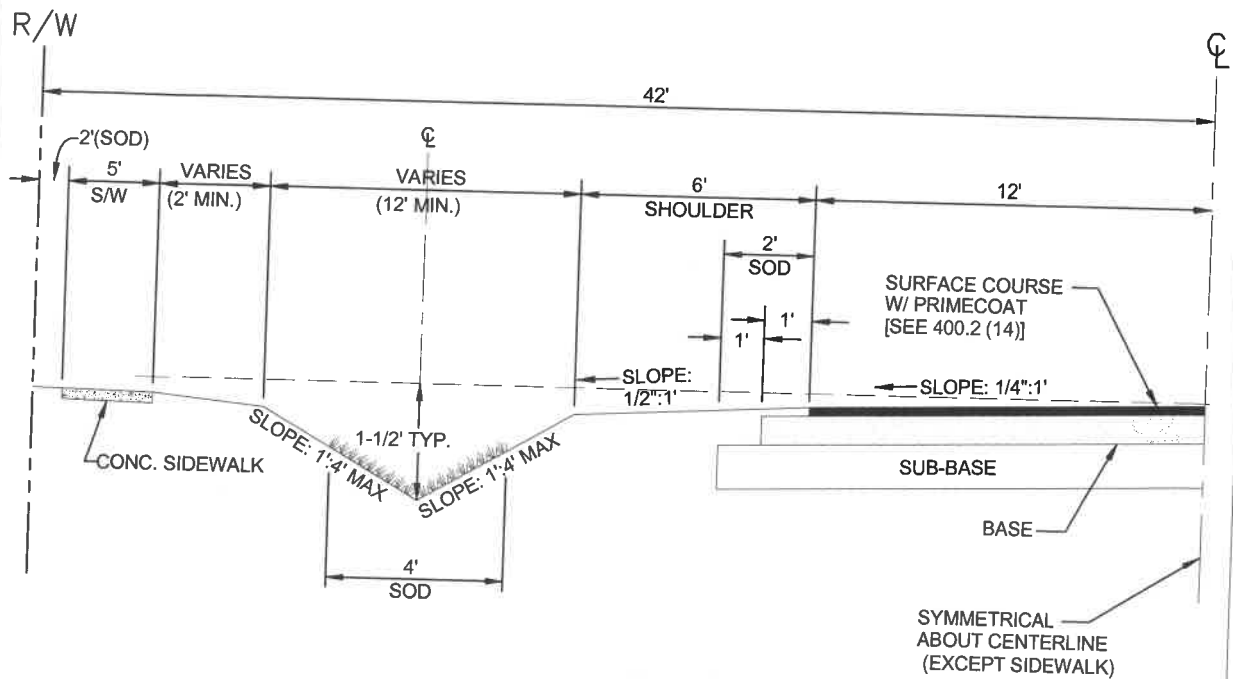
TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

ROAD STANDARDS
INDEX

400.0



NOTES:

- A) Asphaltic concrete surface course 1-3/4" minimum thickness (Type S). Two lifts of asphalt shall be considered acceptable, however a performance bond shall be required if second lift is delayed. The first lift shall be 1" of S-I, the second lift shall be 3/4" of S-III.
 - B) Base Course shall consist of 4-1/2" compacted sand asphalt (1200 lbs. stabilized), 6" base course 600 lbs. per square yard limrock compacted to 98% AASHTO T-180 density, or 6" soil cement* (6" Caloosahatchee Shell LBR 100).
 - C) 6" stabilized sub-base shell marl blended with sandy sub-base minimum LBR 40, 98% T180 AASHTO.
 - D) Shoulder, slopes and ditch bottom to have a minimum of 2" topsoil, bottom 4' of area to be sodded, and the balance is to be seeded and mulched per section 400.1 (8)
 - E) The slope of contiguous property may not exceed 1' to 4'.
 - F) 12" cover on storm sewers, no portion of pipe to be into sub-base.
 - G) Laboratory tests are required to substantiate structural section design. Specifications shown on this sheet are minimum.
- * Or approved equal, meeting same structural number.

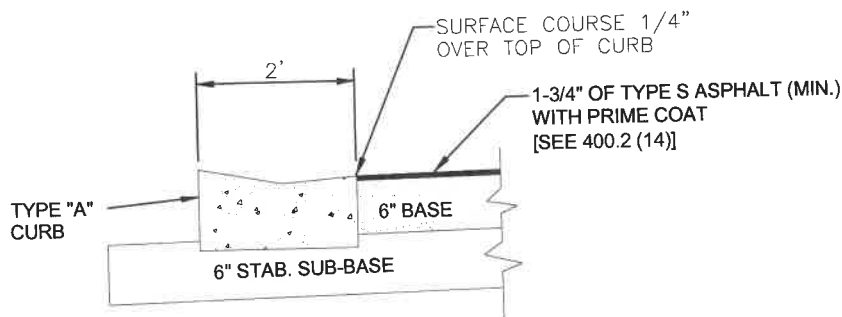
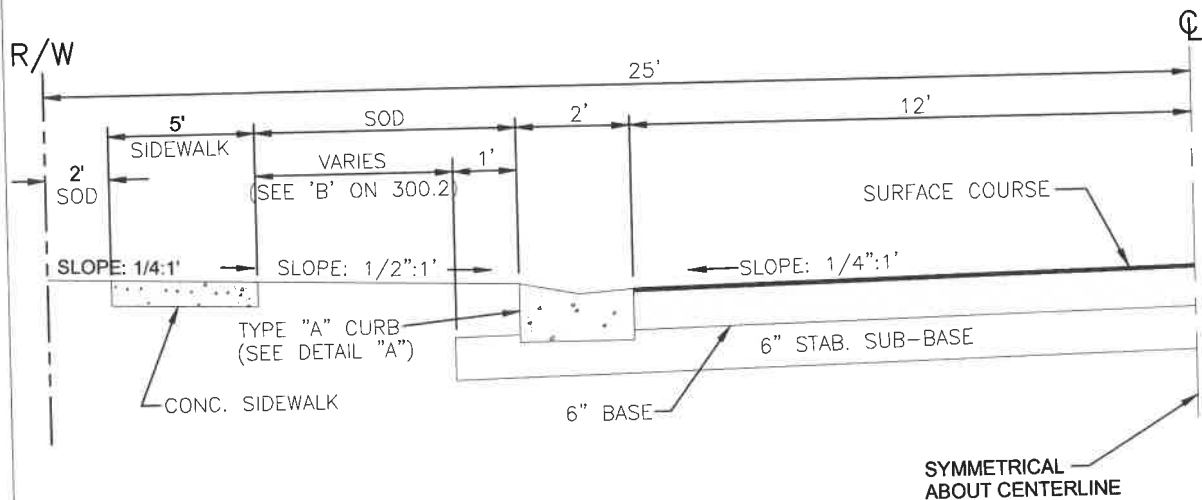
TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL _____

**LOCAL
RESIDENTIAL
SWALE CROSSING**

401.7



DETAIL "A"

NOTES:

- Asphaltic concrete surface course shall be laid in two lifts. The first lift shall be 1" Type S-I or S-III. The second lift shall be 3/4" Type S-III. A performance bond shall be required if the second lift is delayed beyond acceptance of the road.
- Base course shall consist of 4-1/2" compacted sand asphalt base (1200 lbs. stab.) or 6" Caloosahatchee shell compacted to 98% AASHTO T-180 density LBR 100 or 6" soil cement.*
- 6" stabilized sub-base shell marl blended with sandy sub-grade minimum LBR 40, 98% T180 AASHTO.
- On new construction, sanitary sewer may be placed on centerline of R/W if desired. All laterals to be installed at the same time as sanitary sewer main line.
- See section 201.0 for curb and gutter types.
- No portion of drainage pipe shall be allowed in sub-base. 12" minimum cover is required on storm drain.
- Sidewalk shall be 1' or 2' inside R/W line, with 2' preferable. To be constructed per section 300.1
- Laboratory tests are required to substantiate structural section design. Specifications shown on this sheet are minimum requirements.
- If sidewalks are not required, only 2' of sod is required back of curb. Hydromulch balance of right-of-way.
- Sodding shall be installed per section 400.1 (8)

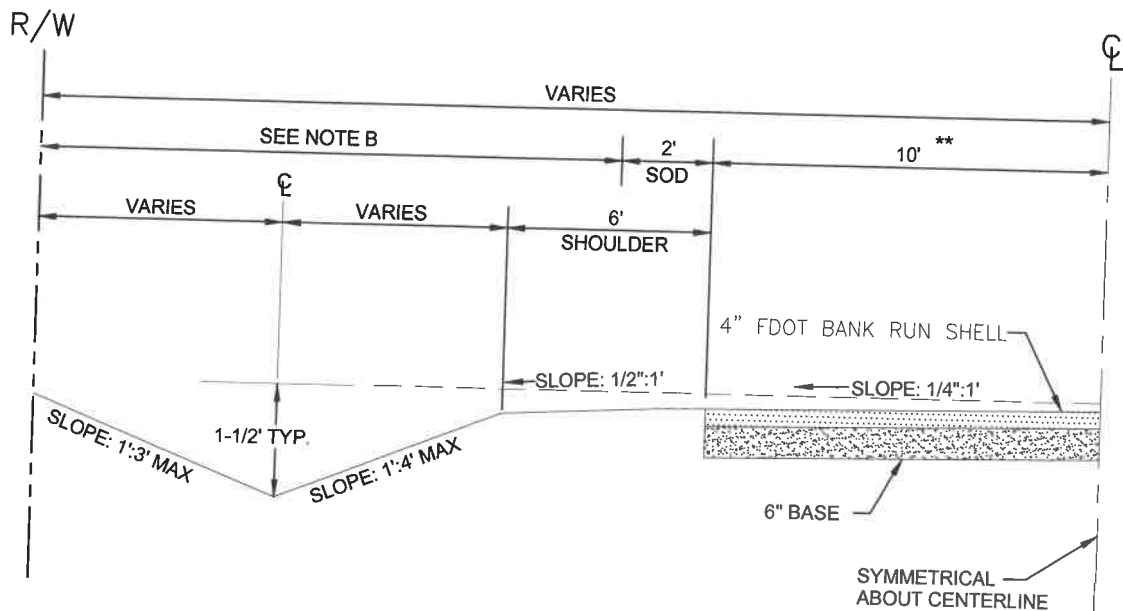
* Or approved equal, meeting same structural number.

TOWN OF REDINGTON BEACH

REV. BY	DATE	
		DATE OF APPROVAL

**LOCAL
RESIDENTIAL
CURB CROSSING**

401.8



Note: These roads may only be approved for use in Ag-rural designated areas on rights-of-way dedicated prior to Oct. 15, 1990.
Roads will be classified as "Emergency Maintained Only."
Local residents are required to perform routine maintenance.

NOTES:

- *A) Clean, stabilized 6" base. Minimum LBR 40, 98% T180 AASHTO. This requires raking and removal of plant material before compaction, if plant material exists within the right of way.
- B) Road shall be finished with 4" FDOT bank run shell, then leveled and compacted.
- C) Side 2' of road shoulder shall be sodded and if there is no substantial existing grass, remaining shoulder, slopes and ditch bottom shall have a minimum of 2" topsoil, and shall be seeded and mulched. Areas susceptible to erosion must be sodded.
- D) The slope of contiguous property may not exceed 3' to 1'.
- E) 12" cover on storm sewers, no portion of pipe allowed in base.
- F) Laboratory tests are required to substantiate structural section design. Specifications shown on this sheet are minimum requirements.

* Or approved equal.

- ** Road may be 12' in width, (6' half width) on non-through roads (Dead Ends) serving 4 or fewer lots. Shoulders shall be a minimum of 6' in width and constructed of a stabilized or compacted soil with a minimum LBR OF 40. The Transportation Director may allow variance to the road standards for certain circumstances.
- ** Road may be 16' in width (8' half width) on non-through roads (Dead Ends) serving 5 to 8 lots.

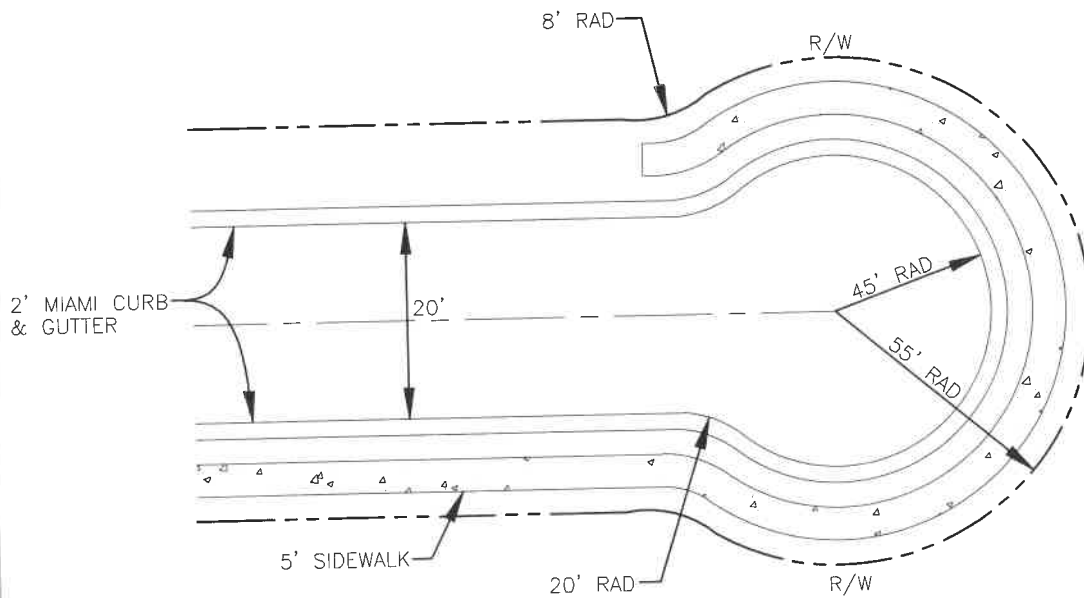
TOWN OF REDINGTON BEACH

REV.BY	DATE

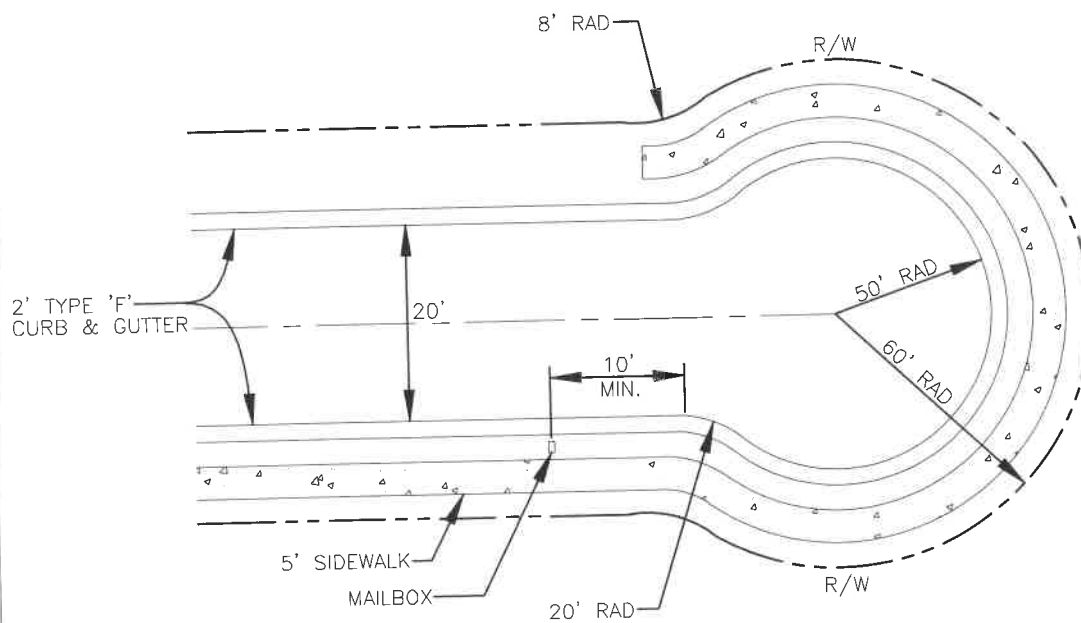
DATE OF APPROVAL

**LOCAL SHELL
ROAD**

401.9

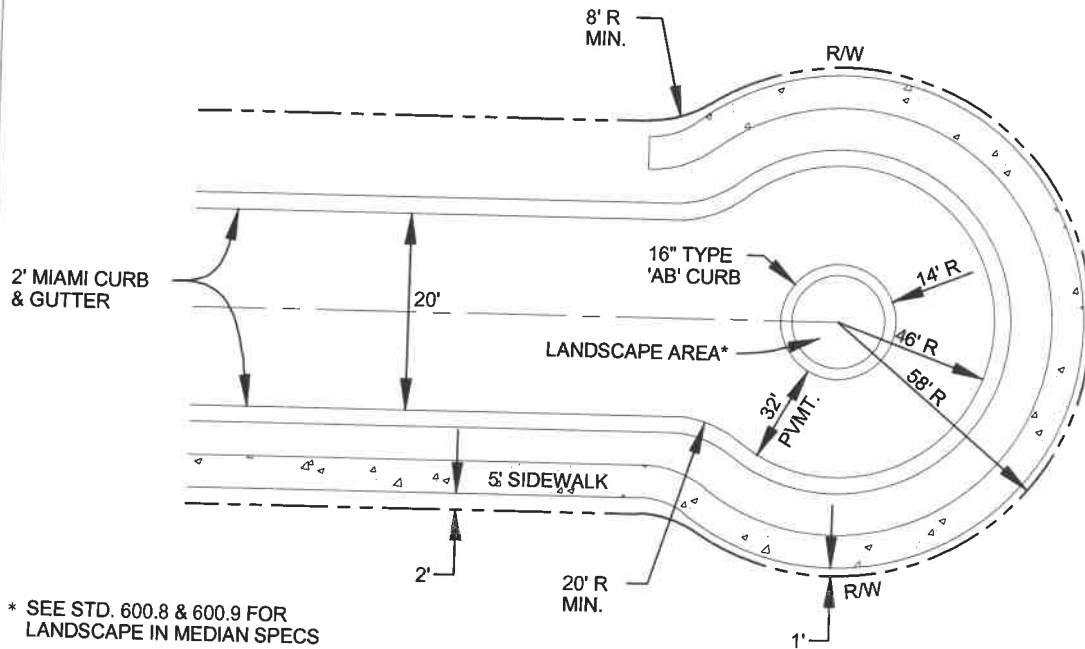


RESIDENTIAL CUL-DE-SAC

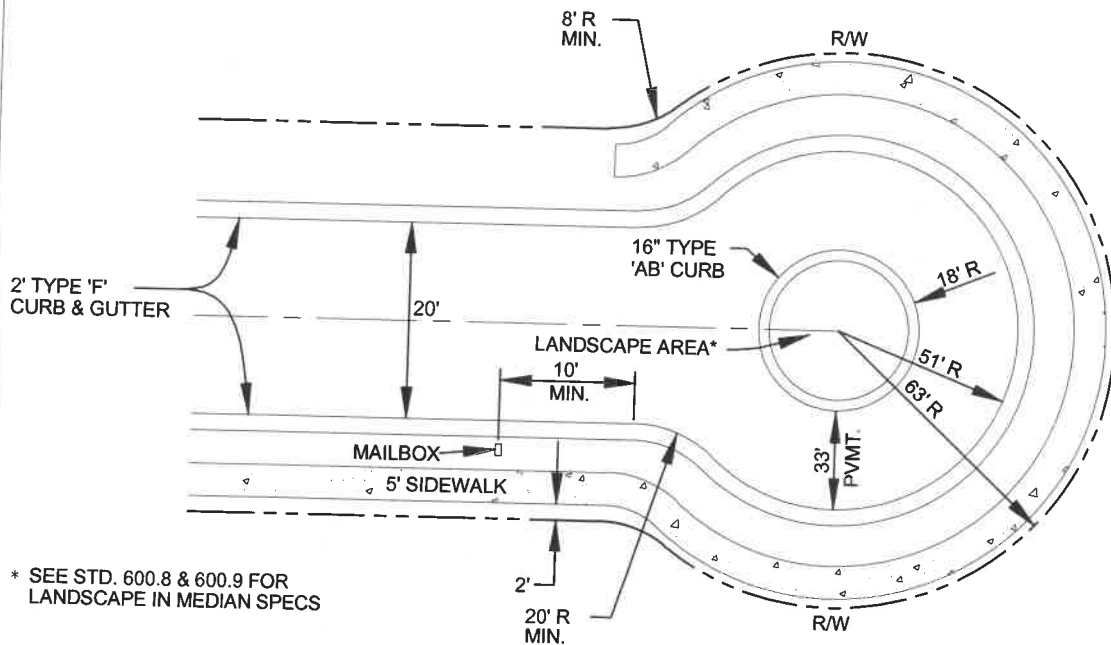


INDUSTRIAL CUL-DE-SAC

TOWN OF REDINGTON BEACH			RESIDENTIAL AND INDUSTRIAL CUL-DE-SAC	401.10
REV. BY	DATE			
		DATE OF APPROVAL		



RESIDENTIAL CUL-DE-SAC



INDUSTRIAL CUL-DE-SAC

ALTERNATE:

TRUCK COLLAR DESIGN MAY BE USED BETWEEN RADIUS OF 16-1/2' AND 30' (SEE 404.2).

TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL

**RESIDENTIAL
AND INDUSTRIAL
CUL-DE-SAC
WITH MEDIAN**

401.11

REV.BY	DATE

DATE OF APPROVAL _____

TOWN OF REDINGTON BEACH

MINIMUM
CURB RADIUS

402.0

MINIMUM FACE OF CURB RADIUS FOR INTERSECTING ROADS

ROAD CLASSIFICATION		ROAD CLASSIFICATION				
		LOCAL RESIDENTIAL (URBAN & RURAL)	INDUSTRIAL (URBAN & RURAL)	MINOR COLLECTOR	MAJOR COLLECTOR	ARTERIAL
LOCAL RESIDENTIAL (URBAN & RURAL)		25'	40'	35'	35'	35'
INDUSTRIAL (URBAN & RURAL)		40'	50'	50'	50'	50'
MINOR COLLECTOR		35'	50'	50'	50'	50'
MAJOR COLLECTOR		35'	50'	50'	50'	50'
ARTERIAL		35**	50'	50'	50'	50'

INCREASE PER MPO FREIGHT MANAGEMENT STUDY

* WITHOUT TURN LANE = 50'

MINIMUM WIDTH OF CLEAR ZONE

TYPE OF FACILITY	DESIGN SPEED (MPH)						
	25 AND BELOW	30	35	40	45	50	55
MINIMUM CLEAR ZONE (FEET)							
RURAL •	6	6 LOCAL 10 COLLECTORS 14 ARTERIALS	6 LOCAL 10 COLLECTORS 14 ARTERIALS	10 COLLECTORS 14 ARTERIALS	14 ARTERIALS AND COLLECTORS ADT < 1500	14 ARTERIALS AND COLLECTORS ADT < 1500	18 ARTERIALS AND COLLECTORS ADT < 1500
					18 ARTERIALS AND COLLECTORS ADT ≥ 1500	18 ARTERIALS AND COLLECTORS ADT ≥ 1500	24 ARTERIALS AND COLLECTORS ADT ≥ 1500
URBAN *	1-1/2	4 **	4 **	4 **	4 **	N/A ••	N/A ••

* FROM FACE OF CURB.

** ON PROJECTS WHERE THE 4' MINIMUM OFFSET CANNOT BE REASONABLY OBTAINED AND OTHER ALTERNATIVES ARE DEEMED IMPRACTICAL, THE MINIMUM MAY BE REDUCED TO 1-1/2'.

• USE RURAL FOR URBAN FACILITIES WHEN NO CURB AND GUTTER IS PRESENT. MEASURED FROM THE EDGE OF THROUGH TRAVEL LANE ON RURAL SECTION.

•• CURB AND GUTTER NOT TO BE USED ON FACILITIES WITH DESIGN SPEED > 45 MPH.

NOTE: ADT IN TABLE REFERS TO DESIGN YEAR ADT.

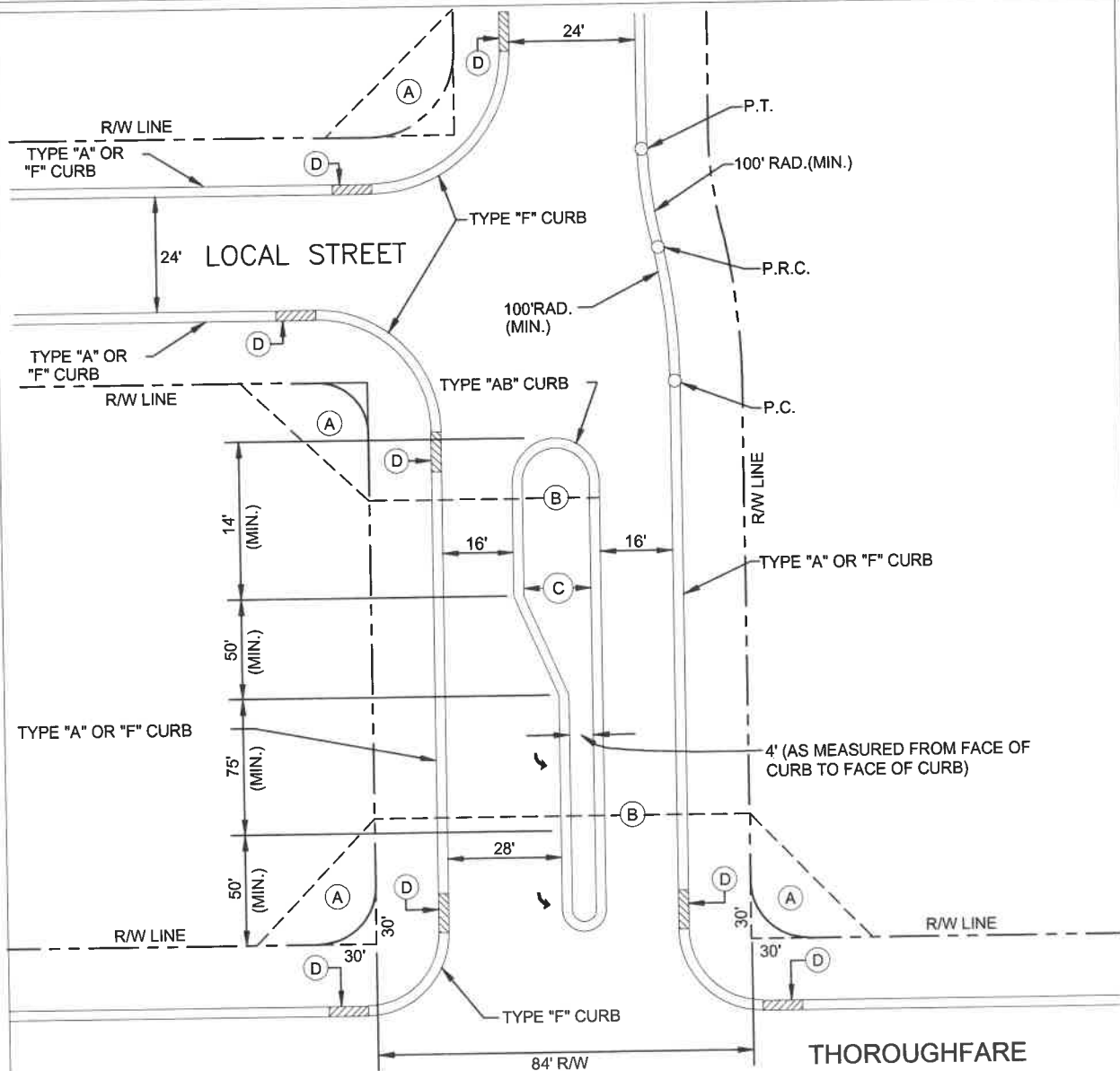
TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL

MINIMUM
CLEAR ZONE
WIDTHS

402.1



- * (A) VISIBILITY TRIANGLE, 30' X 30' AREA PERMITTING NO OBSTRUCTION (1.0 FT. DIA. OR LESS) HIGHER THAN 2' NOR LOWER THAN 8.5', TO ASSURE PROPER VISIBILITY. (SEE L.D.C. 713).
- (B) EXTENSION OF VISIBILITY TRIANGLE ACROSS MEDIAN STRIP TO COMPLY WITH STANDARD ABOVE.
- (C) MEDIAN STRIP MINIMUM WIDTH 19.33' FROM BACK OF CURB TO BACK OF CURB, LENGTH - 300' MAX NOT EXTENDING BEYOND P.C. OF PAVEMENT INTERSECTION RADIUS OR R/W LINE OF INTERSECTING STREET.
- (D) MINIMUM 5' CURB TRANSITION.
SEE SECTION 200 "CURB & GUTTER" SHEET 201.0 FOR CURB TYPE.
SEE SHEET 400.1 "GENERAL NOTES"
RADIUS AS REQUIRED BY ROAD DESIGNATION, LOCAL TO LOCAL 25' R., LOCAL TO THOROUGHFARE 35' R.,
THOROUGHFARE TO THOROUGHFARE 50' R.
- * 30' IS A MINIMUM, MAY BE GREATER, VISIBILITY TRIANGLE TO BE DESIGNED PER F.D.O.T. MANUAL OF
UNIFORM MINIMUM STANDARDS FOR DESIGN, CONST. & MAIN. FOR STREETS & HIGHWAYS (GREEN BOOK),
LATEST REVISION.

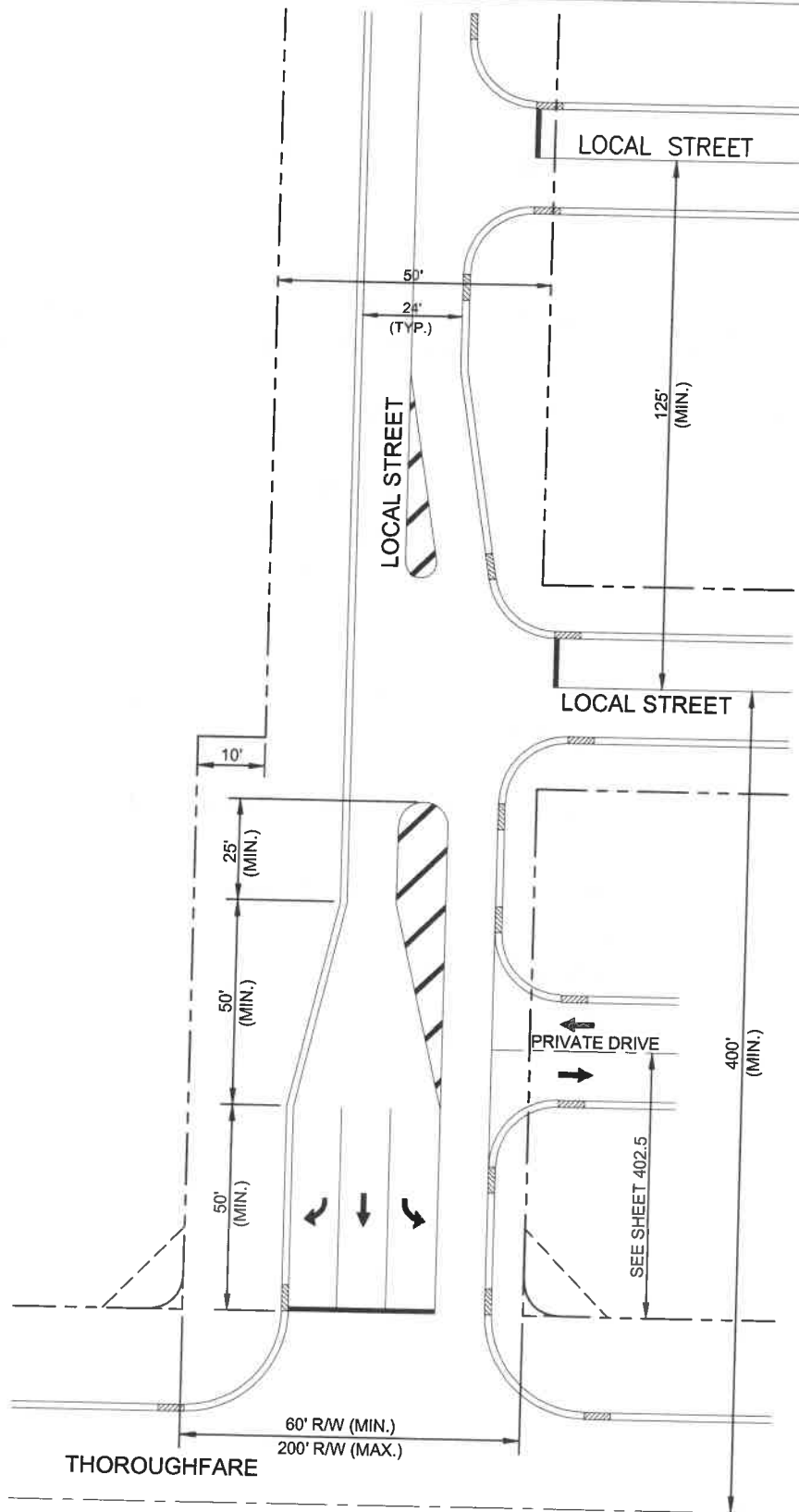
TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

MEDIAN REQUIREMENTS

402.2



TOWN OF REDINGTON BEACH

REV. BY DATE

DATE OF APPROVAL

LOCAL STREET TO
THOROUGHFARE
SEPARATION
REQUIREMENTS

402.3

DRIVEWAY SETBACK DISTANCE

PRINCIPAL USE OF LOT SERVICED	HIGHEST CLASSIFICATION OF INTERSECTING STREETS	MINIMUM REQUIRED DISTANCE (FEET)
RESIDENTIAL	ARTERIAL - THOROUGHFARE	60'
	MAJOR COLLECTOR - THOROUGHFARE	40'
	MINOR COLLECTOR - THOROUGHFARE	30'
	LOCAL	30'
ALL OTHER USES	ARTERIAL - THOROUGHFARE	75'
	MAJOR COLLECTOR - THOROUGHFARE	60'
	MINOR COLLECTOR - THOROUGHFARE	50'
	LOCAL	50'

TOWN OF REDINGTON BEACH

REV.BY DATE

DATE OF APPROVAL _____

**DRIVEWAY
SETBACK
DISTANCE**

402.5

SOIL CEMENT SPECIFICATIONS

1. DESIGN MIX:

- A.) 300 P.S.I. (7 DAYS) LAB DESIGN.
- B.) CEMENT CONTENT BY WEIGHT MUST BE A MINIMUM OF 5% AND A MAXIMUM OF 8%.
- C.) SOIL, CEMENT AND WATER SHALL BE CENTRAL PLANT MIX ONLY.

2. PROJECT TEST SAMPLES:

- A.) THE PILLS CAST FROM PROJECT OPERATIONS MUST BREAK AT 200 P.S.I. OR HIGHER AT 7 DAYS.
- B.) CORES MAY BE TAKEN AT 14 DAYS TO PROVIDE ADDITIONAL INFORMATION REGARDING A SOIL CEMENT SECTION.
- C.) CORE BREAKS BELOW 150 P.S.I. WILL NOT BE ACCEPTABLE.
- D.) IN PLACE DENSITY TESTS SHALL BE MADE IN THE SUB-BASE AND BASE COURSE. FREQUENCY OF TESTING SHALL BE AT LEAST ONE TEST FOR EVERY 500 L.F. OF PAVEMENT. IF PROJECT IS LESS THAN 500 L.F., THEN A MINIMUM OF TWO DENSITY TESTS SHALL BE TAKEN.
- E.) ALL CORES SHALL BE 6" DIAMETER.
- F.) SUB-BASE TO BE A MINIMUM OF LBR 40 (UNLESS OTHERWISE NOTED).

3. CONSTRUCTION METHODS:

- A.) CONSTRUCTION METHODS SHALL IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2000 EDITION, SECTION 270 EXCLUDING SUB-SECTION 270-4.3.1 ("MIX IN PLACE"). ALL OTHER SUB-SECTIONS OF SECTION ARE APPLICABLE.

*NOTE: SOIL CEMENT CAN ONLY BE USED WITH SPECIFIC APPROVAL OF DIRECTOR.

TOWN OF REDINGTON BEACH		SOIL CEMENT SPECIFICATIONS	403.0
REV.BY	DATE		
DATE OF APPROVAL			

CEMENT TREATED BASE CONSTRUCTION

GENERAL:

- 1.1 THE CONSTRUCTION OF THE CEMENT TREATED BASE SHALL IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2000 EDITION, SECTION 270 EXCLUDING SUB-SECTION 270-4.3.1 ("MIX IN PLACE"). ALL OTHER SUB-SECTIONS OF SECTION ARE APPLICABLE.
- 1.2 THE SUBGRADE IS TO BE CONSTRUCTED TO F.D.O.T. SPECIFICATION SECTION 270-4, 2000 EDITION AND BE COMPACTED TO 98 PERCENT AASHTO T-180 DENSITY. THE SUB-BASE TO BE CONSTRUCTED OF MATERIAL HAVING A MINIMUM LBR OF 40.
- 1.3 THE CEMENT TREATED BASE IS TO HAVE A MINIMUM LABORATORY CURED FIELD MIX 7-DAY COMPRESSIVE STRENGTH OF 200 PSI, BY BAG SAMPLE.
- 1.4 SHELL MATERIAL SHALL BE MIXED WITH A MINIMUM CEMENT CONTENT BY WEIGHT OF 2%, BUT NOT TO EXCEED 4%. THE INTENT OF A 2% MIX IS NOT PRIMARILY TO GENERATE STRENGTH BUT TO ENHANCE A SHELL BASE WITH THE RESILIENCY AND WATER RESISTANCE CHARACTERISTICS OF SOIL CEMENT, WITHOUT GENERATING THE PROBLEMATIC CRACKING CHARACTERISTICS GENERALLY ASSOCIATED WITH NORMAL SOIL CEMENT MIXES. THEREFORE, THE CONTRACTOR IS INSTRUCTED TO GENERATE A MIX CAPABLE OF ACHIEVING A FIELD TEST 7-DAY COMPRESSIVE STRENGTH IN THE RANGE OF 200 PSI TO 300 PSI, BY BAG SAMPLE.
- 1.5 BASE MATERIAL SHALL BE F.D.O.T. SHELL AND HAVE A MINIMUM LBR OF 100 AND +/-2% OPTIMUM MOISTURE PRIOR TO MIXING WITH CEMENT.
- 1.6 ANY AREA REPRESENTED BY A 400 PSI 7-DAY BREAK OR GREATER IS SUBJECT TO REJECTION BY THE OWNER OR OWNER'S REPRESENTATIVE AFTER OBSERVATION, EVALUATION AND TESTING. VALUES FROM 300 PSI TO 400 PSI SHALL BE SUBJECT TO REVIEW AND COMPARISON TO THE DESIGN MIX.
- 1.7 IT SHOULD BE NOTED THAT MOISTURE CONTENT, RAPIDITY OF COMPACTION EFFORT AND FINAL COMPACTION RESULTS HAVE AS MUCH, IF NOT MORE, INFLUENCE ON THE COMPRESSIVE STRENGTH AS DOES THE CEMENT CONTENT. IN ORDER TO GIVE THE CONTRACTOR A REFERENCED ACCEPTANCE STANDARD, LOWER AND UPPER VALUES OF 200 PSI AND 300 PSI HAVE BEEN ESTABLISHED. THESE VALUES ARE ALSO GIVEN SOME SUBJECTIVE LEEWAY IN THE INSPECTION OF THE FINAL PRODUCT.
- 1.8 ALL MATERIAL SHALL BE COLLECTED BY THE SACK METHOD, TRANSPORTED TO LAB IN SEALED/MOISTURE RETAINING ENCLOSURE AND TESTED WITHIN 2 HOURS OF FIELD SAMPLING.

TESTING AND INSPECTION:

- 2.1 ALL TESTING AND INSPECTION SHALL BE PERFORMED BY AN INDEPENDENT LABORATORY APPROVED BY THE ENGINEER/COUNTY.
- 2.2 THE CONTRACTOR SHALL MAKE AVAILABLE ALL MATERIALS TO THE LABORATORY FOR THE PURPOSE OF PERFORMING ROUTINE TESTS AS SPECIFIED. THIS INCLUDES SAMPLES FOR CEMENT TREATED BASE MIXTURE DESIGN, MAXIMUM DENSITY DETERMINATION, SIEVE ANALYSIS OR OTHER TESTS AS DIRECTED BY THE ENGINEER.
- 2.3 THE PILLS CAST FROM PROJECT OPERATIONS MUST BREAK AT 200 PSI OR HIGHER AT 7 DAYS.
- 2.4 TEST SAMPLES MAY BE TAKEN AT 14 DAYS TO PROVIDE ADDITIONAL INFORMATION REGARDING A CEMENT TREATED SECTION. SAMPLES SHALL BE SAWCUT, FULL DEPTH AND BE A MINIMUM OF 12"x12".
- 2.5 SAMPLE BREAKS BELOW 150 PSI WILL NOT BE ACCEPTABLE. ALL CORES SHALL BE 6 INCHES IN DIAMETER.
- 2.6 IN PLACE DENSITY TESTS SHALL BE MADE IN THE SUB-BASE AND BASE COURSE. FREQUENCY OF TESTING SHALL BE AT LEAST ONE TEST FOR EVERY 500 L.F. OF PAVEMENT. IF PROJECT IS LESS THAN 500 L.F., THEN A MINIMUM OF TWO DENSITY TESTS SHALL BE TAKEN. A MINIMUM OF TWO STRENGTH TEST VALUE SPECIMENS SHALL BE TAKEN EACH DAY (ONE IN THE MORNING, AND ONE IN THE AFTERNOON)
- 2.7 TEST RESULTS SHALL BE REPORTED IN WRITING TO THE COUNTY.
- 2.8 F.D.O.T. SHELL BASE MATERIALS WILL BE ONLY BASE MATERIAL ACCEPTED.
- 2.9 CRUSHED CONCRETE BASE MATERIAL REQUIRES DIRECTOR'S APPROVAL.

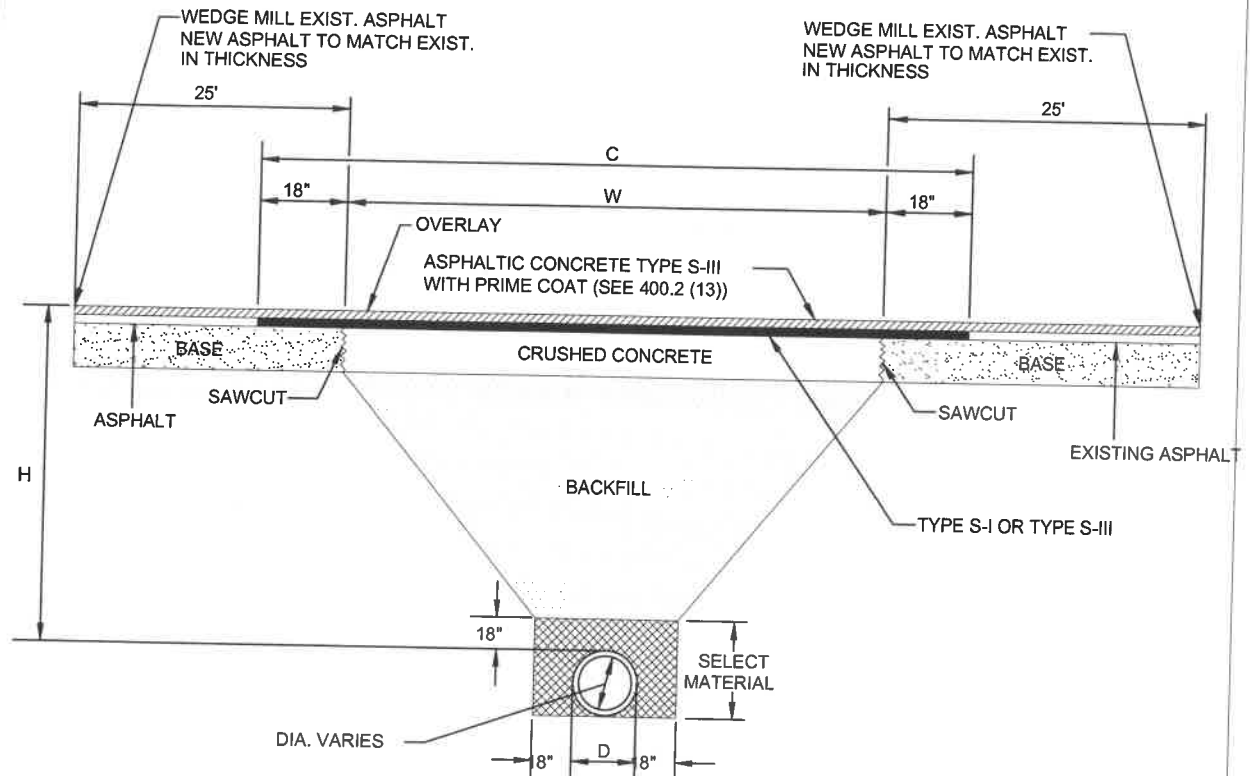
TOWN OF REDINGTON BEACH

REV.BY	DATE

DATE OF APPROVAL _____

**CEMENT TREATED
BASE**

403.1



- A. CRUSHED CONCRETE BASE SHALL BE A MINIMUM OF 8" THICK AND A MINIMUM OF "W" IN WIDTH, OR GREATER, WHERE DISTURBED AREA IS GREATER THAN "W" FROM EQUATION: $W = (2 \times H) + D + (2 \times 18")$. SAND ASPHALT BASE WILL BE AN ACCEPTABLE ALTERNATE.
- B. BACKFILL, AASHTO M145-66 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6", EACH LAYER WILL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% OF MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T-180). NON-SHRINK, HIGH SLUMP, 1,500 PSI CONC. BACKFILL MAY BE USED AS AN ALTERNATIVE IF APPROVED BY TRANSPORTATION DEPARTMENT.
- C. SELECT MATERIAL, AASHTO M-146-70, SHALL BE PLACED ON BOTH SIDES OF THE PIPE SIMULTANEOUSLY, COMPACT AREA UNDER HAUNCHES OF THE PIPE W/ MECHANICAL TAMPERS, AND THROUGHOUT THE REMAINDER OF THE SELECT MATERIAL.
- D. ASPHALTIC CONCRETE FRICTION COURSE, SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF ONE INCH, WHICHEVER IS GREATER. $C = W + 36$
- E. "H" = THE DEPTH FROM TOP OF PIPE TO THE CENTERLINE OF THE ROAD (MINIMUM OF 36") MINIMUM OF 30" UNDER FLOWLINE OF SIDE DITCHES.
- F. RESTORE EXISTING SIGNAGE & MARKING WITH THERMOPLASTIC PER F.D.O.T. STANDARDS.

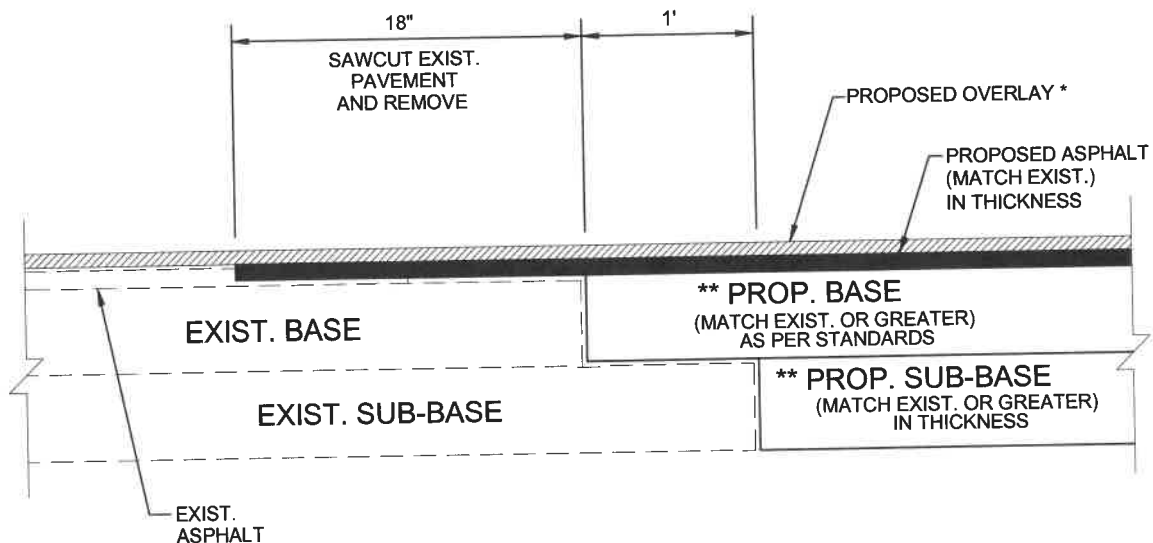
TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL _____

UTILITY ROAD CUT REPLACEMENT

403.2



* NOTE: LIMITS OF OVERLAY - EDGE OF PAVEMENT TO EDGE OF PAVEMENT AND 25' BEYOND LIMITS OF CONSTRUCTION.

** NOTE: CONNECTION TO OLDER (SUBSTANDARD THICKNESS) ROADS MAY REQUIRE THICKER PROPOSED BASE AND SUB-BASE TO MEET CURRENT STANDARDS.

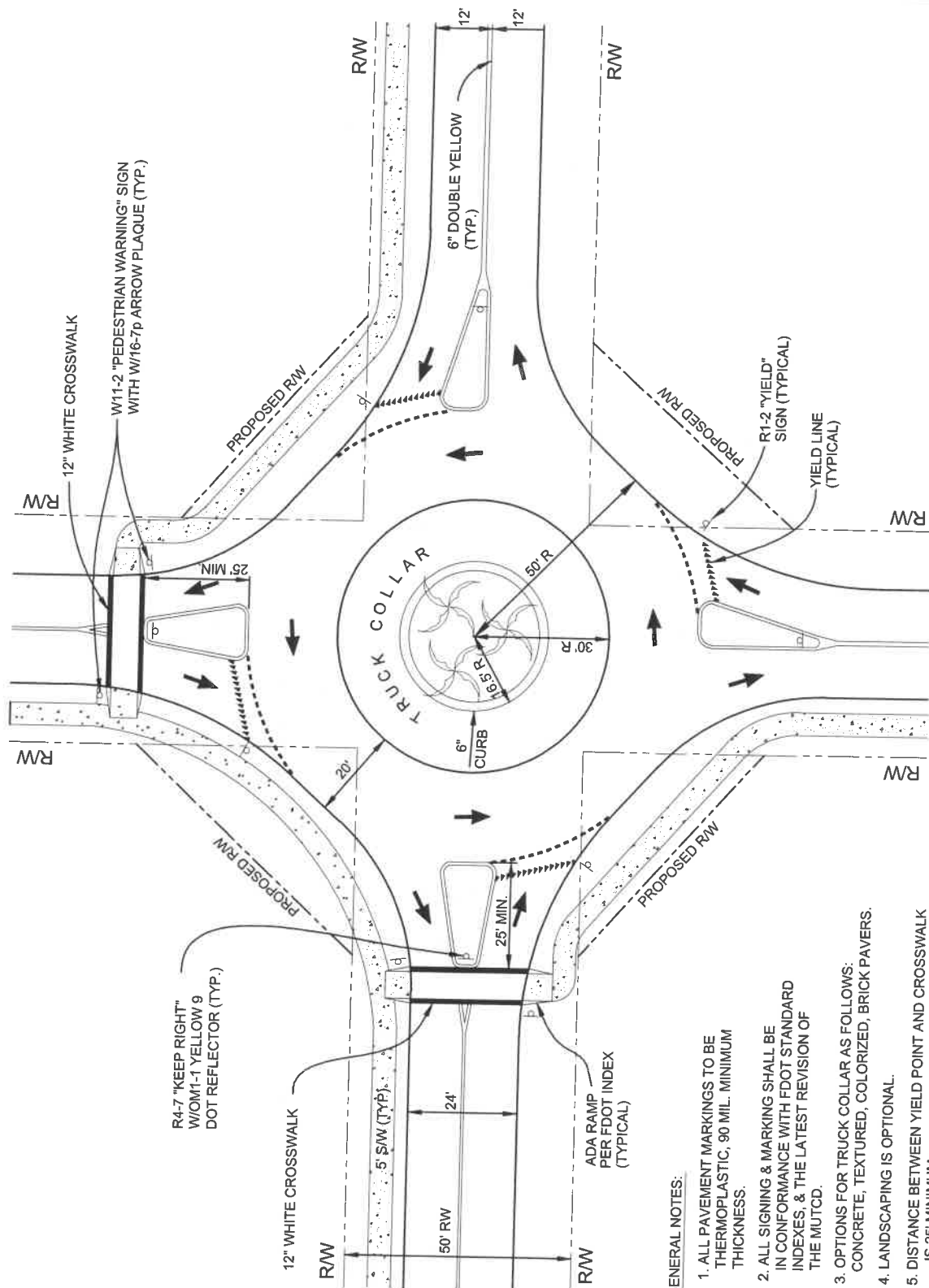
SIGNAGE AND MARKING PLAN SHALL ACCOMPANY CONSTRUCTION PLAN.

ROAD CONNECTION DETAIL

N.T.S.

(NEW CONSTRUCTION TO EXISTING FOR WIDENING OR EXTENSION)

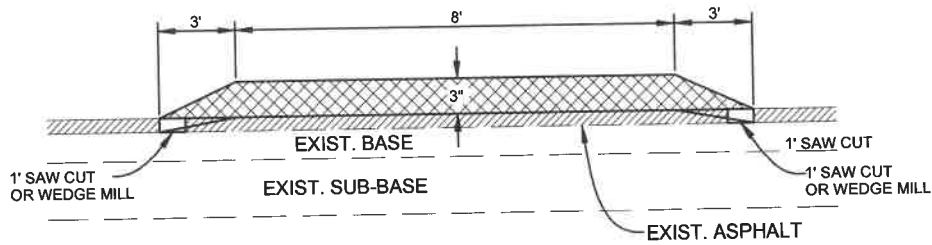
TOWN OF REDINGTON BEACH			ROAD CONNECTION DETAIL	403.3
REV.BY	DATE			
DATE OF APPROVAL				



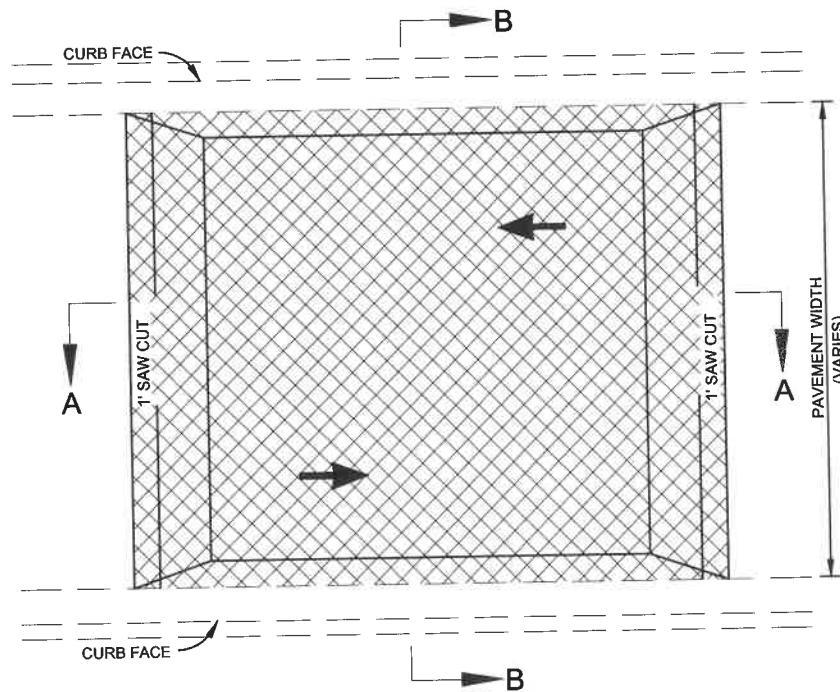
GENERAL NOTES:

1. ALL PAVEMENT MARKINGS TO BE THERMOPLASTIC, 90 MIL. MINIMUM THICKNESS.
2. ALL SIGNING & MARKING SHALL BE IN CONFORMANCE WITH FDOT STANDARD INDEXES, & THE LATEST REVISION OF THE MUTCD.
3. OPTIONS FOR TRUCK COLLAR AS FOLLOWS:
CONCRETE, TEXTURED, COLORIZED, BRICK PAVERS.
4. LANDSCAPING IS OPTIONAL.
5. DISTANCE BETWEEN YIELD POINT AND CROSSWALK IS 25' MINIMUM.

TOWN OF REDINGTON BEACH			TYP. ROUNDABOUT FOR LOCAL & RESIDENTIAL STREETS	404.0
REV.BY	DATE	DATE OF APPROVAL		

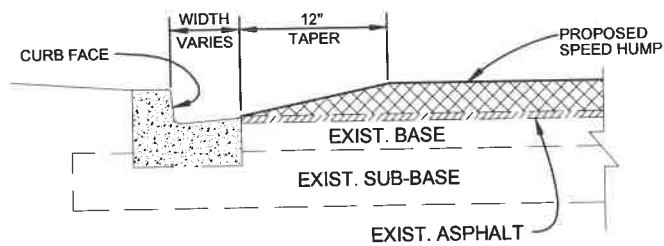


SECTION A-A

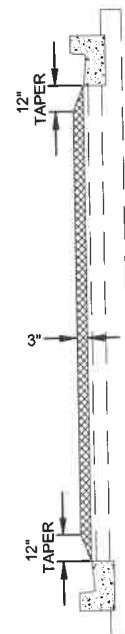


PLAN VIEW

NOTE: ALL PAVEMENT MARKINGS PER MUTCD.
DETAIL IS FOR APPLICATION TO EXISTING ROAD.



SPEED HUMP TAPER AT CURB



SECTION B-B

TOWN OF REDINGTON BEACH

REV.BY DATE

DATE OF APPROVAL

**SPEED TABLE
DETAIL**

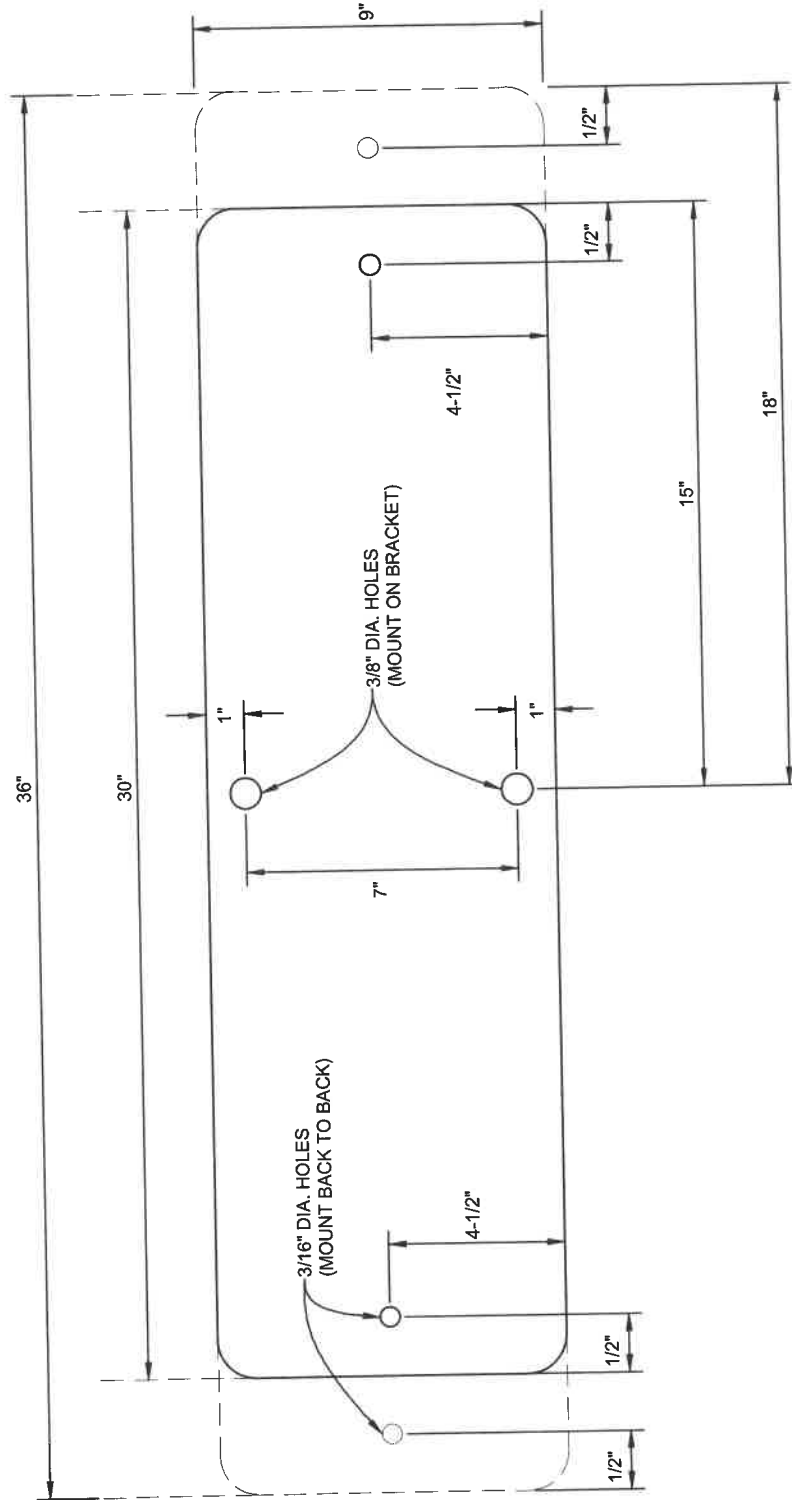
405.0

INDEX

	<u>SHEET NO.</u>
500 TRAFFIC SIGNAL SUPPLEMENTAL SPECIFICATIONS	500.0
1) INDEX SHEET	500.1
2) RESERVED	500.2
3) RESERVED	501.0
4) RESERVED	502.0-502.4
5) RESERVED	503.0
6) RESERVED	504.0-504.2
7) RESERVED	505.0
8) RESERVED	506.0
9) RESERVED	507.0
10) RESERVED	508.0
11) RESERVED	509.0-514.0
12) RESERVED	515.0
13) RESERVED	516.0
14) RESERVED	517.0
15) RESERVED	518.0-521.0
16) RESERVED	522.1-522.6
17) RESERVED	523.0-523.6
18) RESERVED	551.0
19) RESERVED	552.0
20) STREET NAME SIGNING (GROUND MOUNTED) HARDWARE/MATERIALS SPECIFICATIONS	553.0-3
21) RESERVED	554.0
22) RESERVED	555.0
23) RESERVED	556.0
24) RESERVED	557.0
25) RESERVED	557.1

TOWN OF REDINGTON BEACH		TRAFFIC SUPPLEMENTAL SPECIFICATIONS	500.1
REV.BY	DATE		
DATE OF APPROVAL _____			

FIGURE 553-A



ALUMINUM STREET NAME SIGN BLANK

TOWN OF REDINGTON BEACH

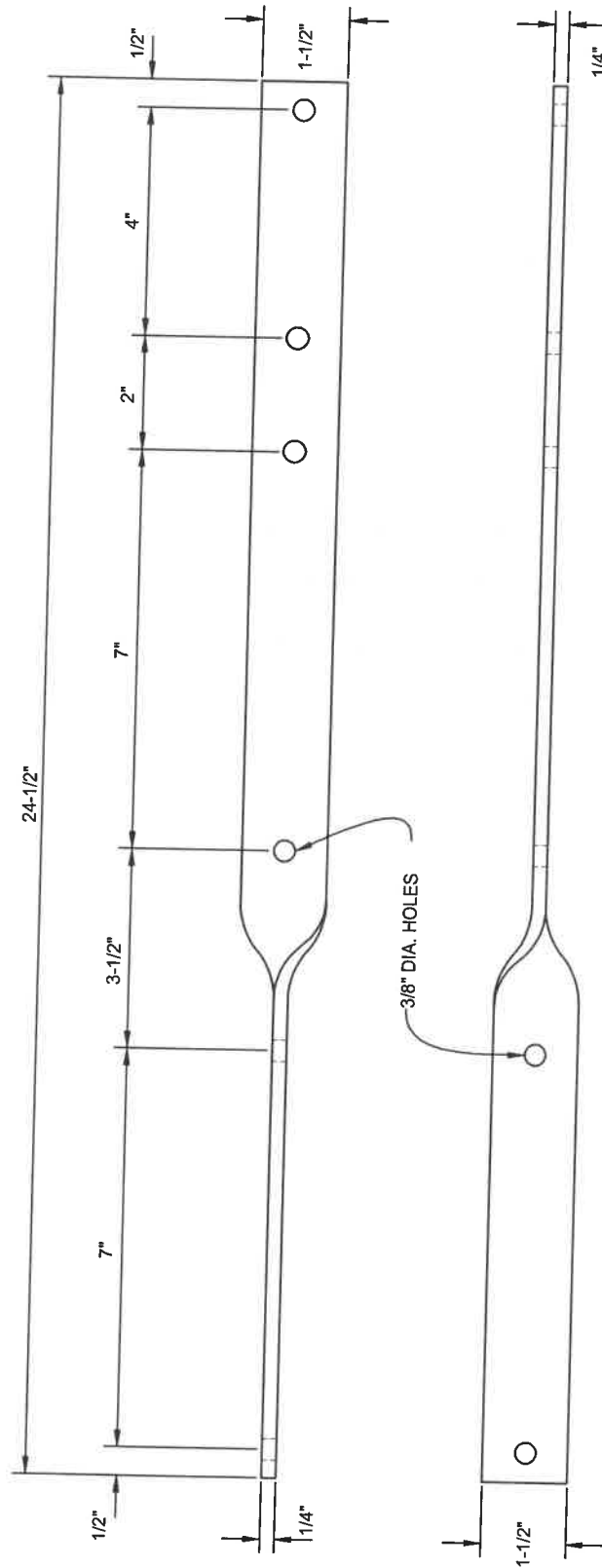
REV. BY	DATE

DATE OF APPROVAL _____

**STREET NAME SIGNS
(GROUND MOUNTED)
HARDWARE/MATERIAL
SPECIFICATIONS**

553.2

FIGURE 553-B



GALVANIZED STEEL STREET NAME SIGN BRACKET

TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL

**STREET NAME SIGNS
(GROUND MOUNTED)
HARDWARE/MATERIAL
SPECIFICATIONS**

553.3

LOT DRAINAGE INDEX

SHEET NO.

700 LOT DRAINAGE SPECIFICATIONS	700.0
1) GENERAL NOTES	700.1
2) LOT DRAINAGE PATTERN EXAMPLE FOR SITE	700.2
3) SILT FENCE DETAIL	700.3
4) RESERVED	700.4
5) LOT GRADING RECORD DRAWING/AS-BUILT CERTIFICATION	700.5
6) TYPICAL INFILTRATION TRENCH (NTS)	700.6
7) HEAVY DUTY INFILTRATION TRENCH (NTS)	700.7
8) TYPICAL SWALE DETAIL	700.8

TOWN OF REDINGTON BEACH

REV.BY DATE

DATE OF APPROVAL

LOT DRAINAGE
INDEX

700.0

GENERAL NOTES:

- 1.) FOR CLOSED DRAINAGE, SHOW CURBS, GUTTERS AND SIDEWALKS, IF APPLICABLE.
- 2.) EXISTING DRAINAGE SHALL BE MAINTAINED OR IMPROVED.
- 3.) MINIMUM DRIVEWAY RISE FROM CURB TO GARAGE IS 1%.
- 4.) SHOW ALL EASEMENTS.
- 5.) MINIMUM GRADE SLOPES ARE AS FOLLOWS: FRONT YARD - 2.0%; REAR AND SIDE YARDS - 1.5%; SWALES - 1.0%.
- 6.) MINOR MODIFICATIONS TO ACCOMMODATE SPECIAL CONDITIONS SUCH AS TREES MAY BE APPROVED BY THE ACCESS/DRAINAGE INSPECTOR.
- 7.) LOTS WITH SPECIAL CONDITIONS MAY HAVE SLOPES BASED ON AN ENGINEER'S DETAILED DESIGN APPROVED BY THE TRANSPORTATION DIRECTOR OR A DESIGNEE.
- 8.) DEVIATIONS DUE TO EXISTING TREES, VEGETATION OR OTHER EXTENUATING CIRCUMSTANCES MAY BE APPROVED. DIFFICULTIES ARISING FROM SUCH DEVIATIONS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER TO SATISFACTORILY RESOLVE.
- 9.) LOT SLOPES APPLY TO A 75' RADIUS FROM THE EDGE OF HOUSE. THE INTENT IS TO ALLOW FLEXABILITY ON LARGER LOTS.
- 10.) ALL CONFLICTS SHALL BE REMEDIED TO THE SATISFACTION OF THE PUBLIC WORKS DEPARTMENT.
- 11.) PERMITTEE SHALL SUBMIT A COPY OF THE APPROVED SUBDIVISION DRAINAGE PLAN. SIZE REQUIREMENTS ARE 8-1/2"x11", 8-1/2"x14" OR 11"x17" AT A SCALE OF 1"=100' OR 1"=200' FOR LOTS OF 5 ACRES OR MORE.

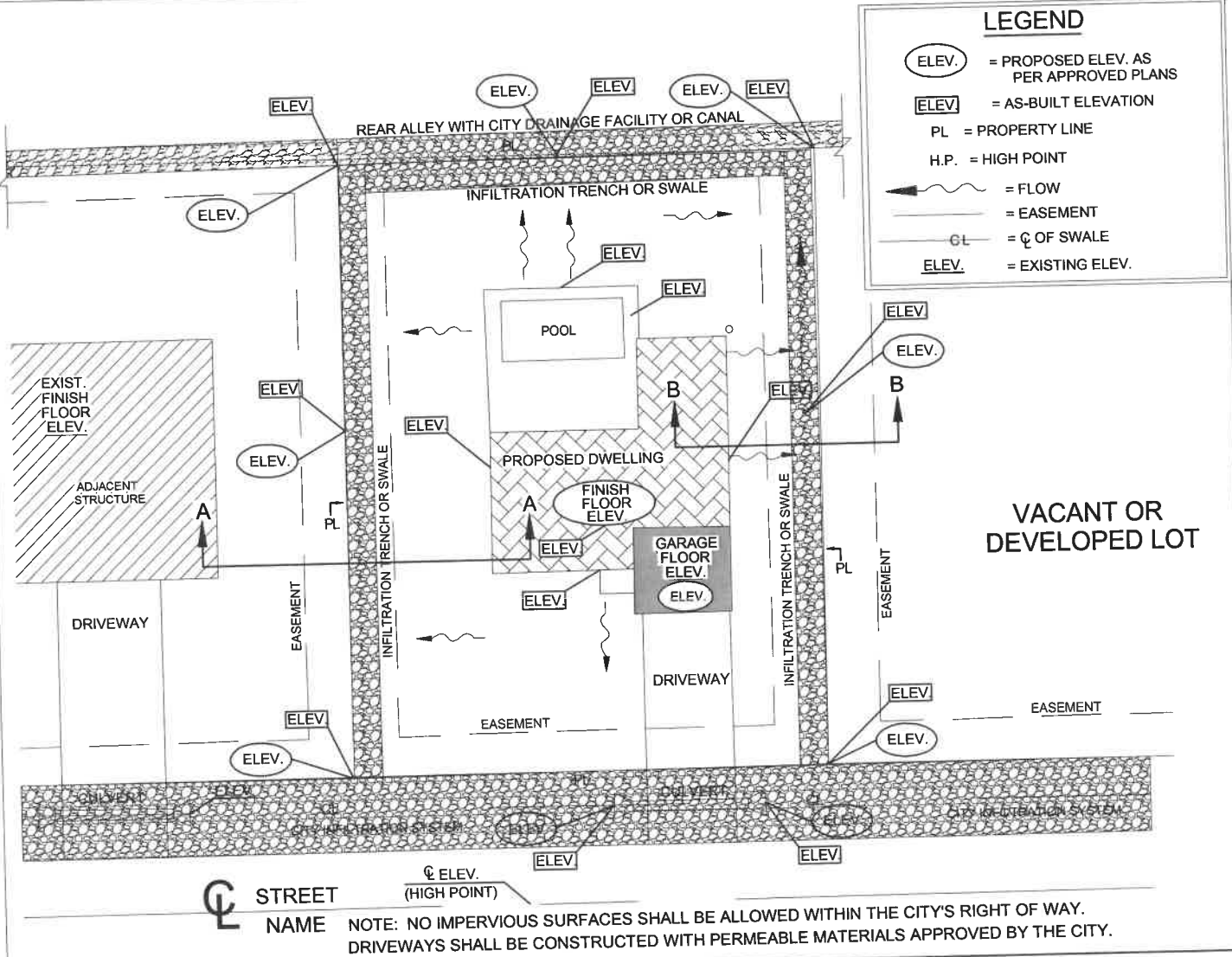
TOWN OF REDINGTON BEACH

REV.BY	DATE

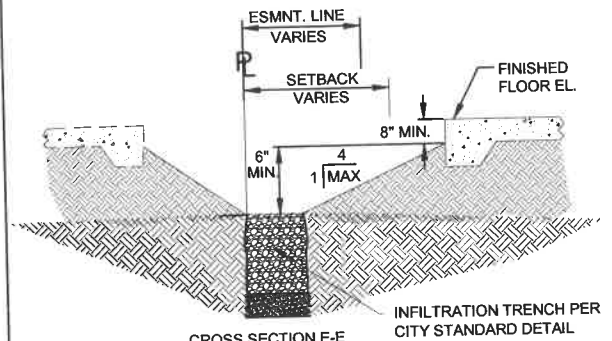
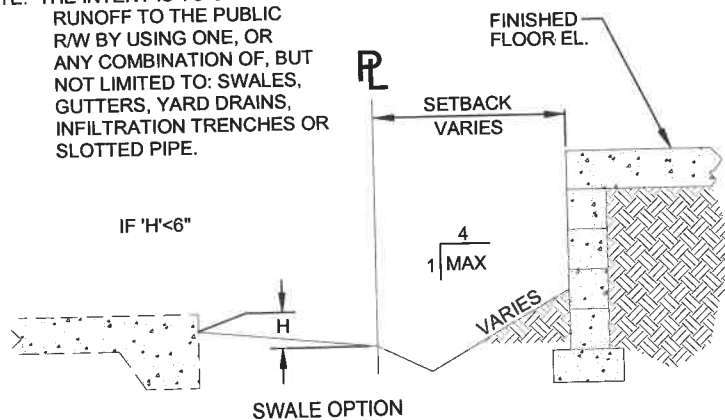
DATE OF APPROVAL _____

**LOT DRAINAGE
GENERAL NOTES**

700.1



NOTE: THE INTENT IS TO CONVEY RUNOFF TO THE PUBLIC R/W BY USING ONE, OR ANY COMBINATION OF, BUT NOT LIMITED TO: SWALES, GUTTERS, INFILTRATION TRENCHES OR SLOTTED PIPE.



INFILTRATION TRENCH OPTION

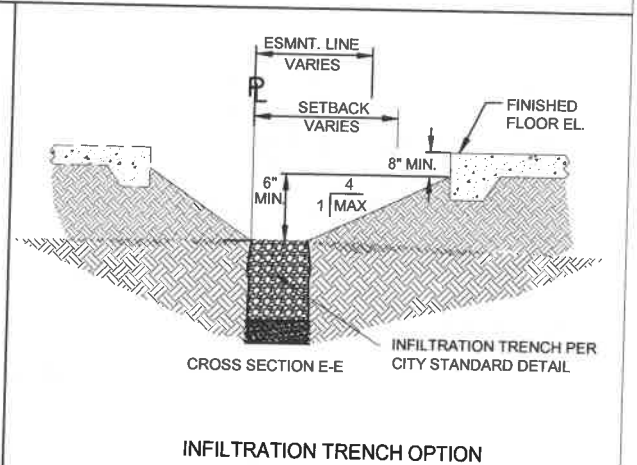
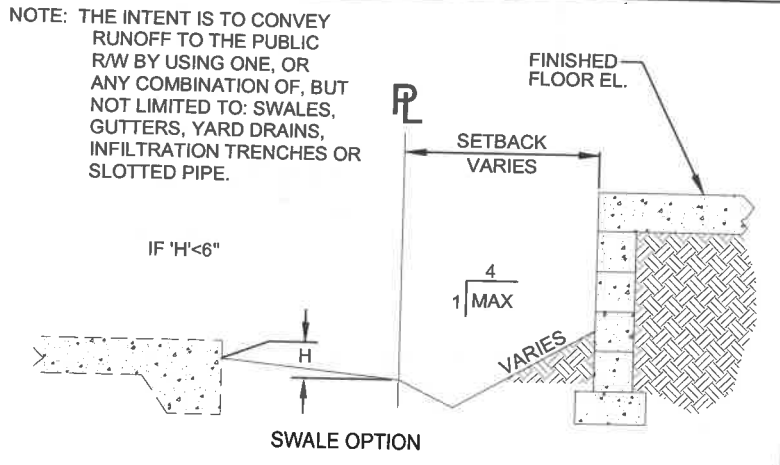
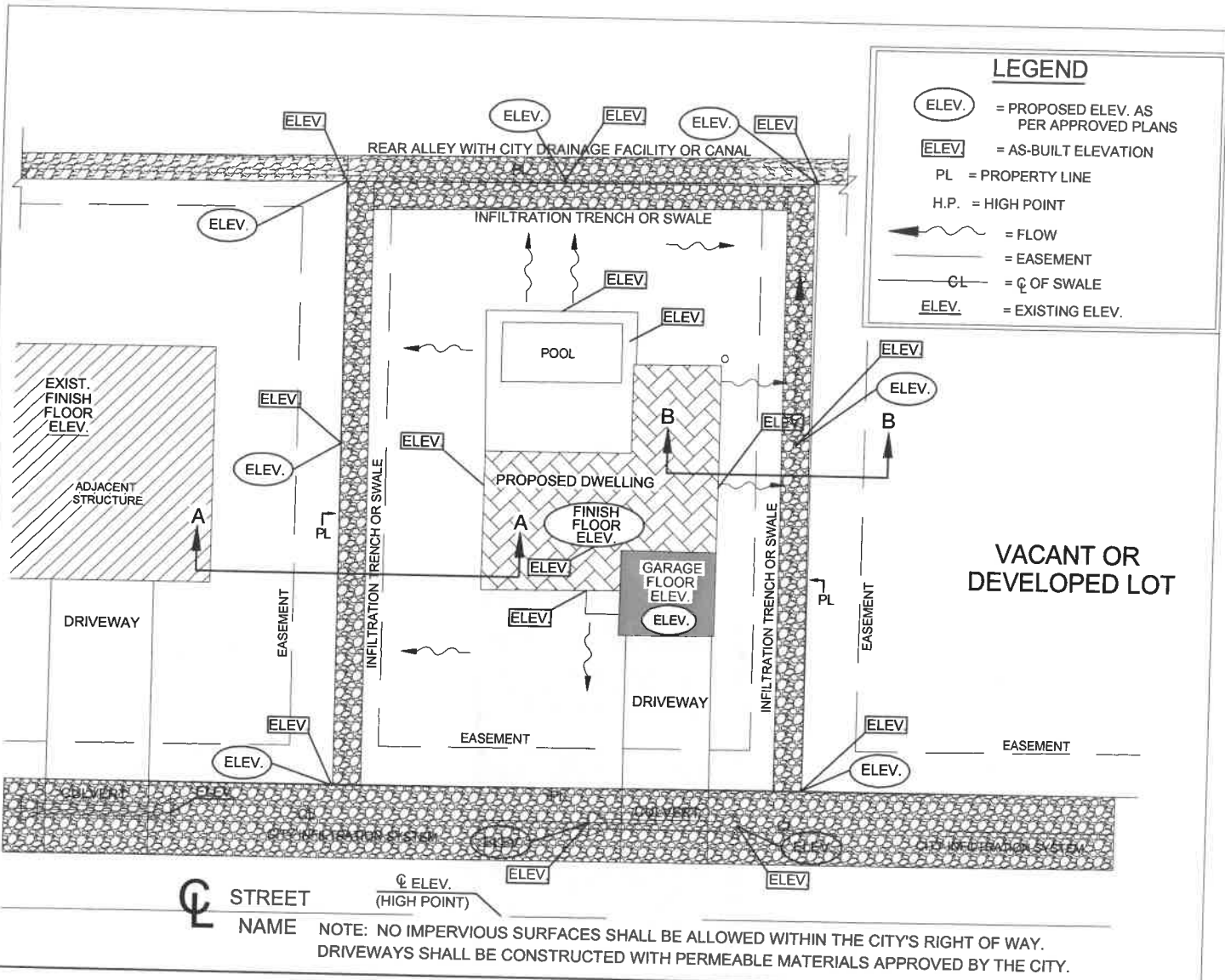
TOWN OF REDINGTON BEACH

LOT DRAINAGE PATTERN
EXAMPLE FOR SITE

700.2

REV. BY DATE

DATE OF APPROVAL

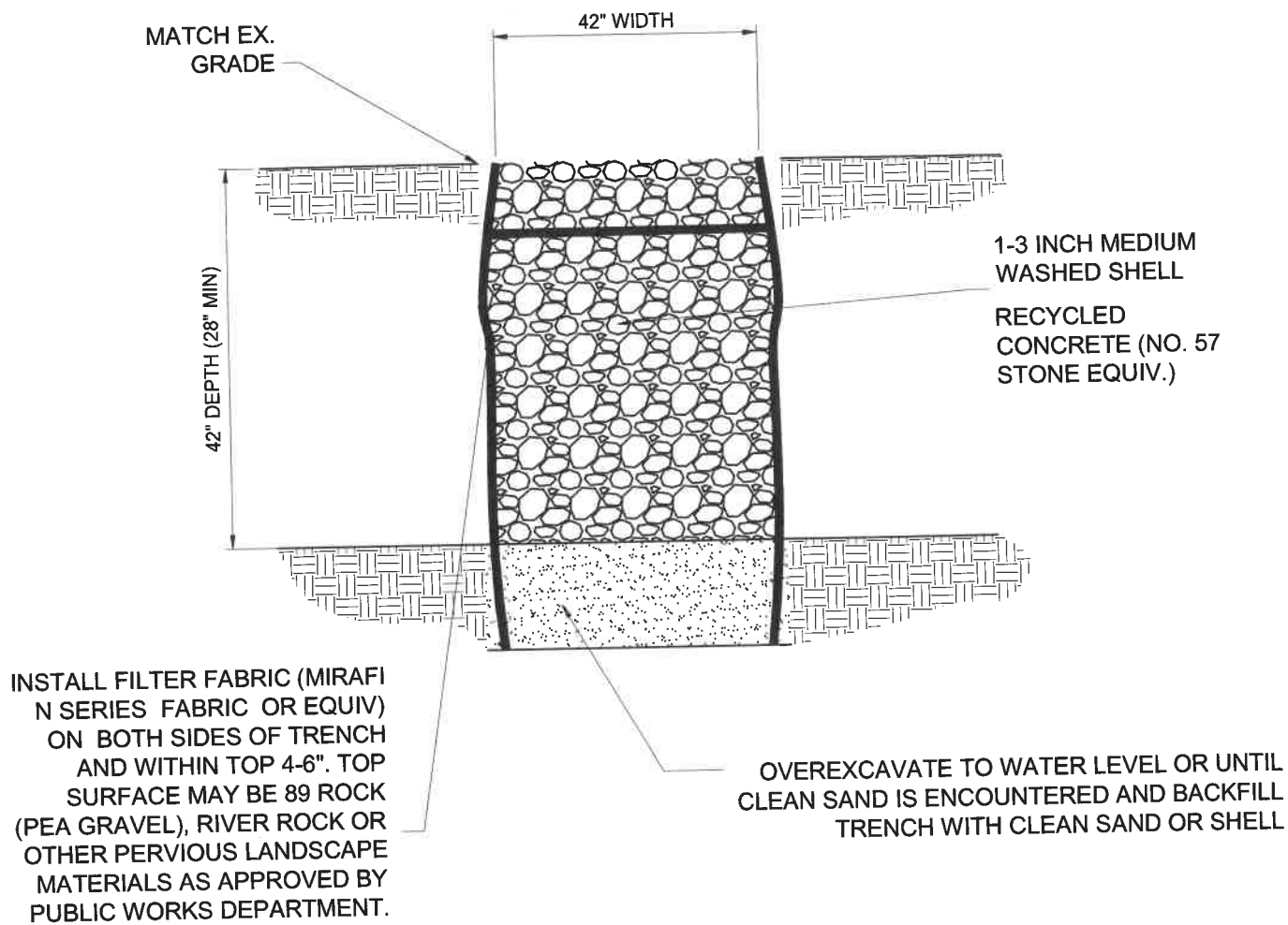


TOWN OF REDINGTON BEACH

REV. BY	DATE
DATE OF APPROVAL	

**LOT GRADING RECORD
DRAWING/AS-BUILT
CERTIFICATION**

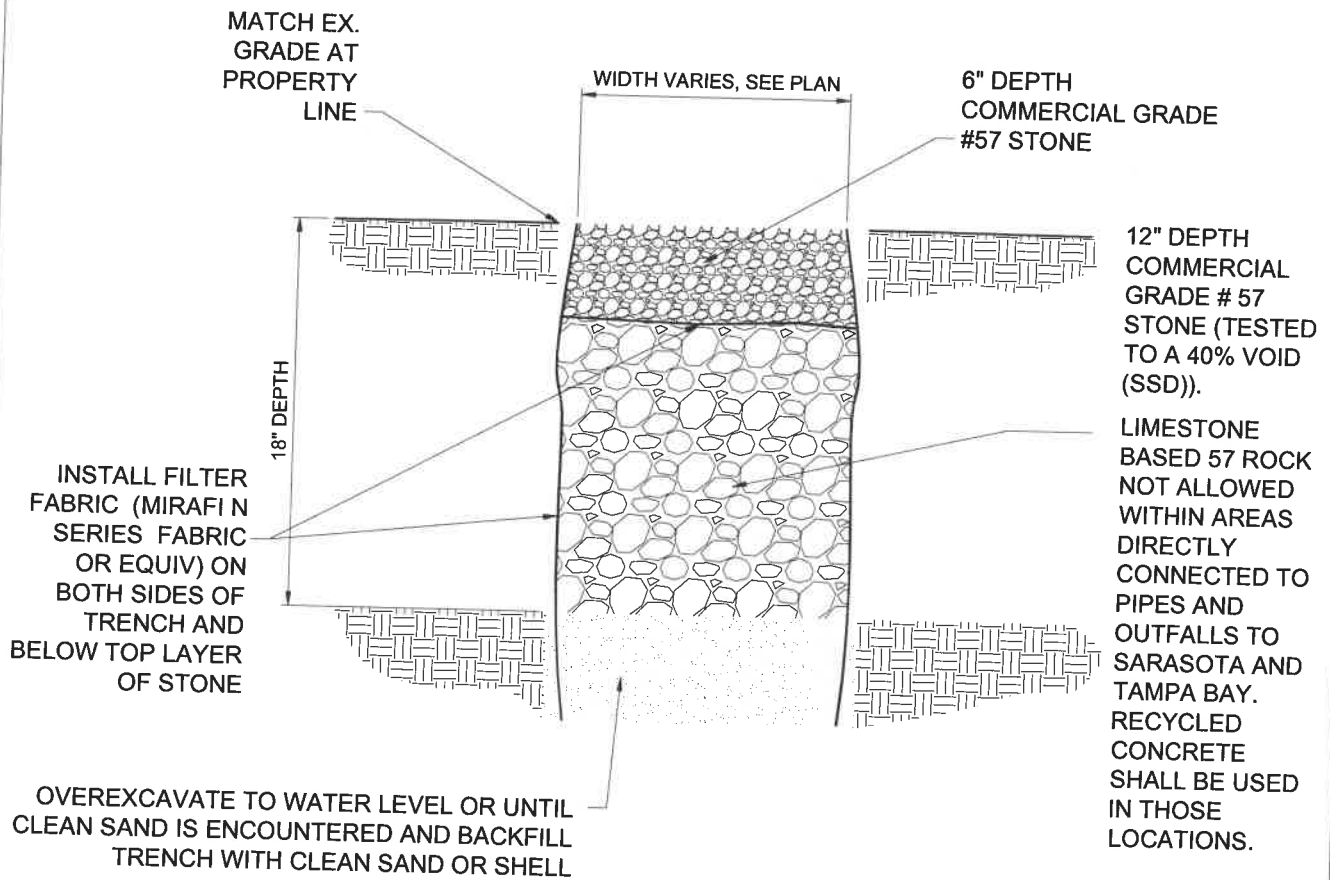
700.5



TYPICAL INFILTRATION TRENCH

NTS

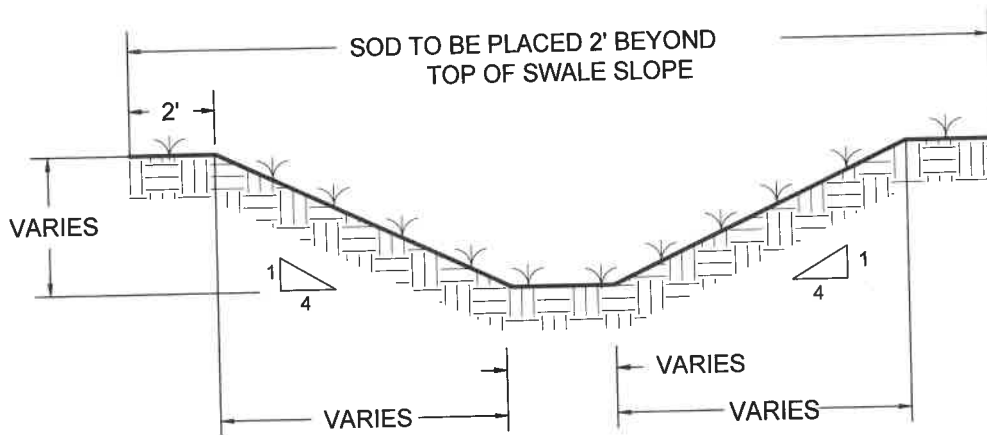
TOWN OF REDINGTON BEACH			TYPICAL INFILTRATION TRENCH	700.6
REV.BY	DATE			
		DATE OF APPROVAL		



HEAVY DUTY INFILTRATION TRENCH

NTS

TOWN OF REDINGTON BEACH			HEAVY DUTY INFILTRATION TRENCH	700.7
REV. BY	DATE			
		DATE OF APPROVAL		



TYPICAL SWALE SECTION

N.T.S.

TOWN OF REDINGTON BEACH

REV. BY	DATE

DATE OF APPROVAL

TYPICAL
SWALE DETAIL

700.8

STANDARD DETAILS FROM



PINELLAS COUNTY

STORMWATER MANUAL

FEBRUARY 1, 2017



6.2.2. Required Level of Treatment and Associated Treatment Volume

The Required Treatment Volume (RTV) necessary to achieve the required treatment efficiency shall be routed to the exfiltration trench and percolated into the ground. The required nutrient load reduction is set forth in the performance standards in **Section 5.1.1.** of this Manual.

Treatment volumes to achieve the necessary efficiencies shall be determined based on the percentage of directly connected impervious area (DCIA) and the weighted curve number for non-DCIA areas as set forth in Table 6.1.1 and Table 6.1.2.

Exfiltration trenches must be designed to have the capacity to retain the required treatment volume without discharging to surface waters.

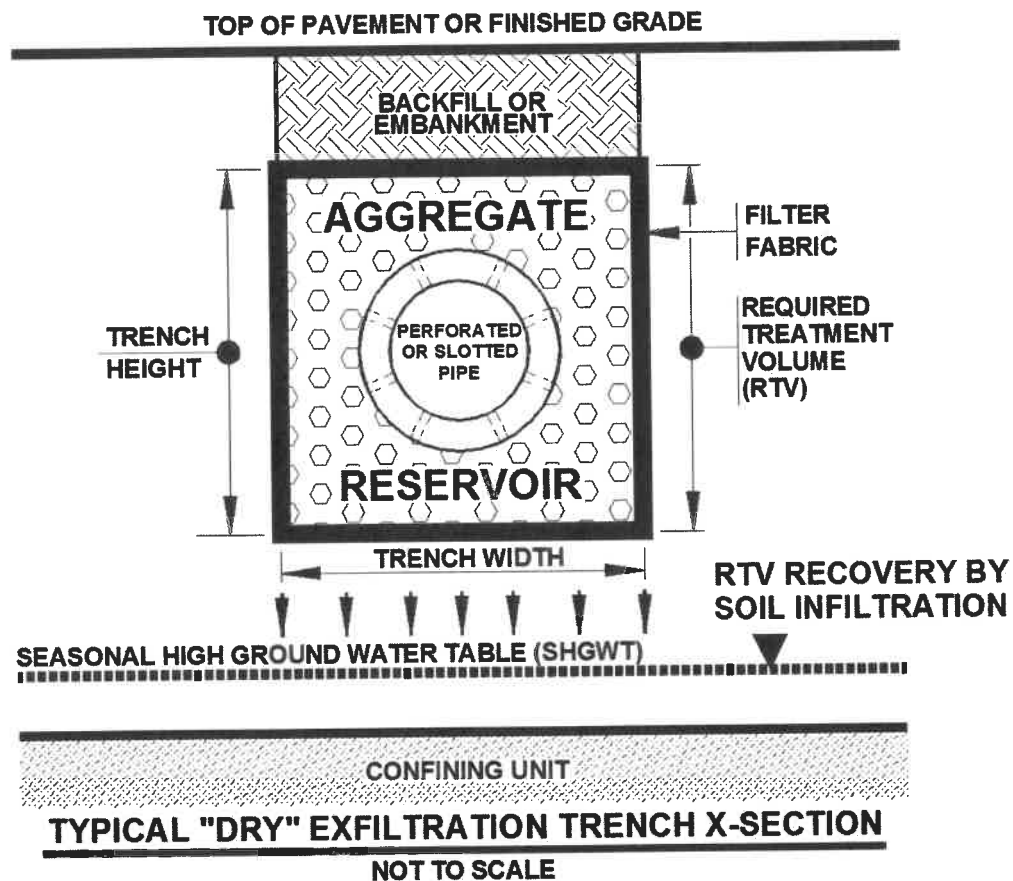


Figure 6.2.1 Cross-section of a "DRY" Exfiltration Trench (N.T.S.)



1. SEE THE SEPARATE DETAIL SKETCHES FOR SEDIMENT / TRASH BAFFLES & TEES, OR OTHER EQUIVALENT DEVICES.
2. PERFORATED OR SLOTTED PIPES SHALL TERMINATE A MINIMUM OF TWO (2) FEET FROM THE END OF THE EXFILTRATION TRENCH, OR CONNECT TO ADDITIONAL INLETS OR MANHOLES.
3. PIPE "DEAD ENDS" (IF UTILIZED) SHALL TERMINATE INTO A SOLID PLUG OR END CAP.
4. SIDES, TOP, BOTTOM, AND ENDS OF TRENCH (AND AGGREGATE BELOW DRAIN HOLE) SHALL BE LINED WITH A PERVIOUS WOVEN OR NON-WOVEN ENGINEERING FILTER FABRIC. OVERLAP FABRIC LINING MATERIAL A MINIMUM OF TWELVE (12) INCHES AT THE TOP OF THE AGGREGATE.
5. REFER TO FDOT INDEX #285 FOR ADDITIONAL INFORMATION ON THE MINIMUM LENGTHS OF SOLID PIPE EXITING THE ACCESS MANHOLE OR DRAINAGE INLET, AND THE MINIMUM CROSS SECTIONAL DIMENSIONS OF THE AGGREGATE RESERVOIR.

NOT TO SCALE

Figure 6.2.3. Typical Exfiltration Trench Sumps and Dead End Details

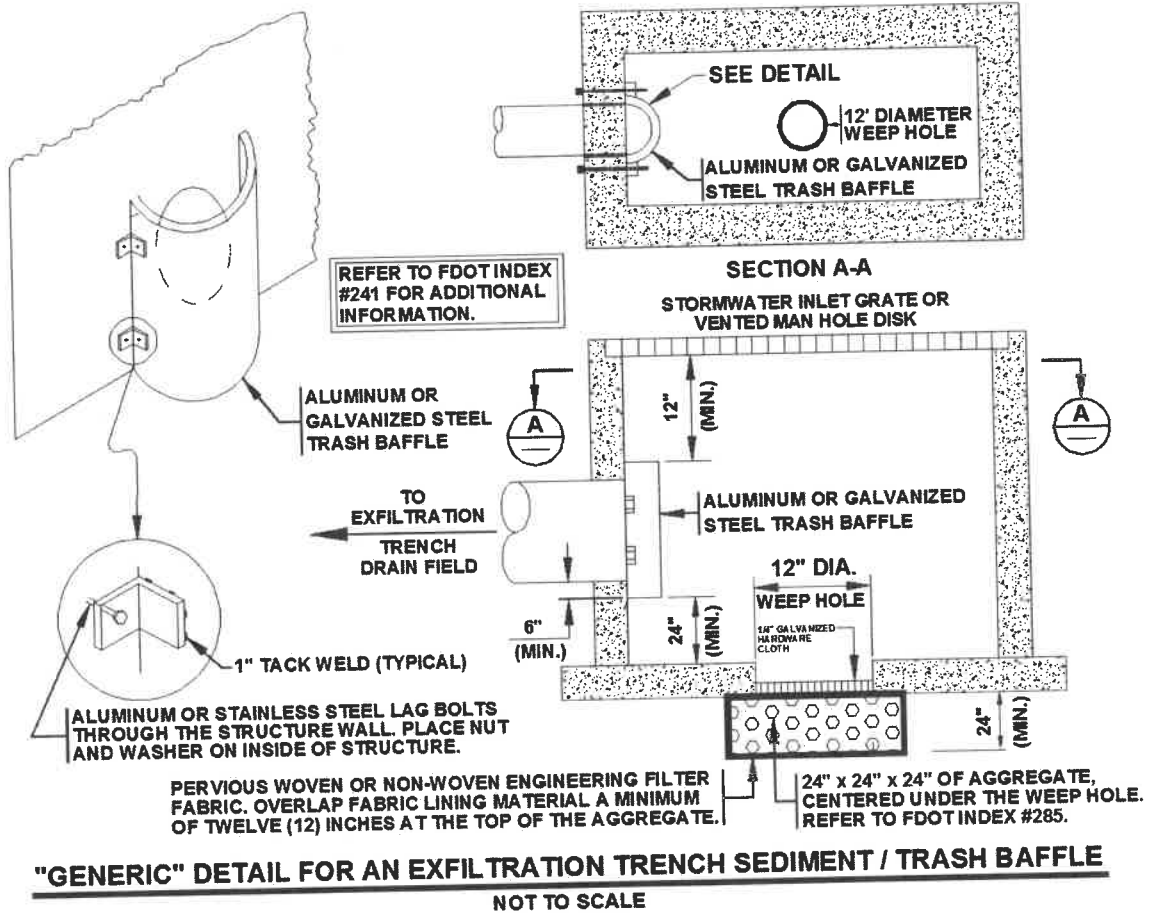


Figure 6.2.4. Detail for Exfiltration Trench Trash Baffle

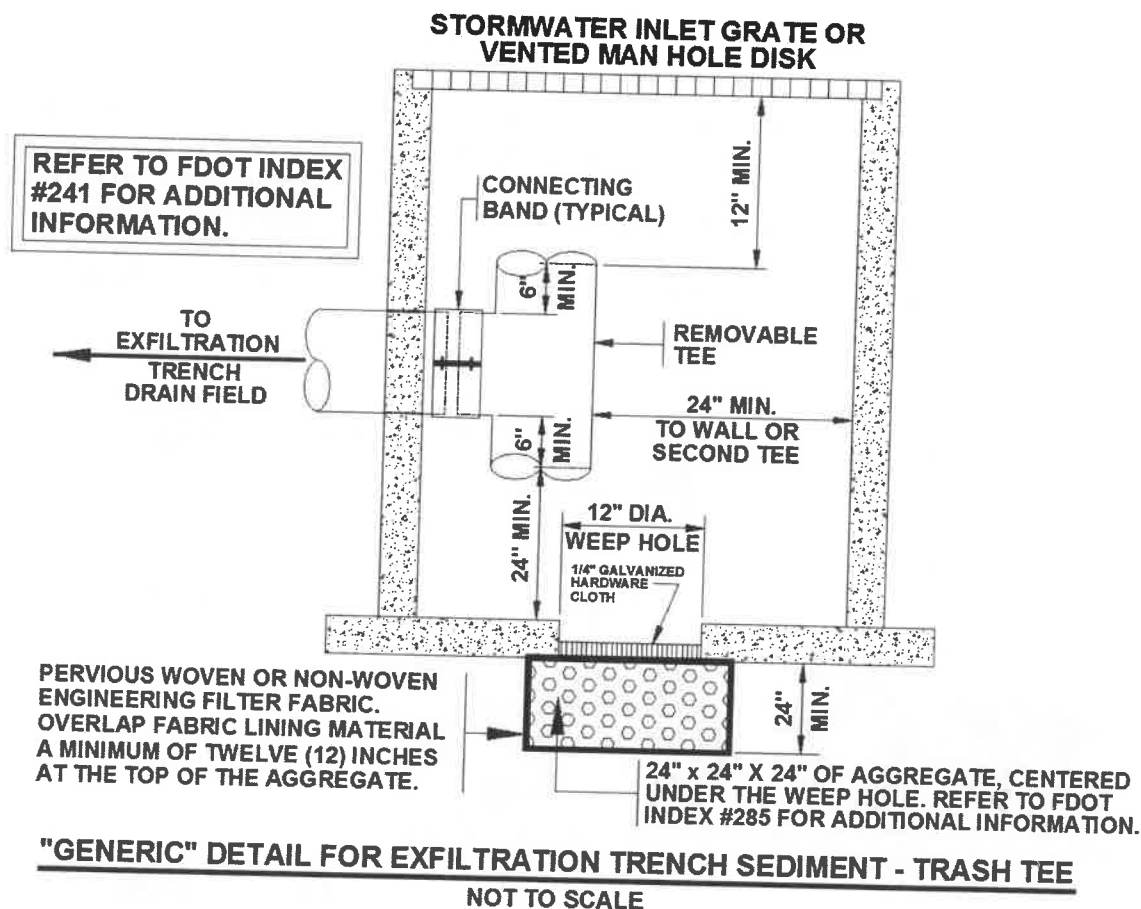


Figure 6.2.5. Generic Detail for a Typical Exfiltration Trench Trash Tee

6.2.6. Construction requirements

During construction, every effort should be made to limit the parent soil and debris from entering the trench. Any method used to reduce the amount of fines entering the exfiltration trench during construction will extend the life of the system.

- (a) The location and dimensions of the exfiltration trench shall be verified onsite prior to trench construction. All design requirements including trench dimensions and distances to foundations, septic systems, wells, etc., need to be verified.
- (b) To minimize sealing of the soil surface, the trench shall be excavated with a backhoe rather than front-end loaders or bulldozers whose blades will seal the infiltration soil surface.
- (c) Excavated materials shall be placed a sufficient distance from the sides of the excavated area to minimize the risk of sidewall cave-ins and prevent the material from re-entering the trench.
- (d) The trench bottom and side walls shall be inspected for materials that could puncture or tear the filter fabric, such as tree roots, and assure they are not present.

6.3. Underground Storage and Retention Systems design criteria

6.3.1. Description

Underground storage and retention systems are special types of retention systems that capture the Required Treatment Volume (RTV) in an underground storage system and "drainfield." Generally, these systems consist of lightweight, high strength modular units with "open" bottoms to allow for soil infiltration (refer to Figure 6.3.1 below). These systems are sometimes used where land values are high, and the owner/applicant desires to minimize the potential loss of usable land with other types of retention Best Management Practices (BMPs). Underground retention systems are not intended to have human access for maintenance.

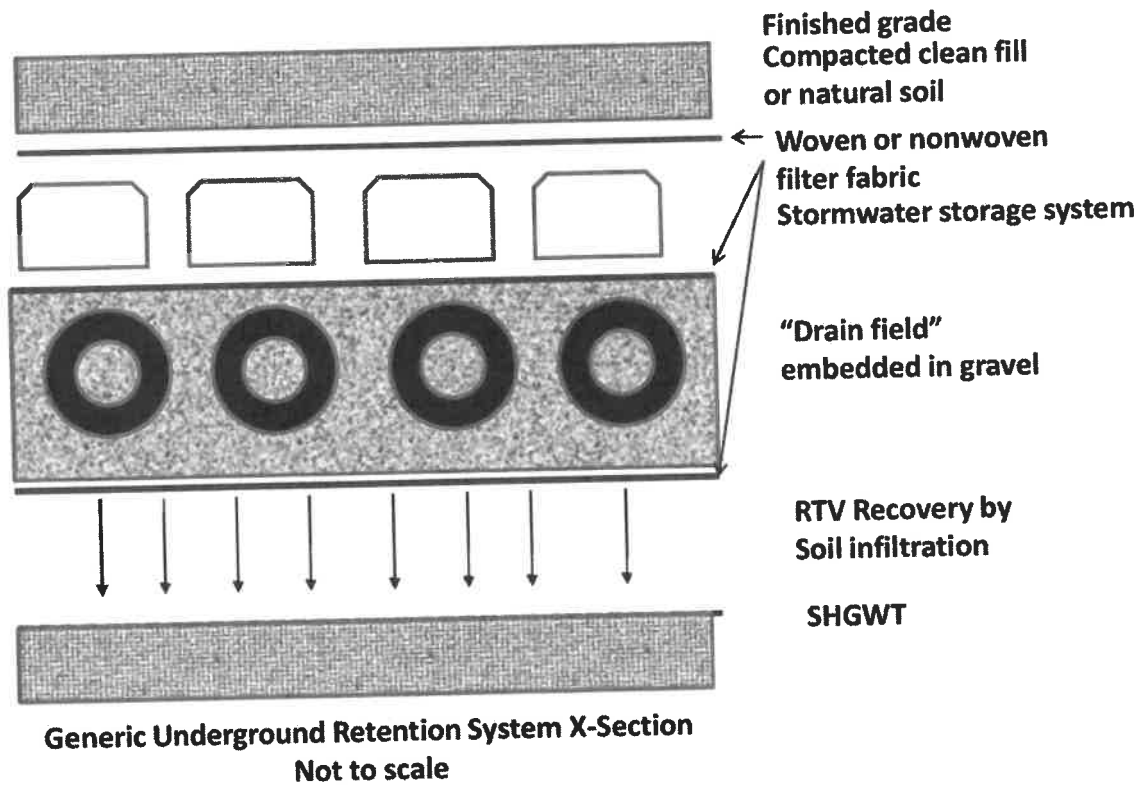


Figure 6.3.1. Generic Underground Retention System

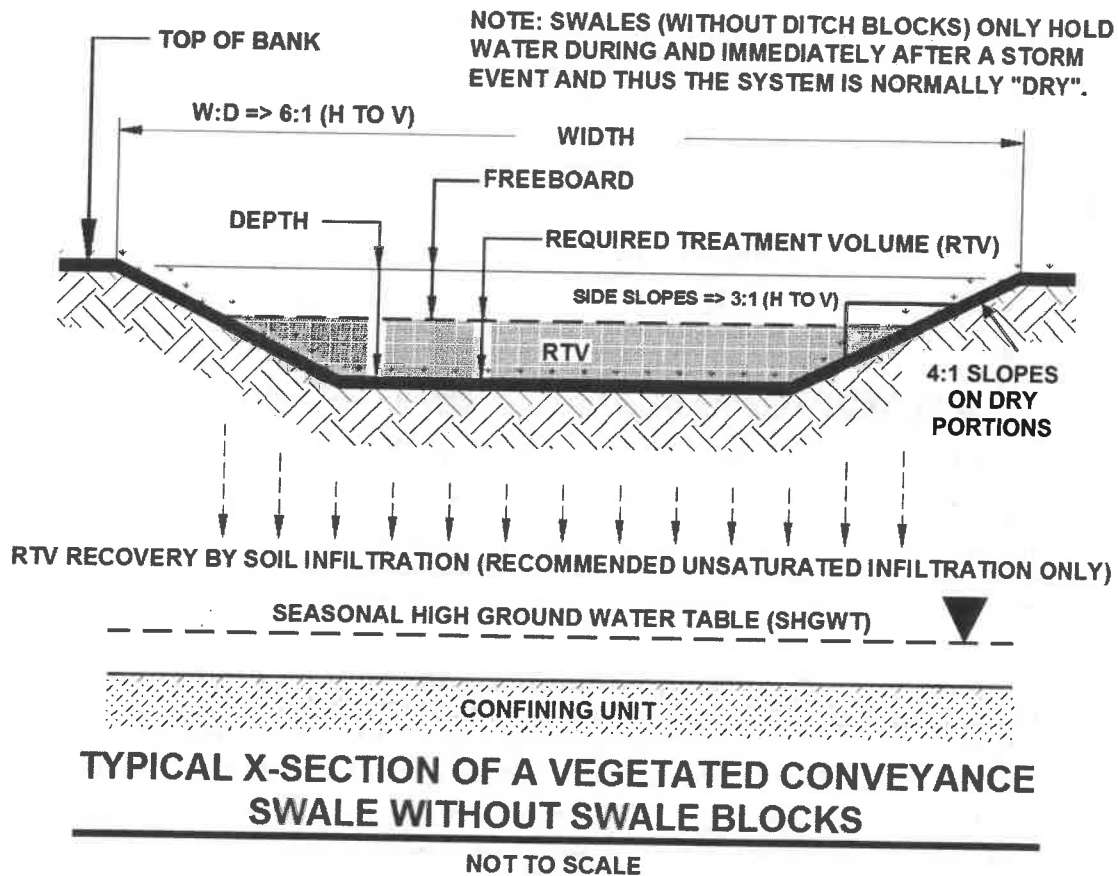


Figure 6.4.1. Typical Cross-section of a Conveyance Swale without Swale Blocks

6.4.5. Calculating the Swale Length for Swales without Blocks

The average flow rate through the swale and the length of swale needed to percolate a given volume of stormwater can be calculated using the two equations below.

Equation 6.4.1 Calculating the average flow rate:

This is calculated using the rational formula with the peak rate divided by 2 (average of triangular hydrograph).

$$Q = 0.5 CIA$$

Where:

Q = Average flow rate

C = runoff coefficient

I = rainfall intensity (inches/hour) for the time of concentration

A = area of the swale being used for infiltration

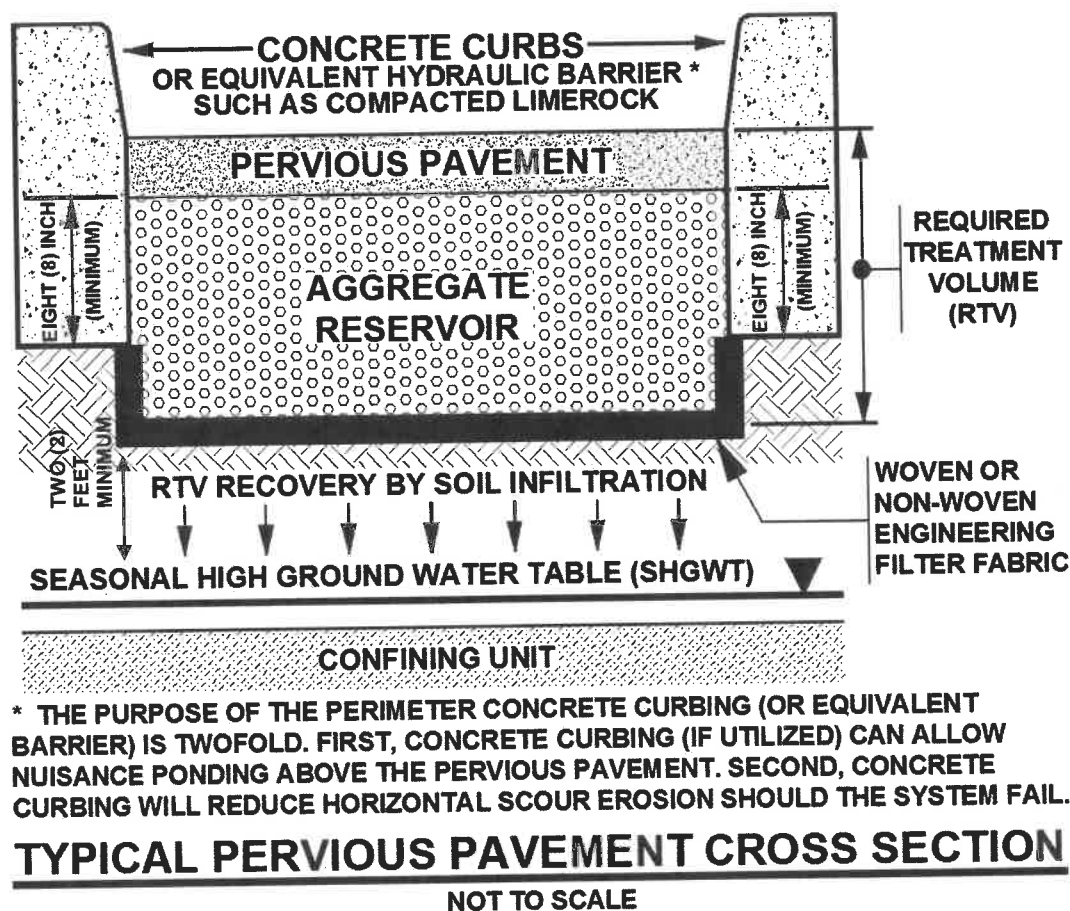


FIGURE 6.6.1. Typical Pervious Pavement Cross Section

6.6.3. Required Treatment Volume

The treatment volume necessary to achieve the required treatment efficiency shall be routed to the pervious pavement system and percolated into the ground. The required nutrient load reduction is set forth in the performance standards in **Section 5.1.1** of this Manual.

Treatment volumes to achieve the necessary efficiencies shall be determined based on the percentage of directly connected impervious area (DCIA) and the weighted curve number for non-DCIA areas as set forth in Table 6.1.1 and Table 6.1.2.

6.6.4. Calculating Load Reduction Efficiency for a Given Retention Volume

Use **Table 6.1.1** to determine the treatment volume needed to achieve an 80% pollutant load reduction

If pervious pavements are being used in a BMP treatment train to achieve part of the required pollutant load reduction use **Table 6.1.2** to determine the percent reduction associated with various treatment volumes. Also use Table 6.1.2 to determine the treatment volume associated with the required nutrient load reduction to achieve the performance standard of reducing nutrient loads by at least 10% from current discharges.

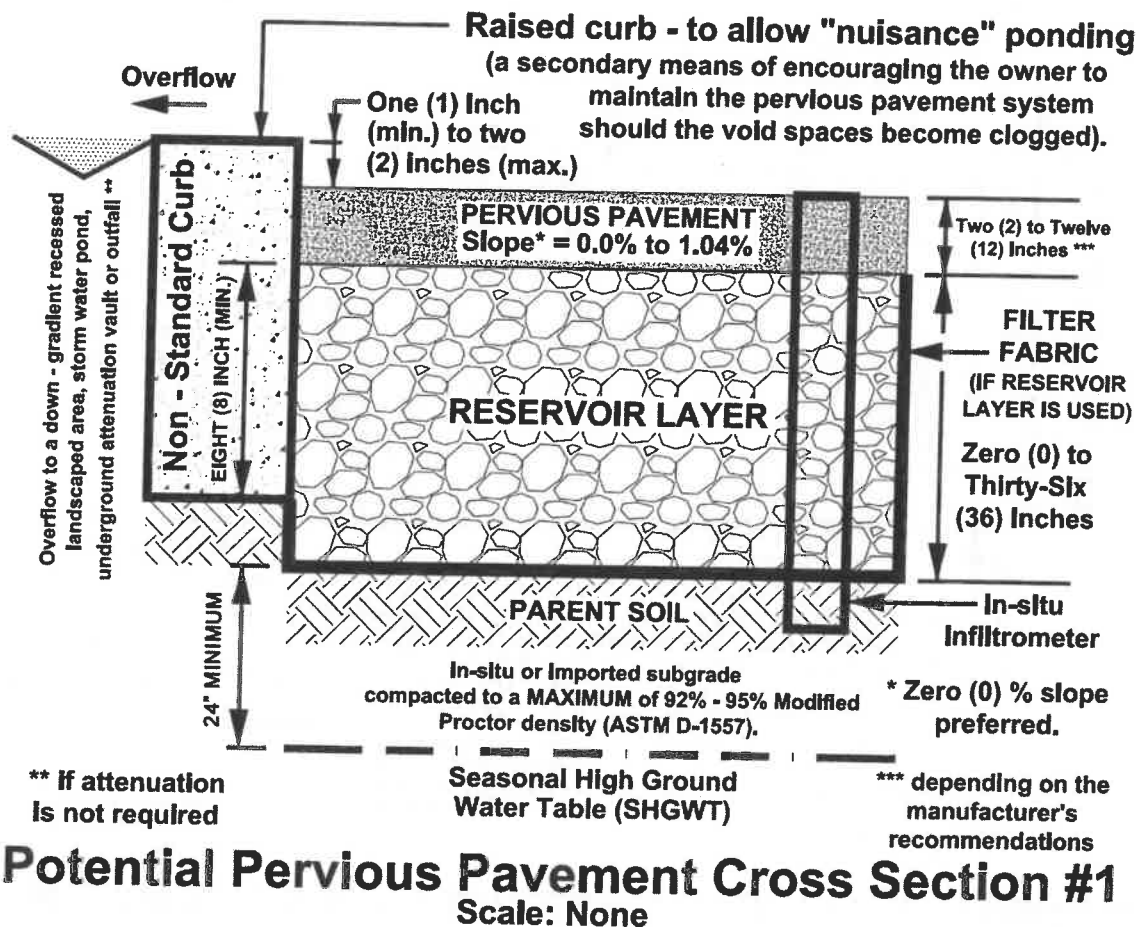
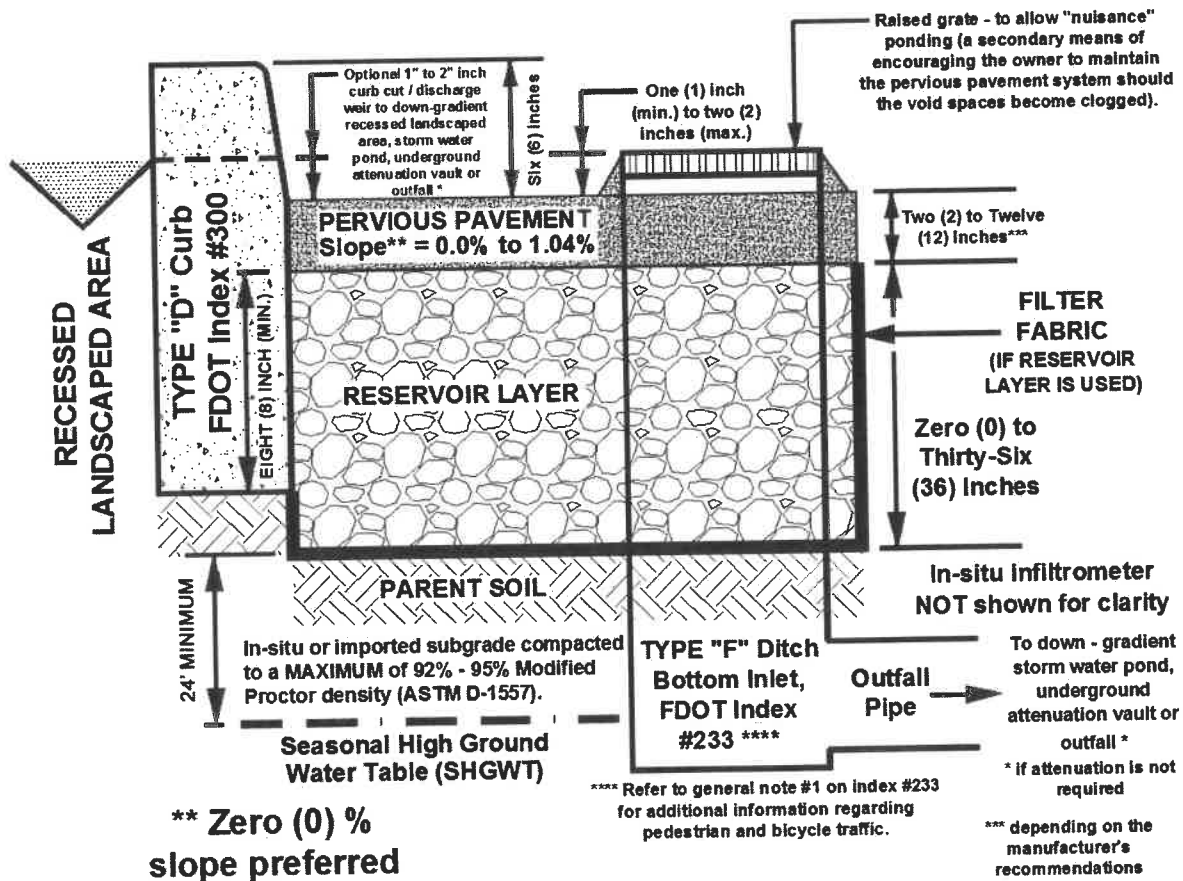


FIGURE 6.6.2. Pervious Pavement System Cross Section #1.

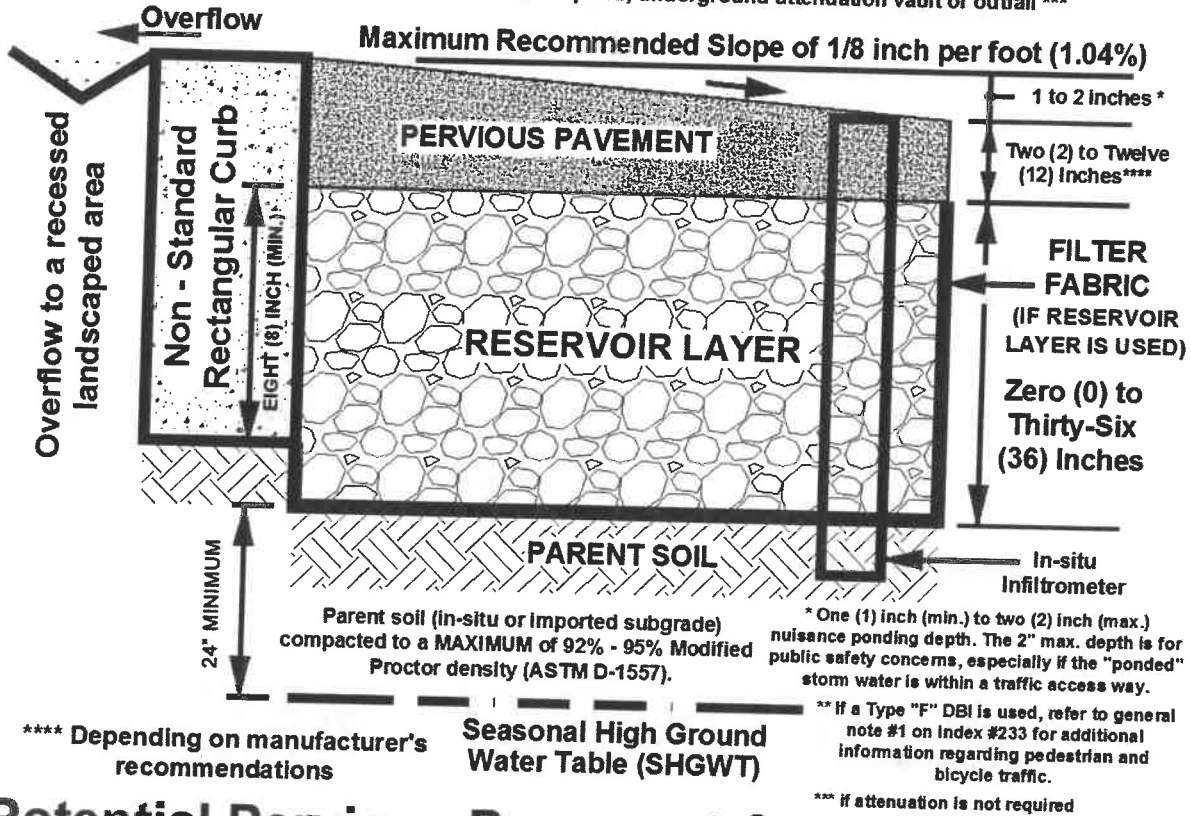


Potential Pervious Pavement Cross Section #2

Scale: None

FIGURE 6.6.3. Pervious Pavement System Cross Section #2.

Slope to center of Parking area to allow "nuisance" ponding *
As an option, a FDOT Type "F" DBI ** [with a one (1) to two (2) inch high raised grate] can be utilized to allow overflow to a down gradient storm water pond, underground attenuation vault or outfall ***



Potential Pervious Pavement Cross Section #3

Scale: None

FIGURE 6.6.4. Typical Pervious Pavement System Cross Section #3.

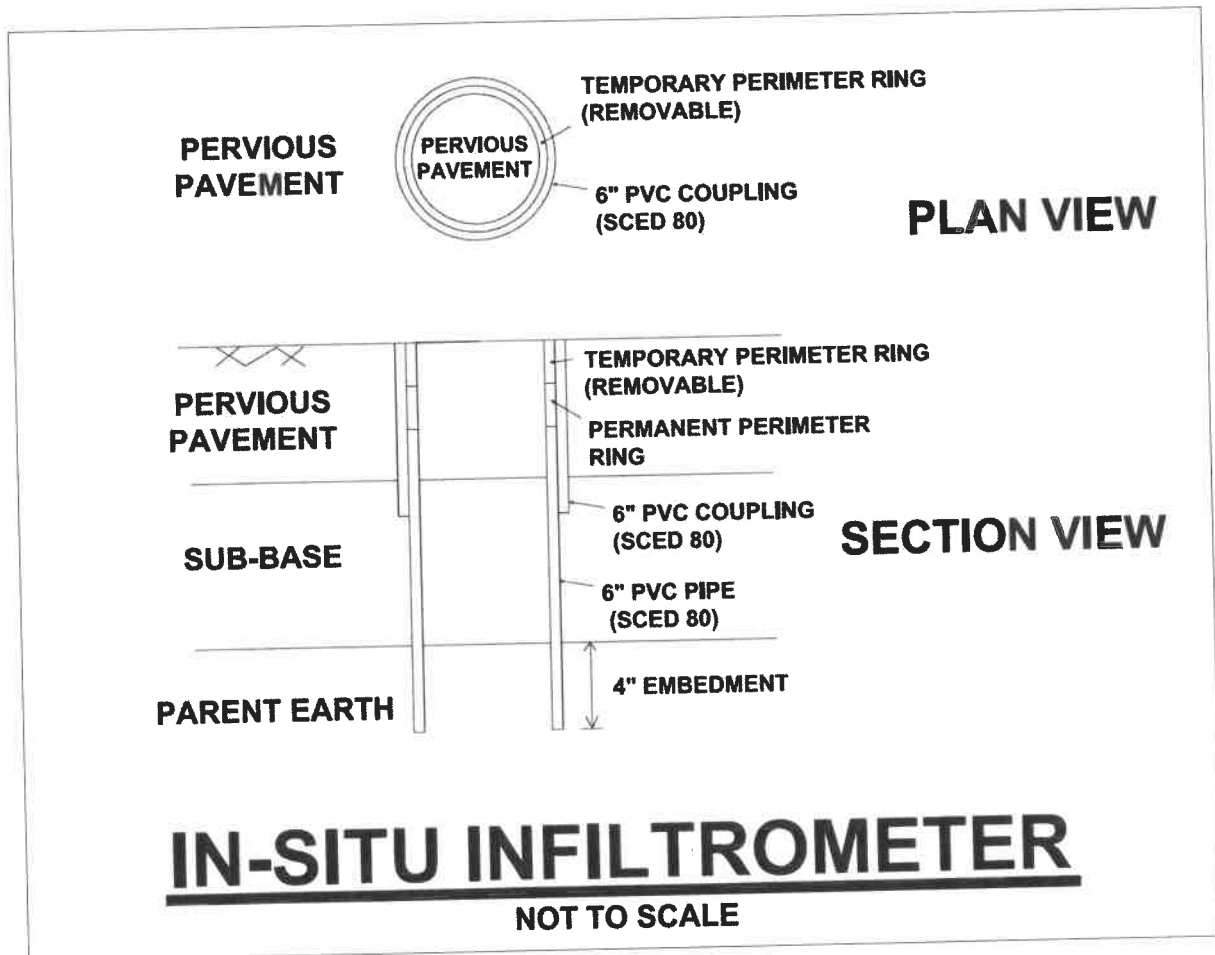
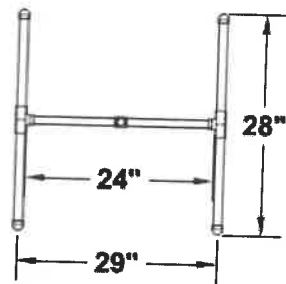
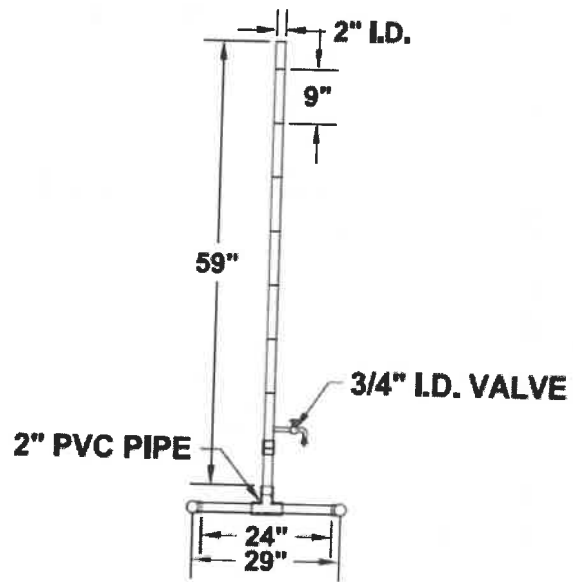


Figure 6.6.5. Plan View of ERIK In-Situ Infiltrrometer - (Embedded Ring Infiltration Kit).



PLAN VIEW



ELEVATION VIEW

ERIK MEASURING TUBE

NOT TO SCALE

Figure 6.6.6. ERIK Measuring Tube.

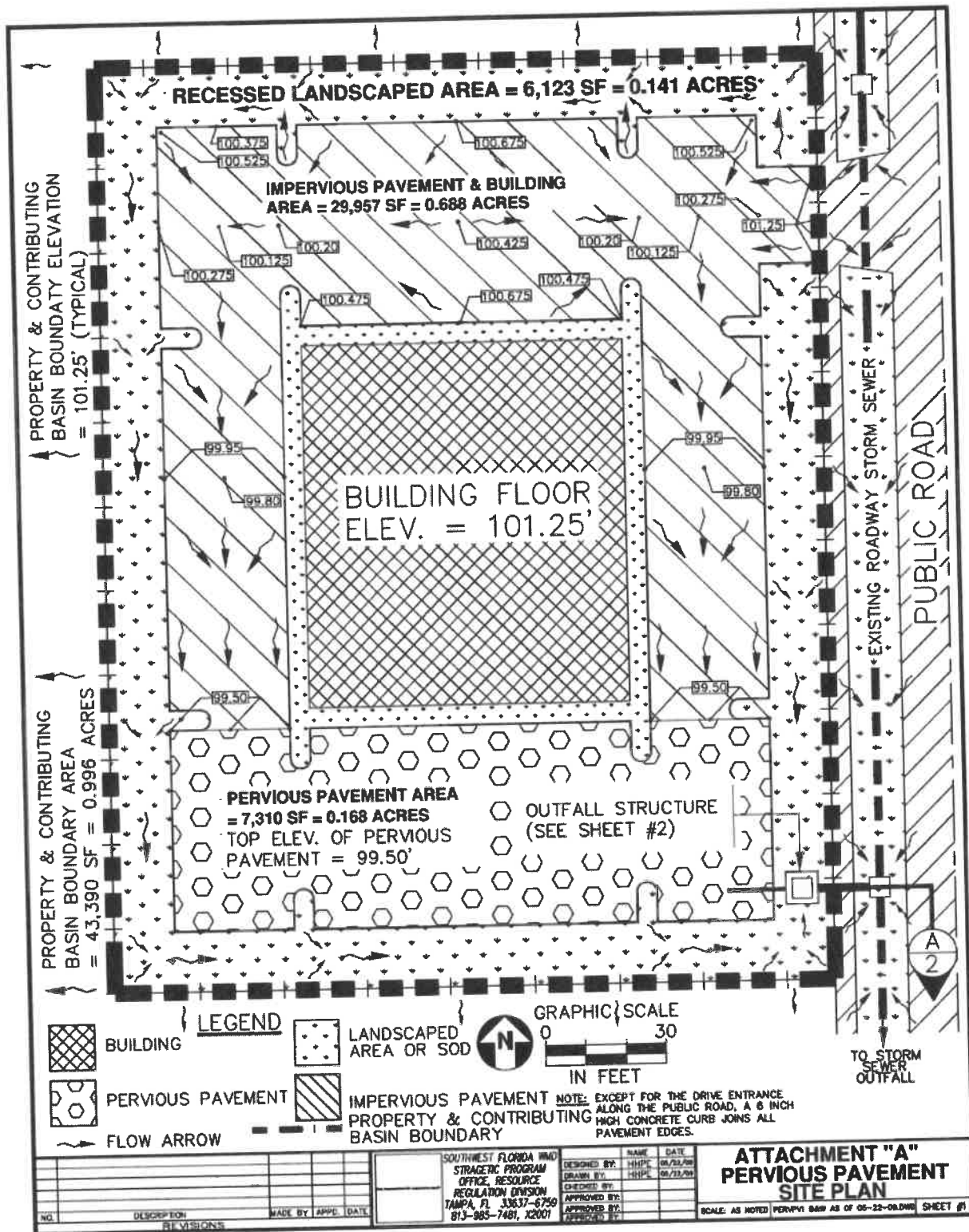


Figure 6.6.7. Pervious Pavement Site Plan.

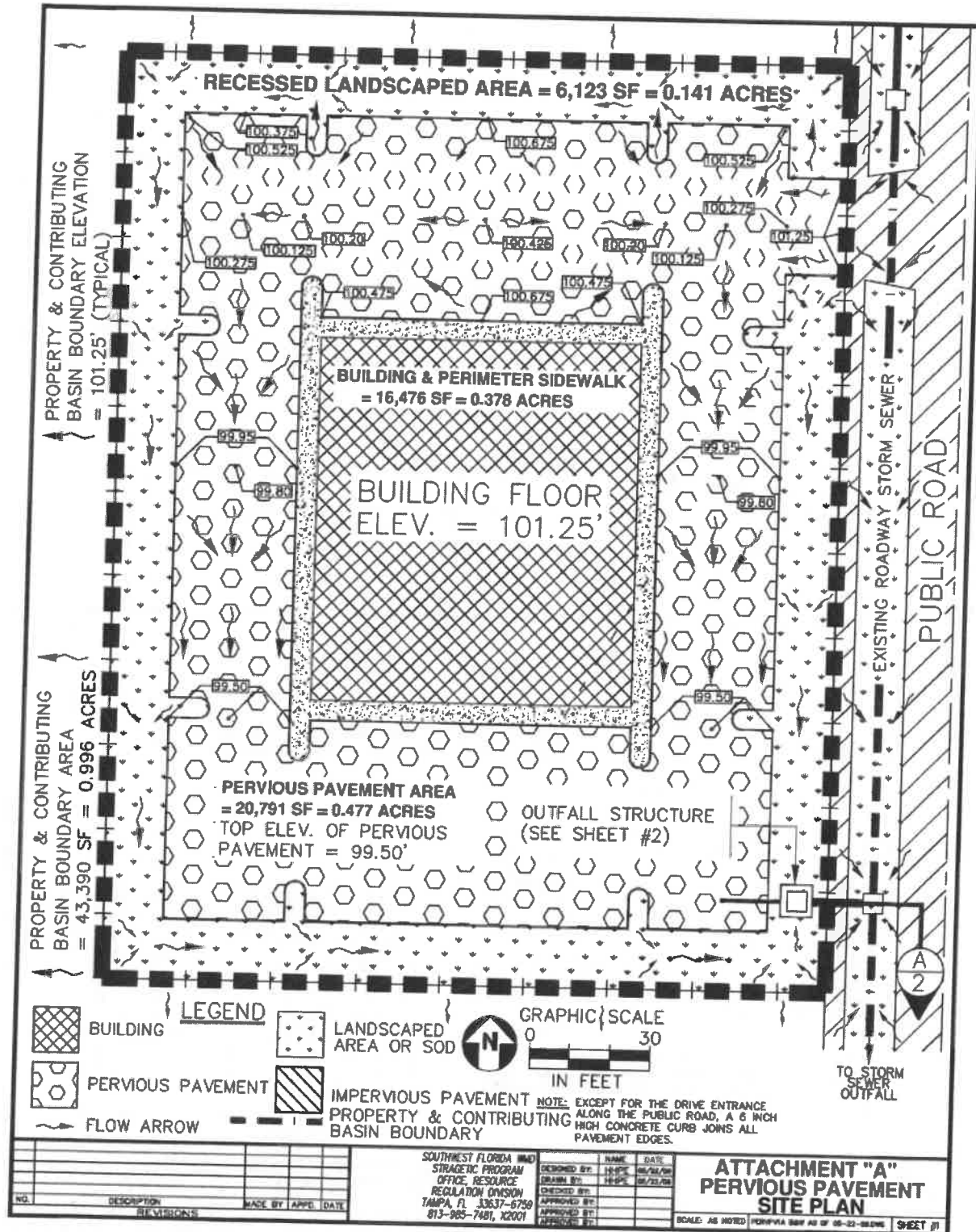
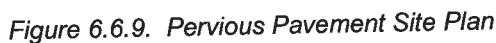


Figure 6.6.8. Pervious Pavement Site Plan.



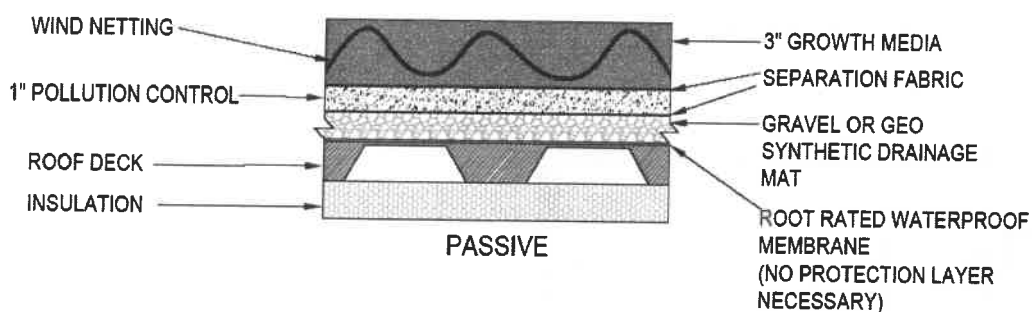


Figure 6.7.1a. Extensive Greenroof Section (Usually Passive Function)

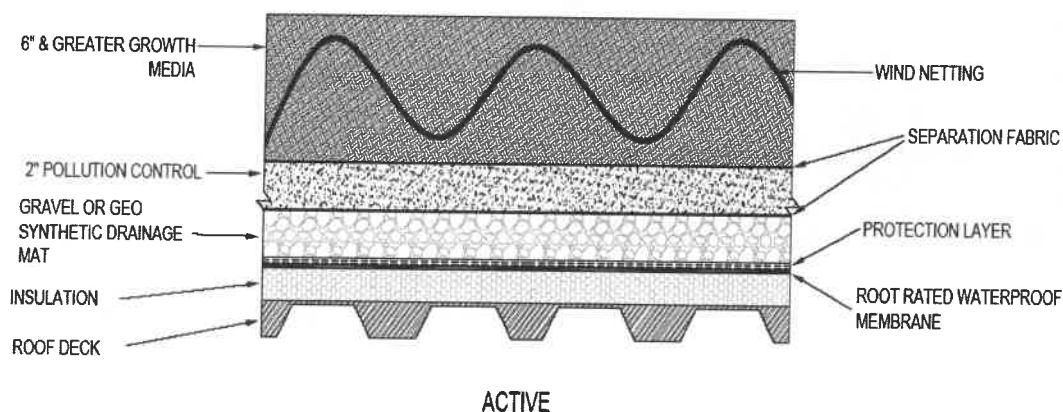


Figure 6.7.1b. Intensive Greenroof Section (Usually Active Function)

6.7.5. Design Criteria

- (a) Greenroof/cistern systems shall be designed to capture and use the required treatment volume for irrigation without discharge except to downstream BMPs if used as part of a BMP treatment train.
- (b) **Structural Integrity** – a structural engineer must certify that the roof can support the weight load of the greenroof system.
- (c) **Waterproof Membrane** - A waterproof membrane layer must be incorporated into the roof system to protect the structure from moisture damage. There are several options for this layer such as, polypropylene or polyethylene membrane, polyvinyl chloride, or spray applied elastomeric waterproofing membrane as well as others. The applicant must check with the membrane manufacturer to ensure that the membrane is rated as a root protection material. All permitted design specifications and manufacturer's installation directions shall be followed to ensure that the proposed product will function as intended with greenroof overburden.
- (d) **Drainage Layer** - The major function of the drainage layer is to facilitate lateral movement of the filtrate to the point of drainage to ensure no standing water is present. The drainage layer can consist of several different materials such as gravel, recycled products, or geo-synthetic drainage mats. It is important to

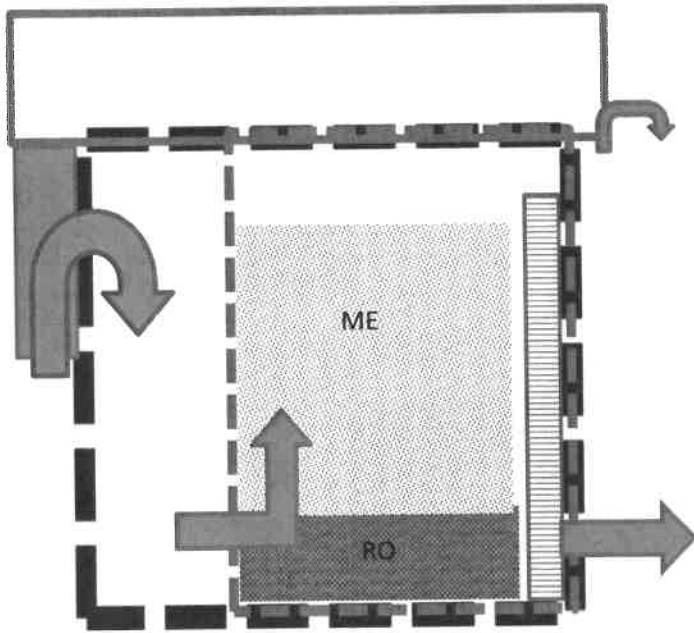


Figure 6.10.2. Typical Schematic of an Up-flow Filter after Wet Detention with Water Flow Direction.

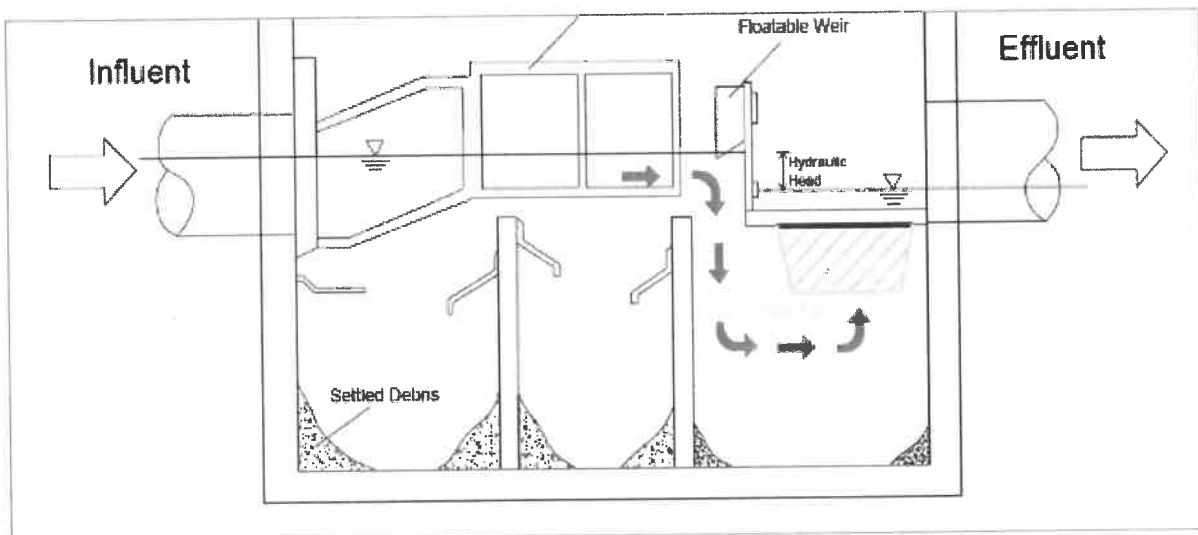


Figure 6.10.3. Typical Schematic of an Up-flow Filter after Vault Detention with Water Flow Direction.

6.12.3. Applicability

1. Water quantity control

Biofiltration systems are designed primarily as BMPs for addressing stormwater quality. Although biofiltration systems will provide some attenuation of peak flows, they will most likely not provide sufficient storage capacity to meet County or SWFWMD water quantity control criteria.

2. Water quality control

Biofiltration systems use the chemical, biological, and physical properties of plants, microbes, and soils or engineered media (BAM) to remove stormwater pollutants. Treating stormwater by biofiltration can be very effective due to the variety of chemical, physical, and biological removal mechanisms.

Biofilters may be especially useful in highly urban areas where land for wet detention systems is scarce and soils are inappropriate for retention systems. Biofilters may be especially useful in highly urban areas where land for retention or wet detention systems is scarce and soils are inappropriate for retention systems. For example, roof runoff can be effectively detained and treated in a containerized biofilters such as a planter box. Parking lot runoff can be routed into shallow depressed landscape islands with curb cuts or into biofilters integrated into the landscaping adjacent to the parking lot. Figures 6.12.1 through 6.12.5 provide illustrations of the several types of biofiltration systems.

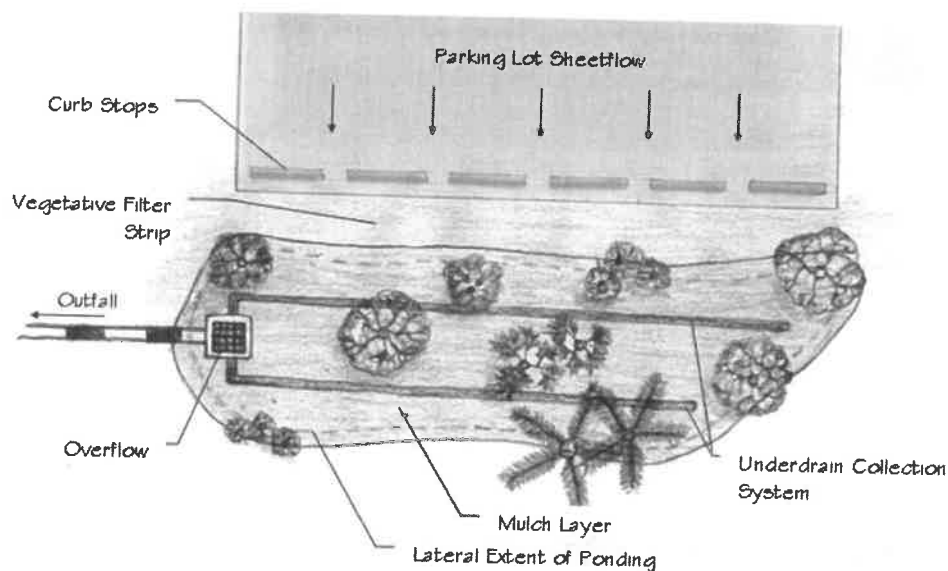
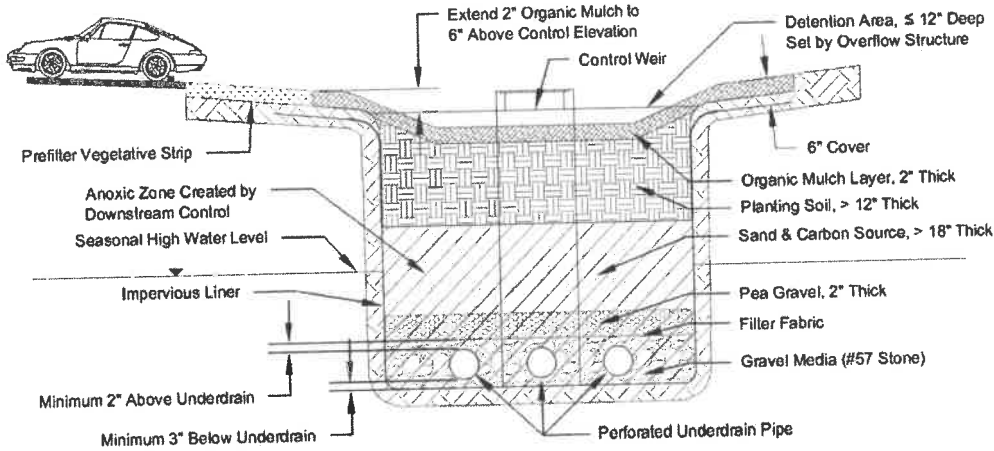
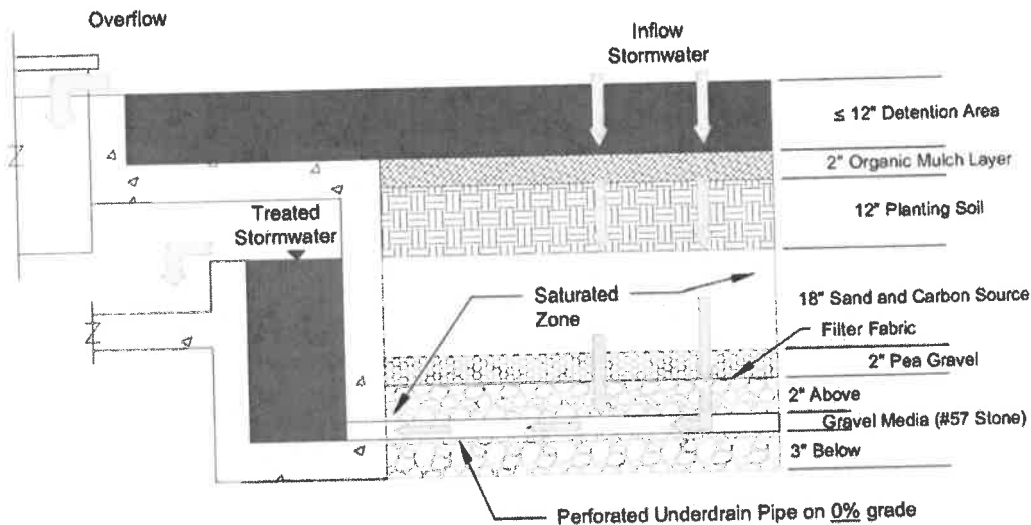


Figure 6.12.1. Plan View Illustrating a Biofiltration System.



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Figure 6.12.2. Cross Section View of a Biofiltration System.



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Figure 6.12.3. Cross Section View of System with Overflow.

Stormwater Planter CD

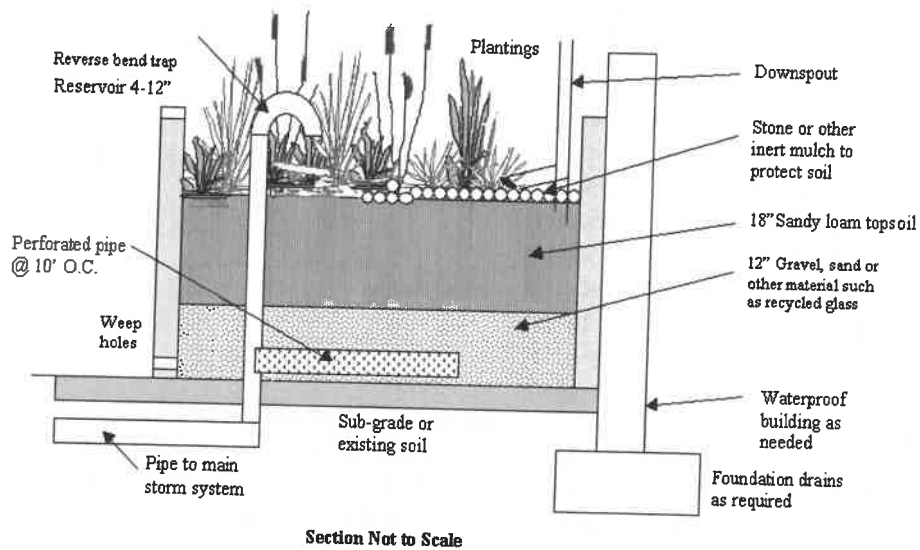


Figure 6.12.4. Stormwater Planter Box Biofiltration System.

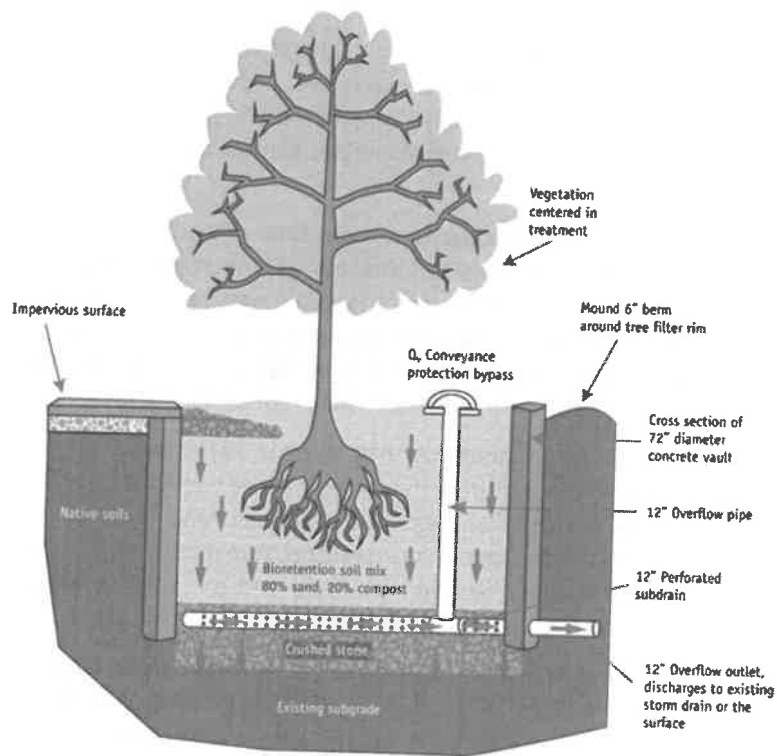
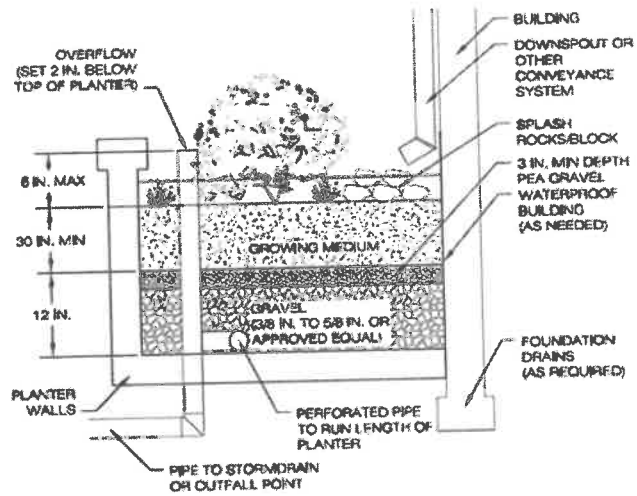


Figure 6.12.5. Stormwater Tree Box Filter System.

6.12.8 Planter Box Biofiltration Systems

All of the above requirements for biofiltration systems apply to Planter Box biofilters unless they are superseded by specific requirements below.

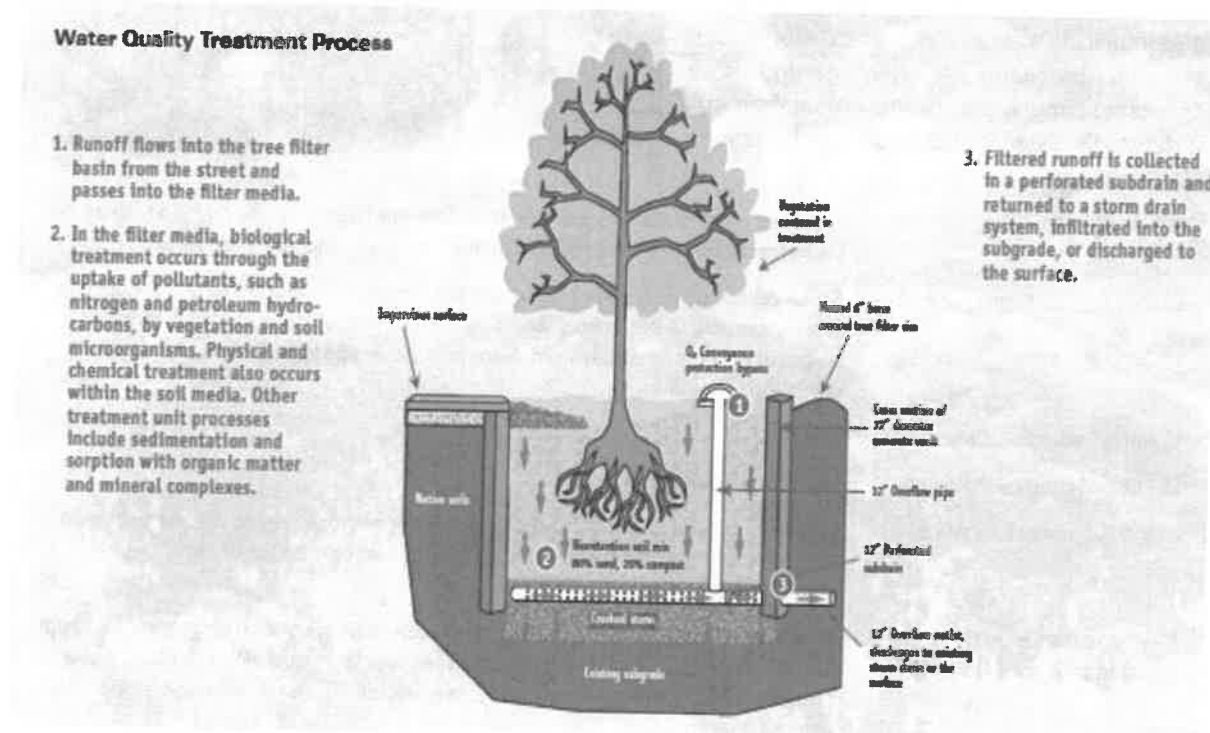
1. **Description** - Planter box biofilters are structural landscaped reservoirs used to collect and filter stormwater, allowing pollutants to settle and filter out as the water percolates through the vegetation, growing medium, and gravel. Excess stormwater collects in a perforated pipe at the bottom of the flow through planter and drains to an approved discharge point and conveyance. Planters can be used to help fulfill a site's



- required landscaping area requirement and should be integrated into the overall site design. Numerous design variations of shape, wall treatment, and planting scheme can be used to fit the character of a site. Because flow-through planters can be constructed immediately next to buildings, they are ideal for sites with setback requirements, poorly draining soils, or other constraints.
2. **Setbacks** - Biofiltration planters that rely on infiltration are typically set back 5 feet from property lines and 10 feet from building foundations. No setbacks are required for lined flow-through planters where the height above finished grade is 30 inches or less. Lined flow-through planters can be used next to foundation walls, adjacent to property lines, or on slopes when they include a waterproof lining.
3. **Contributing drainage area** - The maximum contributing drainage area is 2,500 sq. ft. However, this is considered a general rule. Larger drainage areas may be allowed by Pinellas County if the biofiltration system has sufficient flow controls and other mechanisms to ensure proper function, safety, and community acceptance. The drainage areas in these urban settings are typically considered to be 100% impervious.
4. **Planter biofiltration system sizing and pollutant load reduction** - Planter biofiltration systems that use infiltration and are not underdrained can be sized similar to retention basins by using Table 6.1.2 to determine the desired treatment volume. The treatment volume will then determine the annual load reduction percentage. If the biofiltration system requires an underdrain and discharge off-site, the area of the biofiltration system will be determined by the desired treatment volume and the biofiltration media characteristics. These, in turn, will determine the pollutant load reduction.
5. **Dimensions and slopes** - The minimum infiltration planter width is 30 inches, and the minimum flow-through planter width is 18 inches (measured from inside the planter walls). Storage depth must be between 6 and 12 inches (from inlet elevation of overflow to top of growing medium). Planters are flat facilities that do not slope more than 0.5 percent in any direction. A minimum of 2 inches of freeboard (vertical distance between the design water surface elevation and overtopping elevation) shall be provided.
4. **Planter walls** - Planter walls shall be made of stone, concrete, brick, or other durable material. For planters that require an impervious bottom, a single-pour concrete solution is preferred. Chemically treated wood that can leach out toxic chemicals and contaminate stormwater shall not be used.

5. **Liners** - Flow-through facilities that require an impervious bottom can be achieved through either a waterproof liner (geomembrane) or a single-pour concrete box. If lined, there are many liner options, and installation varies. Liners should be installed to the high water mark. Liner shall be 30 to 40- mil PVC or HDPE as appropriate or approved equivalent.
6. **Vegetation** - The entire planter box filter must be planted with vegetation. The facility area is equivalent to the total area of the planter, as developed in the sizing calculations. The entire surface area of a planter is inundated with water and therefore requires plants that will survive such conditions. Minimum quantities are shown below:

Minimum Vegetation Quantities				
NUMBER OF PLANTS	TYPE OF PLANTS	PER SQUARE FEET	SIZE	SPACING ON CENTER
115	Herbaceous	100	1 gallon	1'
OR				
100	Herbaceous	100	1 gallon	1'
4	Small shrubs	100	1 gallon	2'



Note: Tree planting is not required in planters but is encouraged where practical. Tree planting is also encouraged near planters.

7. **Construction Considerations** - Special attention should be paid to the structural waterproofing if the planter is constructed adjacent to building structures.

6.13. Rain Gardens

6.13.1. Description

Rain gardens are small retention basins that can be integrated into a site's landscaping. A rain garden is a shallow, constructed depression that is planted with deep-rooted Florida-Friendly™ plants. It is located in the landscape to receive runoff from hard surfaces such as a roof, a sidewalk, a driveway, or parking area. Rain gardens slow down the rush of water from these impervious surfaces, holds the water for a short period of time and allows it to naturally infiltrate into the ground.

Rain gardens have multiple functions. They recharge the local aquifer by increasing the amount of water that filters into the ground; reduce the amount of stormwater pollutants – fertilizer, pesticides, car oil, etc. – that enter nearby surface water bodies; provide habitat for birds, butterflies, and beneficial insects; and improve property value by adding curb appeal to the landscape. Rain gardens are a beautiful and colorful way for homeowners, businesses and municipalities to help ease stormwater pollution problems. A rain garden also conserves municipal water resources by reducing the need for potable water irrigation.



RAIN GARDEN SUMMARY

Advantages/Benefits	Reduces stormwater volume and pollutant loadings; provides ground water recharge and enhanced site aesthetics; integrate into site's landscaping.
Disadvantages/Limitations	Small contributing drainage area. Do not construct within 50 feet of a public or private potable water supply well or within 15 feet of an onsite wastewater disposal and treatment system. Site must have appropriate soil and SHGWT conditions for infiltration.
Volume Reduction Potential	Medium
Pollutant Removal Potential	High for all pollutants
Key design considerations	SHGWT at least 2 feet below bottom; recovery of treatment volume within 24 – 72 hours; plant with Florida-Friendly plants appropriate for dry and wet conditions.
Key construction and maintenance considerations	Minimize soil compaction and sedimentation during construction; ensure design infiltration is met after construction; inspect during wet season to see if water is ponding and not infiltrating properly; restore mulch, remove weeds, and replant as necessary.

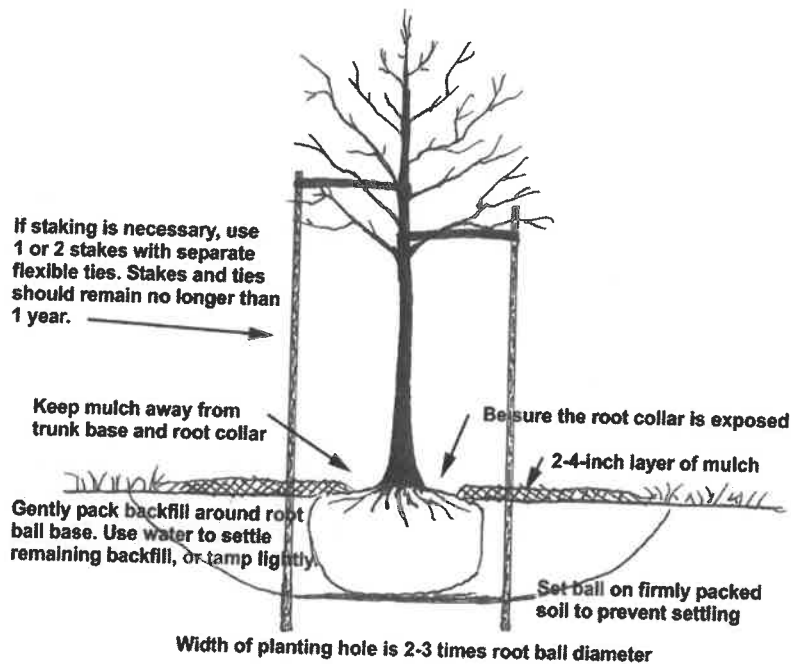


Figure 6.15.1. Tree planting guidelines. (Adapted from Flott, 2004 and ISA, 2003b).

9. **Post-Planting Tree Protection.** Once the tree has been properly planted, 2 to 4 inches of organic mulch must be spread over the soil surface out to the drip line of the tree. If planting a cluster of trees, mulch the entire planting area. Slow-decomposing organic mulches, such as shredded bark, compost, leaf mulch, or wood chips provide many added benefits for trees. Mulch that contains a combination of chips, leaves, bark, and twigs is ideal for reforestation sites. Grass clippings and sawdust are not recommended as mulches because they decompose rapidly and require frequent application, resulting in reduced benefits.

For well-drained sites up to 4 inches of mulch may be applied, and for poorly drained sites a thinner layer of mulch should be applied. Mulch should never be more than 4 inches deep or applied right next to the tree trunk; however, a common sight in many landscaped areas is the —mulch volcano. This over-mulching technique can cause oxygen and moisture-level problems, and decay of the living bark at the base of the tree. A mulch-free area, 2- to 3-inches wide at the base of the tree, must be provided to avoid moist bark conditions and prevent decay (ISA, 2003a).

10. **Limitations:** Tree credits may not be allowed if site circumstances or system limitations exist.

6.15.6. Construction considerations

1. New trees

- Do not allow soil in planter areas to be compacted during construction.
- Do not allow soil in planter areas to become contaminated with construction related materials such as lime or limestone gravel, concrete, sheetrock, or paint.
- Install irrigation system according to proper specifications.

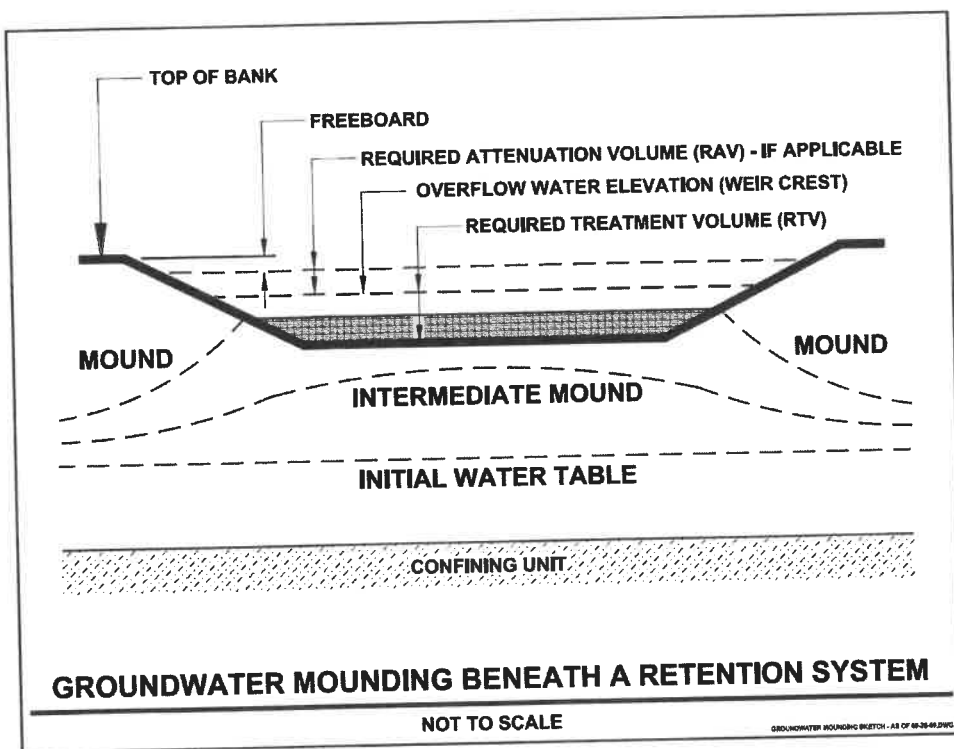
- The depths to the water table and confining unit (i.e., clay or hardpan) below the bottom of the retention BMP, and
- The soil's saturated hydraulic conductivity.

The following paragraph briefly describes the two stages of infiltration, and subsequent subsections present accepted methodologies for calculating infiltration rates and recovery times for unsaturated vertical (Stage One) and saturated horizontal (Stage Two) flow.

Initially, the subsurface conditions are assumed to be:

- The depth to the initial water table below the bottom of the BMP.
- Unsaturated soils above the water table.

When the water begins to infiltrate, it is driven downward as unsaturated flow by the combined forces of gravity and capillary action. Once the unsaturated soil below the BMP becomes saturated (fills the voids in the soil), the water table begins to "mound" (refer to **Figure A.1.1, Ground Water Mounding Beneath a Retention System, below.**



A.1.5. Accepted Methodologies for Determining Retention BMP Recovery

- A. Acceptable methodologies for calculating retention BMP recovery are presented below in **Table A.1.1.**

Table A.1.1. Accepted Methodologies for Retention BMP Recovery	
Vertical Unsaturated Flow	Horizontal Saturated Flow
Green and Ampt Equation	Simplified Analytical Method
Hantush Equation	PONDFLOW
Horton Equation	Modified MODRET
Darcy Equation	
Holton Equation	

Several of these methodologies are available in commercial software products. The Agencies can neither endorse any software program nor certify software results.

- B. Additional requirements for calculating retention BMP recovery

Unless the normal Seasonal High Ground Water Table (SHGWT) is greater than or equal to 2 feet below the bottom of the BMP system, unsaturated vertical flow prior to saturated horizontal mounding shall be conservatively ignored in the recovery analyses. This is not an unrealistic assumption since the height of the capillary fringe in fine sands is on the order of six (6) inches, and a partially mounded water table condition may be remnant from a previous storm event.

A.1.6. Requirements, Guidance and Recommendations for Manual Computations or Computer Simulations

Computer-based ground water flow models are routinely used by practicing engineers and hydrogeologists to predict the time for percolation of the Required Treatment Volume (RTV). The reliability of the output of these models cannot exceed the reliability of the input data. **Input data assessment is probably the most neglected single task in the ground water modeling process.** The accuracy of computer simulations hinges on the quality and completeness of the input data.

The computer models listed in the previous section require input values of the retention BMP dimensions, retained stormwater runoff volume (the RTV) and the following set of aquifer parameters:

- Thickness or elevation of base of mobilized (or effective) aquifer
- Weighted horizontal saturated hydraulic conductivity of mobilized aquifer
- Fillable porosity of mobilized aquifer
- Ambient water table elevation which, for design purposes, is usually the normal Seasonal High Ground Water Table (SHGWT)

Calculated recovery times are most sensitive to the input value for the aquifer's **saturated hydraulic conductivity**.

A. Determination of Aquifer Thickness

Standard Penetration Test (SPT) borings are recommended for definition of the aquifer thickness, especially where the ground water table is deep. This type of boring provides a continuous measure

