WATER QUALITY IMPACT EVALUATION CHECKLIST

PART 1: PROJECT INFORMATION

Project Name:	SR 710 from US 441 to L-63N Canal
County:	Okeechobee
FM Number:	419344-3-43-01
Federal Aid Project No:	TBD
Brief Project Description:	The proposed improvements consist of a new four-lane divided roadway on new alignment from US 441 to SR 710 just west of the L-63N Canal Bridge. The project includes a new culvert crossing at Taylor Creek and a reconstructed bridge crossing over the L-63N Canal. The project is approximately 3.864 miles in length.

PART 2: DETERMINATION OF WQIE SCOPE

Does project discharge to surface or ground water? ☒ Yes ☐ No

Does project alter the drainage system? ☒ Yes ☐ No

Is the project located within a permitted MS4? ☒ Yes ☐ No
Name: Okeechobee County

If the answers to the questions above are no, complete the applicable sections of Part 3 and 4, and then check Box A in Part 5.

PART 3: PROJECT BASIN AND RECEIVING WATER CHARACTERISTICS

Surface Water
Receiving water(s) names: Taylor Creek,L-63N Canal, and Mosquito Creek

Water Management District: South Florida WMD

Environmental Look Around meeting date: N/A
Attach meeting minutes/notes to the checklist.

Water Control District Name (list all that apply): N/A

Groundwater
Sole Source Aquifer (SSA)? ☒ Yes ☐ No
Name Biscayne Aquifer SSA Streamflow and Recharge Source Zones
If yes, complete Part 5, D and complete SSA Checklist shown in Part 2, Chapter 11 of the PD&E Manual

Other Aquifer? ☐ Yes ☒ No
Name _____

Springs vents? ☐ Yes ☒ No
Name _____

Well head protection area? ☒ Yes ☐ No
Name Okeechobee Wellfield Authority
Groundwater recharge? ☒ Yes ☐ No
Name Biscayne Aquifer SSA Streamflow and Recharge Source Zones

Notify District Drainage Engineer if karst conditions are expected or if a higher level of treatment may be needed due to a project being located within a WBID verified as Impaired in accordance with Chapter 62-303, F.A.C.

Date of notification: N/A

PART 4: WATER QUALITY CRITERIA

List all WBIDs and all parameters for which a WBID has been verified impaired, or has a TMDL in **Table 1**. This information should be updated during each re-evaluation as required.

Note: If BMAP or RAP has been identified in **Table 1**, **Table 2** must also be completed.
*Attach notes or minutes from all coordination meetings identified in **Table 2**.*

EST recommendations confirmed with agencies? ☐ Yes ☒ No

BMAP Stakeholders contacted: ☒ Yes ☐ No
See various coordination in Attachment 1

TMDL program contacted: _____ ☐ Yes ☒ No

RAP Stakeholders contacted: ☐ Yes ☒ No
No RAP

Regional water quality projects identified in the ELA ☒ Yes ☐ No

If yes, describe:
See various coordination in Attachment 1

Potential direct effects associated with project construction and/or operation identified? ☒ Yes ☐ No
If yes, describe:
Temporary water quality impacts may occur during project construction. These potential impacts will be avoided and minimized to the greatest extent practicable through the implementation of a Stormwater Runoff Control Concept (SRCC), as well as adherence to resource-agency issued permits and permit conditions and the FDOT's Standard Specifications for Road and Bridge Construction.

Discuss any other relevant information related to water quality including Regulatory Agency Water Quality Requirements.

See various coordination in Attachment 1

PART 5: WQIE DOCUMENTATION

☐ A. No involvement with water quality
☐ B. No water quality regulatory requirements apply.
☒ C. Water quality regulatory requirements apply to this project (provide Evaluator's information below). Water quality and stormwater issues will be mitigated through compliance with the design requirements of authorized regulatory agencies.
☒ D. EPA Ground/Drinking Water Branch review required. ☐ Yes ☒ No
Concurrence received? ☐ Yes ☐ No
If Yes, Date of EPA Concurrence: Click here to enter a date..
Attach the concurrence letter

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

Evaluator Name (print): Gordon Mullen, HNTB	
Title:Sr. Planner	
Signature: Gordon S. Mullen	Date:5/3/2024

Table 1: Water Quality Criteria

Receiving Waterbody Name (list all that apply)	FDEP Group Number / Name	WBID(s) Numbers	Classification (I,II,III,IIIL,IV,V)	Special Designations*	NNC limits**	Verified Impaired (Y/N)	TMDL (Y/N)	Pollutants of concern	BMAP, RA Plan or SSAC
Taylor Creek (Lower Segment)	1	3205B	III F	N/A	N/A	Yes	Yes	DO, TP, Iron, Chloropyhll-A, TN,	BMAP (Lake Okeechobee)
L-63 Canal	1	3203C	III F	N/A	N/A	Yes	No	DO, TP, TN, Chlorophyll-A	BMAP (Lake Okeechobee)
Mosquito Creek	1	3203B	III F	N/A	N/A	Yes	Yes	DO, Fecal Colliform	BMAP (Lake Okeechobee)

*** ONRW, OFW, Aquatic Preserve, Wild and Scenic River, Special Water, SWIM Area, Local Comp Plan, MS4 Area, Other**
**** Lakes, Spring vents, Streams, Estuaries**
Note: If BMAP or RAP has been identified in Table 1, Table 2 must also be completed.

Table 2: REGULATORY Agencies/Stakeholders Contacted

Receiving Water Name (list all that apply)	Contact and Title	Date Contacted	Follow-up Required (Y/N)	Comments
Lake Okeechobee	Various coordination, see Attachment 1		No	
			No	
			No	
			No	
			No	
			No	
			No	

ATTACHMENT 1

419344-3-32-01

SR 710 fr. US 441 to L-63N

Water Quality Agency Coordination

MEETING MINUTES

SR 710 Possible Regional Pond Brainstorming Meeting

SR 710 from US 441 to the L63-N Canal
FPID No. 419344-3-52-01

September 13, 2013, 11:00 am; GoToMeeting

Attendees:
Lesley Bertolotti –SFWMD, Principal Scientist
Kevin Carter – SFWMD, Lead Scientist
Kelly Cranford – SFWMD, Permitting Section Leader
Orlando Diaz – SFWMD, Sr. Environmental Scientist
Eric Gonzalez – SFWMD, Project Manager Principal
Susan Martin – SFWMD, Senior Specialist Attorney
John Morgan – SFWMD, Lead Policy Analyst
Gary Ritter – SFWMD, Intergovernmental & Outreach Representative
Steve Sentes – SFWMD, Regulatory Professional Lead
Tony Waterhouse – SFWMD, Assistant Executive Director, Regulation
Misty Alderman – FDEP, Nonpoint Source Management
Elizabeth Alvi – FDEP, Env Consultant
Ken Kuhl – FDEP, Env Consultant
Trina Vielhauer – FDEP, Env. Assessment and Restoration
Bonnie Wolff Pelaez – FDACS, Env Specialist
Brent Setchell – FDOT, Permitting
Carl Spirio – FDOT, Drainage
Amy Setchell – FDOT – Project Manager
Brian Kirwan – The Wantman Group, PM - Design
Alfredo Rodriguez – The Wantman Group, Roadway
Greg Griffith – The Wantman Group, Permitting
Greg Seidel – The Balmoral Group, Drainage
Jennifer Nunn – The Balmoral Group, Drainage
Tim Desmarais– The Balmoral Group, Drainage

Purpose: The purpose of the meeting was to present the SR 710 project and possible regional pond opportunity to the SFWMD and FDEP, brainstorm on ideas, discuss feasibility and develop a go forward strategy. Below are highlights of the meeting -

1. Greg Seidel began the meeting with introductions. Participants announced who they represent and what role they would presumably play in this concept.
   a) FDOT – regional pond approach has cost savings benefits and is in alignment with BMAP efforts
   b) SFWMD – permitting and also involved in BMAP process
   c) FDEP – BMAP coordinator
   d) FDACS – land owner of the potential site enrolled in the BMP program

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www.balmoralgroup.us

Mr. Seidel added that he is the drainage engineer of record for the SR 710 new alignment project from US 441 to East of the L-63N Canal. As such, he is responsible for developing the stormwater management plan for the project and has been asked to evaluate regional opportunities by the FDOT.

Brent Setchell stated the FDOT position of looking for better ways to spend stormwater management dollars that would provide more treatment than just the roadway and help reduce costs to the FDOT while providing a better "product" to the public.

2. Timeframe – Pond Siting Report – November 2013
Right-of-Way Acquisition – July 2015 (tentative)

3. Mr. Seidel began the brainstorming session with an overview of the proposed road alignment and overview of the local/regional hydrology. (Please see attached exhibits from the meeting agenda)

a) Water levels governed by operation of S-133 and S-191. Taylor Creek is pumped into Lake Okeechobee. This pump station was not designed to pump both ways.
b) Most of the runoff in Taylor Creek is from urbanized areas. Flows from the large agricultural areas to the north bypass Taylor Creek and flow around the city via the L-63 Canal. Much of the ag-based runoff is treated via an existing SFWMD Stormwater Treatment area to the north.
c) Discussed ongoing stormwater improvements and needs in the area:
    i. Oak Park – reconstructed swales
    ii. SW 32nd Ave ditch
    iii. TMDL-related improvements
    iv. E-W conveyance project
    v. Miscellaneous retrofits for direct connections to Taylor Creek
d) One option is to reverse the typical flow water in Taylor Creek, rout it through the proposed regional facility for treatment, and discharging back to Taylor Creek (or possibly L-63N). Routing water northward into L-63N may create a problem with septic tanks in the south, which have reported to have issues whenever the water reaches 13.8'.
e) Another suggestion was to route some of the water flowing in L-63N into the proposed regional facility for treatment and release it back to L-63N.
f) The landowners have been contacted about the roadway project.

4. It was suggested to contact USACE about this concept, as they may have interests from a permitting perspective and possible cost-sharing. It was agreed to this at a later date following an additional coordination meeting.

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5. Water Quality data on Taylor Creek, L-63N, and Lake Okeechobee would be helpful in determining how to maximize the potential benefit from this concept.

6. It was noted that Taylor Creek used to have a sand bottom and is now covered with organic silt and muck. The southern portion of the basin contains homes on septic tank.

7. The meeting ended with an agreement to revisit and discuss more in detail when the draft Pond Siting Report is completed which will be in November. At this time, the FDOT will know more about pond sizes, locations and costs. The FDOT will contact the participants to schedule the meeting at a later date.

c. Attendees (Via Email)

Attachment – Agenda Exhibits

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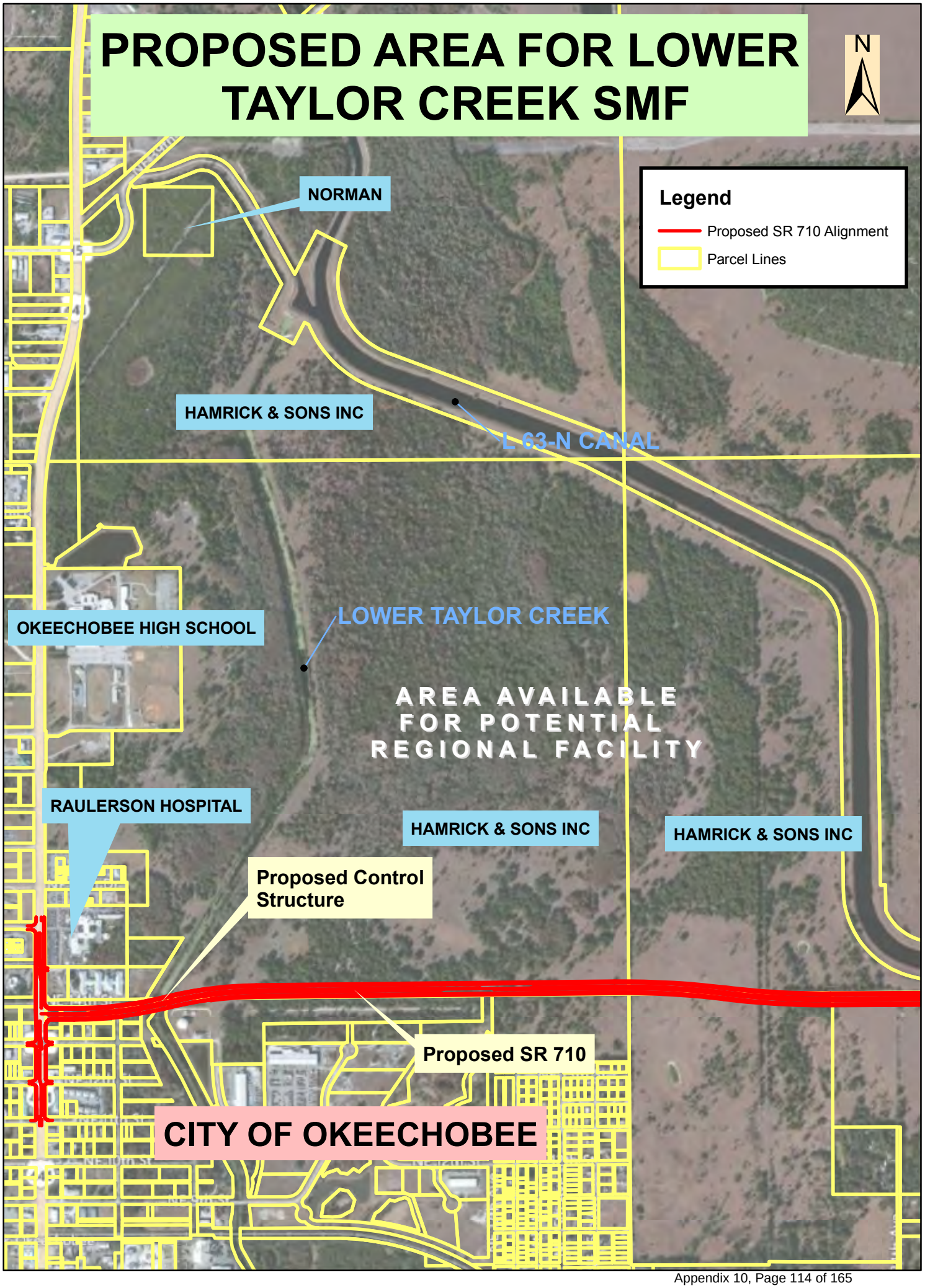
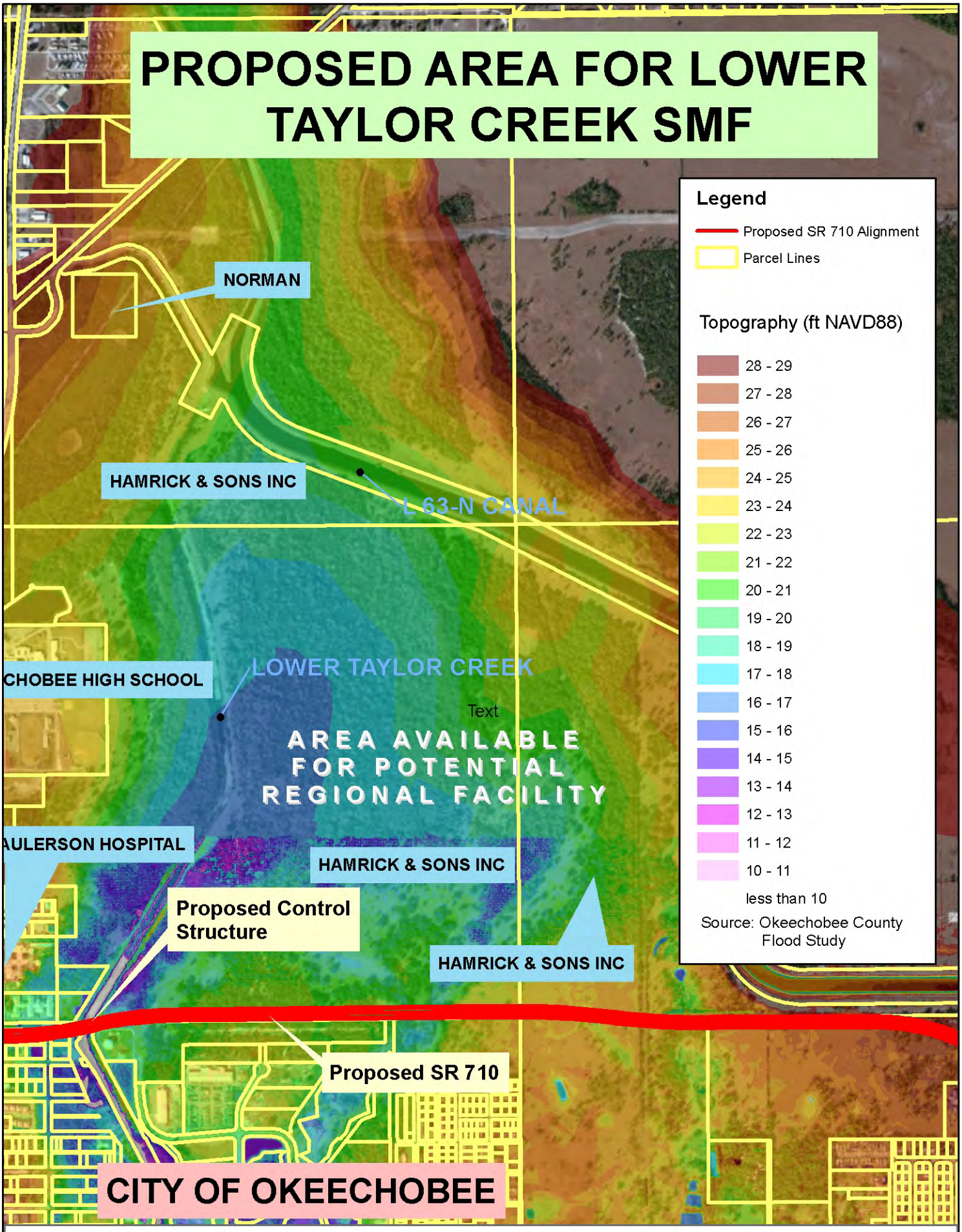

PROPOSED AREA FOR LOWER TAYLOR CREEK SMF
N
Legend
Proposed SR 710 Alignment
Parcel Lines
NORMAN
HAMRICK & SONS INC
L-63-N CANAL
OKEECHOBEE HIGH SCHOOL
LOWER TAYLOR CREEK
AREA AVAILABLE FOR POTENTIAL REGIONAL FACILITY
RAULERSON HOSPITAL
HAMRICK & SONS INC
HAMRICK & SONS INC
Proposed Control Structure
Proposed SR 710
CITY OF OKEECHOBEE



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

0 0.125 0.25 Miles

Memo

To: Gregory Seidel, P.E.

From: Lori Stanfill, P.E.

CC:

Date: September 11, 2013

Re: SR 710 - Pump Information for Taylor Creek (Structures S-192 & S-133)

According to the System Operation Manual for Lake Okeechobee, Structure S-192 is located at the junction of L-63N Canal and Taylor Creek (North of the City of Okeechobee). This structure is a single 48" culvert with a gate and a pump. When the gate is open, it allows passage of water from L-63N to Taylor Creek (gravity flow), however, the gate is typically closed. The structure also permits back pumping from Taylor Creek to L-63N (See References).

The purpose of S-192 is to prevent stagnation in the lower reaches of Taylor Creek. The S-192 gate is normally closed, except for the following reasons: 1) Maintenance purposes, where it is needed to divert flows from L-63N Canal; 2) When the water quality in Taylor Creek is degraded (i.e. by discharge of the sewage treatment plant) and Lake Okeechobee is sufficiently low to allow gravity flow to the south into the lake (below elevation 14.0 ft, NGVD).

Similarly, the S-192 pump is only activated when the water quality in lower Taylor Creek is degraded (i.e. from discharge from the sewage treatment plant), and Lake Okeechobee is too high to allow flow into the lake (above elevation 14.0 ft, NGVD). When this occurs, structure S-193 (located at south end of Taylor Creek, at entry into Lake Okeechobee) is also open to discharge the same flow into Taylor Creek from Lake Okeechobee as is being pumped out to the north (into L-63N Canal).

S-192 is not designed to pass flood flows. Flood flows are routed to Lake Okeechobee via L-63N Canal, L-59 Canal, and structure S-191 (See Reference).

Stage and discharge Information for S-192 was obtained from the SFWMD website, and is shown below:

Location	Stage (ft NGVD)	Discharge	Date
S-192		Unavailable	11-15-2012
S-192 (US at L-63N)	19.42		3-12-2013
S-192 (DS at Taylor Creek)	13.67		3-12-2013

There is daily information for the stages and structures on Lake Okeechobee which can be accessed from the Army Corps of Engineers website (See References & Attachments). Structure S-133 is located at the southernmost end of Taylor Creek where it drains into Lake Okeechobee (at northeast bank of lake).

Structure S-133 includes 5 pumping units with a combined capacity of 625 cfs (or greater). It is designed to remove ¾ inch per day of runoff from the 16,190 acre drainage area. There are five – 48 inch steel pipes which convey pumped discharge into Lake Okeechobee. There are slidegates on the intake end (Taylor Creek side) and flapgates on the discharge end (Lake Okeechobee side).

Structure S-193 (mentioned above) is located 1200' to the east of S-133. It is a lock which can be opened to pass flows to the north or south depending on the stage in Lake Okeechobee (See Reference).

Information for the abovementioned structures can be obtained on the SFWMD website (See References). Stage and discharge Information for S-133 and S-193 was obtained from the SFWMD website, and is shown below:

Location	Stage (ft NGVD)	Discharge (cfs)	Date
S-133		282*	9-11-2013
S-133 (US at Taylor Creek)	13.67		9-11-2013
S-133 (DS at Lk. Okeechobee)	15.23		9-11-2013

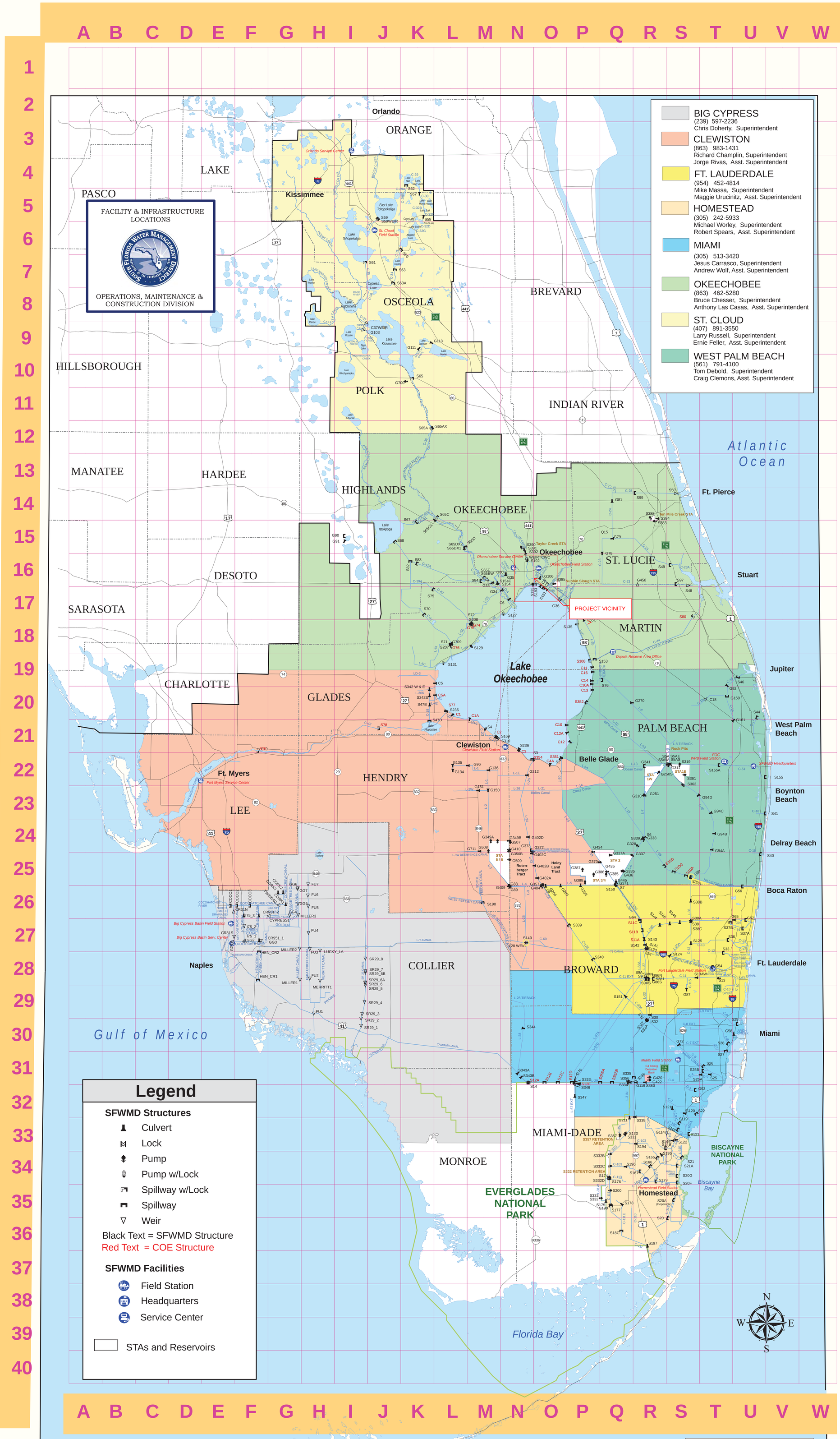
Note: 2 pumps @ 1178.79 rpm discharging on 9-11-2013

According to the Army Corps of Engineers website, the pumps from Lake Okeechobee to the Caloosahatchee River were turned on in Feb. 2013, but turned off in late Aug. 2013 as the water level was sufficiently reduced and within the range the Corps likes to maintain. On September 10, 2013, the stage in Lake Okeechobee is 15.46 feet NGVD. The Corps acceptable range (Operational Management Band) for which no pumping is necessary is between 12.59 feet NGVD to 16.48 feet NGVD. The stage on the upstream side (Taylor Creek) of S-133 was 13.46 feet NGVD on Sept. 10, 2013. See attached chart for Lake Okeechobee stage information from January 2012 to September 2013 and Lake Okeechobee Vicinity Report.

References:

1. *Central and Southern Florida Project for Flood Control and Other Purposes System Operating Manual, Lake Okeechobee & EAA Vol. 3, Version 1 Draft 4*. Dept. of the Army Corps of Engineers, Jacksonville District, December 2005.
2. http://w3.saj.usace.army.mil/h2o/plots.htm. Army Corps of Engineers Website.
3. http://www.sfwmd.gov/portal/pls/portal/realtime.pkg_rr.proc_rr?p_op=OKEECHOBEE&p_wcs_name=TAYLOR_CK_1. SFWMD Website.

FIELD STATION AREAS OF RESPONSIBILITY



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G248A-D	R	22 STA1W
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G251	R	23 STA1W
G252H-J	R	22 STA1W
G253A-J	R	22 STA1W
G254A-A1	R	22 STA1W
G254B-B1	R	22 STA1W
G254C-C1	R	22 STA1W
G254D-D1	R	22 STA1W
G254E	R	22 STA1W
G255	R	22 STA1W
G258	R	22 STA1W
G259	R	23 STA1W
G270	Q	20
G300	S	22 STA1W
G301	R	22 STA1W
G302	R	22 STA1W
G303	R	22 STA1W
G304A-J	R	22 STA1W
G305A-V	R	22 STA1W
G306A-J	R	22 STA1W
G307	R	23 STA1W
G308	R	23 STA1W
G309	R	23 STA1W
G310	R	23 STA1W
G311	S	22 STA1E
G327A-C	R	22 STA1W
G328	R	24 STA2
G329A-D	Q	25 STA2
G330A-E	Q	25 STA2
G331A-G	Q	25 STA2
G332	Q	25 STA2
G333A-E	Q	25 STA2
G334	Q	25 STA2
G335	Q	25 STA2
G336A-F	R	24 STA2
G336G	Q	25 STA2
G337	Q	25 STA2
G337A	Q	25 STA2
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G339	R	24 STA2
G341	R	22
G342A-D	M	24 STA5
G342E-F	M	25 STA5
G343A-H	M	24 STA5
G343I-J	N	25 STA5
G344A-D	N	24 STA5
G344E-F	N	25 STA5
G345	N	24 STA5
G348	N	24 STA5
G349A	M	24 STA5
G349B	M	24 STA5
G349C	M	24 STA5
G350B	N	24 STA5
G351	N	25 STA6
G352A-C	N	25 STA6
G353A-C	N	25 STA6
G354A-C	N	25 STA6
G357	O	25
G360B	M	24 STA5
G367A-F	Q	25 STA2
G368	Q	25 STA2
G370	Q	25 STA3/4
G370S	P	25 STA3/4
G371	Q	25 STA3/4
G372	N	24 STA3/4
G372S	N	24 STA3/4
G372HL	N	24 STA3/4
G373	N	24 STA3/4
G374A-F	P	25 STA3/4
G375A-D	Q	25 STA3/4
G375E-F	P	25 STA3/4
G376A-F	Q	25 STA3/4
G377A-E	P	25 STA3/4
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G379A-F	P	25 STA3/4
G380A-F	P	25 STA3/4
G381A-F	P	25 STA3/4
G382A-B	P	25 STA3/4
G383	P	25 STA3/4
G384A-F	P	25 STA3/4
G385	Q	25 STA3/4
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G388	P	25 STA3/4
G389A-B	P	25 STA3/4
G390A-B	P	25 STA3/4
G393A-C	N	25 STA6
G396A-C	N	25 STA6
G402A	O	25
G402B	O	25
G402C	N	25
G402D	N	24
G404	O	26
G406	M	24 STA5
G407	N	25 STA6
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G410	N	24 STA5
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G420S	R	31
G421	R	31
G422	R	31
G423	R	31
G450	R	16
G507	N	24 STA5
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GG2	F	27
GG3	F	27
GG4	G	26
GG5	G	26
GG6	G	26
GG7	G	26
HC1	F	28
HEN_CR2	F	28
I75_1	F	27
I75_2	F	27
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L28WEIR	N	27
L65C	P	17
LUCKY_LA	H	27
MERRITT1	H	28
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S3	N	22
S4	M	21
S5A	S	22
S5AE	S	22
S5AS	S	22
S5AW	S	22
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S9XS	R	28
S10A	S	25
S10C	S	25
S10D	R	25
S11A	R	27
S11B	R	27
S11C	R	27
S12A	N	31
S12B	O	31
S12C	O	31
S12D	P	31
S13	T	28
S13AW	S	28
S14	N	31
S18C	Q	36
S20	S	36
S20A	S	35
S20F	S	34
S20G	S	34
S21	S	34
S21A	S	34
S22	S	32
S25	T	31
S25A	T	31
S25B	T	31
S25BP	T	31
S26	T	31
S26P	T	31
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S62	K	4
S63	J	7
S63A	J	7
S65	K	10
S65A	K	12
S65AX	K	12
S65C	L	14
S65CX	L	14
S65D	L	15
S65DX1	L	15
S65DX2	L	15
S65E	M	16
S65EW	M	16
S67	K	15
S67X	K	15
S68	J	15
S70	K	17
S71	L	18
S71W	L	18
S72	M	18
S72W	M	18
S75	K	17
S76	Q	19
S77	L	20
S78	J	21
S79	F	21
S80	S	17
S82	K	16
S83	K	16
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S122	S	33
S123	S	33
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S368A-E	S	22 STA1E
S369A-D	S	22 STA1E
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S372A-E	S	22 STA1E
S373A-B	S	22 STA1E
S374A-C	S	22 STA1E
S375	S	22 STA1E
S376	S	22 STA1E
S377	S	22 STA1E
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S383	R	15
S384	R	14
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L-16	P23
L-18	P24
L-19	P23
L-1E	N22
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L-37	R28
L-38E	Q26
L-38W	Q26
L-39	R25
L-4	N25
L-40	T23
L-41	L20
L-42	K20
L-47	P18
L-48	M18
L-49	L18
L-5	P25
L-50	K19
L-59	M17
L-6	Q25
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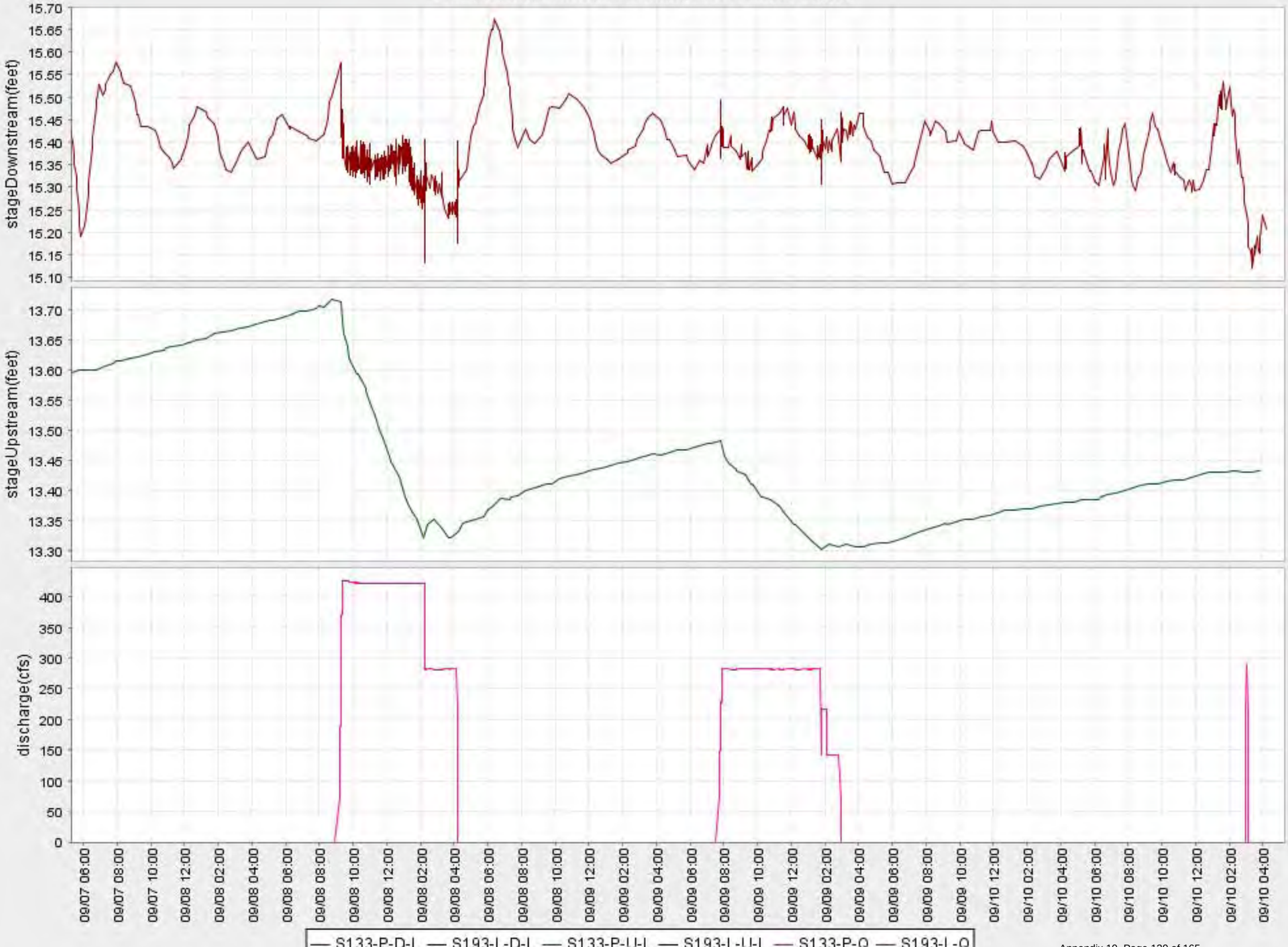
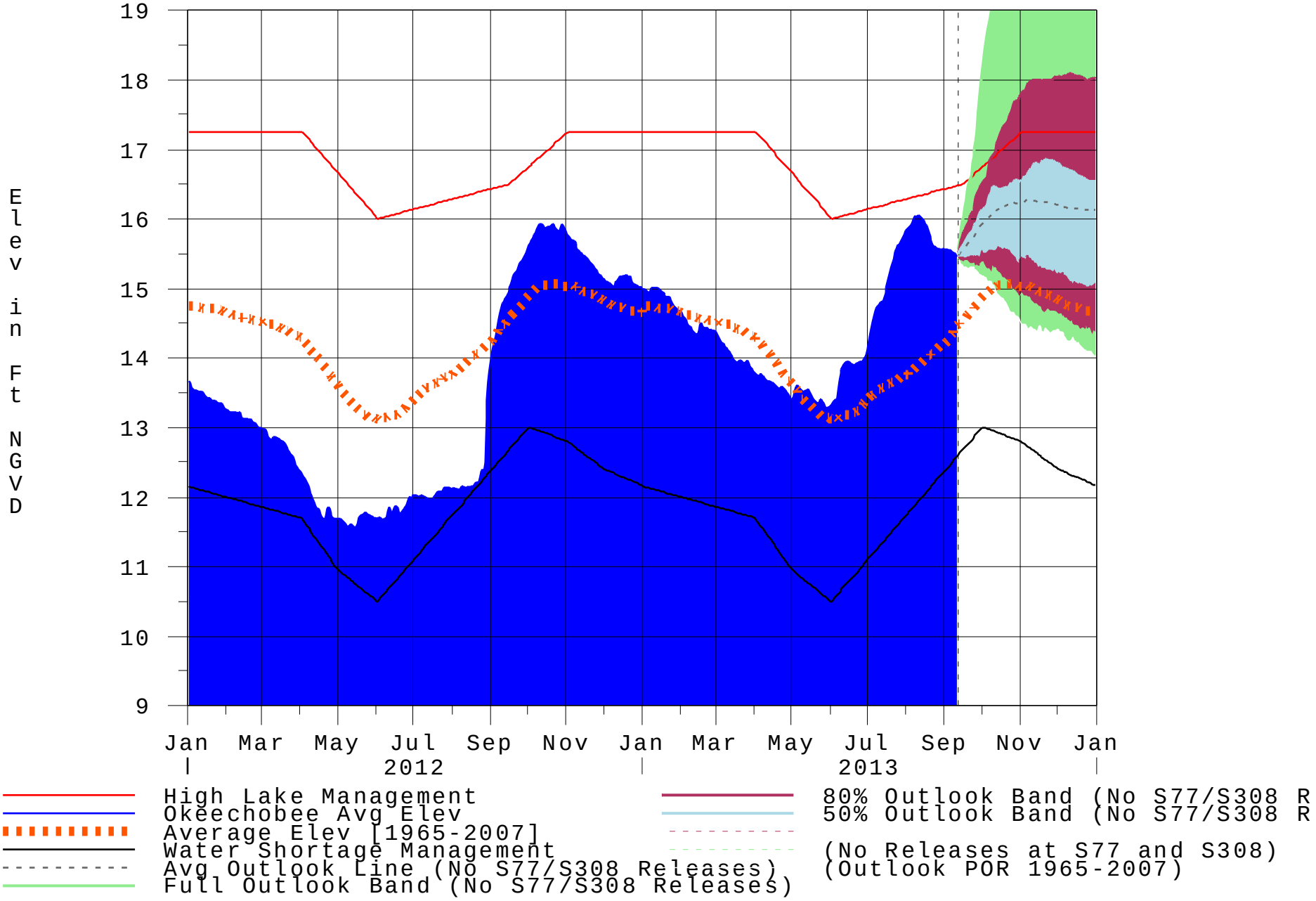
05/07/2013

Combined Realtime Chart of S133_S193 for last 3 Day(s)



Lake Okeechobee

11SEP13 10:00:36



U. S. Army Corps of Engineers, Jacksonville District
Lake Okeechobee and Vicinity Report
** Preliminary Data - Subject to Revision **

Data Ending 2400 hours 10 SEP 2013

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)	
*Okeechobee Lake Elevation	15.46	14.81	10.86	(Official Elv)

Bottom of High Lake Mngmt= 16.48 Top of Water Short Mngmt= 12.59
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 13.41
Difference from Average LORS2008 2.05

10SEP (1965-2007) Period of Record Average 14.47
Difference from POR Average 0.99

Today Lake Okeechobee elevation is determined from the 4 Int & 4 Edge stations

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 9.40'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 7.60'
Bridge Clearance = 49.24'

---

4 Interior and 4 Edge Okeechobee Lake Average (Avg-Daily values):

L001	L005	L006	LZ40	S4	S352	S308	S133
15.24	15.47	15.49	15.56	15.61	15.59	15.32	15.37

*Combination Okeechobee Avg-Daily Lake Average = 15.46 (*See Note)

Okeechobee Inflows (cfs):

S65E	3077	S191	162	Fisheating Cr	600
S154	152	S133 Pumps	0	S135 Pumps	0
S84	4	S127 Pumps	0	S2 Pumps	0
S71	156	S129 Pumps	0	S3 Pumps	0
S72	166	S131 Pumps	0	S4 Pumps	0

Total Inflows: 4317

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	4001 (Used)
S127 Culverts	0	S351	0	S77Below	4449 (NOT USED)
S129 Culverts	0	S352	250	S308	1300 (Used)
S131 Culverts		L8 Canal Pt	352	S308Below	1212 (NOT USED)
C5	0				

Total Outflows: 5903

****S77 Structure outflow is being used to compute Total Outflow.
****S308 Structure outflow is being used to compute Total Outflow.

Okeechobee Pan Evaporation (inches):

S77	0.41	S308	0.39

Average Pan Evap x 0.75 Pan Coefficient = 0.30" = 0.02'

Lake Average Precipitation using NEXRAD: = 0.03" = 0.00'

Evaporation - Precipitation: = 0.27" = 0.02'
Evaporation - Precipitation using Lake Area of 730 square miles
is equal to 5300 cfs out of the lake.
Lake Okeechobee (Change in Storage) Flow is -6504 cfs or -12900 AC-FT

Note: Headwater, tailwater, and stage values below are instantaneous values unless otherwise specified.

	Headwater Elevation (ft-msl)	Tailwater Elevation (ft-msl)	Disch (cfs)	Gate Positions #1 (ft)	#2 (ft)	#3 (ft)	#4 (ft)	#5 (ft)	#6 (ft)	#7 (ft)	#8 (ft)	
			(I) see note at bottom									
North East Shore												
S133 Pumps:	13.46	15.52	0	0	0	0	0	0				(cfs)
S193:												
S191:	19.23	15.50	162	0.0	0.0	0.5						
S135 Pumps:	13.46	15.35	0	0	0	0	0					(cfs)
S135 Culverts:			0	0.0	0.0							
North West Shore												
S65E:	21.13	15.71	3077	2.0	1.5	1.5	1.5	1.0	1.0			
S127 Pumps:	13.46	15.40	0	0	0	0	0	0				(cfs)
S127 Culvert:			0	0.0								
S129 Pumps:	12.97	15.56	0	0	0	0						(cfs)
S129 Culvert:			0	0.1								
S131 Pumps:	12.93	15.68	0	0	0							(cfs)
S131 Culvert:												
Fisheating Creek												
nr Palmdale		32.33	600									
nr Lakeport		16.02										
C5:	16.71	15.46	0	0.0	0.0	0.0						
South Shore												
S4 Pumps:	10.88	15.58	0	0	0	0						(cfs)
S169:	14.41	10.90	0	0.0	0.0	0.0						
S310:	15.55		2									
S3 Pumps:	10.59	15.60	0	0	0	0						(cfs)
S354:	15.60	10.59	0	0.0	0.0							
S2 Pumps:	9.87	15.52	0	0	0	0	0					(cfs)
S351:	15.52	9.87	0	0.0	0.0	0.0						
S352:	15.49	11.48	250	0.8	0.8							
C10A:	-NR-	-NR-		10.0	10.0	8.0	10.0	10.0				
L8 Canal PT		15.35	352									

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.87	15.52	0	-NR--NR--NR--NR--NR--NR-
S352:	11.48	15.49	250	-NR--NR--NR--NR-
S354:	10.59	15.60	0	-NR--NR--NR--NR-

```
Caloosahatchee River (S77, S78, S79)
  S47B:        13.04     12.03            0.0  0.5
  S47D:        12.03     10.71    -NR-    0.0
  S77:
    Spillway and Sector Flow:
                15.26     10.86    4000   -NR-  3.7  3.7  3.7
    Flow Due to Lockages+:             1

  S77 Below USGS Flow Gage        4449

  S78:
    Spillway and Sector Flow:
                10.32      3.16    5255    4.0  4.0  4.5  4.0
    Flow Due to Lockages+:             4

  S79:
    Spillway and Sector Flow:
                 2.92      1.40    7862    3.0  3.0  3.0  4.0  4.0  3.0  3.0  3.0
    Flow Due to Lockages+:             2
    Percent of flow from S77         51%
    Chloride            (ppm)      48


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Flow:
                15.30     14.26    1298    0.0  3.0  3.5  0.0
    Flow Due to Lockages+:             2

  S308 Below USGS Flow Gage       1212
  S153:        18.95     14.14      84    0.5  0.0
  S80:
    Spillway and Sector Flow:
                14.08      0.85    1808    0.0  1.0  1.0  0.0  1.0  1.0  0.0
    Flow Due to Lockages+:            13
    Percent of flow from S308         72%

  Steele Point Top Salinity    (mg/ml) ****
  Steele Point Bottom Salinity (mg/ml) ****

  Speedy Point Top Salinity    (mg/ml) 7089
  Speedy Point Bottom Salinity (mg/ml) 7723

 + Flow Due to lockages is computed utilizing average daily headwater and
   tailwater along with total number of lockages for the day to calculate
   a volume which is then converted to an average discharge in cfs.
```

Daily Precipitation Totals	1-Day (inches)	3-Day (inches)	7-Day (inches)	Wind Direction (Degø)	Wind Speed (mph)
S133 Pump Station:	-NR-	0.13	1.38		
S193:	-NR-	0.00	0.00	-NR-	-NR-
Okeechobee Field Station:	-NR-	0.00	0.00		
S135 Pump Station:	-NR-	0.98	2.15		
S127 Pump Station:	-NR-	0.00	0.08		
S129 Pump Station:	-NR-	0.70	1.62		
S131 Pump Station:	-NR-	0.00	0.07		
S77:	0.00	0.00	0.33	114	2
S78:	0.00	0.00	1.57	25	1
S79:	0.15	0.16	1.40	36	2

S4 Pump Station:	-NR-	0.00	0.00		
Clewiston Field Station:	-NR-	0.17	1.30		
S3 Pump Station:	-NR-	0.01	0.87		
S2 Pump Station:	-NR-	0.02	0.35		
S308:	0.18	0.18	0.24	270	0
S80:	0.57	0.77	0.78	90	0
Okeechobee Average (Sites S78, S79 and S80 not included)	0.09	0.17	0.65		
Oke Nexrad Basin Avg	0.03	0.06	0.67		

Okeechobee Lake Elevations				Difference from 10SEP13
10SEP13	-1 Day =	09 SEP 2013	15.49	0.03
10SEP13	-2 Days =	08 SEP 2013	15.51	0.05
10SEP13	-3 Days =	07 SEP 2013	15.52	0.06
10SEP13	-4 Days =	06 SEP 2013	15.51	0.05
10SEP13	-5 Days =	05 SEP 2013	15.53	0.07
10SEP13	-6 Days =	04 SEP 2013	15.54	0.08
10SEP13	-7 Days =	03 SEP 2013	15.55	0.09
10SEP13	-30 Days =	11 AUG 2013	16.03	0.57
10SEP13	-1 Year =	10 SEP 2012	14.81	-0.65
10SEP13	-2 Year =	10 SEP 2011	10.86	-4.60

Long Term Mean 30day Avearge ET for Lake Alfred (Inches) = 4.21

Lake Okeechobee Net Inflow (LONIN)						
		Average Flow over the previous 14 days				Avg-Daily Flow
10SEP13	Today =	10 SEP 2013	4652	WED		-604
10SEP13	-1 Day =	09 SEP 2013	5146	TUE		1328
10SEP13	-2 Days =	08 SEP 2013	5509	MON		3524
10SEP13	-3 Days =	07 SEP 2013	5282	SUN		8285
10SEP13	-4 Days =	06 SEP 2013	5105	SAT		2180
10SEP13	-5 Days =	05 SEP 2013	5485	FRI		4287
10SEP13	-6 Days =	04 SEP 2013	5528	THU		4081
10SEP13	-7 Days =	03 SEP 2013	5221	WED		6085
10SEP13	-8 Days =	02 SEP 2013	5055	TUE		3705
10SEP13	-9 Days =	01 SEP 2013	4672	MON		8314
10SEP13	-10 Days =	31 AUG 2013	4174	SUN		4563
10SEP13	-11 Days =	30 AUG 2013	3916	SAT		4619
10SEP13	-12 Days =	29 AUG 2013	3934	FRI		10499
10SEP13	-13 Days =	28 AUG 2013	3342	THU		4261

S65E						
		Average Flow over previous 14 days				Avg-Daily Flow
10SEP13	Today=	10 SEP 2013	3223	WED		3077
10SEP13	-1 Day =	09 SEP 2013	3200	TUE		3217
10SEP13	-2 Days =	08 SEP 2013	3149	MON		3216
10SEP13	-3 Days =	07 SEP 2013	3114	SUN		3378
10SEP13	-4 Days =	06 SEP 2013	3057	SAT		3009
10SEP13	-5 Days =	05 SEP 2013	3072	FRI		2776
10SEP13	-6 Days =	04 SEP 2013	3097	THU		3200
10SEP13	-7 Days =	03 SEP 2013	3081	WED		3234
10SEP13	-8 Days =	02 SEP 2013	3064	TUE		3130
10SEP13	-9 Days =	01 SEP 2013	3062	MON		3393
10SEP13	-10 Days =	31 AUG 2013	3041	SUN		3218
10SEP13	-11 Days =	30 AUG 2013	3105	SAT		3283

10SEP13 -12 Days =	29 AUG 2013	3197	FRI	3501
10SEP13 -13 Days =	28 AUG 2013	3278	THU	3496

Lake Okeechobee Outlets Last 14 Days

DATE	S-77 Discharge (0700-2100) (AC-FT)	S-77 Discharge (ALL DAY) (AC-FT)	Below S-77 Discharge (ALL-DAY) (AC-FT)	S-78 Discharge (0700-2100) (AC-FT)	S-78 Discharge (ALL DAY) (AC-FT)	S-79 Discharge (ALL DAY) (AC-FT)
10 SEP 2013	4738	7934	8822	6192	10429	15595
09 SEP 2013	4626	7771	8697	6240	10466	17759
08 SEP 2013	4554	7673	8528	5960	9945	17447
07 SEP 2013	4692	7895	8778	5889	9977	14918
06 SEP 2013	4782	8158	9020	6229	10457	16324
05 SEP 2013	5029	8434	9256	6521	10981	16496
04 SEP 2013	4866	8168	9168	6620	11170	17692
03 SEP 2013	4713	7952	8694	6532	10854	18873
02 SEP 2013	4878	8225	8778	6024	10130	19373
01 SEP 2013	4020	8386	8845	4812	10098	15902
31 AUG 2013	3853	8386	8850	4618	10162	16993
30 AUG 2013	3820	8326	8759	4686	10251	18255
29 AUG 2013	3827	8366	8851	4610	10025	18838
28 AUG 2013	3880	8438	8769	4459	9759	19453

DATE	S-310 Discharge (ALL DAY) (AC-FT)	S-351 Discharge (ALL DAY) (AC-FT)	S-352 Discharge (ALL DAY) (AC-FT)	S-354 Discharge (ALL DAY) (AC-FT)	L8 Canal Pt Discharge (ALL DAY) (AC-FT)
10 SEP 2013	3	0	496	0	698
09 SEP 2013	8	0	333	0	718
08 SEP 2013	-0	0	621	0	724
07 SEP 2013	10	0	682	0	779
06 SEP 2013	2	0	1130	0	808
05 SEP 2013	12	0	851	0	796
04 SEP 2013	18	0	944	0	784
03 SEP 2013	2	0	758	0	804
02 SEP 2013	-5	0	258	0	743
01 SEP 2013	2	0	389	0	782
31 AUG 2013	60	0	1251	0	797
30 AUG 2013	29	0	1384	0	808
29 AUG 2013	-2	0	325	0	718
28 AUG 2013	93	0	1222	0	753

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
10 SEP 2013	2578	2404	3611
09 SEP 2013	2419	2236	3596
08 SEP 2013	2276	2163	3640
07 SEP 2013	2781	2741	3600
06 SEP 2013	2831	2814	3573
05 SEP 2013	2722	2751	3596
04 SEP 2013	2507	2431	3624
03 SEP 2013	2560	2320	3620
02 SEP 2013	2432	2114	3640
01 SEP 2013	2636	2491	3628
31 AUG 2013	2920	2712	3604
30 AUG 2013	2951	2672	3600
29 AUG 2013	2820	2650	3580

28 AUG 2013   2344   2517   3620

*** NOTE: 1) Discharge from (0700-2100) is computed using Spillway and Sector Gate Discharges from 0700 hrs to 2100 hrs.
2) Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(I) - Flows preceeded by "I" signify an instantaneous flow computed from the single value reported for the day

---

* On 11 May 1999, Lake Okeechobee Elevation was switched from Instantaneous 2400 value to an average-daily lake average.
On 14 Mar 2001, due to the isolation of various gages within the standard 10 stations, the average of the interior 4 station gages was used as the Lake Okeechobee Elevation.
On 05 November 2010, Lake Okeechobee Elevation was switched to a 9 gage mix of interior and edge gages to obtain a more reliable representation of the lake level.
On 09 May 2011, Lake Okeechobee Elevation was switched to a 8 gage mix of interior and edge gages to obtain a more reliable representation of the lake level due to isolation of S135 from low lake levels.
Today Lake Okechobee elevation is determined from the 4 Int & 4 Edge stations
++ For more information see the Jacksonville District Navigation website at http://www.saj.usace.army.mil/
$ For information regarding Lake Okeechobee Service Area water restrictions please refer to www.sfwmd.gov

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Report Generated 11SEP2013 @ 09:46 ** Preliminary Data - Subject to Revision **

MEETING MINUTES

SR 710 Possible Regional Pond Brainstorming Meeting 2
SR 710 from US 441 to the L-63N Canal
FPID No. 419344-3-52-01

April 4, 2014, 2:00 pm; GoToMeeting

Attendees:

Name		E-mail	Office Phone Number
FDOT			
Rick Renna	State Drainage Engineer	rick.renna@dot.state.fl.us	850-414-5351
Brent Setchell	District Environmental Permitting Engineer	brent.setchell@dot.state.fl.us	863-519-2557
Nicole Monies	District Environmental Permitting Specialist	nicole.monies@dot.state.fl.us	863-519-2359
Amy Setchell	Senior Project Manager	amy.setchell@dot.state.fl.us	863-519-2609
SFWMD			
Lesley Bertolotti	Principal Scientist (Northern Everglades Program Manager)	lbertolo@sfwmd.gov	(561) 682-6415
Kevin Carter	Lead Scientist (TMDL Coordinator)	kecarter@sfwmd.gov	(561) 682-6949
Orlando Diaz	Senior Environmental Scientist (Water Quality Treatment Technologies)	odiaz@sfwmd.gov	(561) 682-6534
Eric Gonzalez	Project Manager Principal (Northern Everglades)	ergonzal@sfwmd.gov	(561) 682-6391
Jesse Markle	Okeechobee Regulatory Service Center Administrator	jmarkle@sfwmd.gov	(863) 462-5260 x3005
Damon Meiers	Principal Engineer (Dispersed Water Management)	dmeiers@sfwmd.gov	(561) 682-6876
Gary Ritter	Intergovernmental Representative: Okeechobee, Glades, and Highlands Counties	gritter@sfwmd.gov	(863) 462-5260 x3017
Steve Sentes	Regulatory Professional Lead (West Coast and Local Projects)	ssentes@sfwmd.gov	(239) 338-2929 x7754
Tony Waterhouse	Assistant Director Regulation Division	twaterho@sfwmd.gov	(561) 682-6867

Name		Email	Phone
FDEP			
Kim Dinkins	Environmental Consultant	Kimberleigh.Dinkins@dep.state.fl.us	850-245-8825
Katie Hallas	Environmental Consultant	Katie.Hallas@dep.state.fl.us	850-245-8432
Beth Alvi	Program Administrator	Elizabeth.Alvi@dep.state.fl.us	850-245-8559
Trina Veilhauer	Deputy Director	Trina.Vielhauer@dep.state.fl.us	850-245-8338
Wantman Group			
Henri Belrose	Project Manager	henri.belrose@wantmangroup.com	813-574-3190
Eric Lanning	Project Engineer	Eric.Lanning@WantmanGroup.com	407-581-1221
Kasey Carrere	Environmental Scientist	Kasey.Carrere@WantmanGroup.com	407-581-1221
Balmoral Group			
Greg Seidel	Project Drainage Engineer	gseidel@balmoralgroup.us	407-629-2185
Jennifer Nunn	Asst. Project Drainage Engineer	JNunn@Balmoralgroup.us	407-629-2185
Lori Stanfill	Asst. Project Drainage Engineer	LStanfill@balmoralgroup.us	407-629-2185
ATM			
Janet Hearn	Senior Engineer	JHearn@AppliedTM.com	386-256-1018

Purpose: The purpose of the meeting is for the FDOT to present the results of draft Pond Siting Report and continue discussion. Below are highlights of the meeting -

1. Greg Seidel began the meeting with introduction of the lead contacts for each agency and a brief description of the roles.

2. Brent Setchell reiterated from the previous meeting the FDOT's interest in providing as much nutrient loading reduction as possible based on the FDOT budget for "typical postage stamp ponds" on a project. He added that the FDOT is very interested in partnering in regional treatment. Rick Renna affirmed the FDOT position.

3. Mr. Setchell summarized the current SR 710 status - the pond costs for the project are estimated at [redacted]. The FDOT has not completed its review and this number is subject to change. The SR 710 project has ROW funding beginning in FY 2016 (July 2015). The goal for completing a partnering agreement for regional treatment would be April 2015 prior to finalizing our ROW maps. The project is not currently funded for construction, but the earliest construction could be funded would be FY 2019 (July 2018). Mr. Seidel provided a brief review of the SR 710 project utilizing the meeting exhibits (See

Attachments) and google maps. The project will be a four-lane curb and gutter typical section. The roadway begins at US 441 at the Airport Ditch and runs east along a new alignment across Taylor Creek then turns south tying into the existing SR 710 before crossing the L-63N Canal and ending at Mosquito Creek. The project length is approximately 3.85 miles.

4. Mr. Seidel gave a review of the Taylor Creek and L-63N Canal Bridge Hydraulics Reports (BHR) at SR 710 noting that the reports were completed in NAVD datum. The Taylor Creek BHR indicated that the Lower Taylor Creek basin is comprised of a 3.26 square mile Airport Ditch Basin and a 2.20 square mile Lower Taylor Creek Basin for a total drainage basin of 5.46 square miles. From the BHR for the L-63N Canal, the drainage basin upstream of the SR 710 crossing is 111.89 square miles.

5. Mr. Seidel provided the control elevations within Taylor Creek as 12.83 NAVD and within the L-63 as 17.83 NAVD.

6. Mr. Seidel gave a review of the pond siting report for the project and focused on the different elements reviewed such as drainage patterns, wetlands, cultural resources, utilities, geotechnical data and contamination screenings and estimated costs. For each of the areas, Mr. Seidel highlighted the evaluations for Pond Site 2C which would be within the location of the regional facility. He noted the study area did not include the entire regional pond area shown in the first meeting.

7. Mr. Renna made a comment that the 2C site would likely contain wetlands which could be used for wetland enhancement and nutrient uptake.

8. Mr. Seidel commented that the regional pond would reduce pollutants at a much higher concentration than the smaller SR 710 ponds. Specifically, the PSR estimated a reduction of 12 kg/yr for the post stamp ponds vs an estimated 2-3 MT/yr for a regional facility depending on the size.

9. Mr. Seidel went over the preliminary stormwater management concept for SR 710 utilizing the regional pond. This concept includes 3 drainage basins: the first basin will discharge to the regional pond; the second basin will discharge for pre-treatment to an existing (SR 70) pond without meeting pre/post requirements prior to discharging to L-63N Canal; and the third basin will discharge directly to the L-63N Canal. Mr. Renna commented that the existing permitting rules allow for compensatory treatment, and that approval of discharge

into the L-63N Canal would not be difficult. There was no objection from either SFWMD or FDEP participants.

10. Several local projects were noted including the Nubbin Slough STA, the Upper Taylor Creek STA, Treasure Island and Oak Park.

11. Gary Ritter commented that there is water demand from the L-63N Canal. If S-192 is utilized, project needs to be cognizant of water supply needs.

12. Concerns were expressed with the proximity of the Okeechobee airport to the proposed regional treatment facility and need to be at least 10,000 feet away to reduce the risk of bird strikes.

13. Mr. Renna indicated that he was meeting with Tom Frick from FDEP on Thursday to discuss this project among others.

14. Trina Veilhauer indicated the FDEP is quite interested and asked how we best move forward from this point. Brent Setchell offered that FDOT could fund The Balmoral Group through their District 1 Districtwide Drainage contract to perform a feasibility study for the regional treatment. It was agreed that the feasibility study would analyze two options – a project option funded and constructed entirely by the FDOT to meet permit requirements and a Stormwater Treatment Area (STA) option that investigated partnering and a much larger facility. Mr. Seidel indicated that a scope of services would be prepared to investigate the two options, which would include meetings and coordination with stakeholders. A draft report will be submitted to FDOT, SFWMD and FDEP for review prior to finalizing the report.

15. Brent Setchell noted that FDOT staff is not "experts" in the design of STAs and would look for either SFWMD or FDEP to take the lead in the design and construction of a larger STA.

16. Brent Setchell noted that FDOT would like to utilize suitable excavated material from the regional pond for use as fill on its SR 710 project.

17. It was noted that the project is not within the Central Florida Water Initiative (CFWI) boundaries.

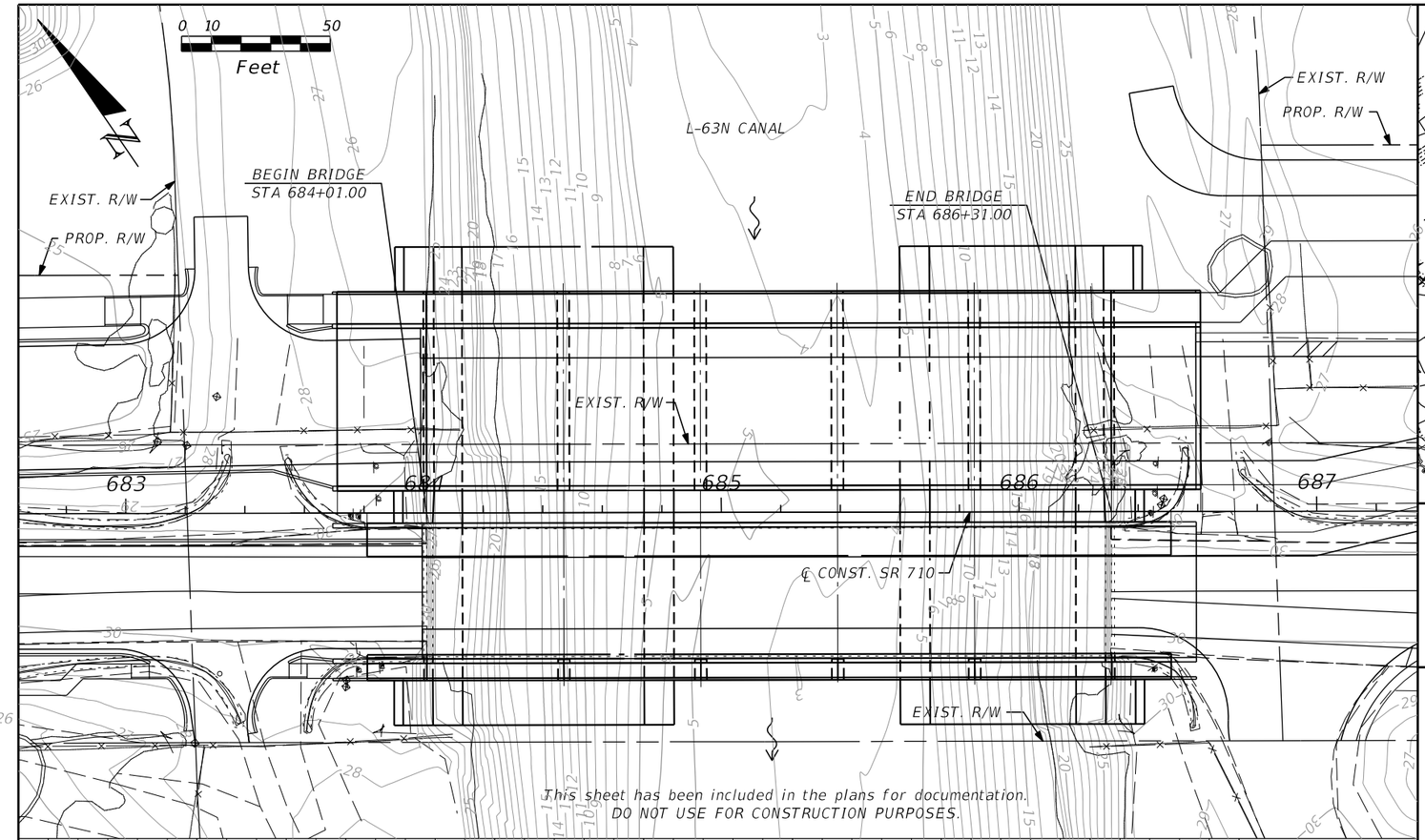
Action Items

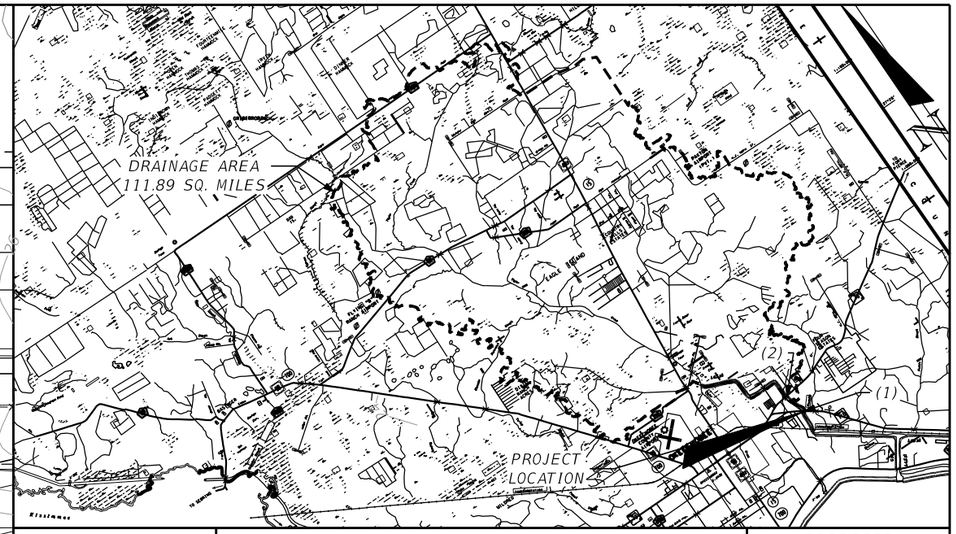
1. FDOT shall negotiate a Task Work Order with the Balmoral Group to prepare the feasibility study for the regional treatment options. The draft report is expected to be sent to FDEP & SFWMD for review by August 15, 2014.

2. FDEP and SFWMD to explore funding participation options and be prepared to make a funding commitment no later December 31, 2014 so that we may move forward with preparing an agreement.

c. Attendees (Via Email)

Attachment – Agenda Exhibits





(REFERENCE)	EXISTING STRUCTURES (1)	(2)	(3)	(4)	PROPOSED STRUCTURE
FOUNDATION	CONCRETE PILES	24" SQ. CONCRETE PILES			CONCRETE PILES
OVERALL LENGTH	230'	231'			230'
SPAN LENGTH	5 @ 46'	3 @ 77.0'			5 @ 46'
TYPE CONSTRUCTION	CONCRETE	CONCRETE COMPOSITE			CONCRETE
AREA OF OPENING @ D.F.		3120 SF			
BRIDGE WIDTH	46.25'	44.292' & 56.292'			130.6'
ELEV. LOW MEMBER	26.33 FT NAVD	27.62 FT NAVD			26.33 FT NAVD

HYDRAULIC DESIGN DATA

NOTE:
The hydraulic data is shown for informational purposes only to indicate the flood discharges and water surface elevations which may be anticipated in any given year. This data was generated using highly variable factors determined by a study of the watershed. Many judgements and assumptions are required to establish these factors. The resultant hydraulic data is sensitive to changes, particularly antecedent conditions, urbanization, channelization and land use. Users of this data are cautioned against the assumption of precision which cannot be obtained.

TERMS:
Design Flood: Utilized to assure a desired level of hydraulic performance.
Base Flood: Has a 1% chance of being exceeded in any given year (100 year frequency)
Overtopping Flood: Causes flow over the highway, over a watershed divide, or thru emergency relief structures.
Greatest Flood: The most severe that can be predicted where overtopping is not practicable.

WATER SURFACE ELEVATIONS: N.H.W. (Non-Tidal) 17.83 FT NAVD M.H.W. (Tidal) ____
CONTROL (Non-Tidal) 17.83 FT NAVD M.L.W. (Tidal) ____

FLOOD DATA:	MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	☐ OVERTOPPING or ☒ GREATEST FLOOD
STAGE ELEV. NAVD (ft)		20.24	21.04	23.26
DISCHARGE (cfs)		6797	8202	12063
AVERAGE VELOCITY (f/s)		2.94	3.34	4.18
EXCEEDANCE PROB. (%)		2	1	0.2
FREQUENCY (yr.)		50	100	500

SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:

PIER INFORMATION NUMBERS	SIZE AND TYPE	LONG TERM SCOUR ELEV. PROPOSED	TOTAL SCOUR ELEVATION WORST CASE < 100 yr. FREQ. (yr.) 100 YR	WORST CASE < 500 yr. FREQ. (yr.) 500 YR
			5.01	5.54

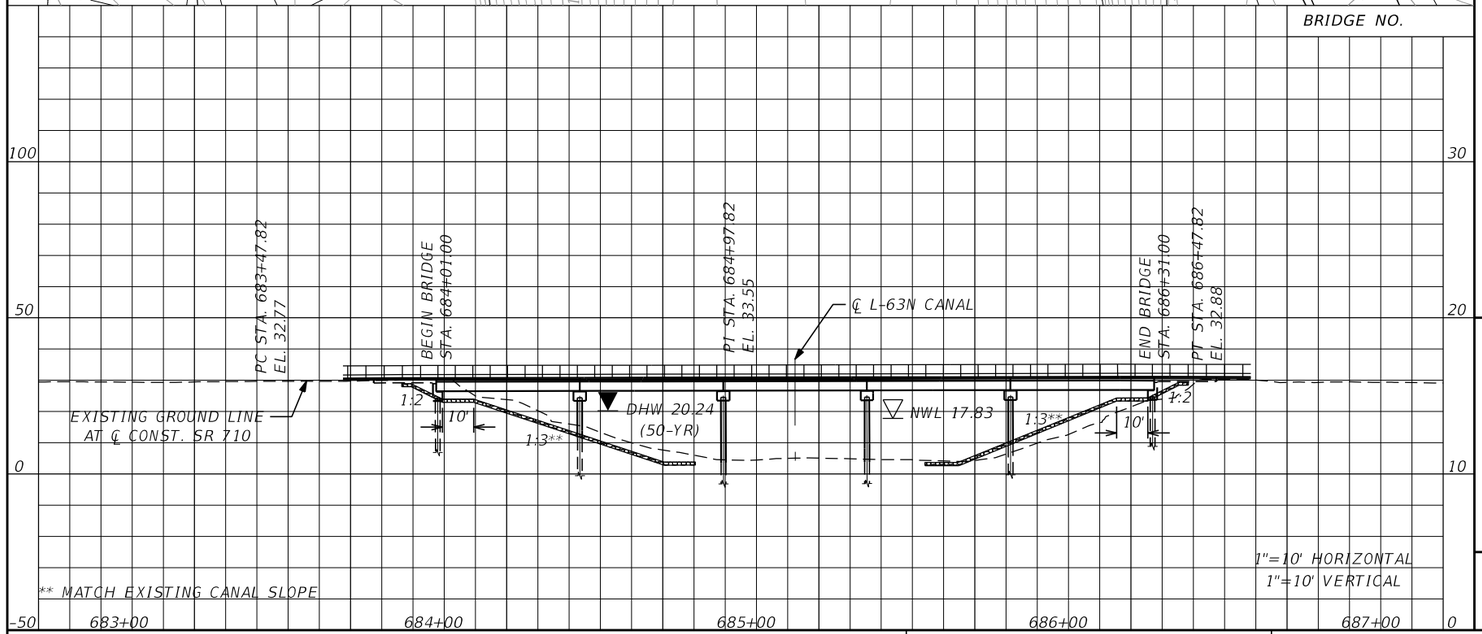
HYDRAULIC RECOMMENDATIONS

1. BEGIN BRIDGE STATION 684+01.00 END BRIDGE STATION 686+31.00 SKEW ANGLE 0
2. CLEARANCE PROVIDED: NAV: HORIZ. N/A VERT. N/A ABOVE EL. N/A DRIFT: HORIZ. 43 VERT. 8.5 ABOVE EL. 17.83 (NHW)
3. MINIMUM CLEARANCE: NAV: HORIZ. N/A VERT. N/A ABOVE EL. N/A DRIFT: HORIZ. 43 VERT. 6.09 ABOVE EL. 20.24 (DHW)
4. ABUTMENTS:

	BEGIN BRIDGE	END BRIDGE
RUBBLE GRADE:	STANDARD RUBBLE	STANDARD RUBBLE
SLOPE:	3:1	3:1
BURIED OR NON-BURIED HORIZ. TOE:	BURIED	BURIED
TOE HORIZ. DISTANCE:	10.00' TO EL. 4.00	10.00' TO EL. 4.00
LIMIT OF PROTECTION:	R/W TO R/W	R/W TO R/W

5. DECK DRAINAGE: ____

REMARKS: PRELIMINARY DESIGN ONLY – FURTHER ANALYSIS REQUIRED



REVISIONS DATE	DESCRIPTION	DATE	DESCRIPTION

The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
Phone: (407) 629-2185
www.balmoralgroup.us
Certificate of Authorization No. 26123
E.O.R.: Gregory S. Seidel, P.E. No. 47571

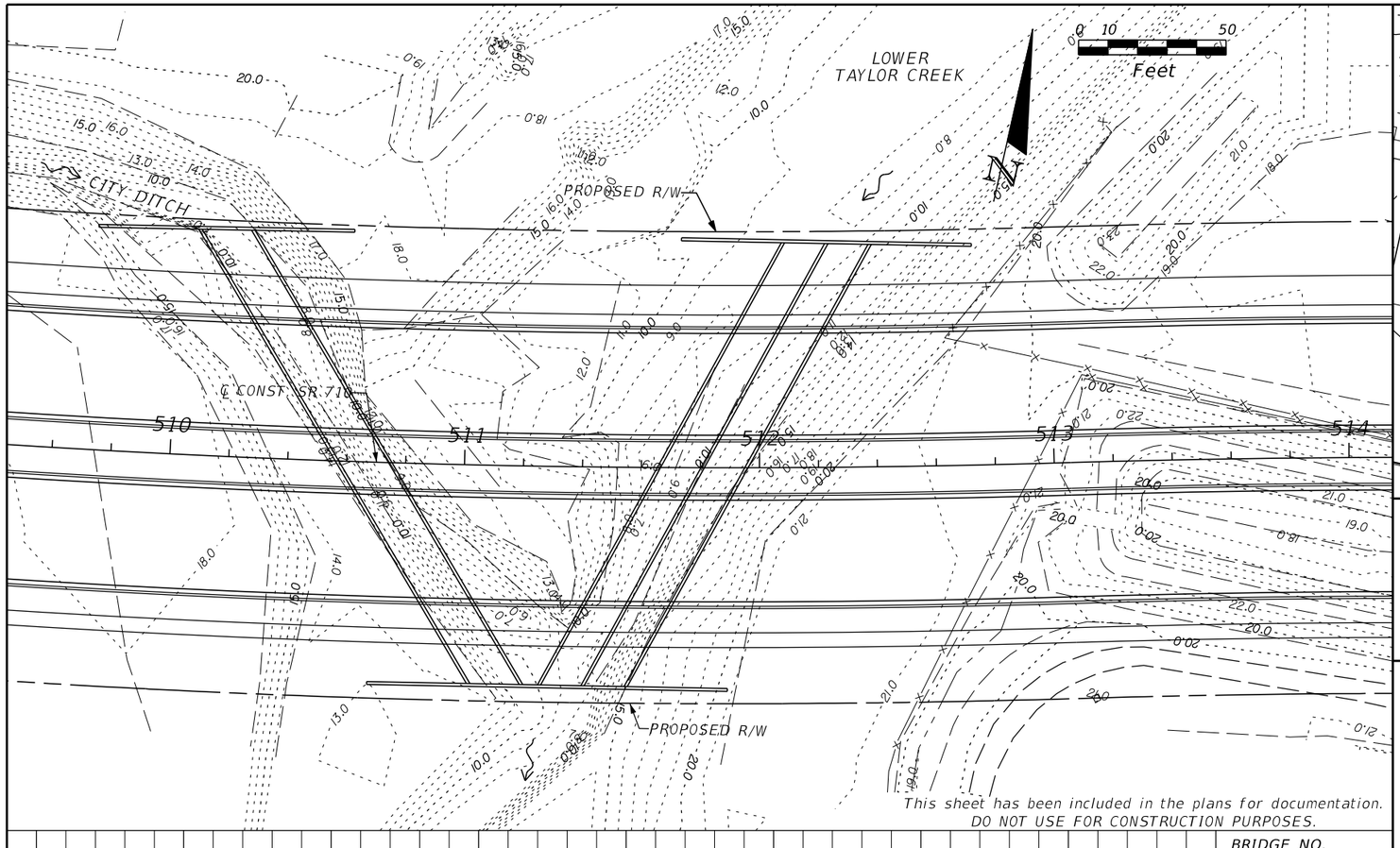
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

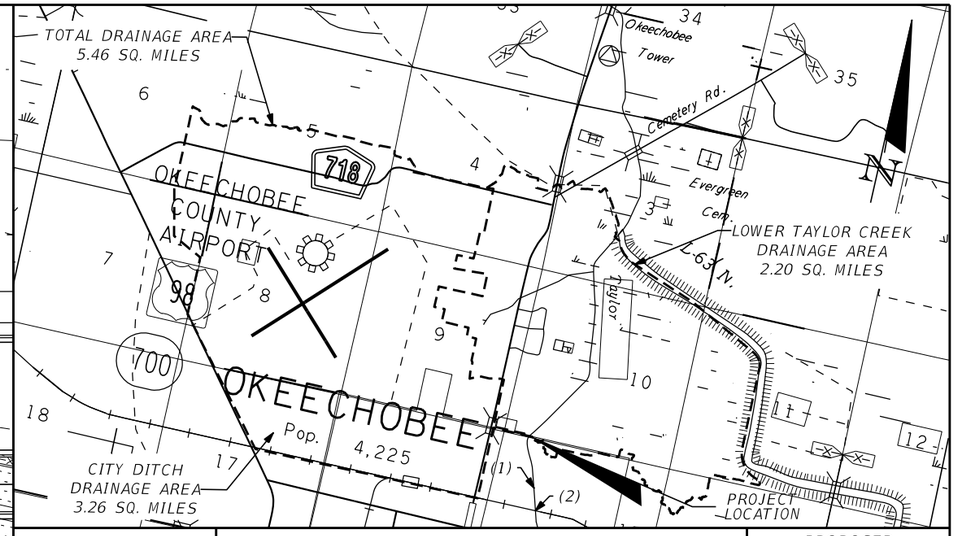
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-32-01

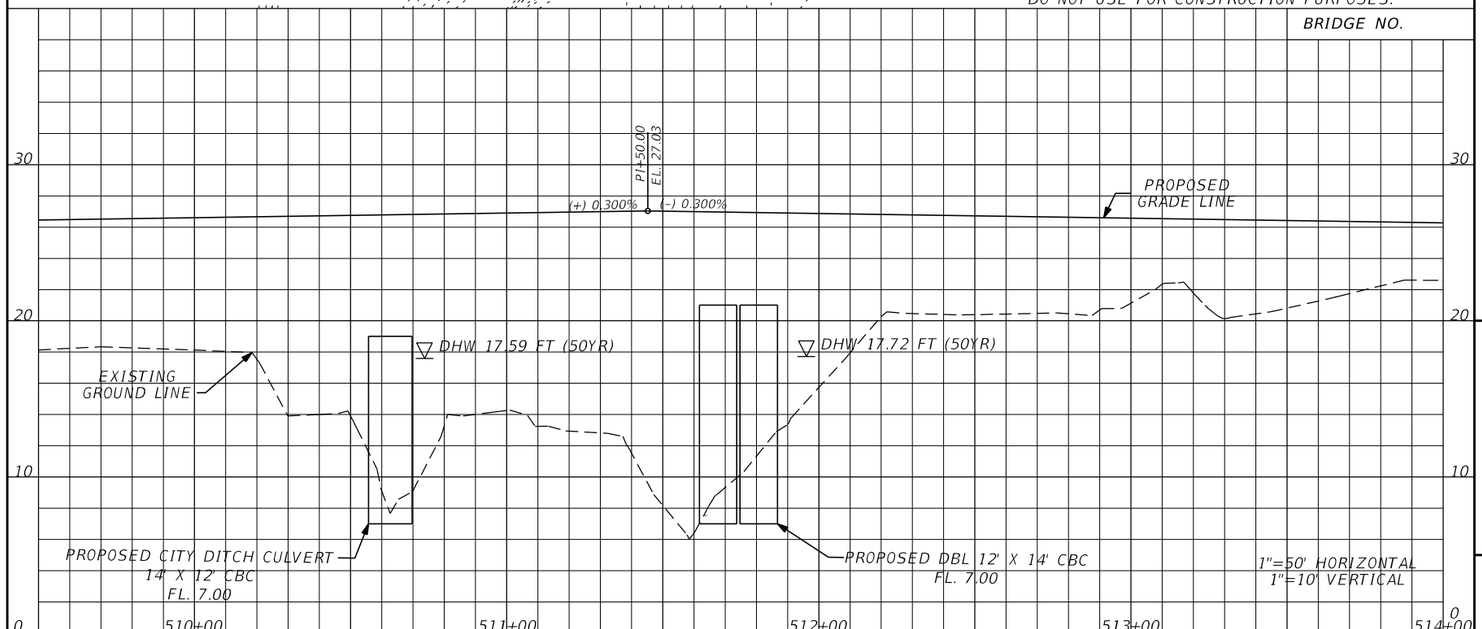
BRIDGE HYDRAULIC RECOMMENDATIONS

SHEET NO. BHRS

AExposito 1/31/2014 9:35:14 AM T:\00809.00\41934433201\drainage\BRHYRD-L63N.dgn







(REFERENCE)	EXISTING STRUCTURES (1)	(2)	(3)	(4)	PROPOSED STRUCTURE
FOUNDATION	CONCRETE PILES	CONCRETE PILES			N/A
OVERALL LENGTH	150'	180'			DBL 12'W X 14'H CBC
SPAN LENGTH	5 @ 30'	18 @ 10'			N/A
TYPE CONSTRUCTION					CONCRETE
AREA OF OPENING @ D.F.					N/A
BRIDGE WIDTH	40'	60'			N/A
ELEV. LOW MEMBER	18.83 FT NAVD	23.00 FT NAVD			N/A

HYDRAULIC DESIGN DATA

NOTE:
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Greatest Flood: The most severe that can be predicted where overtopping is not practicable.

WATER SURFACE ELEVATIONS: N.H.W. (Non-Tidal) 12.83 FT NAVD M.H.W. (Tidal) _____
CONTROL (Non-Tidal) 12.83 FT NAVD M.L.W. (Tidal) _____

FLOOD DATA:	MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	☐ OVERTOPPING or ☒ GREATEST FLOOD
STAGE ELEV. NAVD (ft)		17.72	18.22	19.05
DISCHARGE (cfs)		346	417	599
AVERAGE VELOCITY (f/s)		0.32	0.35	0.45
EXCEEDANCE PROB. (%)		2	1	0.2
FREQUENCY (yr.)		50	100	500

SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:

TOTAL SCOUR ELEVATION _____

PIER INFORMATION NUMBERS	SIZE AND TYPE	LONG TERM SCOUR ELEV.	WORST CASE < 100 yr. FREQ. (yr.)	WORST CASE < 500 yr. FREQ. (yr.)

HYDRAULIC RECOMMENDATIONS

1. BEGIN BRIDGE STATION _____ END BRIDGE STATION _____ SKEW ANGLE _____
2. CLEARANCE PROVIDED: NAV: HORIZ. ____ VERT. ____ ABOVE EL. _____ DRIFT: HORIZ. ____ VERT. ____ ABOVE EL. _____
3. MINIMUM CLEARANCE: NAV: HORIZ. ____ VERT. ____ ABOVE EL. _____ DRIFT: HORIZ. ____ VERT. ____ ABOVE EL. _____
4. ABUTMENTS:

	BEGIN BRIDGE	END BRIDGE
RUBBLE GRADE:		
SLOPE:		
BURIED OR NON-BURIED HORIZ. TOE:		
TOE HORIZ. DISTANCE:		
LIMIT OF PROTECTION:		

5. DECK DRAINAGE: _____

REMARKS: CITY DITCH CULVERT INFORMATION IS SHOWN FOR REFERENCE ONLY.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
Phone: (407) 629-2185
www.balmoralgroup.us
Certificate of Authorization No. 26123
E.O.R.: Gregory S. Seidel, P.E. No. 47571

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-32-01

BRIDGE HYDRAULIC RECOMMENDATIONS

SHEET NO. BHRS

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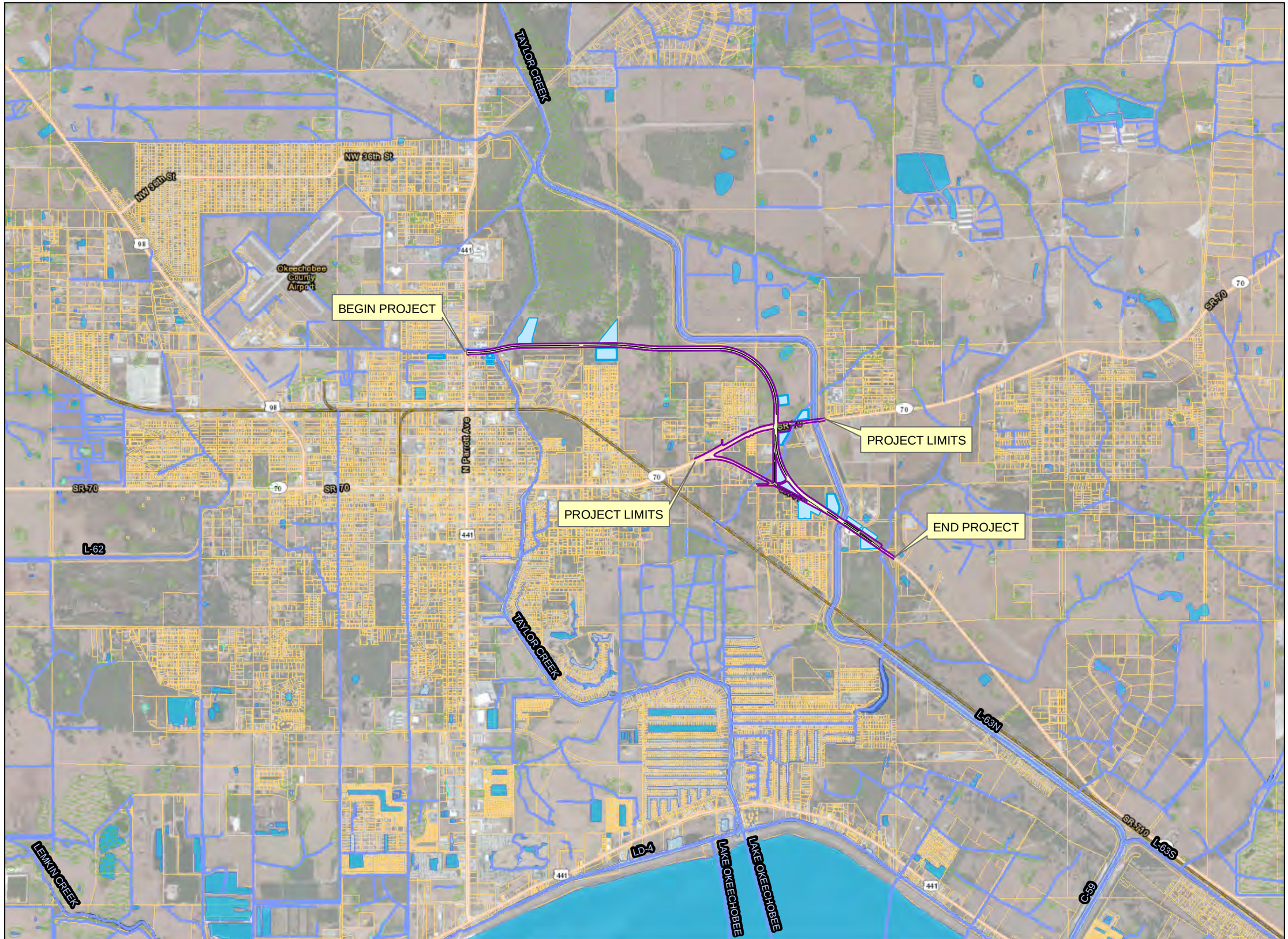
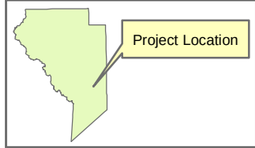


STATE OF FLORIDA • DEPARTMENT OF TRANSPORTATION



Legend

- Proposed Roadway
- Proposed Ponds
- Parcels
- Proposed ROW

Notes:

1. The information on this sheet is for information purposes only and is not to be used for construction. The sheet is to be used for documentation and to assist agencies and construction personnel with drainage concerns.

2. The existing contour information has been compiled from multiple sources including the National Elevation Dataset, Okeechobee County contours, LiDAR from Herbert Hoober Dike Area, existing permits, and recent survey files.

N
W E
S

0 200,000 Feet

0 50 Miles

Location Map
Figure 1

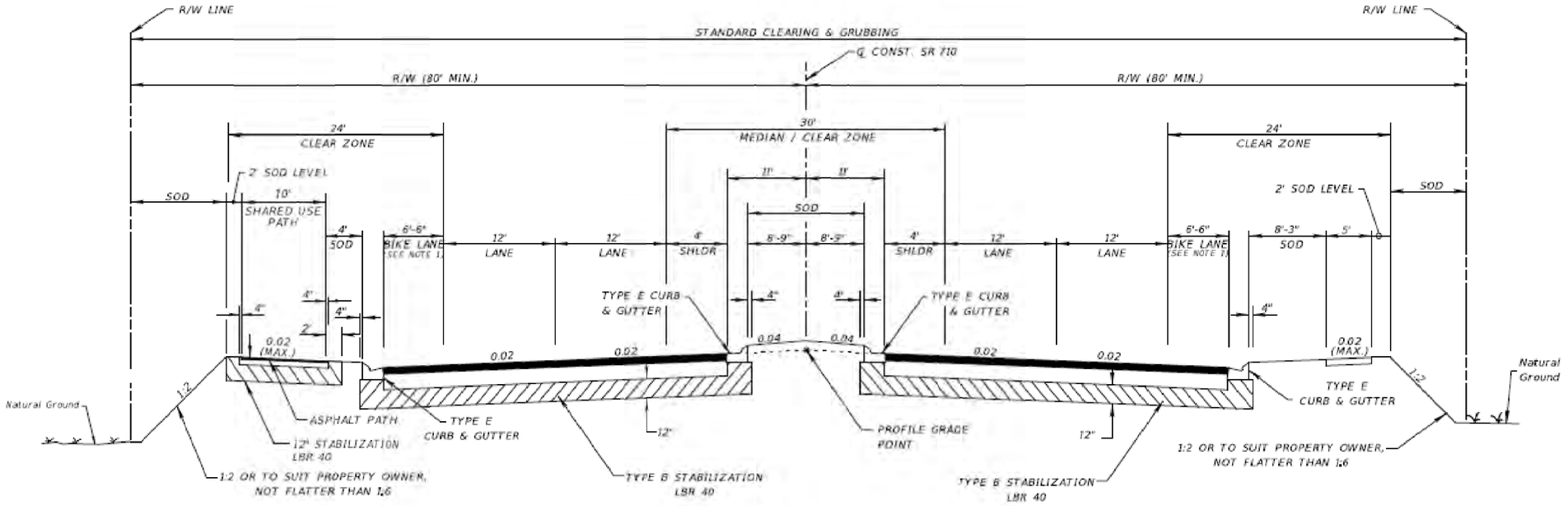
The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
Phone: (407) 629-2185
www.balmoralgroup.us
Certificate of Authorization No. 26123

TBG Proj. No.: 00809.00
FPID No.: 419344-3-32-01

SR 710 from US 441 to the L-63N Canal

Okeechobee County, Florida

Filename:	Map Date:	Map Prepared By:
FIG1_Location_SR710.mxd	October, 2013	The Balmoral Group



TYPICAL SECTION NO. 1
SR 710
STA. 500+00.00 TO STA. 703+50.00

TYPICAL SECTION NOTES:

1. PROVIDES FOR 8' USABLE SHOULDER.

NEW CONSTRUCTION

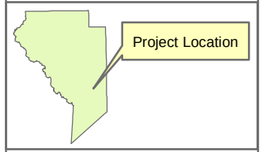
OPTIONAL BASE GROUP 11 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (4")
AND FRICTION COURSE FC-5 (¾") (RUBBER)

PATH

OPTIONAL BASE GROUP 1 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC A) (1")

TRAFFIC DATA

CURRENT YEAR = 2013 AADT = 7,100
ESTIMATED OPENING YEAR = 2015 AADT = 11,400
ESTIMATED DESIGN YEAR = 2035 AADT = 14,190
K = 9.0% D = 56.2% T = 20.9% (24 HOUR)
DESIGN HOUR T = 10.5%
DESIGN SPEED = 50 MPH



Typical Section
Figure 2

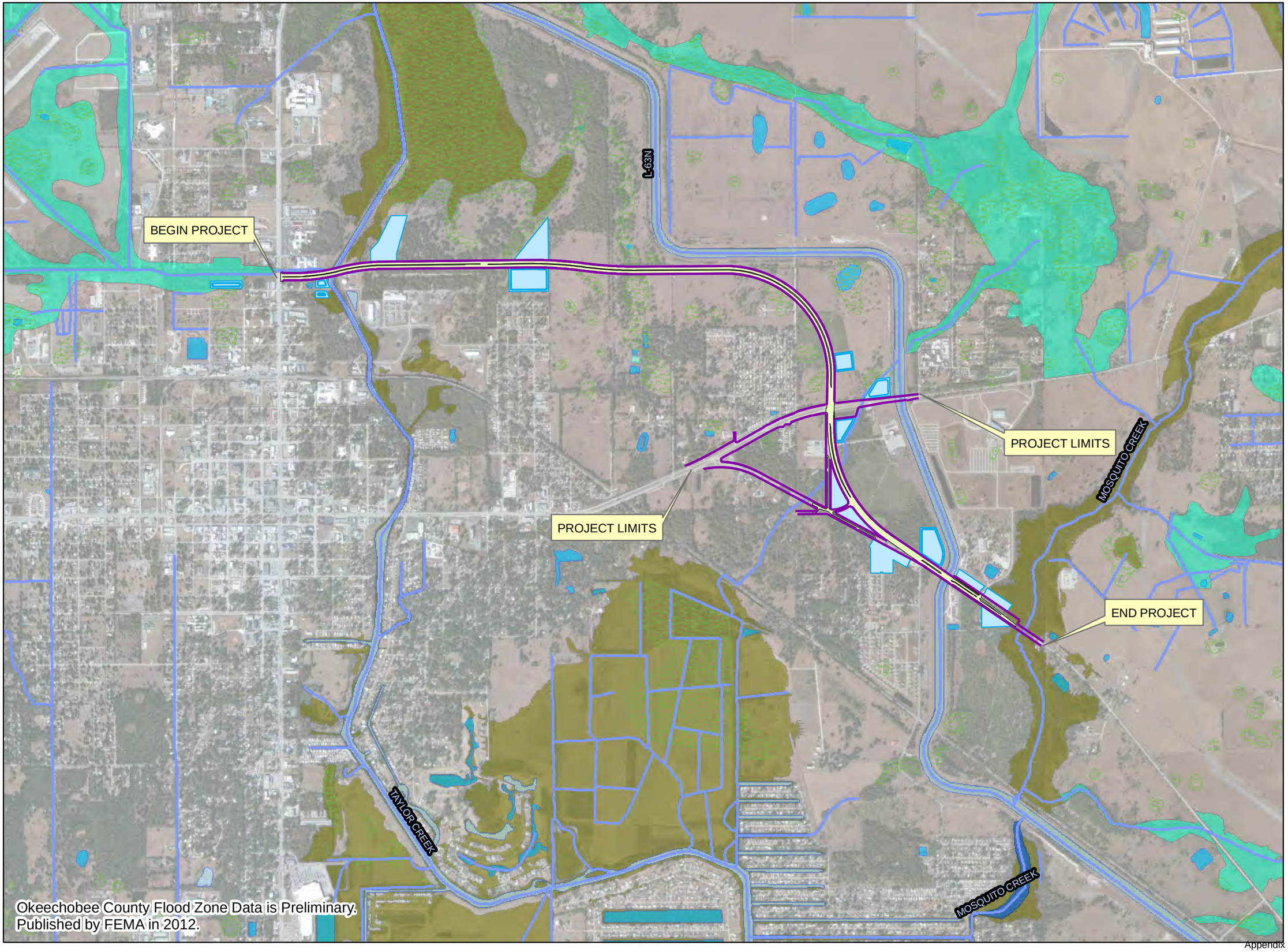
The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
Phone: (407) 629-2185
www.balmoralgroup.us
Certificate of Authorization No. 26123

TBG Proj. No.: 00809.00
FPID No.: 419344-3-32-01

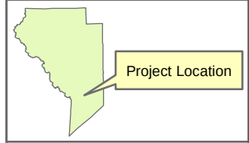
SR 710 from US 441 to the L-63N Canal

Okeechobee County, Florida

Filename:	Map Date:	Map Prepared By:
FIG2_TypicalSection_SR710.mxd	October, 2013	The Balmoral Group



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION



Legend

- Proposed Roadway
- Proposed Ponds
- Proposed ROW

Flood Zones

- A
- AE

Notes:

1. The information on this sheet is for information purposes only and is not to be used for construction. The sheet is to be used for documentation and to assist agencies and construction personnel with drainage concerns.

2. The existing contour information has been compiled from multiple sources including the National Elevation Dataset, Okeechobee County contours, LiDAR from Herbert Hoober Dike Area, existing permits, and recent survey files.

N
W E
S

0 1,000 2,000 Feet

0 0.25 Miles

FEMA FIRM Map
Figure 5

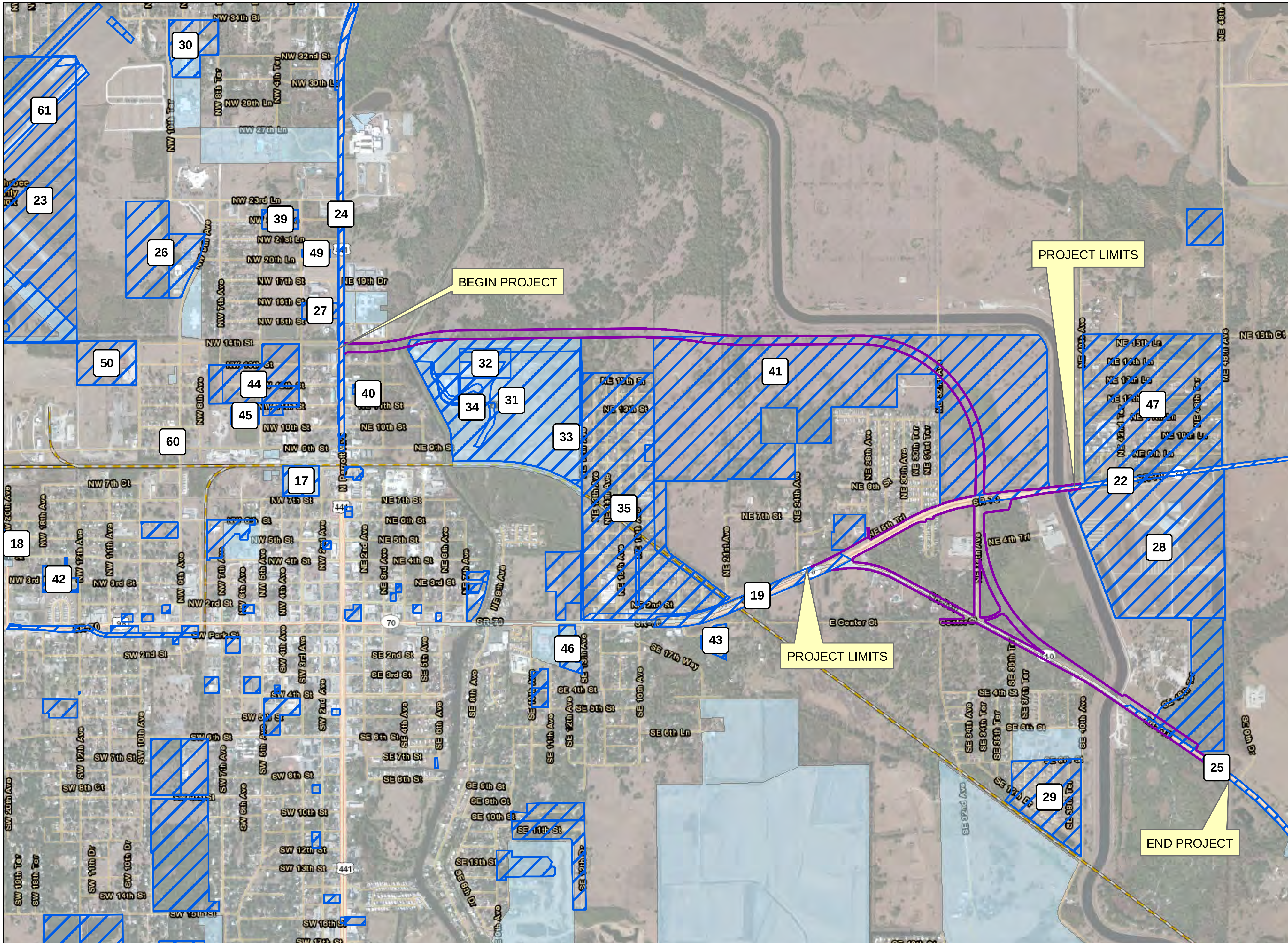
The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
Phone: (407) 629-2185
www.balmoralgroup.us
Certificate of Authorization No. 26123

TBG Proj. No.: 00809.00
FPID No.: 419344-3-32-01

SR 710 from US 441 to the L-63N Canal

Okeechobee County, Florida

Filename:	Map Date:	Map Prepared By:
FIGS_FEMAMap_SR710.mxd	October, 2013	The Balmoral Group



Legend

Existing Permits

ERP

SWIM

Proposed ROW

Project Location

Notes:

1. The information on this sheet is for information purposes only and is not to be used for construction. The sheet is to be used for documentation and to assist agencies and construction personnel with drainage concerns.

2. The existing contour information has been compiled from multiple sources including the National Elevation Dataset, Okeechobee County contours, LiDAR from Herbert Hoober Dike Area, existing permits, and recent survey files.

N W E S

0 200,000 Feet

0 50 Miles

Existing SFWMD Permits Map
Figure 8A

The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
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www.balmoralgroup.us
Certificate of Authorization No. 26123

TBG Proj. No.: 00809.00
FPID No.: 419344-3-32-01

SR 710 from US 441 to the L-63N Canal

Okeechobee County, Florida

Filename:	Map Date:	Map Prepared By:
FIG8A_ExistingPermits_SR710.mxd	October, 2013	The Balmoral Group

Project Location

Legend

Proposed ROW

Parcels

N W E S

0 25 50 Feet

Notes:

1. The information on this sheet is for information purposes only and is not to be used for construction. The sheet is to be used for documentation and to assist agencies and construction personnel with drainage concerns.

2. The aerial source is I.F. Rooks and Associates, March, 2013.

Pond 2C Aerial
Figure 12F

TBG Proj. No.: 00809.00
FPID No.: 419344-3-32-01

Okeechobee County, Florida

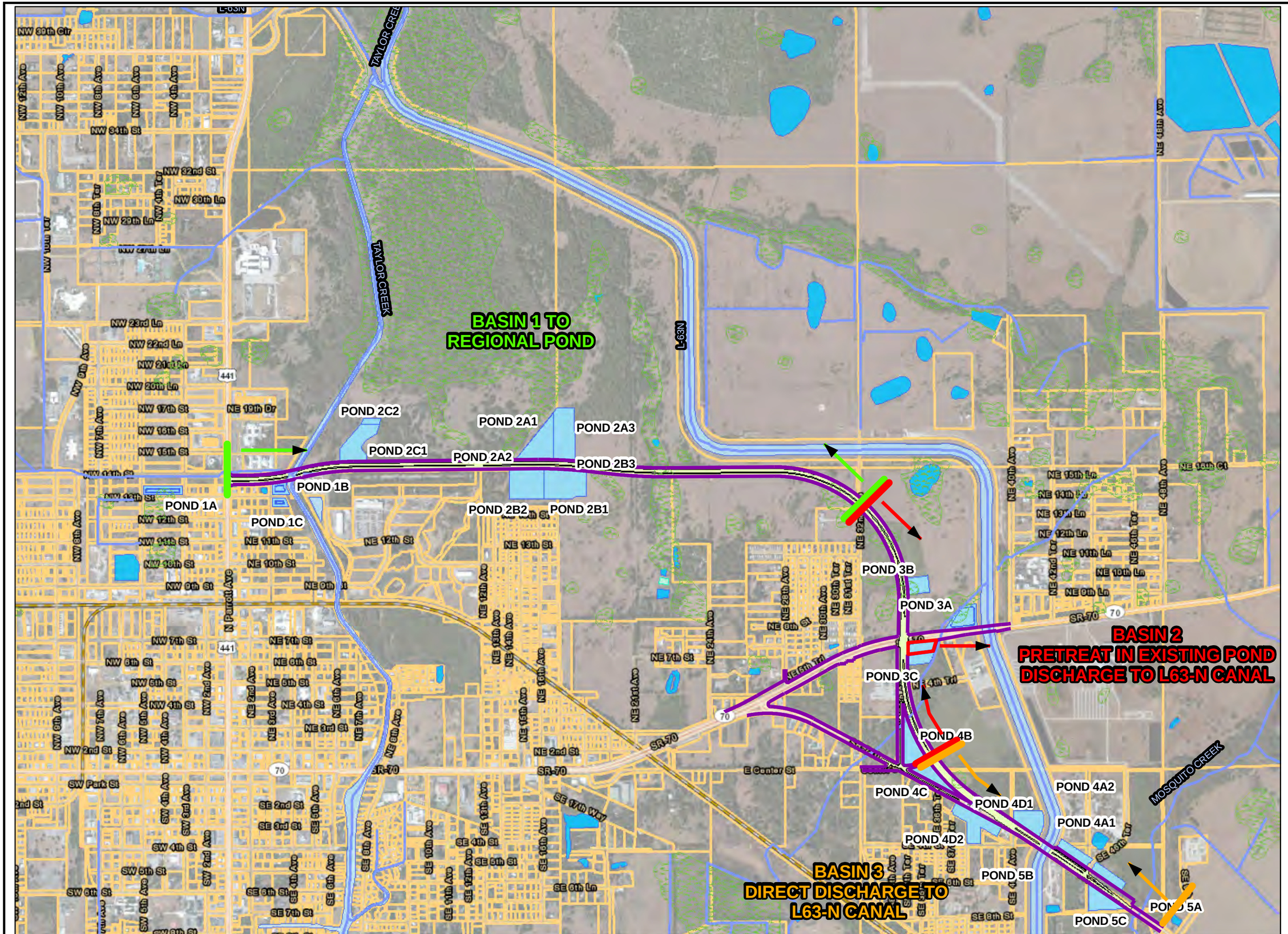
The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
Phone: (407) 629-2185
www.balmoralgroup.us
Certificate of Authorization No. 26123

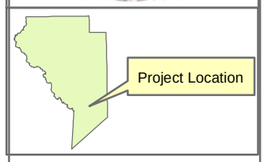
SR 710 from US 441 to
the L-63N Canal

Revised:

Map Date:
February, 2014

Map Prepared By:
The Balmoral Group





Legend

- Proposed Roadway
- Proposed Ponds
- Parcels
- Proposed ROW

Notes:

1. The information on this sheet is for information purposes only and is not to be used for construction. The sheet is to be used for documentation and to assist agencies and construction personnel with drainage concerns.

2. The existing contour information has been compiled from multiple sources including the National Elevation Dataset, Okeechobee County contours, LiDAR from Herbert Hoober Dike Area, existing permits, and recent survey files.

N W E S

0 800 1,600 Feet

0 0.2 Miles

Regional Pond
Post Basin Map

The Balmoral Group
165 Lincoln Avenue
Winter Park, FL 32789
Phone: (407) 629-2185
www.balmoralgroup.us
Certificate of Authorization No. 26123

TBG Proj. No.: 00809.00
FPID No.: 419344-3-32-01

SR 710 from US 441 to the L-63N Canal

Okeechobee County, Florida

Filename:	Map Date:	Map Prepared By:
80710_Regional_Pond_Post_Basin_Map.mxd	October, 2013	The Balmoral Group

SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study
Initial Meeting with Hamrick Property Owner
Meeting Minutes
FPID No. 432644-1-32-01 – D1 DW Drainage

Location: District One, Bartow
Date: July 11, 2014
Time 11:00 am

The purpose of the meeting is to introduce the SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study as an investigation being undertaken by the FDOT District One as a part of the SR 710 new alignment project in Okeechobee.

Attendees: See attached Sign-In Sheet

1. Mr. Brent Setchell gave an introduction and project background on the SR 710 Feasibility Study to the property owners, Mr. Michael and Ms. Maryann Hamrick and their consultant, Morris Crady.

2. Mr. Greg Seidel introduced the regional pond alternative that is to be constructed by the FDOT for the SR 710. This option would incorporate offsite areas associated with Lower Taylor Creek.

   Ms. Janet Hearn introduced the Stormwater Treatment Area (STA) alternative which would require interagency cooperation and be hydraulically connected to the L63-N canal and Upper Taylor Creek. Ms. Hearn said that the amount of nutrient reduction achieved by the STA would depend in part on the area of the STA but that a minimum size of 100 acres is desirable. This is comparable to the Taylor Creek STA which has a treatment area of 118 acres.

3. Ms. Amy Setchell gave a brief update on the SR 710 new alignment project from L-63N to US-41.

4. Mr. Hamrick reiterated that maintaining the integrity of the property is important to them.

5. As part of the study, a portion of the property will be surveyed to verify design assumptions. Access to the site will be coordinated with the ranch manager. Contact information to be provided by The Wantman Group. Survey will need to get started as soon as possible.

6. The next step is to set-up a Stakeholder Meeting in Okeechobee. This will be scheduled in the next two weeks. The Balmoral Group will be contacting the Hamricks regarding availability.

End of Minutes

SIGN IN SHEET

SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study
Initial Meeting with Hamrick Property Owner
Meeting Agenda
FPID No. 432644-1-32-01 - D1 DW Drainage

Location: District One, Bartow
Date: July 11, 2014
Time 11:00 am

NAME	FIRM/AGENCY	OFFICE / RESPONSIBILITY	EMAIL ADDRESS	Initials
Carlton Spirio	FDOT	Drainage	Carlton.Spirio@dot.state.fl.us	
Brent Setchell	FDOT	Drainage	Brent.Setchell@dot.state.fl.us	BS
Amy Setchell	FDOT	PM	Amy.Setchell@dot.state.fl.us	AES
Michael Hamrick	Property Owner		MHamrick@manateelegal.com	MHS
Morris Crady				MC
Gregory Seidel	The Balmoral Group	Consultant	gseidel@balmoralgroup.us	GS
Jennifer Nunn	The Balmoral Group	Consultant	jnunn@balmoralgroup.us	JN
Janet Hearn	ATM	Consultant	jhearn@appliedtm.com	JH
Henri Belrose	Wantman Group	Consultant	Henri.belrose@wantmangroup.com	HB
Alfredo Rodriguez	Wantman Group	Consultant	Alfredo.rodriguez@wantmangroup.com	AR
Gregory Bowne	FDOT	Right-of-way	Gregory.Bowne@dot.state.fl.us	Greg
Jennie Richard	FDOT	Right-of-way	Jennie.Richard@dot.state.fl.us	JR
Morris Crady	Lucido & Assoc.	Hamrick & Sons	mcrady@lucidodesign.com	MC
MARYANN HAMRICK	HAMRICK & SONS		ANNIE4UF@ACI.COM	mah
Nicole Monies	FDOT	Permits	nicole.monies@dot.statefl.us	NM

SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study
Stakeholder Meeting Minutes
FPID No. 432644-1-32-01 – D1 DW Drainage

Location: SFWMD Okeechobee Service Center, Okeechobee
Date: July 31, 2014
Time 10:30 am

The purpose of the meeting is to introduce the SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study as an investigation being undertaken by the FDOT District One as a part of the SR 710 new alignment project in Okeechobee.

Attendees: See attached Sign-In Sheet

1. Mr. Brent Setchell gave an introduction on the SR 710 Feasibility Study.

2. Mr. Greg Seidel gave a brief project history explaining how the SR 710 Feasibility Study has progressed to this point.

3. Mr. Greg Seidel introduced the regional pond alternative that is to be constructed by the FDOT for the SR 710. This option would incorporate offsite areas associated with Lower Taylor Creek.
    a. Representatives from Okeechobee County confirmed the airport ditch is owned by the County from Taylor Creek up to airport property.
    b. Mr. Setchell voiced his concern about conveying water from the airport ditch to the regional pond. He mentioned the preferred option on behalf of the FDOT would be to provide the required 1-inch of treatment for the SR 710 roadway and demonstrate that the nutrient removal shows a net benefit to the community.
    c. Mr. Seidel mentioned that a lower treatment depth could be provided. He also indicated that a control structure could be located at Taylor Creek and securing flood rights from the property owners could be an option.
    d. Mr. Setchell explained the SR 710 Regional Pond approach in that Basins 1 and 2 would be treated by the Regional Pond, Basin 3 and a portion of Basin 4 would pre-treat via the existing pond and that the remaining runoff would discharge directly to the L-63N Canal.

4. Ms. Janet Hearn introduced the Stormwater Treatment Area (STA) alternatives which would require interagency cooperation and be hydraulically connected to the L63-N canal and Upper Taylor Creek.
    a. Ms. Hearn said that for planning purposes a 100-acre STA is being evaluated. This is comparable to the Taylor Creek STA which has a treatment area of 118 acres. A 100 acre STA could remove about 1,500 to 1,600 kg of TP per year. An overview of three potential locations for a 100 acre STA within the Hamrick property was presented. These three sites were selected to avoid wetlands.

b. The Lake Okeechobee TMDL requires an in-lake concentration of 40 parts per billion (ppb) TP.
c. FDEP added that the existing Taylor Creek STA provides approximately 1520 kg of removal.
d. The STA 2 option would require some rehabilitation of the existing wetland in order to retain runoff from the surrounding property. This would provide additional storage and remove approximately 180 kg TP per year without additional flow from the L-63N Canal or Upper Taylor Creek.
e. The STA 2 option could provide up to 1000 kg of removal if inflow was augmented with flow from L-63N Canal.
f. Mr. Morris Crady asked if a combination of STA 1 and STA 2 would be possible in order to still use the property (i.e. for walking trails) in the winter. Mr. Seidel responded by saying the final STA choice is not part of the feasibility study and would be coordinated under final design.
g. Mr. Setchell liked the fact that the STA 2 option would provide some treatment and attenuation. However, he expressed some concern for the STA 2 option since the restored wetlands would be limited on the treatment volume depth (storage) provided. Would this option still require a control structure and how would the western bank of Lower Taylor Creek be affected?
h. If an STA option is chosen, FDOT would still need to obtain fill for the SR 710 project and this could be coordinated through agreements.
i. Mr. Hamrick asked if an STA option would impact ranch operations. Ms. Bonnie Wolff Pelaez confirmed that the BMAP manual does not restrict cattle from the wetlands.
j. Mr. Hamrick mentioned that the wetland portion of his property is the emotional piece, and the upland portion of his property is the economic piece.

5. Mr. Seidel mentioned that if an STA option was selected, FDOT would not be taking the lead on this design and this would most likely fall to the FDEP or SFWMD.

6. Mr. Jim Threewits reiterated his concerns with ponds adjacent to the right-of-way. The County has requested from FDOT that the new SR 710 alignment be a main corridor to attract development. The County wants this gateway to be pretty and attractive for development and does not want unattractive ponds or ponds along the roadway frontage. Mr. Threewits feels this is a chance to do something good and doesn't want to miss out and added that this is a very valuable piece of the land to the county.
    a. Mr. Setchell responded by saying that FDOT is evaluating the need for pond fencing. FDOT is open to providing drainage easements for property owners to provide pond maintenance.
    b. Mr. Setchell stated that FDOT does not want to move ponds away from the right-of-way due to the hydraulics and increase in cost.

7. Mr. Seidel commented that the current schedule calls for a decision to be reached by the end of the year.
    a. Ms. Amy Setchell responded that the draft Feasibility report is due Sept. 22nd with the final report due Oct. 22nd.

b. The next step is to review the information presented today individually with the stakeholders and obtain feedback as necessary.
c. Final calculations need to be performed.

End of Minutes

c. Attendees
Carl Spirio, P.E., FDOT Drainage
Alfredo Rodriguez, P.E., Wantman

SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study
Stakeholder Meeting
Sign-In Sheet
FPID No. 432644-1-32-01 - D1 DW Drainage

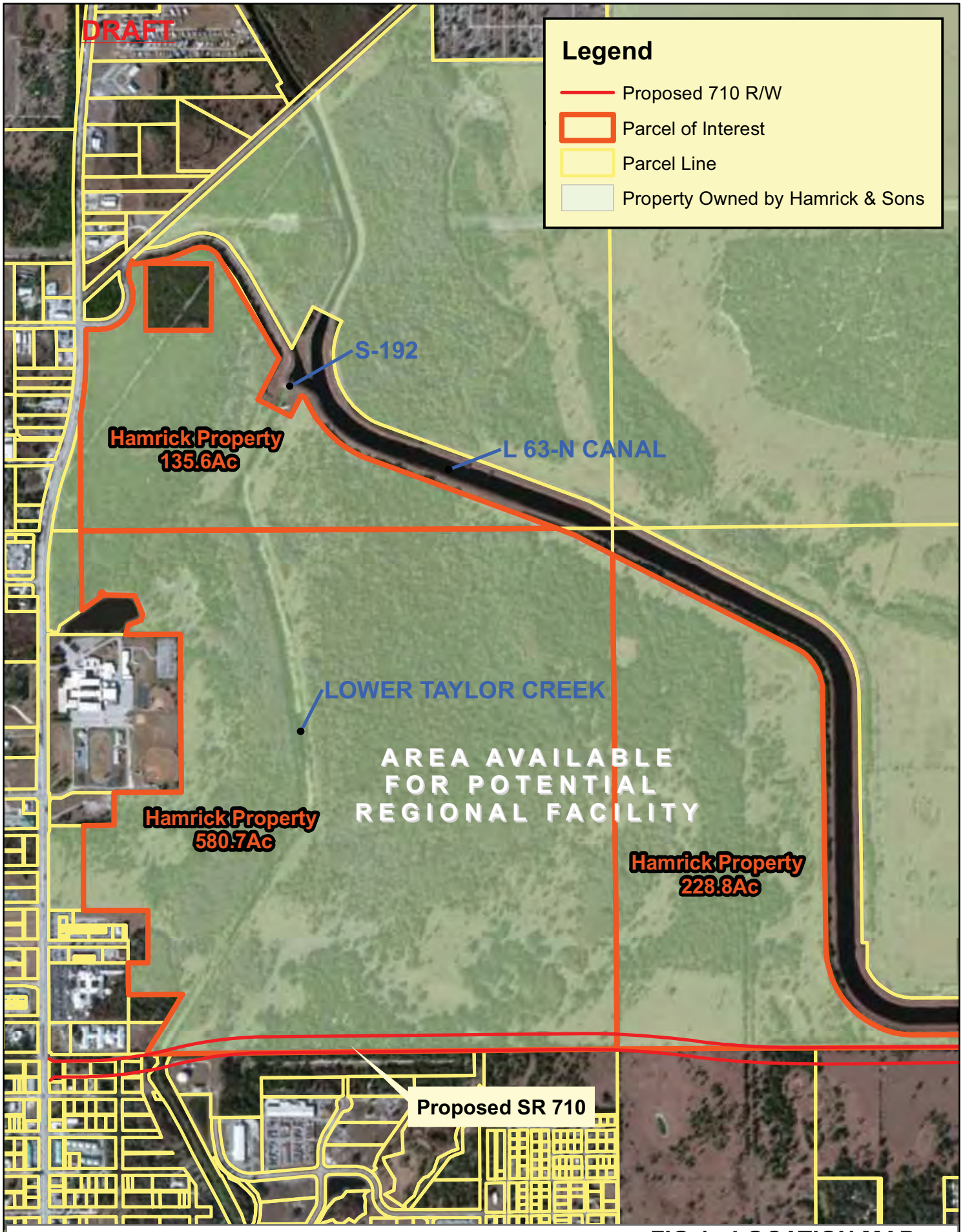
Location: SFWMD Okeechobee Service Center Auditorium
3800 NW 16th Boulevard, Suite A, Okeechobee, FL 34972
Date: July 31, 2014
Time 10:30 am

NAME	FIRM/AGENCY	OFFICE / RESPONSIBILITY	EMAIL ADDRESS	Initials
Carlton Spirio	FDOT	Drainage	Carlton.Spirio@dot.state.fl.us	
Brent Setchell	FDOT	Permitting	Brent.Setchell@dot.state.fl.us	
Amy Setchell	FDOT	PM	Amy.Setchell@dot.state.fl.us	
Kevin Inlge	FDOT		Kevin.Ingle@dot.state.fl.us	
Jeffrey Mednick	FDOT		Jeffrey.Mednick@dot.state.fl.us	
Michael Hamrick	Property Owner	Hamrick & Sons	MHamrick@manateelegal.com	
Morris Crady	Lucido & Assoc.	Hamrick & Sons	mcrady@lucidodesign.com	
Maryann Hamrick	Property Owner	Hamrick & Sons	Annie4UF@aol.com	
Regina Hamrick	Property Owner	Hamrick & Sons		
Gregory Seidel	The Balmoral Group	Project Drainage Engineer	gseidel@balmoralgroup.us	
Jennifer Nunn	The Balmoral Group	Project Drainage Engineer	jnunn@balmoralgroup.us	
Janet Hearn	ATM	STA Designer	jhearn@appliedtm.com	
Henri Belrose	Wantman Group	Consultant PM	Henri.belrose@wantmangroup.com	
Alfredo Rodriguez	Wantman Group	Consultant Asst. PM	Alfredo.rodriguez@wantmangroup.com	
Kathy Scott	Okeechobee Co.	Kathy Airport/TDC	kscott@co.okeechobee.fl.us	
Lee Evett	Okeechobee Co.		levett@co.okeechobee.fl.us	
Jim Threewits	Okeechobee Co.	Admin	jthreewits@co.okeechobee.fl.us	
Kelly Baney	Okeechobee Co.		kbaney@co.okeechobee.fl.us	
Katie Hallas	FDEP	PHONE	Katie.Hallas@dep.state.fl.us	
Elizabeth Alvi	FDEP	PHONE	Elizabeth.Alvi@dep.state.fl.us	
Jim Jeffords	USACE		jim.w.jeffords@usace.army.mil	
David Allen	City of Okeechobee		dallen@cityofokeechobee.com	
Lesley Bertolotti	SFWMD		lbertolo@sfwmd.gov	
Bonnie Wolff Pelaez	FDACS		Bonnie.WolffPelaez@freshfromflorida.com	
Regina Hamrick				

SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study
Stakeholder Meeting
Sign-In Sheet
FPID No. 432644-1-32-01 - D1 DW Drainage

Location: SFWMD Okeechobee Service Center Auditorium
3800 NW 16th Boulevard, Suite A, Okeechobee, FL 34972
Date: July 31, 2014
Time 10:30 am

NAME	FIRM/AGENCY	OFFICE / RESPONSIBILITY	EMAIL ADDRESS	Initials
GARY RITTER	SFWMD	INTER GOV	gritter@sfwmd.gov	GR

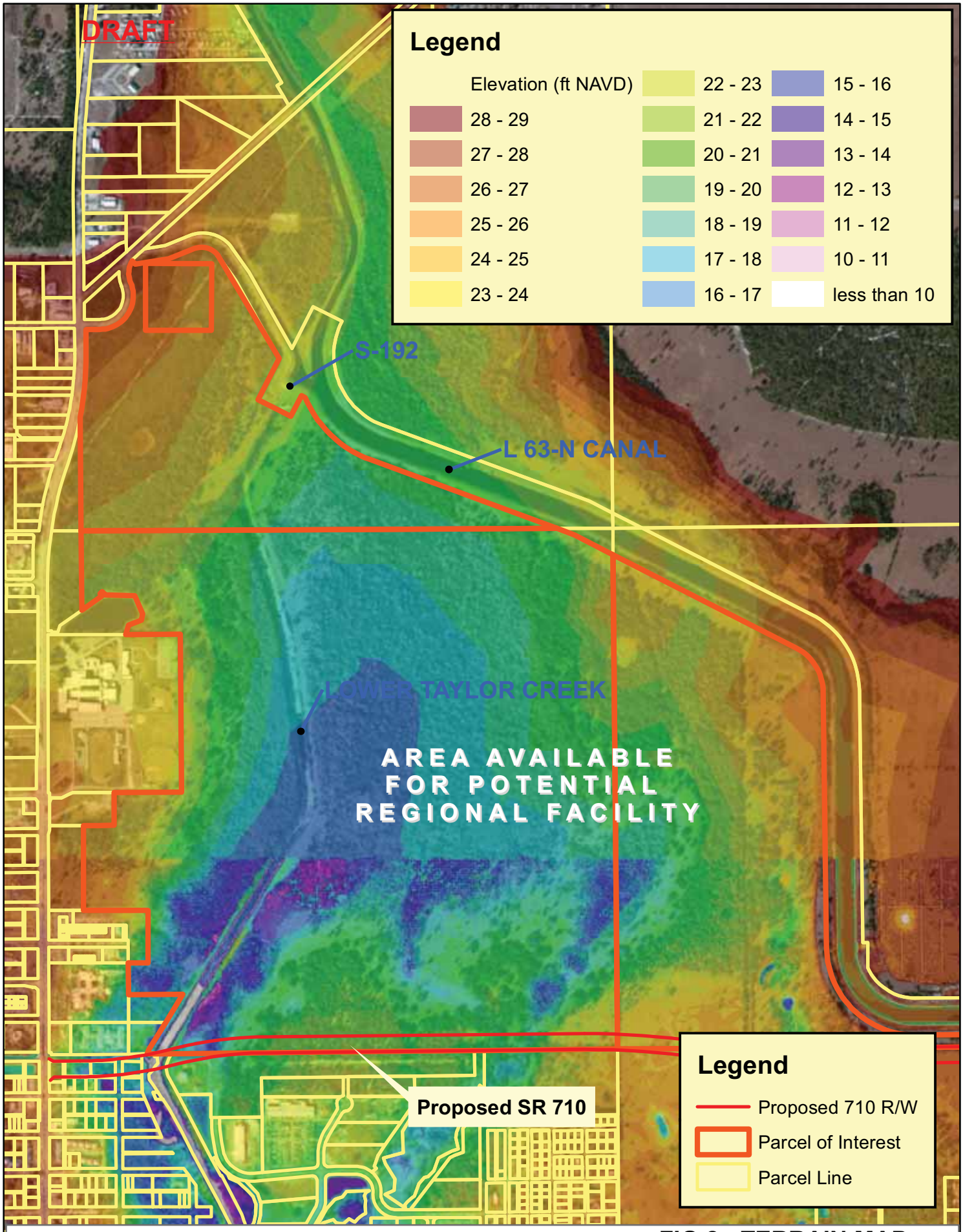


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

0 0.125 0.25 Miles

FIG 1 - LOCATION MAP

SR 710 Regional Facility Conceptual Analysis



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

0 0.125 0.25 Miles

FIG 2 - TERRAIN MAP

SR 710 Regional Facility Conceptual Analysis

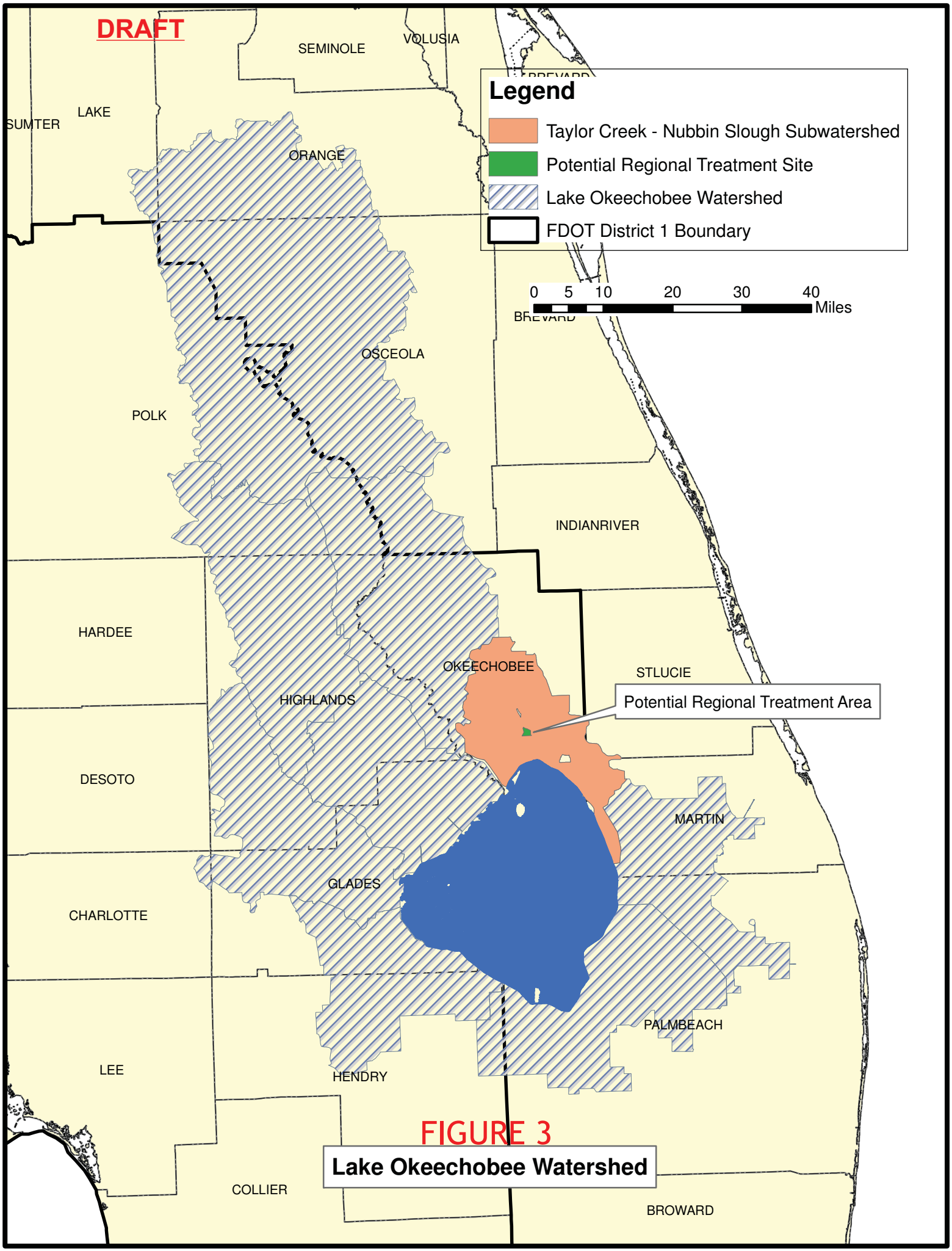
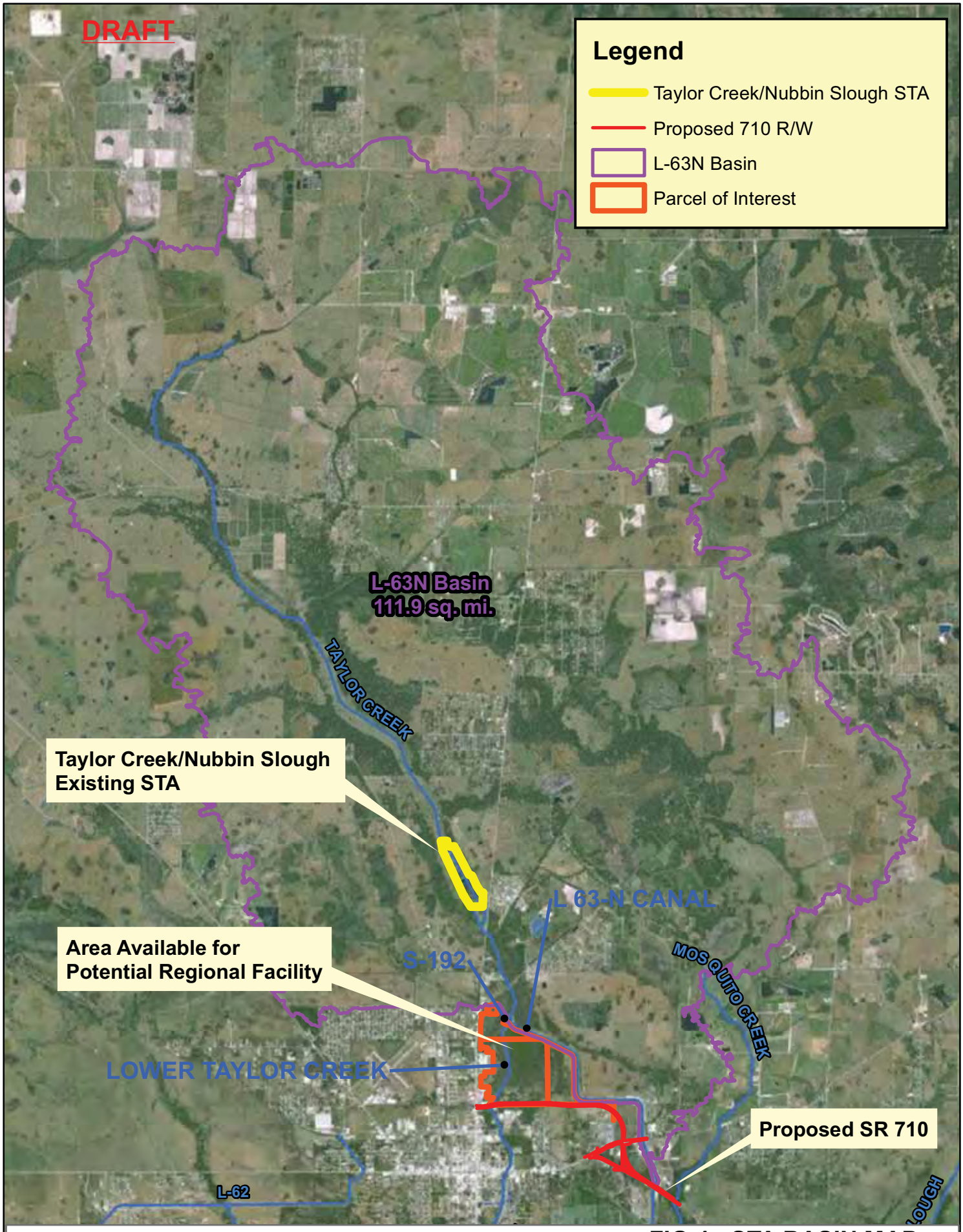


FIGURE 3

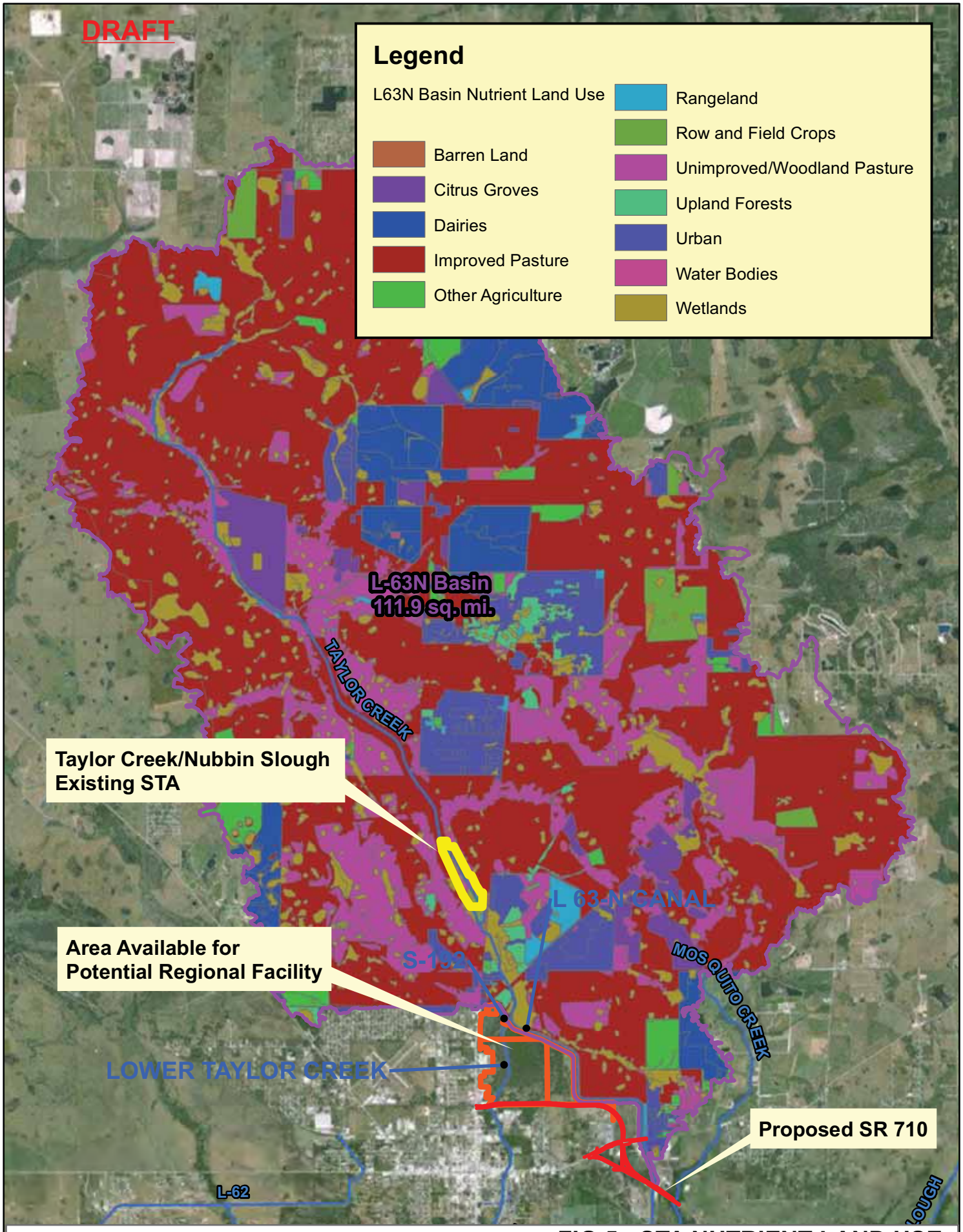
Lake Okeechobee Watershed



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

FIG 4 - STA BASIN MAP

SR 710 Regional Facility Conceptual Analysis



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

FIG 5 - STA NUTRIENT LAND USE

SR 710 Regional Facility Conceptual Analysis

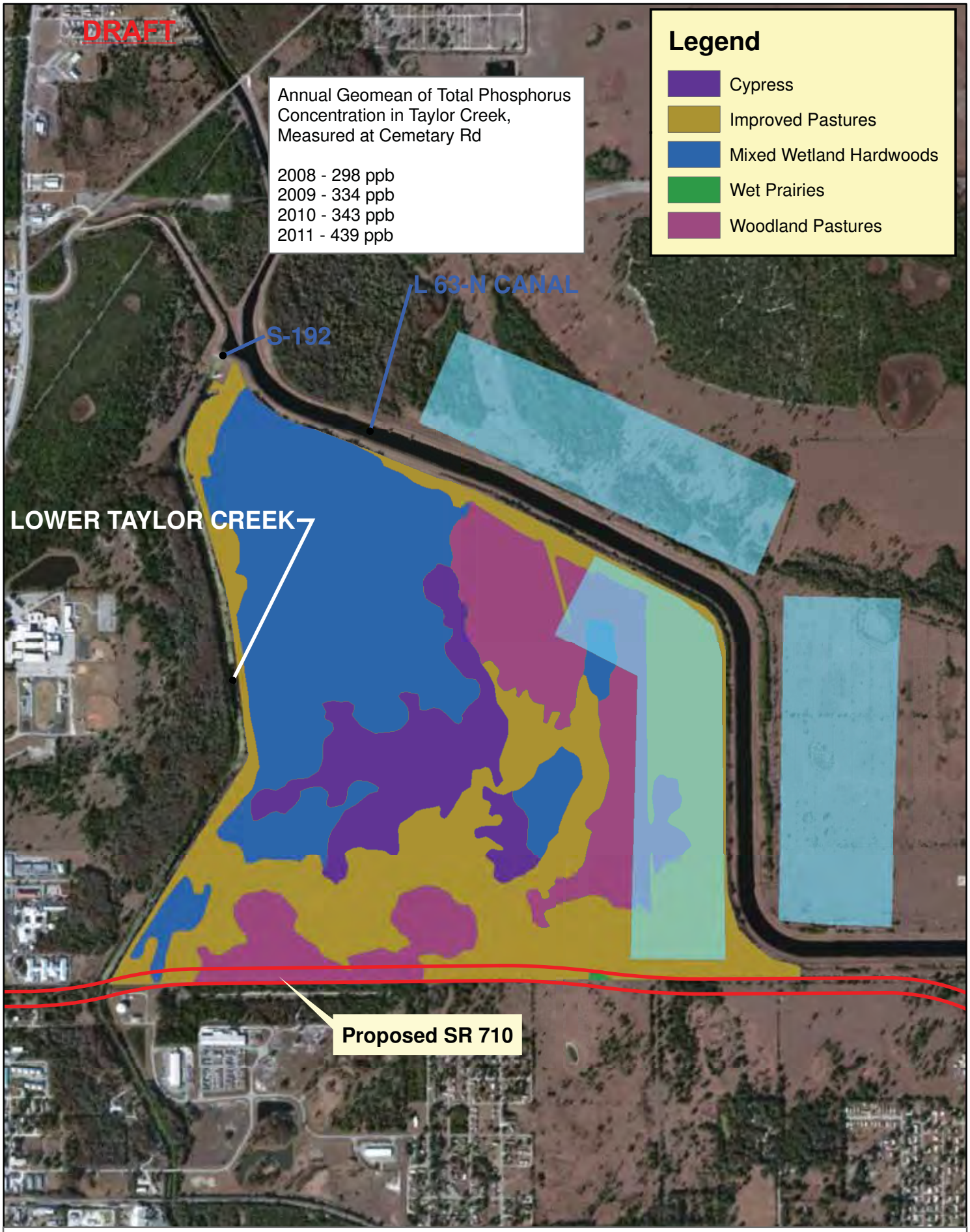


FIG 6 **POTENTIAL 100 ACRE STA LOCATIONS**

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

0 0.125 0.25 Miles

SR 710 Regional Facility Conceptual Analysis

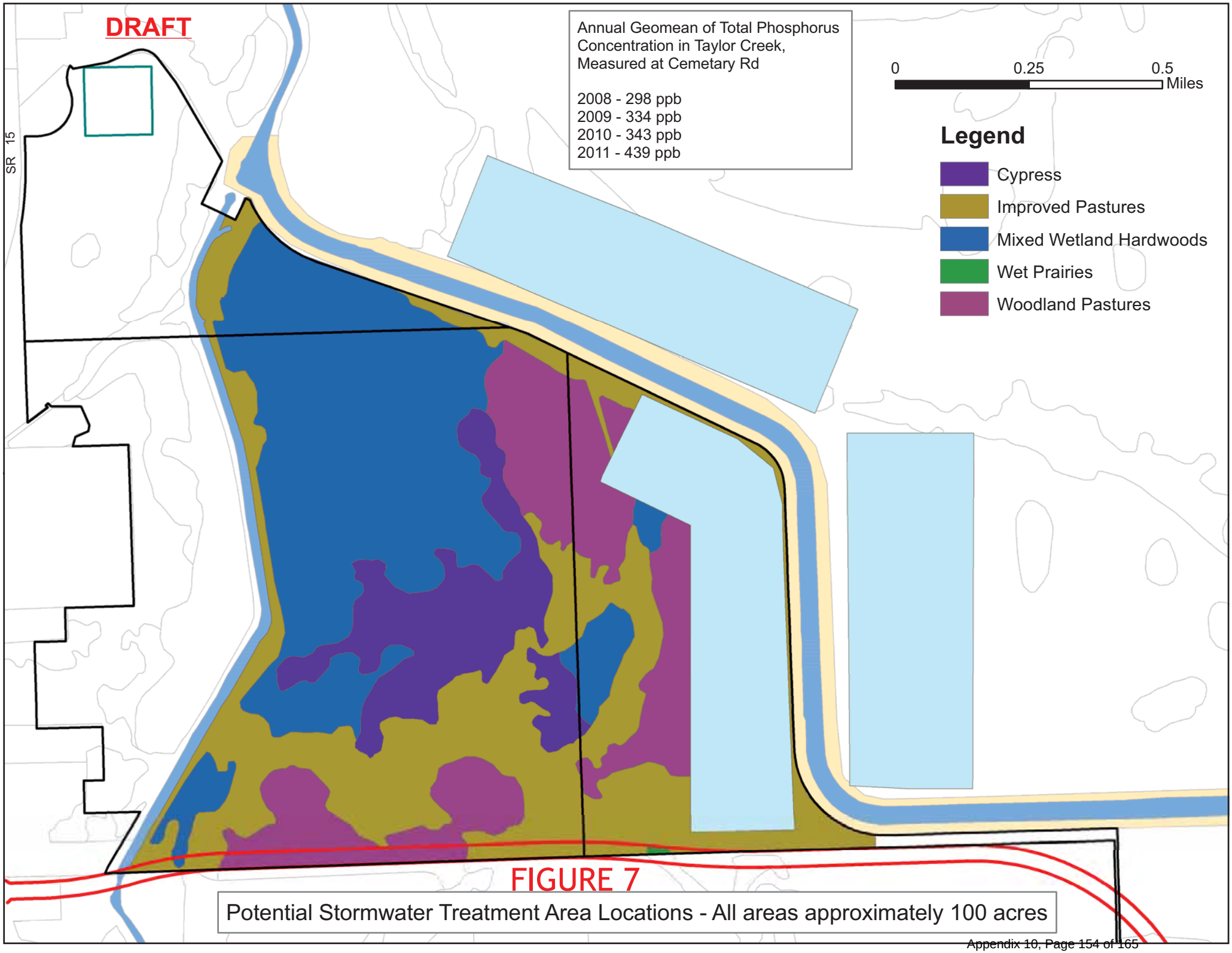
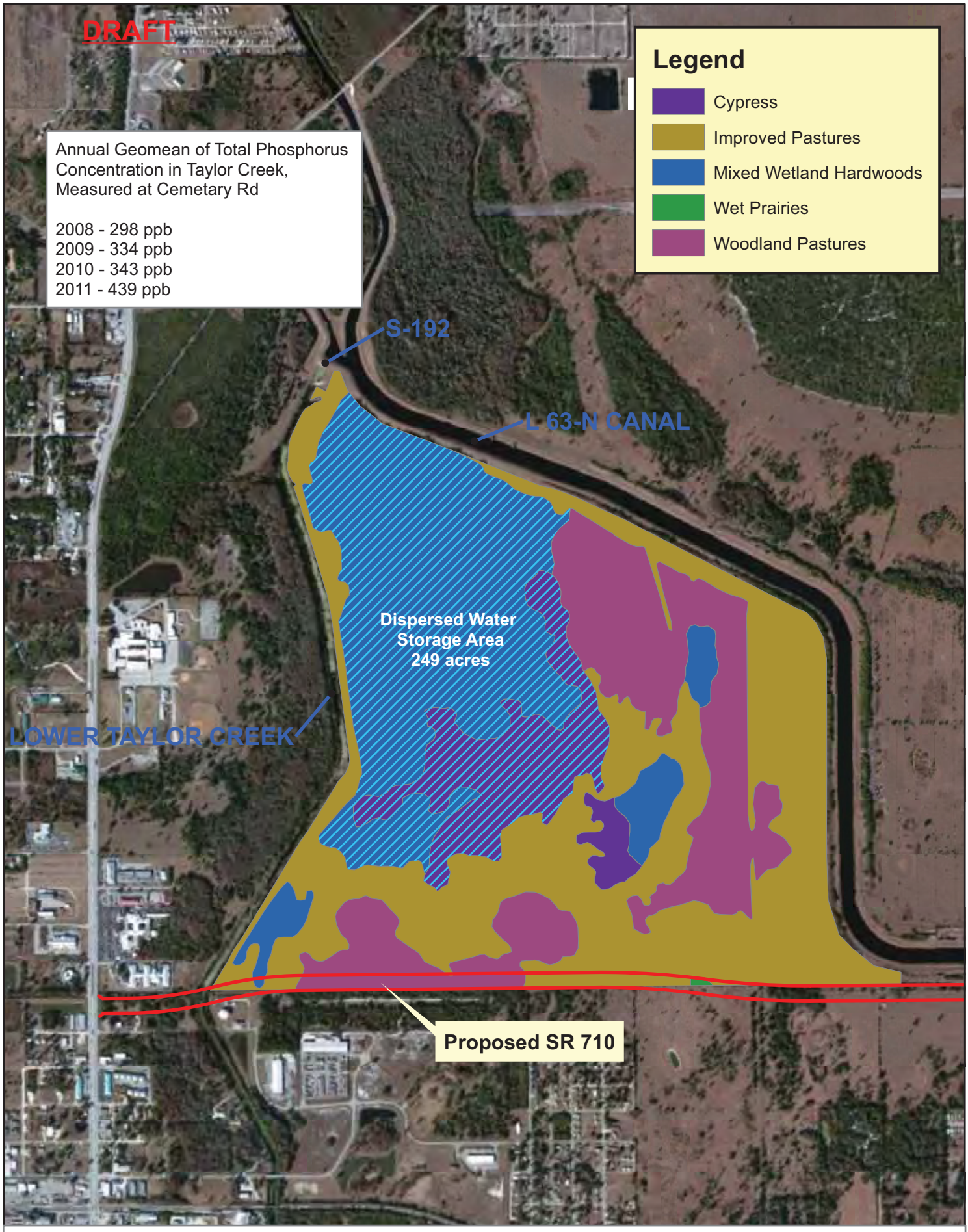


FIGURE 7

Potential Stormwater Treatment Area Locations - All areas approximately 100 acres



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

0 0.125 0.25 Miles

FIG 8 AREA FOR POTENTIAL DISPERSED WATER STORAGE

SR 710 Regional Facility Conceptual Analysis

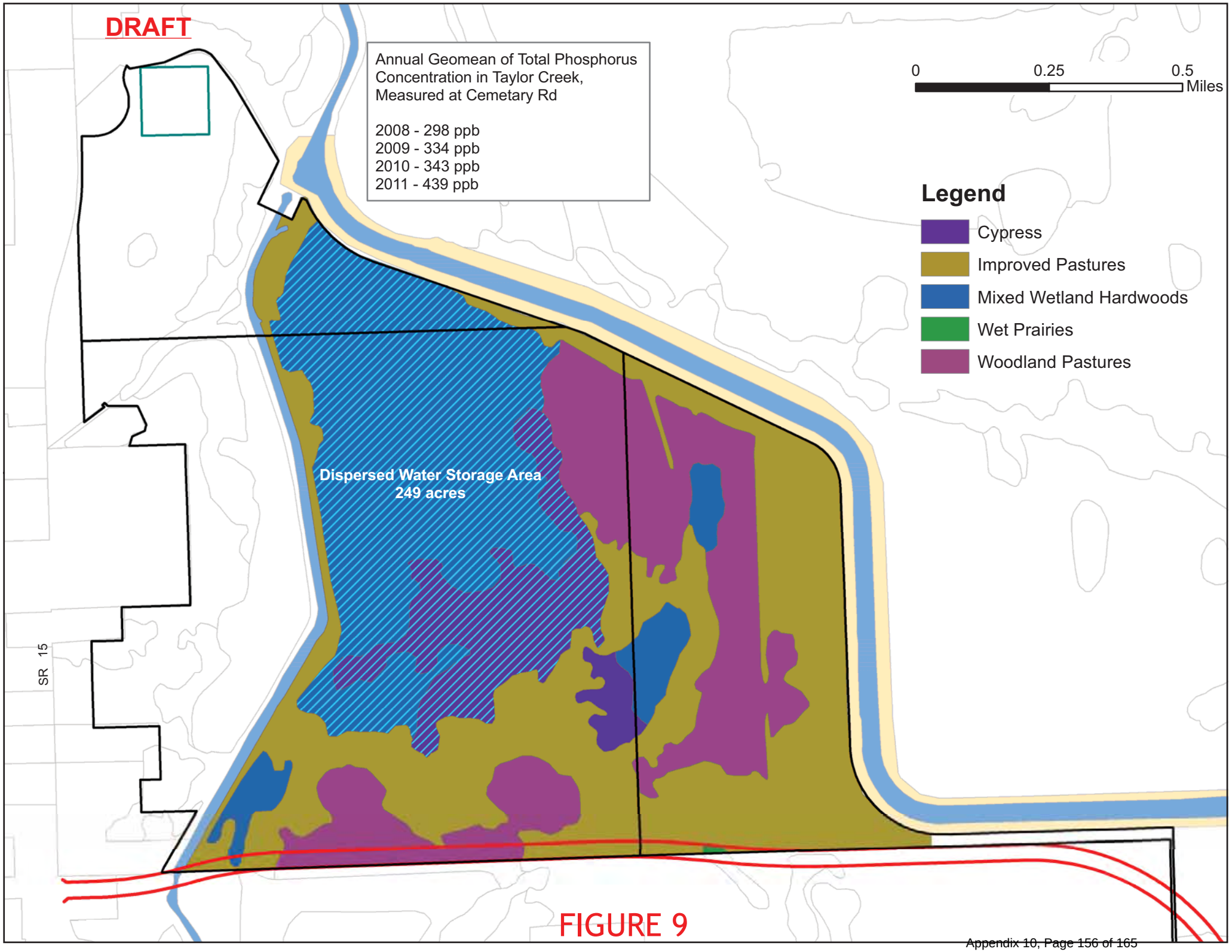
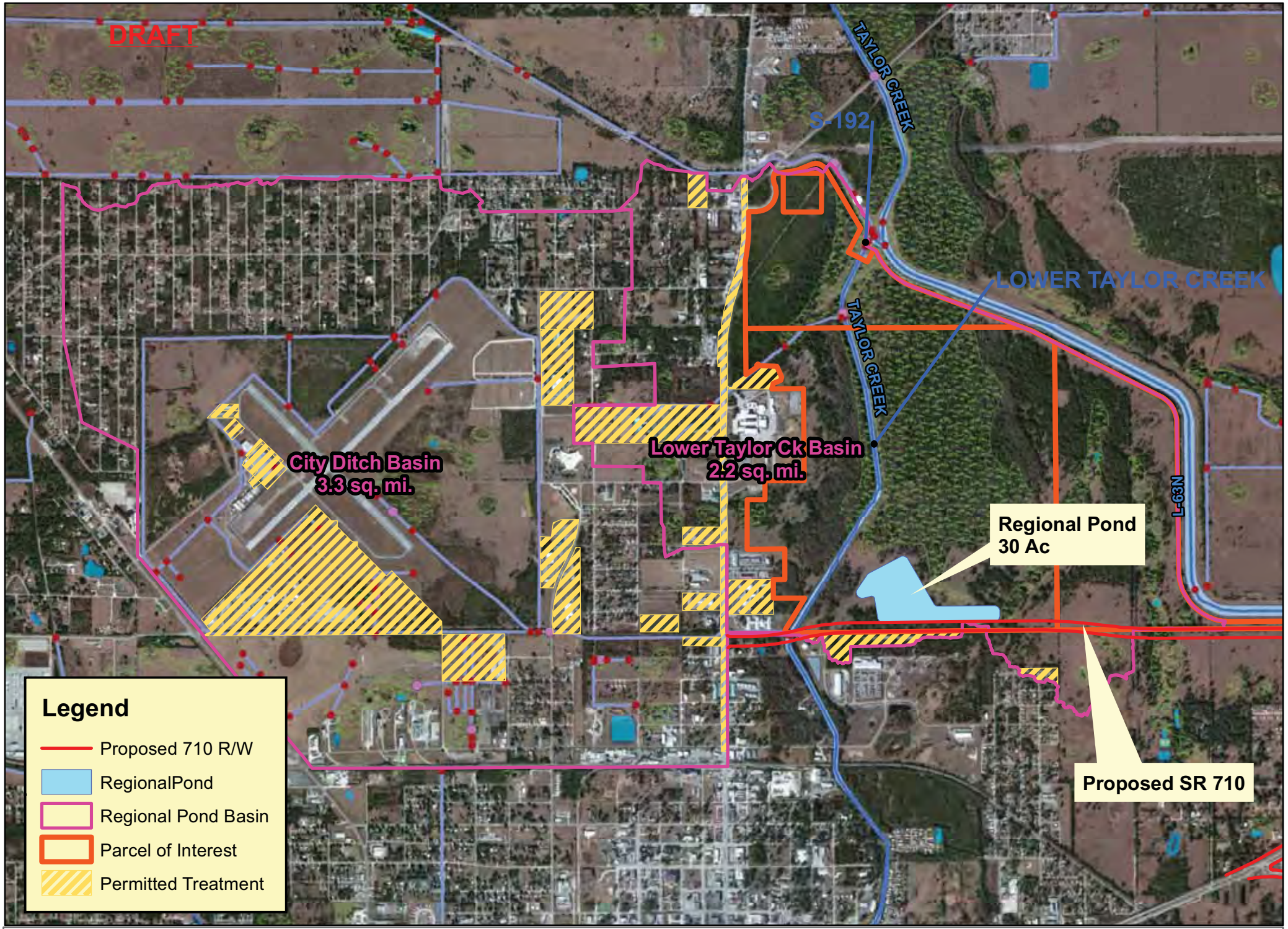

DRAFT
Annual Geomean of Total Phosphorus Concentration in Taylor Creek, Measured at Cemetary Rd
2008 - 298 ppb
2009 - 334 ppb
2010 - 343 ppb
2011 - 439 ppb
0
0.25
0.5
Miles
Legend
Cypress
Improved Pastures
Mixed Wetland Hardwoods
Wet Prairies
Woodland Pastures
Dispersed Water Storage Area
249 acres
SR 15

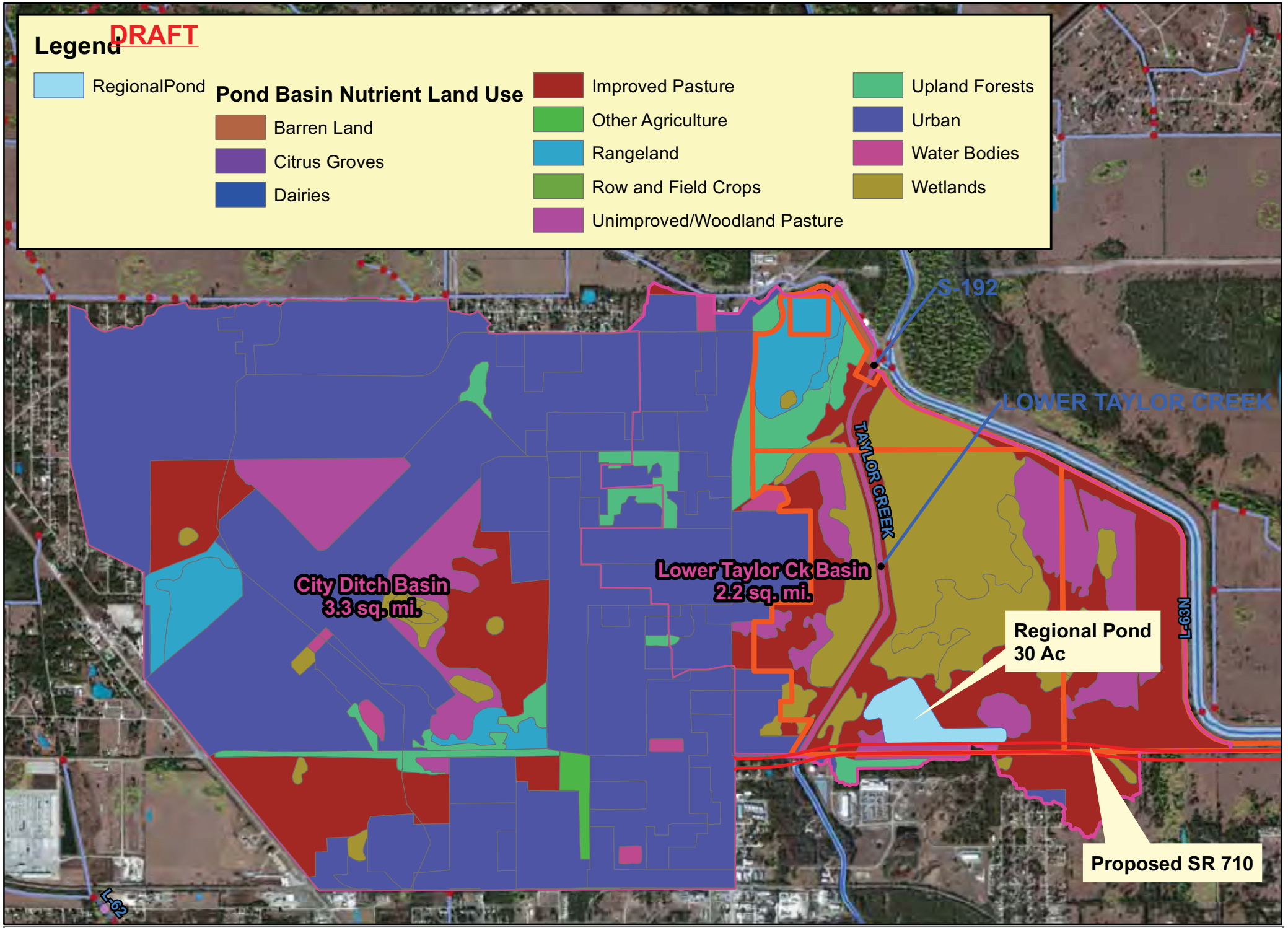
FIGURE 9



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX,

0 0.25 0.5 Miles

FIG 10 - REGIONAL POND BASIN MAP
SR 710 Regional Facility Conceptual

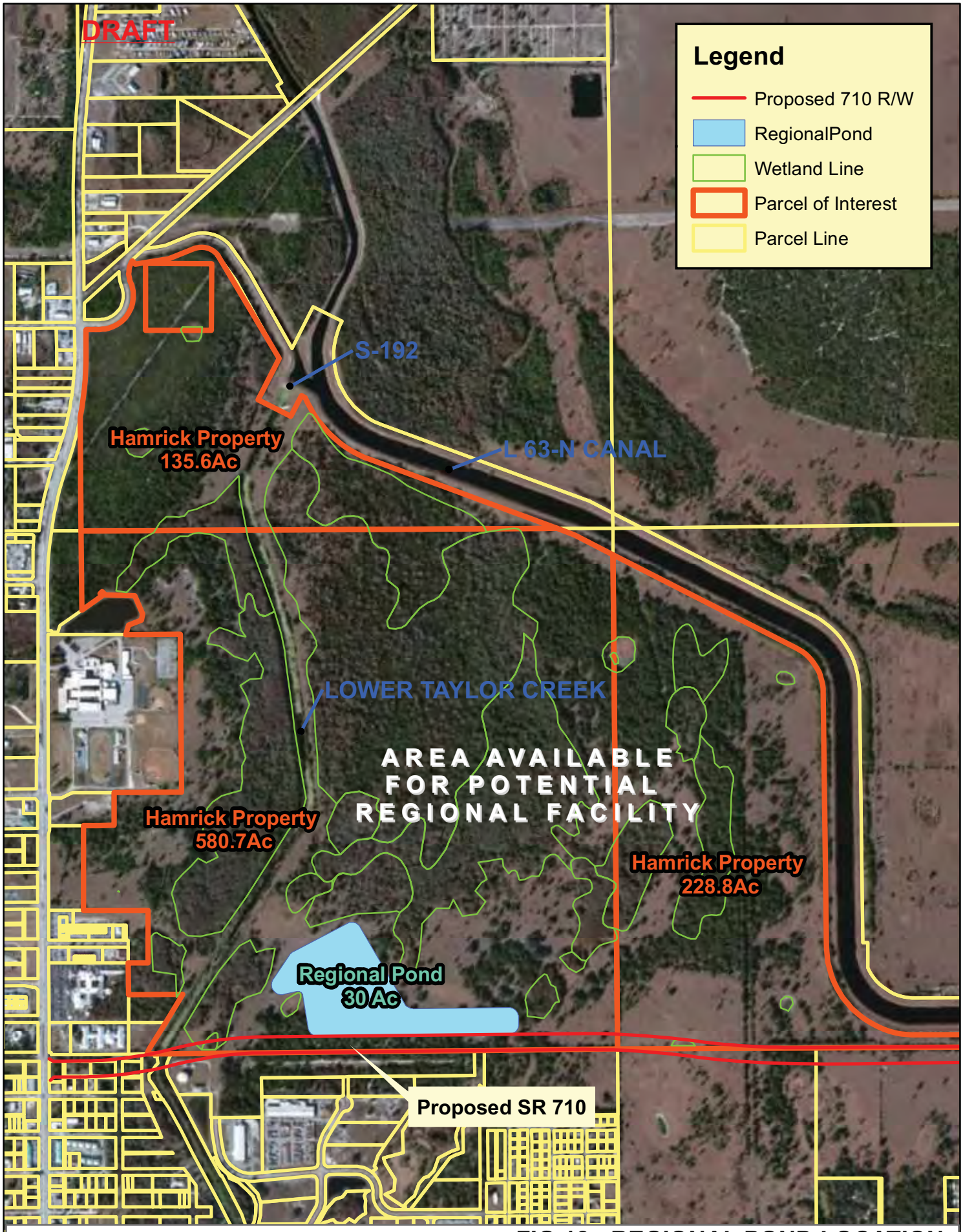


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX,

0 0.25 0.5 Miles

FIG 11 - REGIONAL POND NUTRIENT LAND USE MAP

SR 710 Regional Facility Conceptual



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

0 0.125 0.25 Miles

FIG 12 - REGIONAL POND LOCATION

SR 710 Regional Facility Conceptual Analysis

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

0 0.5 1 Miles

FIG 13 - FAA Buffer

SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study
GOTO Meeting with Mike Hamrick, Property Owner
Meeting Minutes
FPID No. 432644-1-32-01 – D1 DW Drainage

Location: GotoMeeting
Date: August 12, 2014
Time 9:00 am

By: Greg Seidel Checked By: Janet Hearn

Attendees: Mike Hamrick, Tony Federico, Greg Seidel, Janet Hearn,

1. A Gotomeeting was held between Greg Seidel, Janet Hearn, Mr. Hamrick and Mr. Hamrick's consultant, Tony Federico, to advise him regarding pollutant loadings and discharges. Mr. Federico is a principal at Federico, Lamb and Associates and has worked extensively on water quality issues in the Lake Okeechobee basin.

2. Greg Seidel went through the Regional Pond/ STA options that are being reviewed by the FDOT and gave a brief project history of SR 710 and how we have gotten to this point. Mr. Federico asked multiple questions for clarification and inquired as to the preliminary loading rate calculations. Janet Hearn will provide preliminary rate calculations for his review.

3. Mr. Hamrick indicated that their preferred location for an STA would be in the triangle of land to the north of where Taylor Creek and the L-63 canal diverge but that they have not ruled out any of the other locations presented to date. Greg noted that putting something in the north triangle would be difficult because of the gas line that runs through that portion of the property. Mr. Hamrick said that the easement he negotiated for the gas line is more flexible than the standard easement language and may give FDOT more flexibility. The exhibit developed for the Hamricks that was shown at the stakeholder meeting was just an exhibit to demonstrate a size comparison; it was not a location exhibit.

4. Mr. Hamrick said that it is important to maintain the integrity of the property and the current level of use of the property.

c. Attendees
Brent Setchell, FDOT
Carl Spirio, FDOT
Amy Setchell, FDOT
Jennifer Nunn, Balmoral Group

Greg Seidel

From: Setchell, Amy <Amy.Setchell@dot.state.fl.us>
Sent: Thursday, September 04, 2014 1:25 PM
To: Mike Hamrick; Greg Seidel; federico@fla-inc.com; JHearn@AppliedTM.com
Cc: Setchell, Brent; Spirio, Carlton D; Jennifer Nunn
Subject: RE: SR 710 Regional Pond Hamrick Meeting Minutes.2014.08.12

Mr. Hamrick,
The Department has received your email and it will be documented as part of the SR710 Feasibility Study. We appreciate your participation and interest in the project and look forward to sharing the results of study with you.

Thank you,

Amy Setchell, P.E.
Project Manager
FDOT District 1
801 N. Broadway Ave.
Bartow, FL 33830
P:(863)519-2609
Email: Amy.Setchell@dot.state.fl.us

From: Mike Hamrick [mailto:MHamrick@manateelegal.com]
Sent: Thursday, September 04, 2014 11:45 AM
To: Greg Seidel; federico@fla-inc.com; JHearn@AppliedTM.com
Cc: Setchell, Brent; Spirio, Carlton D; Setchell, Amy; Jennifer Nunn
Subject: RE: SR 710 Regional Pond Hamrick Meeting Minutes.2014.08.12

Greg,

Thank you for the minutes. As to your 4th point in the minutes (which are similarly stated in prior minutes as well), I thought it might be helpful for me to express in writing what I have attempted to say by spoken word. Thus, in hopes of avoiding a misunderstanding, let me express the position of Hamrick & Sons, Inc. this way:

Hamrick & Sons, Inc. has been approached by DOT and other entities with various concepts and ideas relating to drainage options in the construction of the SR 710 Extension. Thus far, these ideas have consisted of a "Regional Pond", a Stormwater Treatment Area and a Water Dispersal Area. Thus far, for understandable reasons, there has been limited information on acreage to be used and no information whatsoever on compensation to the landowner. Hamrick & Sons, Inc. has made no demands on the continued use of the property or the size of the project. What we have said is that the property is currently an operating cattle ranch (both to the north and the south of the L-63 canal). If the purposes of the relevant entities could be accomplished with minimal disruption to the present use of the property, that is a factor is making such an endeavor attractive to Hamrick & Sons, Inc. If the relevant entities desire to use the property in a way that would substantially impair or eliminate part or all of the use of the property to the south of the L-63 canal for cattle purposes, then Hamrick & Sons, Inc. would simply have to evaluate the compensation being proposed against the lost revenue from a cut back in the existing cattle operations. While continued "integrity" of the property in its current use is attractive to Hamrick & Sons, Inc., at no time have we indicated that we would not look at any proposed project where more substantial changes would occur. Having said that, Hamrick & Sons is left without much of a way to evaluate anything without more definitive direction from the relevant entities, including, at some point, an indication of dollars associated with each decision. Nothing has been ruled off the table. For that matter, I don't have

a good feeling for what is on the table as no “discussion” has yet led to what I would categorize as a firm proposal on how to proceed.

Mike Hamrick
President, Hamrick & Sons, Inc.

601 12th Street West
Bradenton, Florida 34205
mhamrick@manateelegal.com
Phone: (941) 747-1871
Facsimile: (941) 745-2866
www.manateelegal.com

From: Greg Seidel [mailto:GSeidel@balmoralgroup.us]
Sent: Thursday, September 04, 2014 11:05 AM
To: Mike Hamrick; federico@fla-inc.com; JHearn@AppliedTM.com
Cc: Setchell, Brent (Brent.Setchell@dot.state.fl.us); CARLTON.SPIRIO@DOT.STATE.FL.US; Amy.Setchell@dot.state.fl.us; Jennifer Nunn
Subject: SR 710 Regional Pond Hamrick Meeting Minutes.2014.08.12

Dear All –
Please find attached the notes from the GotoMeeting with Mike Hamrick and Tony Federico regarding the proposed Regional Pond/Stormwater Treatment Area at the proposed SR 710, Airport Ditch and Lower Taylor Creek confluence. Please let me know if you have any questions or comments.
Regards,
Greg

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SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study
SR 710 Conceptual Regional Pond/STA Meeting with Avcon Representing Okeechobee
Meeting Minutes
FPID No. 432644-1-32-01 – D1 DW Drainage

Location: AVCON, 5555 E. Michigan Street, Suite 200 Orlando, FL 32822-2779
Date: Thursday, August 14, 2014
Time 3:00pm

Attendees:

1. Greg Seidel – The Balmoral Group, Drainage
2. Jim Kriss-AVCON, Principal
3. Hilary Maull – AVCON, Project Manager-Airports
4. Brent Setchell (by phone) - FDOT, Project Manager

Purpose: The purpose of the meeting is for The Balmoral Group to present a brief recap of the stakeholder kickoff meeting to the Okeechobee Airport General Consultant and to share information to help determine if the airport may benefit from the project and be a contributing stakeholder should the project move forward.

1. Greg Seidel began the meeting by giving a project background to AVCON. Avcon is the general consultant for the Okeechobee County Airport and has developed their master stormwater plan.

2. Greg Seidel gave the background review.

3. Discussion was held regarding FAA requirements for a new pond within the FAA Wildlife Management Area. Mr. Seidel presented the map showing that the new proposed ponds would lie within this area. It was noted that if the airport got involved the requirements may be more stringent because the FAA dollars would be included in the project.

4. Mr. Kriss indicated that there was certainly some possibility for the group to work together and it all seemed very reasonable. The other issue the airport had was they were looking for mitigation credits for wetland impacts to their site. There was a previous worked out deal on the table with a mitigation bank, however that deal fell through and so this is an ongoing issue and the airport is pursuing possible mitigation options.

5. The meeting ended with the decision that AVCON would approach the FAA regarding non project specific questions and once those questions were answered they would return to discuss the responses with the FDOT. We would go forward from that point.

c. Attendees
Amy Setchell, FDOT
Carl Spirio, FDOT
Jim Threewits, Okeechobee County
Kathy Scott, Okeechobee County
Kelly Baney, Okeechobee County
Jennifer Nunn, Balmoral Group

Greg Seidel

From: Jennifer Nunn
Sent: Friday, September 12, 2014 8:24 AM
To: Jose Otero (jotero@sfwmd.gov)
Cc: Hearn, Janet; Greg Seidel; Ostrovsky, Moysey
Subject: SR 710 Regional Pond/STA Feasibility Study - SFWMD Operations
Attachments: Location.pdf

Jose,
Per our phone conversation on 9/9/14, I am following up with an email to request additional information regarding the structures S-192 and S-133/S-193. The Balmoral Group has been contracted to perform a feasibility study for regional pond and STA options in the Lower Taylor Creek area. This is being undertaken by the FDOT District One as a part of the SR 710 new alignment project in Okeechobee. The SR 710 New Alignment Project in Okeechobee County and the City of Okeechobee is currently under design by the FDOT. During the development of the Pond Siting Report, one of the pond sites was identified as a possible location for a regional stormwater treatment facility that could provide greater stormwater treatment benefits to the local area. This undeveloped area is located east of the City of Okeechobee, just south of the confluence of Lower Taylor Creek and the L-63N Canal. This property appears to owned and controlled by Hamrick and Sons based on the local property appraiser website and the FDOT deed research. Please see attached map.

Per our discussion Tuesday, it was confirmed that the US Army Corps built and conveyed S-192 and S-133/S-193 to the SFWMD.
Please answer and provide clarification on the following:

- Who has the authority to modify the structure or operation of the structure?
- What is the process of modifying the structure or operation manual? Who performs the review of these changes?
- Who controls the levees along the L-63N and who would review additional connections to the L-63N?
- Specifically, how is the S-192 and S-193/S-133 structures operated to date? The information we obtained is from a Draft 2005 Central and Southern Florida Project For Flood Control and Other Purposes System Operating Manual for Lake Okeechobee and Everglades Agricultural Area Volume 3, December 2005. Is there a more recent Operating Manual with update information?

Let me know if you have any questions.

Thanks,

Jennifer A. Nunn, P.E.

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