Walden Lake Community Expansion
Drainage Report

January 2015

Prepared for:

Visions Golf, LLC

Prepared by:

Advantage Engineering, Inc.

3914 Flatiron Loop, Suite 102
Wesley Chapel, Florida 33544
(813) 975-9638
Certificate of Authorization #00008806

Brian A. Acken, P.E.
Florida Reg. # 46528

1.0 GENERAL PROJECT DESCRIPTION

The intent of this report is to document the preliminary development of the Walden Lake Community Expansion which includes surrounding areas **(See Appendix A).** Advantage Engineering, Inc. has been retained by Visions Golf, LLC to provide an overall preliminary Pre and Post Development ICPR model for the project limits to determine if there is any anticipated adverse impacts based on the 25-yr and 100-yr / 24-hr storm events. The project site is located Section 1, Township 29 South, and Range 21 East in Hillsborough County, Florida and lies is a tributary to the Hillsborough River. The project site is approximately 133 acres and is noted as Folio Number 2032740550. The Location Map is shown on **Figure 1.1** and the project study limits area shown in **Appendix A**.

The intent of this drainage report is to document the development of the existing and proposed conditions for the Walden Lake Community Expansion for the City of Plant City. The existing project site is a vacant golf course and has been proposed as a residential expansion to the surrounding community. A more detailed study will follow this report at a later date during the development review process with the City of Plant City and the Southwest Florida Water Management District (SWFWMD). The Pre-Application meeting minutes for both agencies can be found in **Appendix J**.

2.0 EXISTING CONDITIONS

The existing Walden Lake Community Expansion Watershed Model was developed from the original design plan information from Heidt & Associates, Inc., the latest Hillsborough County Pemberton Baker Area (PBA) Creek SWMM Model information, recent survey provided by Brooks Land Surveying, Inc., and field reviews. The existing soil conditions were determined from Web Soil (SCS Soil Maps) and is outlined in **Appendix B**. The soils information was used to compare with the latest PBA SWMM Model hydrology input for the existing curve numbers on the vacant golf course site. The existing Curve Numbers along with other data from the PBA SWMM Model are shown in **Appendix C**. From the survey, PBA SWMM Model, original design plans, the following is the summary of the ICPR input information:

- 11 Basins
- 14 Nodes
- 5 Weirs
- 7 Drop Structures
- 3 Pipes
- 2 Outflow Boundaries (Stage vs Time) - Each Storm Event

The overall existing Walden Lake Community Expansion Node Diagram and the ICPR input can be found in **Appendix E**. The existing Walden Lake Community Expansion ICPR results are shown in **Appendix F**. The Table 3.1 and 3.2 show the tabular results for each node location.

3.0 POST CONDITIONS

The overall Post Condition Walden Lake Community Expansion Node Diagram and the ICPR input can be found in **Appendix G**. The Post Condition Walden Lake Community Expansion ICPR results are shown in **Appendix H**. The Table 3.1 and 3.2 show the tabular results for each node location.

Table 3.1 Summary of 25-yr / 24-hr Pre versus Post Results for the Walden Lake Watershed ICPR Model

Node	Pre Stage Model (ft.)	Post Stage Model (ft.)	Difference (ft.)	Pre Outfall Discharge (cfs)	Post Outfall Model (cfs)	Difference (cfs)
Outfall (361680)*	112.24	112.24	0.00	57.25	57.21	-0.04
Walden Lake (361720)*	112.95	113.07	+0.12	57.25	57.21	-0.04
Wetland A (361725)	115.95	116.32	+0.37	155.99	156.52	+0.53
Wetland D-H*	127.71	N/A	N/A	109.16	N/A	N/A
361730	116.37	116.42	+0.05	22.46	21.96	-0.50
361740	123.91	123.91	0.00	0.00	0.00	0.00
361745	131.07	131.07	0.00	26.10	26.10	0.00
361760	115.26	115.26	0.00	102.97	102.97	0.00
361780	119.96	119.96	0.00	0.00	0.00	0.00
361785	121.78	121.78	0.00	1.98	1.98	0.00
361840	114.76	114.76	0.00	20.98	20.98	0.00
361850	117.33	117.33	0.00	0.00	0.00	0.00
361900	124.29	124.29	0.00	53.84	53.84	0.00
WCE Pond #1*	N/A	127.58	N/A	N/A	38.85	N/A
WCE Pond #2*	N/A	122.19	N/A	N/A	51.44	N/A
WCE Pond #3*	N/A	122.19	N/A	N/A	51.44	N/A

Table 3.2 Summary of 100-yr / 24-hr Pre versus Post Results for the Walden Lake Watershed ICPR Model

Node	Pre Stage Model (ft.)	Post Stage Model (ft.)	Difference (ft.)	Pre Outfall Discharge (cfs)	Post Outfall Model (cfs)	Difference (cfs)
Outfall (361680)*	113.16	113.16	0.00	128.57	119.86	-8.71
Walden Lake (361720)*	114.04	114.15	+0.11	128.57	119.86	-8.71
Wetland A (361725)	117.09	117.38	+0.29	190.57	197.58	+7.01
Wetland D-H*	127.75	N/A	N/A	179.70	N/A	N/A
361730	117.20	117.42	+0.22	24.42	22.45	-1.97
361740	124.55	124.55	0.00	3.01	3.02	0.00
361745	131.51	131.51	0.00	40.51	40.51	0.00
361760	115.42	115.42	0.00	280.18	280.18	0.00
361780	120.70	120.70	0.00	2.78	2.78	0.00
361785	122.43	122.43	0.00	11.63	11.63	0.00
361840	115.68	115.68	0.00	27.54	27.54	0.00
361850	118.42	118.42	0.00	3.39	3.39	0.00
361900	124.96	124.96	0.00	86.69	86.69	0.00
WCE Pond #1*	N/A	127.94	N/A	N/A	61.06	N/A
WCE Pond #2*	N/A	122.99	N/A	N/A	58.48	N/A
WCE Pond #3*	N/A	122.82	N/A	N/A	68.79	N/A

- Notes: The Outfall point from Walden Lake is the comparison location for the 25-yr / 24-hr and 100-yr / 24-hr pre and post conditions. Also, the comparison of the Walden Lake stages are shown.
- Wetland D-H will be removed in the post condition, hence the N/A in the post.
- WCE Ponds #1, #2, #3 and Basin #4 are included in the post model to represent the post condition development. Assumed CN= 90 and estimated time of conc, = 15 minutes for #1, #2, and #3, and estimated time of conc. = 20 minutes for Basin #4 (larger basin) which discharges directly to Wetland A with modification to the Control Structure at Wetland A.

The post condition analysis removed the post drainage area from Wetland A (Node 361725). Based on the general conceptual plan, the intent was to breakout the post basins for the development (WCE Basins #1, #2, #3, and #4) and include ponds for each basin. For the purposes of this preliminary study, the pond sizes were only estimated and were based on the general seasonal high information and limited topography. All geotechnical and survey work will be needed to accurately size each pond in the Design and Permitting Phase. Given the amount of attenuation needed, the existing control structures at Wetland A and Walden Lake may need to be adjusted to demonstrate no increase in discharge downstream at the Outfall point (Node 361680). It is understood that Visions Golf, LLC has the ownership and authority to make adjustments to these control structures as long as there is no adverse (any significant rise in stage) impact to the surrounding residents.

4.0 RECOMMENDATIONS AND CONCLUSIONS

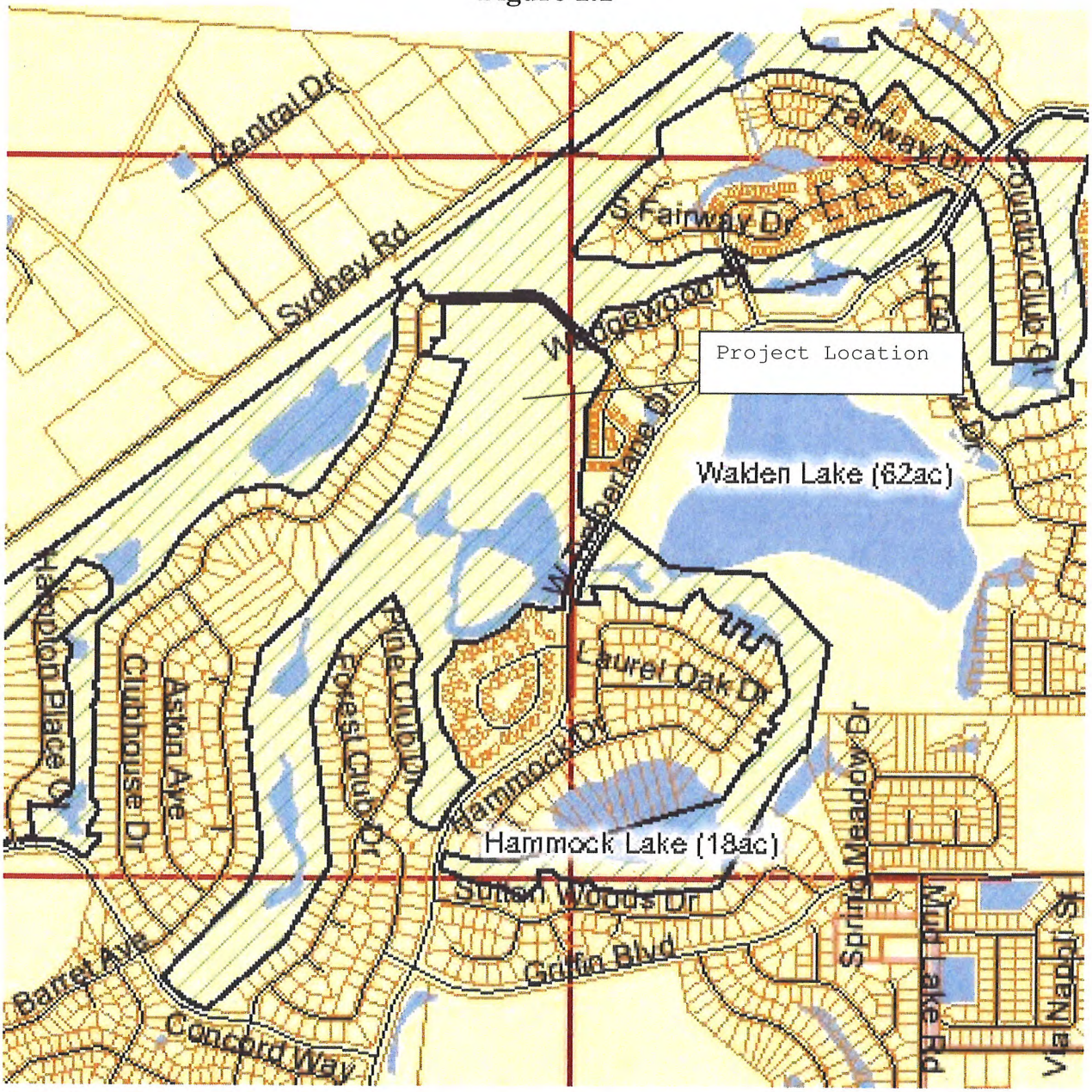
Prior to the Design and Permitting phase, complete geotechnical and topographic survey will be needed for the project site to more accurately size each proposed pond. Based on the preliminary information provided and the general pre and post master drainage model developed, the results suggest no adverse impacts to the downstream location (flow rate comparisons, etc.) and reasonable differences in upstream stages (elevation comparisons in Walden Lake, Wetland A, etc.). Further documentation of this Preliminary Phase can be found in **Appendix J** for the Pre-Application Meeting minutes with the City of Plant City and SWFWMD.

LIST OF APPENDICES

Appendix	Title
A	Walden Lake Watershed Study Limits
B	FEMA Floodplain Map
C	Soils Report
D	Hillsborough County Pemberton Baker Area (PBA) SWMM Information
E	Pre-Development ICPR Node Diagram and Input
F	Pre-Development ICPR Results • 25-yr / 24-hr • 100-yr / 24-hr
G	Post-Development ICPR Node Diagram and Input
H	Post-Development ICPR Results • 25-yr / 24-hr • 100-yr / 24-hr
I	Photos
J	Correspondence

Location Map

Figure 1.1



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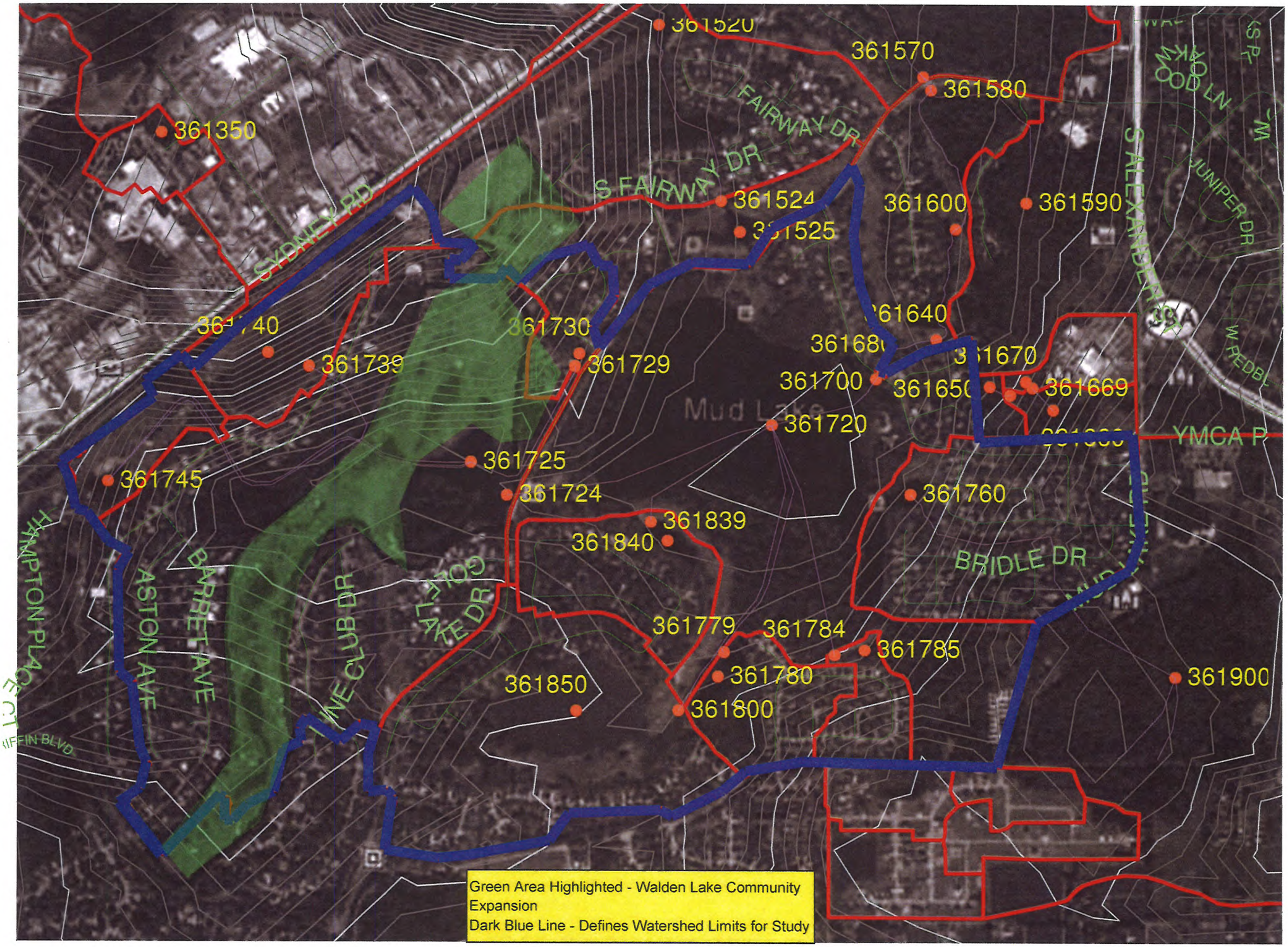
APPENDIX A
WALDEN LAKE WATERSHED STUDY LIMITS


361520
361570
361580
361350
FAIRWAY DR
S FAIRWAY DR
SYDNEY RD
361524
361525
361600
361590
S ALEXANDER
JUNIPER DR
361740
361730
361739
361729
361640
361670
361700
361669
Mud Lake
361720
YMCA P
361725
361745
361724
361760
361839
361840
BRIDLE DR
HAMPTON PLACE CT
ASTON AVE
BARBET AVE
LAKE DR
361779
361784
361785
361850
361780
361800
361900
Green Area Highlighted - Walden Lake Community Expansion
Dark Blue Line - Defines Watershed Limits for Study

MAP OF SURVEY

DESCRIPTION:

A PARCEL OF LAND LYING IN SECTION 1, TOWNSHIP 29 SOUTH, RANGE 21 EAST AND SECTION 12, TOWNSHIP 29 SOUTH, RANGE 21 EAST AND SECTION 6, TOWNSHIP 28 SOUTH, RANGE 22 EAST, HILLSBOROUGH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHEAST CORNER OF SAID SECTION 1, THENCE S 13°06'18"W, FOR A DISTANCE OF 205.60 FEET; THENCE S 87°01'35"W, FOR A DISTANCE OF 249.26 FEET; THENCE S 13°59'16"W, FOR A DISTANCE OF 1478.51 FEET; THENCE S 52°57'38"E, FOR A DISTANCE OF 249.34 FEET; THENCE S 41°23'16"W, FOR A DISTANCE OF 558.88 FEET; THENCE S 51°50'36"W, FOR A DISTANCE OF 249.34 FEET; THENCE S 41°23'16"W, FOR A DISTANCE OF 175.07 FEET; THENCE S 44°25'08"E, FOR A DISTANCE OF 99.81 FEET; THENCE S 46°03'21"E, FOR A DISTANCE OF 281.54 FEET; THENCE S 56°30'00"E, FOR A DISTANCE OF 0.6 FEET; THENCE S 25°11'31"W, FOR A DISTANCE OF 136.10 FEET; THENCE S 29°22'53"W, FOR A DISTANCE OF 245.60 FEET; THENCE S 10°51'20"W, FOR A DISTANCE OF 285.98 FEET; THENCE S 01°34'28"E, FOR A DISTANCE OF 137.90 FEET; THENCE S 08°40'11"E, FOR A DISTANCE OF 97.54 FEET TO THE POINT OF BEGINNING

AND

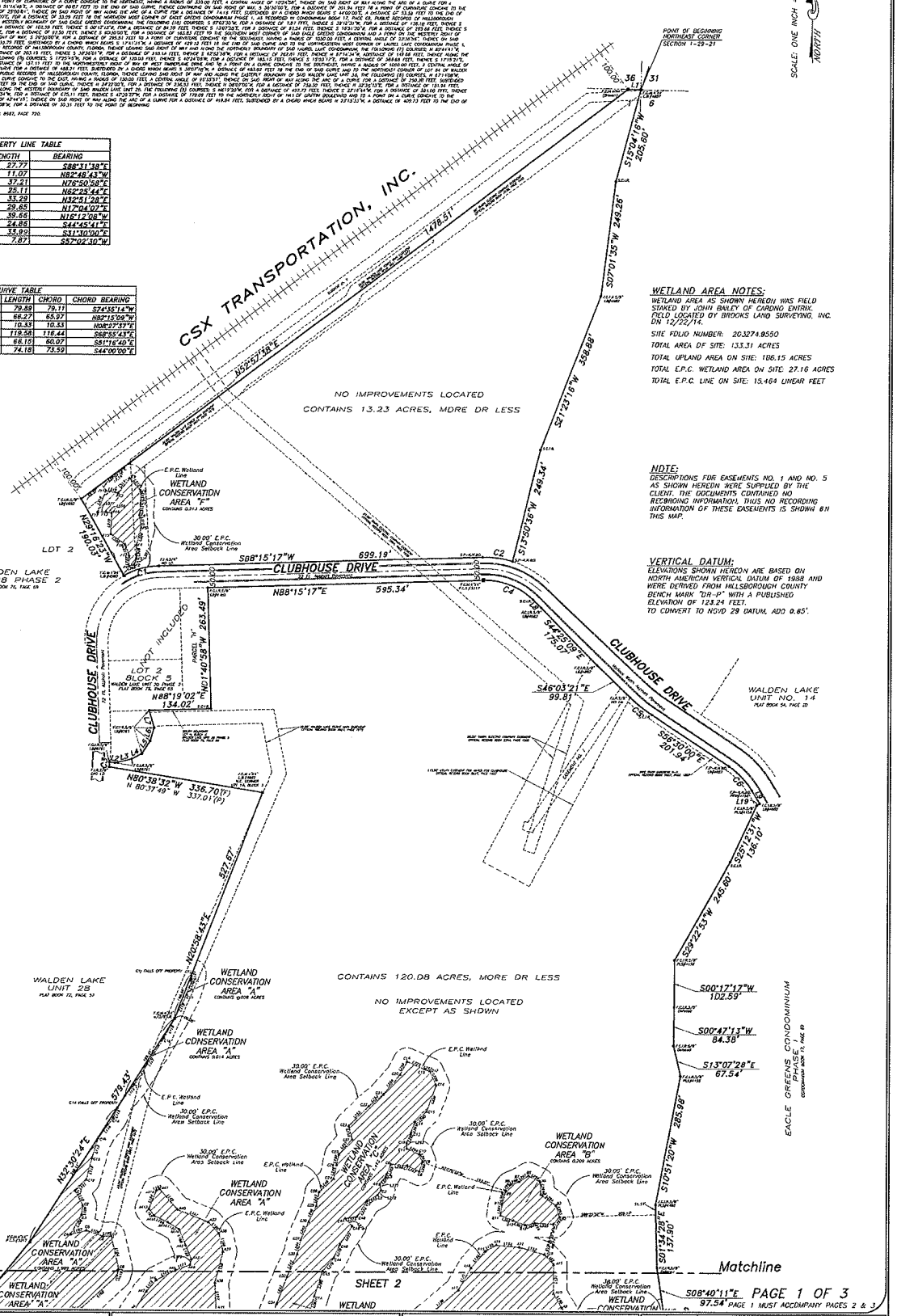
A PARCEL OF LAND LYING IN SECTION 1, TOWNSHIP 29 SOUTH, RANGE 21 EAST AND SECTION 12, TOWNSHIP 29 SOUTH, RANGE 21 EAST AND SECTION 6, TOWNSHIP 29 SOUTH, RANGE 23 EAST, HILLSBOROUGH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF LOT 1, BLOCK 4 OF WALDEN LAKE UNIT 28 PHASE 1, AS RECORDED IN PLAT BOOK 86, PAGE 57 OF THE PUBLIC RECORDS OF HILLSBOROUGH COUNTY, FLORIDA; THENCE ALONG THE EASTERLY BOUNDARY OF SAID WALDEN LAKE UNIT 28, AS RECORDED IN PLAT BOOK 72, PAGE 69 OF THE PUBLIC RECORDS OF HILLSBOROUGH COUNTY, FLORIDA, THE FOLLOWING (16) COURSES: N 47°59'24"E, FOR A DISTANCE OF 49.89 FEET; THENCE N 21°39'40"E, FOR A DISTANCE OF 33.23 FEET; THENCE N 12°24'07"E, FOR A DISTANCE OF 39.66 FEET; THENCE N 16°12'08"W, FOR A DISTANCE OF 24.86 FEET; THENCE N 44°45'41"E, FOR A DISTANCE OF 33.99 FEET; THENCE N 31°30'00"E, FOR A DISTANCE OF 7.87 FEET; THENCE N 88°48'43"W, FOR A DISTANCE OF 11.07 FEET; THENCE N 76°50'58"E, FOR A DISTANCE OF 37.21 FEET; THENCE N 88°31'38"E, FOR A DISTANCE OF 27.11 FEET; THENCE N 32°51'28"E, FOR A DISTANCE OF 25.11 FEET; THENCE N 62°25'44"E, FOR A DISTANCE OF 33.29 FEET; THENCE N 17°04'07"E, FOR A DISTANCE OF 29.65 FEET; THENCE N 32°51'28"E, FOR A DISTANCE OF 25.11 FEET; THENCE N 62°25'44"E, FOR A DISTANCE OF 33.29 FEET; THENCE N 17°04'07"E, FOR A DISTANCE OF 29.65 FEET; THENCE N 16°12'08"W, FOR A DISTANCE OF 24.86 FEET; THENCE N 44°45'41"E, FOR A DISTANCE OF 33.99 FEET; THENCE N 31°30'00"E, FOR A DISTANCE OF 7.87 FEET; THENCE S 57°02'30"W, FOR A DISTANCE OF 19.63 FEET; THENCE LEAVING SAID RIGHT OF WAY LINE, S 89°31'30"E, FOR A DISTANCE OF 37.77 FEET TO THE POINT OF BEGINNING

LESS AND EXCEPT THAT PARTS DESCRIBED IN OFFICIAL RECORD BOOK 8583, PAGE 720.

PROPERTY LINE TABLE		
LINE	LENGTH	BEARING
L1	27.77	S88°31'38"E
L2	11.07	N82°48'43"W
L3	37.21	N76°50'58"E
L4	25.11	N62°25'44"E
L5	33.29	N32°51'28"E
L6	29.65	N17°04'07"E
L7	39.66	N16°12'08"W
L8	24.86	S44°45'41"E
L9	33.99	S31°30'00"E
L10	7.87	S57°02'30"W

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C1	165.00	27°45'25"	79.89	79.11	S74°55'14"W
C2	200.00	18°09'08"	66.27	65.97	N82°15'09"W
C3	275.00	2°09'06"	10.33	10.33	N04°27'27"E
C4	150.00	45°40'40"	119.58	116.44	S68°55'43"E
C5	330.00	10°26'38"	60.15	60.07	S51°16'40"E
C6	170.00	25°00'01"	74.18	73.59	S44°00'00"E



E.P.C. LINE TABLE		
LINE	LENGTH	BEARING
[illegible]	[illegible]	[illegible]

BEARING BASIS:

BEARINGS REFER TO N43°29'39"E (A PLAT BEARING) ALONG THE EASTERLY BOUNDARY LINE OF WALDEN LAKE PHASE 1, AS SHOWN HEREON.

WETLAND AREA NOTES:

WETLAND AREA AS SHOWN HEREON WAS FIELD STAKED BY JOHN BAILEY OF CARDNO ENTRIX. FIELD LOCATED BY BROOKS LAND SURVEYING, INC. ON 12/22/14.

SITE FOLIO NUMBER: 203274.9550

TOTAL AREA OF SITE: 133.31 ACRES

TOTAL UPLAND AREA ON SITE: 106.15 ACRES

TOTAL E.P.C. WETLAND AREA ON SITE: 27.16 ACRES

TOTAL E.P.C. LINE ON SITE: 15,464 LINEAR FEET

NOTE:

DESCRIPTIONS FOR EASEMENTS NO. 1 AND NO. 5 AS SHOWN HEREON WERE SUPPLIED BY THE CLIENT. THE DOCUMENTS CONTAINED NO RECORDING INFORMATION. THUS NO RECORDING INFORMATION OF THESE EASEMENTS IS SHOWN ON THIS MAP.

VERTICAL DATUM:

ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 AND WERE DERIVED FROM HILLSBOROUGH COUNTY BENCH MARK "DR-P" WITH A PUBLISHED ELEVATION OF 123.24 FEET.
TO CONVERT TO NGVD 29 DATUM, ADD 0.65'.

Surveyor's Notes

1. No underground utilities or improvements have been located except as shown.
2. Bearings are based on Assumed Bearings, Bearings, Right of Way, and/or Easements were furnished this Survey except as noted.
3. Unless shown hereon, no Jurisdictional Wetland Areas or other physical topographic features have been located.
4. This survey does not reflect nor determine ownership.

General Legend

[illegible]

Brooks Land Surveying, Inc.
110 S. Palmer Street
Plant City, Florida 33563 Phone (813)754-6620 Fax (813)719-1504

Certificate of Authorization "L.B. #7077"

Surveyor's Certificate

I hereby certify that the survey represented hereon meets the requirements of Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes. Subject to the qualifications noted hereon. Not valid without the signature and original raised seal of a Florida licensed surveyor and mapper this drawing, sketch, and or map is for informational purposes only and is not valid.

Signature _____
Daniel T. Brooks, P.L.S #3583 or Steven M. Iglield, PSM#5349

REVISION NO.	DATE	DESCRIPTION
1	12/15/14	WETLAND DELINEATION AND WSC UTILITY LOCATION.

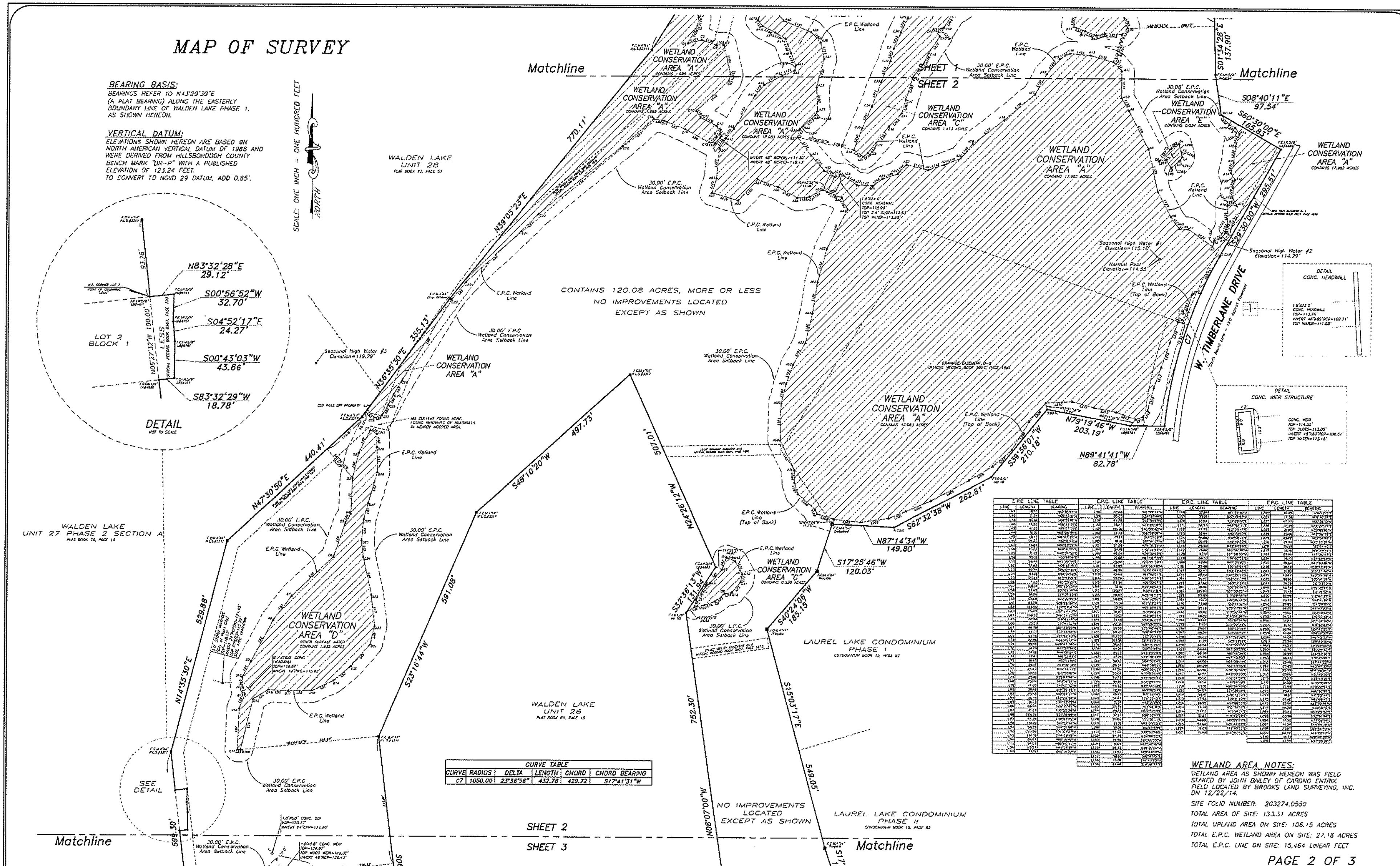
SCALE: 1"=100' | DATE: JANUARY 28, 2013 | DWG. NO. L-13323

BOUNDARY AND WETLAND DELINEATION SURVEY FOR AND CERTIFIED TO:
VISIONS GOLF, L.L.C.

MAP OF SURVEY

BEARING BASIS:
BEARINGS REFER TO N43°29'39"E (A PLAT BEARING) ALONG THE EASTERLY BOUNDARY LINE OF WALDEN LAKE PHASE 1, AS SHOWN HEREON.

VERTICAL DATUM:
ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 AND WERE DERIVED FROM HILLSBOROUGH COUNTY BENCH MARK "DR-P" WITH A PUBLISHED ELEVATION OF 123.24 FEET. TO CONVERT TO NGVD 29 DATUM, ADD 0.85'.



CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C7	1050.00	23°36'58"	432.78	429.72	S17°41'31"W

E.P.C. LINE TABLE (4 tables)

LINE	LENGTH	BEARING
[illegible]	[illegible]	[illegible]

WETLAND AREA NOTES:
WETLAND AREA AS SHOWN HEREON WAS FIELD STAKED BY JOHN BAILEY OF CARDNO ENTRIX. FIELD LOCATED BY BROOKS LAND SURVEYING, INC. ON 12/22/14.

SITE FOLIO NUMBER: 203274.0550
TOTAL AREA OF SITE: 133.31 ACRES
TOTAL UPLAND AREA ON SITE: 106.15 ACRES
TOTAL E.P.C. WETLAND AREA ON SITE: 27.16 ACRES
TOTAL E.P.C. LINE ON SITE: 15,464 LINEAR FEET

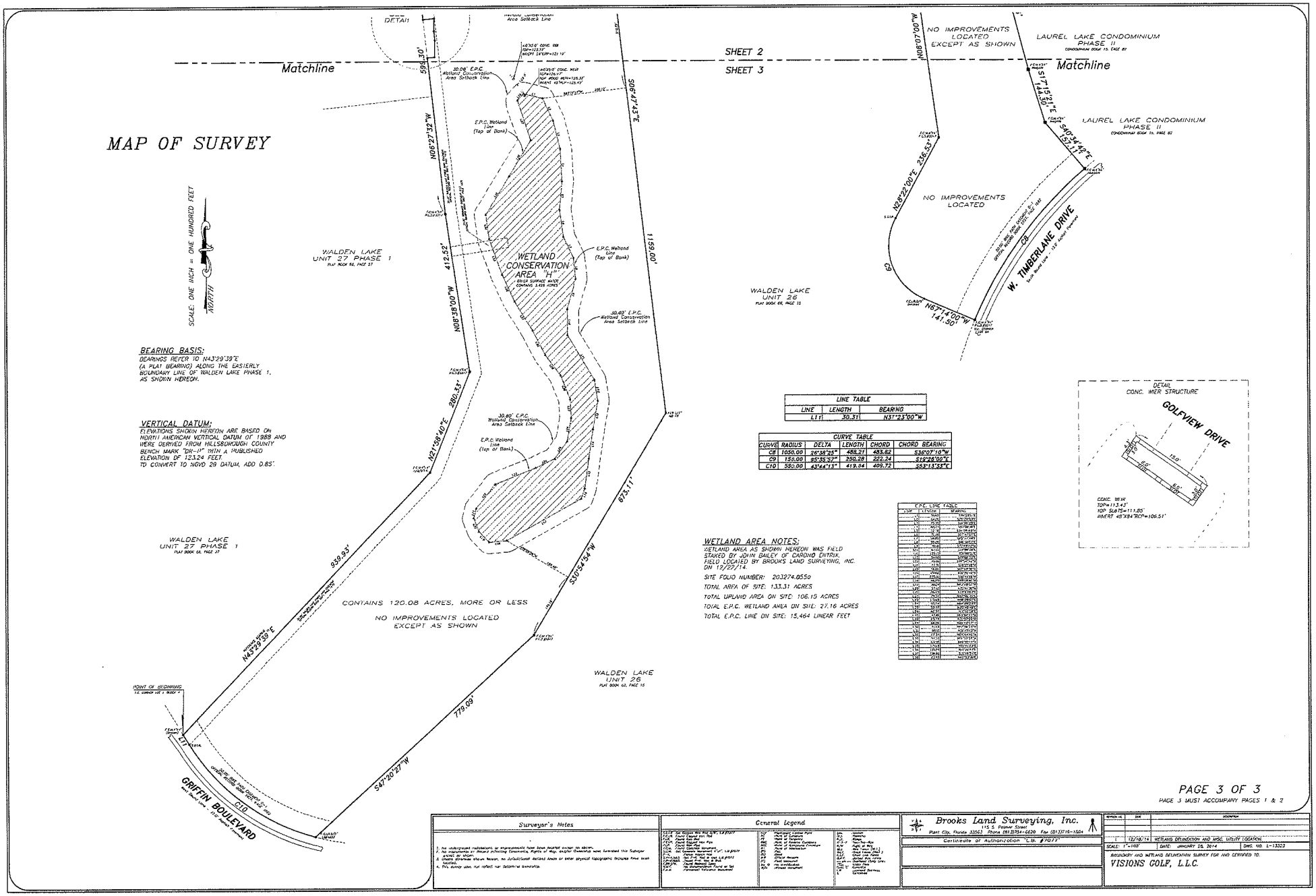
Surveyor's Notes

General Legend

Brooks Land Surveying, Inc.
115 S. Palmer Street
Plant City, Florida 33563 Phone (813)754-6690 Fax (813)719-1504
Certificate of Authorization "L.B. #7077"

12/18/15 WETLAND DELINEATION AND MISC. UTILITY LOCATION
SCALE: 1"=100' DATE: JANUARY 28, 2016 DWG. NO. L-13303
BOUNDARY AND WETLAND DELINEATION SURVEY FOR AND CERTIFIED TO:
VISIONS GOLF, L.L.C.

MAP OF SURVEY



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BEARINGS REFER TO N43°29'39"E (A PLAT BEARING) ALONG THE EASTERLY BOUNDARY LINE OF WALDEN LAKE PHASE 1, AS SHOWN HEREON.

VERTICAL DATUM:
ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 AND WERE DERIVED FROM HILLSBOROUGH COUNTY BENCH MARK "DR-11" WITH A PUBLISHED ELEVATION OF 123.24 FEET.
TO CONVERT TO NGVD 29 DATUM, ADD 0.85'.

LINE TABLE		
LINE	LENGTH	BEARING
L11	30.31'	N31°23'00"W

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C8	1050.00	26°58'25"	488.21	483.82	S36°07'10"W
C9	150.00	85°05'37"	220.29	222.24	S19°26'00"E
C10	550.00	43°44'13"	419.94	409.72	S53°13'53"E

E.P.C. LINE TABLE		
LINE	LENGTH	BEARING
L1	74.43'	N47°31'11"E
L2	64.20'	S41°29'32"E
L3	50.00'	S48°30'28"W
L4	42.17'	S41°29'32"E
L5	12.19'	S48°30'28"W
L6	50.00'	S41°29'32"E
L7	24.85'	S48°30'28"W
L8	50.00'	S41°29'32"E
L9	21.19'	S48°30'28"W
L10	50.00'	S41°29'32"E
L11	41.03'	S48°30'28"W
L12	50.00'	S41°29'32"E
L13	24.04'	S48°30'28"W
L14	50.00'	S41°29'32"E
L15	21.19'	S48°30'28"W
L16	50.00'	S41°29'32"E
L17	41.03'	S48°30'28"W
L18	50.00'	S41°29'32"E
L19	24.04'	S48°30'28"W
L20	50.00'	S41°29'32"E
L21	21.19'	S48°30'28"W
L22	50.00'	S41°29'32"E
L23	41.03'	S48°30'28"W
L24	50.00'	S41°29'32"E
L25	24.04'	S48°30'28"W
L26	50.00'	S41°29'32"E
L27	21.19'	S48°30'28"W
L28	50.00'	S41°29'32"E
L29	41.03'	S48°30'28"W
L30	50.00'	S41°29'32"E
L31	24.04'	S48°30'28"W
L32	50.00'	S41°29'32"E
L33	21.19'	S48°30'28"W
L34	50.00'	S41°29'32"E
L35	41.03'	S48°30'28"W
L36	50.00'	S41°29'32"E
L37	24.04'	S48°30'28"W
L38	50.00'	S41°29'32"E
L39	21.19'	S48°30'28"W
L40	50.00'	S41°29'32"E
L41	41.03'	S48°30'28"W
L42	50.00'	S41°29'32"E
L43	24.04'	S48°30'28"W
L44	50.00'	S41°29'32"E
L45	21.19'	S48°30'28"W
L46	50.00'	S41°29'32"E
L47	41.03'	S48°30'28"W
L48	50.00'	S41°29'32"E
L49	24.04'	S48°30'28"W
L50	50.00'	S41°29'32"E
L51	21.19'	S48°30'28"W
L52	50.00'	S41°29'32"E
L53	41.03'	S48°30'28"W
L54	50.00'	S41°29'32"E
L55	24.04'	S48°30'28"W
L56	50.00'	S41°29'32"E
L57	21.19'	S48°30'28"W
L58	50.00'	S41°29'32"E

WETLAND AREA NOTES:
WETLAND AREA AS SHOWN HEREON WAS FIELD STAKED BY JOHN BAILEY OF CARDNO ENTRIX. FIELD LOCATED BY BROOKS LAND SURVEYING, INC. ON 12/27/14.

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TOTAL UPLAND AREA ON SITE: 106.15 ACRES

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TOTAL E.P.C. LINE ON SITE: 15,464 LINEAR FEET

DETAIL
CONC. WIER STRUCTURE

PAGE 3 OF 3
PAGE 3 MUST ACCOMPANY PAGES 1 & 2

Surveyor's Notes

1. No underground installations or improvements have been located except as shown.
2. No instruments of record affecting Easements, Rights of Way, and/or Ownership were furnished this Surveyor except as shown.
3. Unless otherwise shown hereon, no Jurisdictional Wetland Areas or other physical topographic features have been located.
4. This survey does not reflect non jurisdictional boundaries.

General Legend

CB.F.B.	Set Nelson Mfg Rod &/W. 1.5" FDOT	⊗	Manholes Cleaner Hole
F.C.H.	Found Capped Iron Rod	⊗	Water Valve
F.I.R.	Found Iron Rod	⊗	Water Meter
F.I.P.	Found Iron Pipe	⊗	Water Well
F.N.D.	Found Nail & Disk	⊗	Fire Hydrant
F.M.D.	Found Monument	⊗	Light Pole
S.N.D.	Set Nail & Disk	⊗	Light Pole (Dbl.)
S.M.D.	Set Concrete Monument 4"x4", Lb.#6616	⊗	Wood Power Pole
P.R.M.	Permanent Reference Monument	⊗	Wood Pole (Dbl.)
P.C.P.	Permanent Control Point	⊗	Concrete Power Pole
F.C.H.N.D.	Found Capped Nail & Disk	⊗	Utility Pedestal
F.C.H.R.D.	Found Capped Rod & Disk	⊗	Utility Manhole
F.C.H.P.D.	Found Capped Pipe & Disk	⊗	Utility Pole
C.P.P.	Concrete Power Pole	⊗	Guy Anchor
C.L.F.	Chain Link Fence	⊗	Sign
W.F.	Wood Fence	⊗	Mailbox
P.V.C.	Polyvinyl Chloride Pipe	⊗	Cleanout
C.M.P.	Corrugated Metal Pipe	⊗	Sewer Cleanout
R.C.P.	Reinforced Concrete Pipe	⊗	Sewer Manhole
C.O.	Cleanout	⊗	Sewer Lift Station
C.B.	Concrete Block	⊗	Sewer Pump
C.L.F.	Chain Link Fence	⊗	Sewer Vent
W.F.	Wood Fence	⊗	Sewer Valve
W.M.	Water Meter	⊗	Sewer Cleanout
W.V.	Water Valve	⊗	Gas Valve
W.W.	Water Well	⊗	Gas Meter
F.H.	Fire Hydrant	⊗	Gas Tank
L.P.	Light Pole	⊗	Telephone Pedestal
		⊗	Telephone Manhole
		⊗	Telephone Booth
		⊗	Telephone Pole
		⊗	Telephone Cable Vault
		⊗	Cable Pedestal
		⊗	Cable Box
		⊗	Cable Pole
		⊗	Commercial Business
		⊗	Cellphone

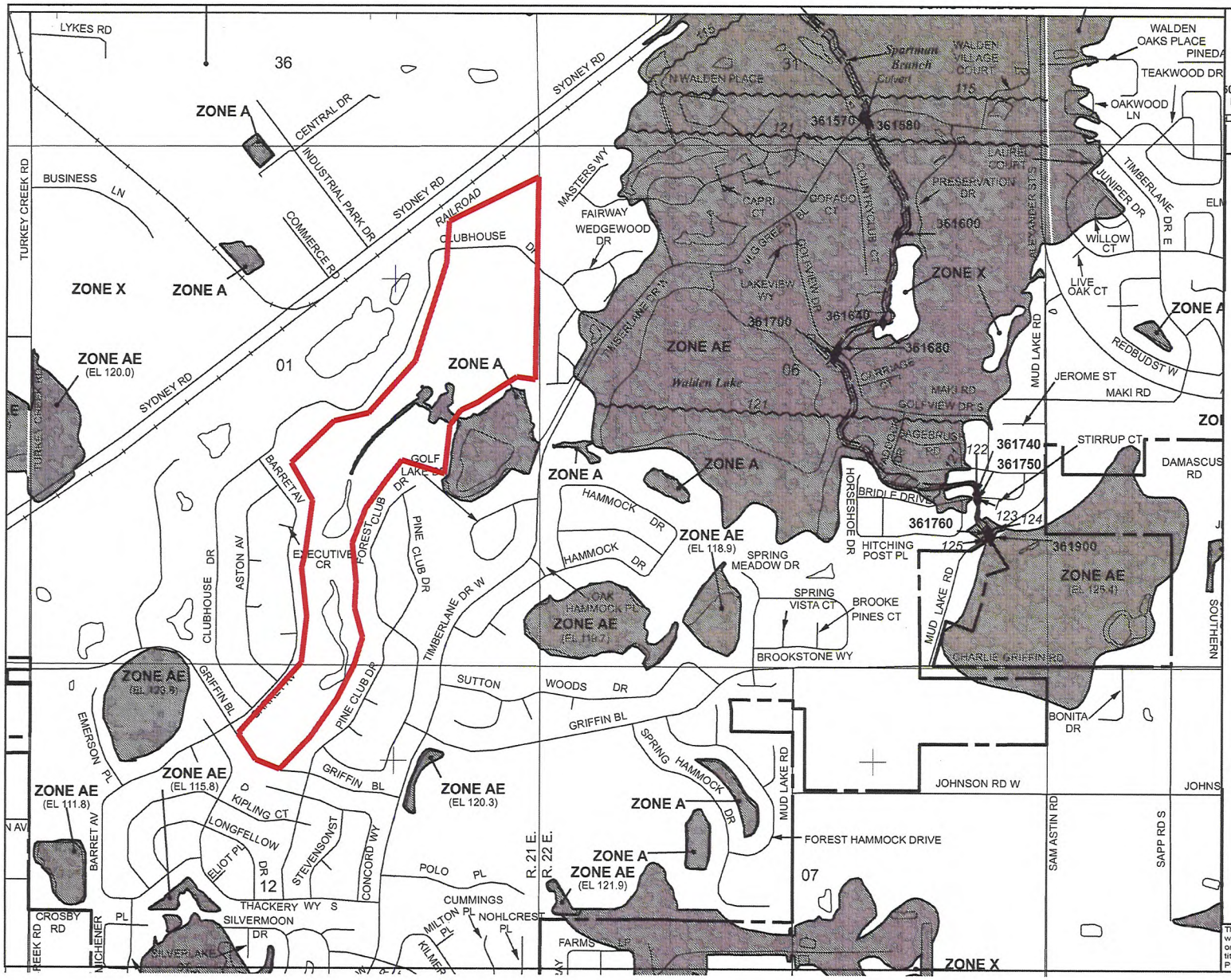
Brooks Land Surveying, Inc.
115 S. Palmer Street
Plant City, Florida 33563 Phone (813)754-6620 Fax (813)716-1504
Certificate of Authorization "L.B. #7072"

REVISION NO.	DATE	DESCRIPTION
1	12/18/14	WETLAND DELINEATION AND MISC. UTILITY LOCATION

SCALE: 1"=100' | DATE: JANUARY 26, 2014 | DWG. NO. L-13323

BOUNDARY AND WETLAND DELINEATION SURVEY FOR AND CERTIFIED TO:
VISIONS GOLF, L.L.C.

APPENDIX B
FEMA FLOODPLAIN MAP



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METER

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0410H

FIRM

FLOOD INSURANCE RATE MAP

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

PANEL 410 OF 801

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HILLSBOROUGH COUNTY	120112	0410	H
PLANT CITY, CITY OF	120113	0410	H

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
12057C0410H

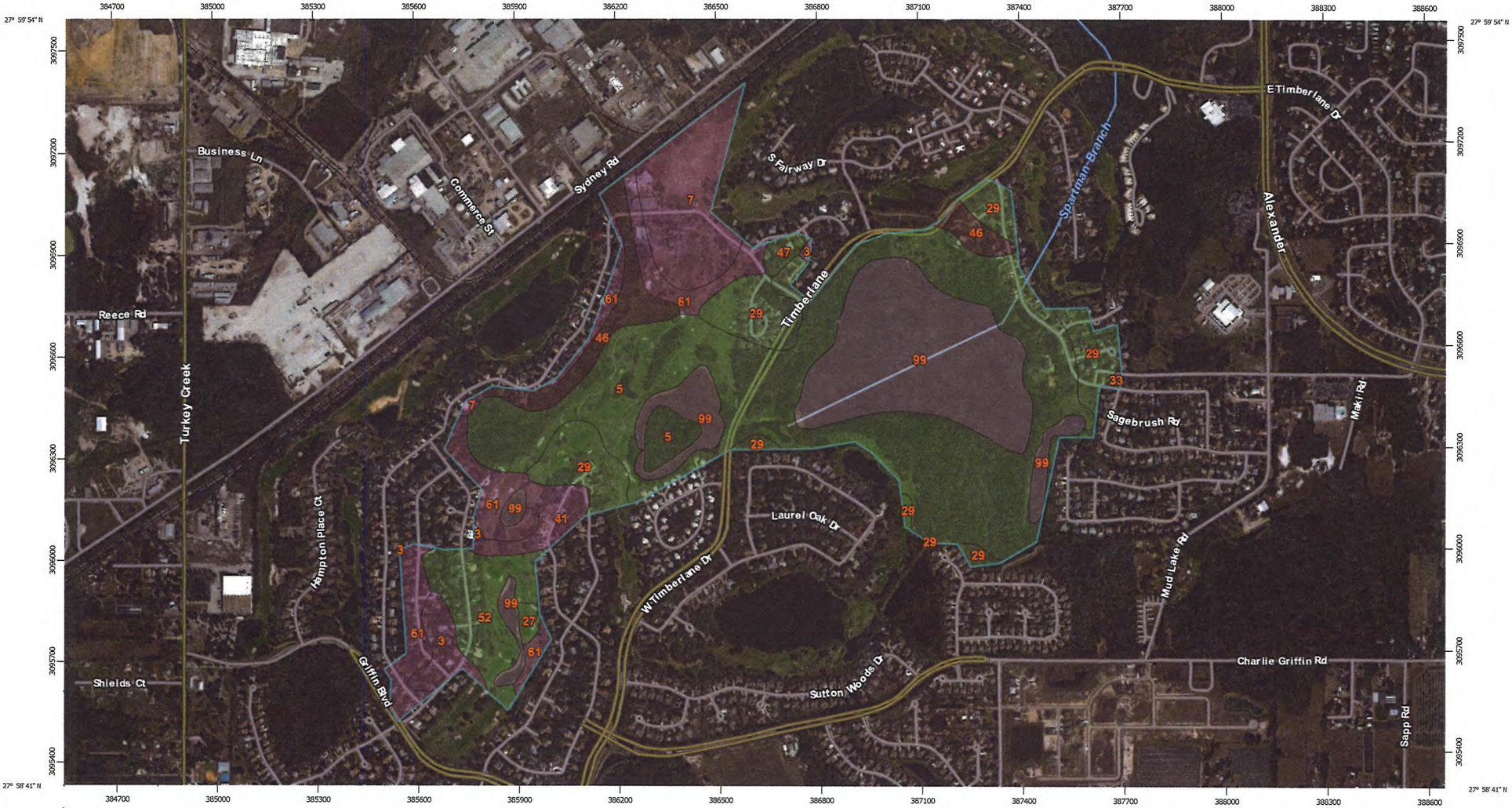
EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

APPENDIX C
SOILS REPORT

Hydrologic Soil Group—Hillsborough County, Florida
(Walden Lakes Community Expansion)



Map Scale: 1:11,100 if printed on B landscape (17" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hillsborough County, Florida
Survey Area Data: Version 11, Dec 17, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 10, 2010—Mar 13, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Hillsborough County, Florida (FL057)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
3	Archbold fine sand	A	7.7	2.0%
5	Basinger, Holopaw, and Samsula soils, depressional	A/D	143.7	37.8%
7	Candler fine sand, 0 to 5 percent slopes	A	28.7	7.6%
27	Malabar fine sand	A/D	1.7	0.4%
29	Myakka fine sand	A/D	38.2	10.0%
33	Ona fine sand	B/D	0.4	0.1%
41	Pomello fine sand, 0 to 5 percent slopes	A	8.4	2.2%
46	St. Johns fine sand	B/D	17.9	4.7%
47	Seffner fine sand	A/D	2.5	0.7%
52	Smyrna fine sand	A/D	20.5	5.4%
61	Zolfo fine sand	A	32.4	8.5%
99	Water		77.9	20.5%
Totals for Area of Interest			**379.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

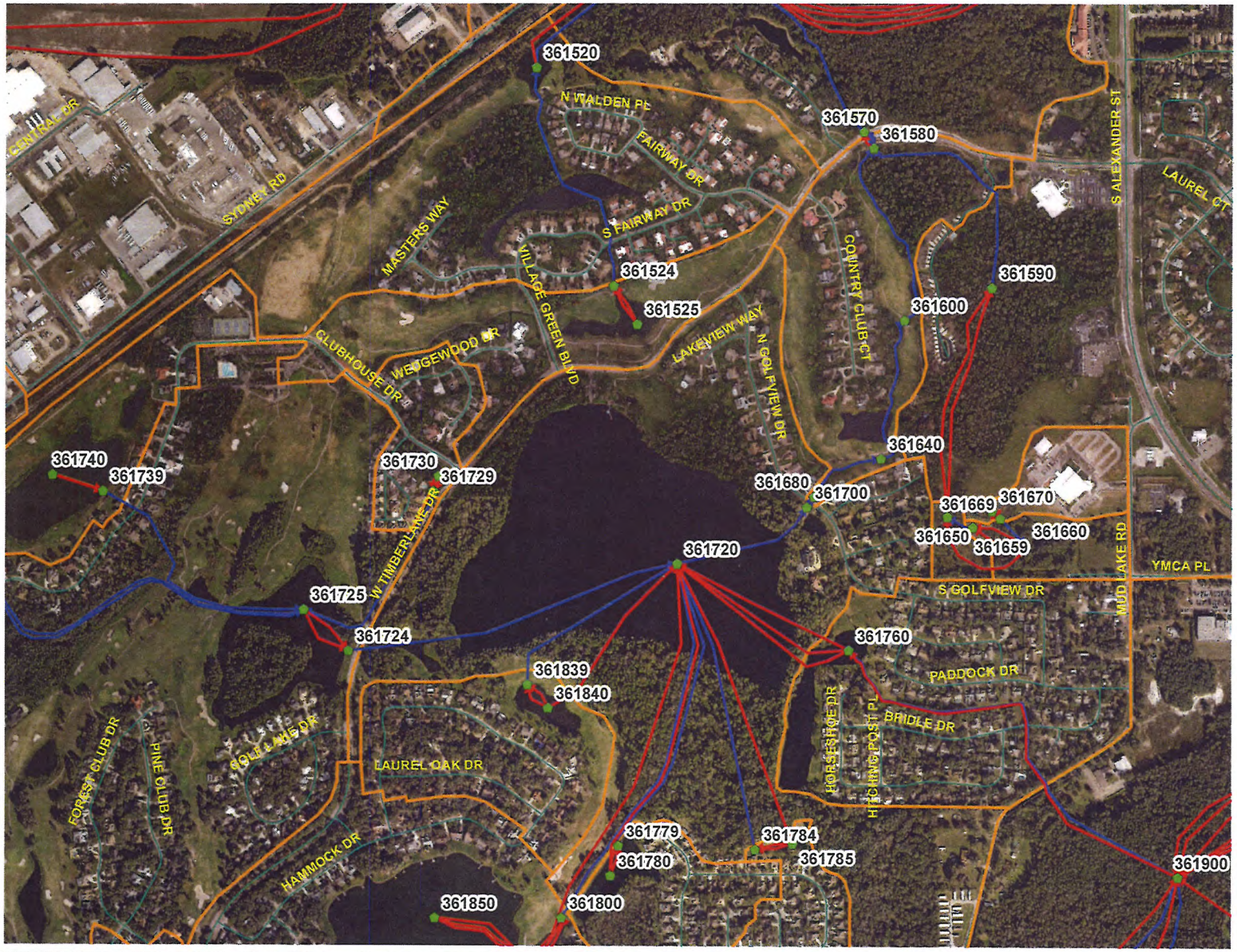
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

APPENDIX D
HILLSBOROUGH COUNTY PEMBERTON BAKER AREA (PBA) SWMM INFORMATION



N
W E
S

Legend

- Stormwater_Junction
- Stormwater_Weir
- Stormwater_Conduit
- Subbasin_Delineation
- Streets

0 500 1,000 Feet

```
*Last update 08/12/09 by Ayres
* ==========================================================================
*                      PEMBERTON CREEK/BAKER CANAL AREA
*                         Rainfall Distributions
*                       25-Year/24-Hour SCS Type II MODIFIED
* ==========================================================================
*       SWFWMD 24-Hour Rainfall Depths--From Isohyetal Curves
*              100-Year              11.00
*               50-Year              10.00
*               25-Year               8.00
*               10-Year               7.00
*                5-Year               5.50
*             2.33-Year               4.50
*
ID                 PEMBERTON CREEK/BAKER CANAL AREA
ID        Hillsborough County BOCC--Dept of Public Works
*
*
*   This is a standard HEC-1 file.  RDHEC copies the ID, *, IT, IO, JR,
*       PG, IN, PC, and PR records from this file.  It ignores other records.
*
*FREE
*DIAGRAM
*   NMIN    DATE   ITIME      NQ
IT    10 21JAN98       0     1003
*
*NOLIST
*   IPRT    IPLT
*   0,1,2          All
*       3          Input Data and Intermediate and Master Summaries
*       4          Input Data and Master Summary
*       5          Job specification and Master Summary Only
*
*            0,1   No Printer Plots--Can be overriden on KO record
*              2   Plot All
*
IO     3       0
*
* MULTIRATION ANALYSIS--DO NOT USE
*   Use Only one ratio per run for SWMM.
* ##################################################
* 25-Year/24-Hour SWFWMD
*JR  PREC      4.50
*JR  PREC      5.50
*JR  PREC      7.00
JR   PREC      8.00
*JR  PREC     10.00
*JR  PREC     11.00
* ##################################################
* ##################################################
*
*
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
*    SCS 24-HR, TYPE II FLORIDA MODIFIED DISTRIBUTION (30 MIN INCREMENTS)
PGFLMOD     1.0
*    SCS 24-HR, TYPE II FLORIDA MODIFIED DISTRIBUTION (30 MIN INCREMENTS)
IN     30 14JAN98       0
PC  .000    .006    .012    .019    .025    .032    .039    .047    .054    .062
PC  .071    .080    .089    .099    .110    .122    .134    .148    .164    .181
PC  .201    .226    .258    .308    .607    .719    .757    .785    .807    .826
PC  .842    .857    .870    .882    .893    .904    .913    .923    .931    .940
PC  .948    .955    .962    .969    .976    .983    .989    .995    1.00    1.00
*
```

WP	360758	360758	20	16.95	77.8	0.2	256	0
WP	360760	360760	30	118.40	81.1	0.2	256	0
WP	360770	360770	31	274.97	81.6	0.2	256	0
WP	360790	360790	35	16.63	91.9	0.2	256	0
WP	360800	360800	54	61.95	90.9	0.2	256	0
WP	360810	360810	26	11.35	80.2	0.2	256	0
WP	360820	360820	15	8.19	77.3	0.2	256	0
WP	360850	360850	37	24.17	85.2	0.2	256	0
WP	360860	360860	35	28.80	81.9	0.2	256	0
WP	360865	360865	25	7.82	82.7	0.2	256	0
WP	360870	360870	27	78.82	88.2	0.2	256	0
WP	360875	360875	70	4.81	85.5	0.2	256	0
WP	360880	360880	33	76.15	86.6	0.2	256	0
WP	360890	360890	16	91.81	91.0	0.2	256	0
WP	360910	360910	70	5.68	88.7	0.2	256	0
WP	360920	360920	95	120.00	86.6	0.2	256	0
WP	360930	360930	22	11.41	79.9	0.2	256	0
WP	360940	360940	18	17.29	89.3	0.2	256	0
WP	360960	360960	65	56.02	91.2	0.2	256	0
WP	361000	361000	122	183.74	78.1	0.2	256	0
WP	361040	361040	20	13.67	88.5	0.2	256	0
WP	361050	361050	15	19.19	86.2	0.2	256	0
WP	361100	361100	28	196.54	80.1	0.2	256	0
WP	361150	361150	74	72.98	75.0	0.2	256	0
WP	361160	361160	20	19.30	82.3	0.2	256	0
WP	361200	361200	36	119.83	89.4	0.2	256	0
WP	361260	361260	30	36.77	94.3	0.2	256	0
WP	361300	361300	294	339.09	83.7	0.2	256	0
WP	361350	361350	10	12.27	83.1	0.2	256	0
WP	361400	361400	10	3.67	91.2	0.2	256	0
WP	361440	361440	55	36.88	90.5	0.2	256	0
WP	361470	361470	49	28.35	88.3	0.2	256	0
WP	361490	361490	58	45.52	91.0	0.2	256	0
WP	361500	361500	86	104.70	94.1	0.2	256	0
WP	361510	361510	41	10.61	92.0	0.2	256	0
WP	361515	361515	24	8.07	92.3	0.2	256	0
WP	361520	361520	36	108.81	78.1	0.2	256	0
WP	361525	361525	18	39.97	77.2	0.2	256	0
WP	361530	361530	21	18.58	91.8	0.2	256	0
WP	361540	361540	15	2.95	96.5	0.2	256	0
WP	361542	361542	20	3.65	96.7	0.2	256	0
WP	361544	361544	15	3.79	96.4	0.2	256	0
WP	361546	361546	43	29.26	88.7	0.2	256	0
WP	361550	361550	24	11.17	86.0	0.2	256	0
WP	361551	361551	24	48.63	83.3	0.2	256	0
WP	361552	361552	10	2.62	85.4	0.2	256	0
WP	361555	361555	37	54.09	89.1	0.2	256	0
WP	361560	361560	15	7.18	91.9	0.2	256	0
WP	361590	361590	150	301.20	86.0	0.2	256	0
WP	361600	361600	50	48.88	86.2	0.2	256	0
WP	361650	361650	14	3.76	86.5	0.2	256	0
WP	361660	361660	10	9.48	85.4	0.2	256	0
WP	361670	361670	14	11.05	90.7	0.2	256	0
WP	361720	361720	88	208.07	90.7	0.2	256	0
WP	361725	361725	36	247.92	79.0	0.2	256	0
WP	361730	361730	15	14.73	82.6	0.2	256	0
WP	361740	361740	17	33.08	70.8	0.2	256	0
WP	361745	361745	25	17.38	61.3	0.2	256	0
WP	361760	361760	19	71.72	84.7	0.2	256	0
WP	361780	361780	21	24.47	87.3	0.2	256	0
WP	361785	361785	25	14.11	79.8	0.2	256	0
WP	361840	361840	32	34.66	83.4	0.2	256	0
WP	361850	361850	115	101.14	80.2	0.2	256	0

WP	361900	361900	49	231.79	88.0	0.2	256	0
WP	361920	361920	29	19.78	85.1	0.2	256	0
WP	361940	361940	41	43.90	81.0	0.2	256	0
WP	361950	361950	15	7.65	91.8	0.2	256	0
WP	362000	362000	15	26.00	94.1	0.2	256	0
WP	362010	362010	26	14.87	82.6	0.2	256	0
WP	362020	362020	22	10.44	84.5	0.2	256	0
WP	362030	362030	22	13.41	79.0	0.2	256	0
WP	362040	362040	21	19.16	85.4	0.2	256	0
WP	362100	362100	29	16.43	90.2	0.2	256	0
WP	363000	363000	63	25.66	85.6	0.2	256	0

```
*Last update 04/26/10 by Ayres
*Datum in NAVD88; to convert to NGVD add 0.87'
*==========================================================================
*                      PEMBERTON CREEK/BAKER CANAL AREA
*                        Existing Conditions Model
*                   100-Year 24-Hour Design Storm Event
*                         Setup for SWMM 4.3 (Mod)
*
* ========================================================================
*   NBLOCKS   INBLK1  OUTBLK1   INBLK2  OUTBLK
SW    2         8        12       12       0
* NITCH NSCRATCH(1)NSCRATCH(2)NSCRATCH(3)NSCRATCH(4)NSCRATCH(5)NSCRATCH(NTH)
MM    6   10   11   13   14   15  16
* ========================================================================
@     8   'PBA100EU.WPX'
@    11   'PBA100EU.HOT'
@    12   'PBA100EU.INT'
@    15   'PBA100EU.SMX'
@    16   'PBA100EU.PLT'
$COMBINE
A1  11
B1  '  CONVERT HEC1 DATA FROM TAPE21 FILE'
B1  '  MAKE SWMM INTERFACE FILE          '
* ========================================================================
$EXTRAN
A1 ''
A1 ''
B0          2        0        1
BB          1        0
*
*==============================================================
*
B1     612000      1.0      0.0      1     3600      3600      0
*
*B1    432000      1.0      0.0      1     3600      3600      0
*
*B1    345600      1.0      0.0      1     3600      3600      0
*
*B1    518400      1.0      0.0      1     7200      7200      0
*
*==============================================================
*
B2          0        0     40.0     50     0.05
*     H-prnt  Q-prnt H-plot Q-plot
*       Junction Condition
*       NHPRT   NQPRT   NHPLT   LPLT    NB8     NB9     NJSW
B3      1380    1050    1380    1050    0       0       0
*       JPRT(1) (2)     (3)     (4)     (5)     (6)     (7)     (8)     (9)     (10)
B4      300040  300100  300110  300120  300200  300210  300250  300260  300300  300320
        300340  300350  300360  300380  300400  300440  300450  300460  300470  300480
        300500  300520  300540  300560  300580  300600  300700  300800  300820  300830
        300850  300900  300910  300920  300930  300940  301095  301100  301110  301120
        301130  301140  301150  301160  301170  301180  301190  301220  301225  301230
        301240  301260  301280  301285  301290  301300  301302  301310  301320  652400
        301399  301400  301500  310050  310100  310180  310200  310220  310230  310240
        310250  310300  310400  310500  310600  310610  310615  310620  310650  310680
        310700  310710  310720  310730  310740  310750  310760  310770  310780  310790
        310800  310900  310920  310940  310960  311000  311010  311020  311040  311050
        320008  320009  320010  320011  320012  320013  320020  320025  320028  320030
        320065  320067  320068  320069  320070  320071  320072  320074  320080  320090
        320100  320120  320130  320200  320300  320400  320409  320410  320420  320424
        320425  320430  320434  320435  320450  320500  320600  320680  320700  320740
        320750  320780  320800  320810  320820  320830  320840  320850  320860  320870
        320875  320880  320885  320890  320900  320980  320990  320995  321000  321100
        321120  321140  321150  321160  321200  321300  321350  321400  321410  321419
        321420  321430  321480  321490  321500  321530  321540  321600  321640  321650
```

```
*FDOT 10090-3536 S9
C1      1361159 361159  361150  0       1       0.00    2.00    2.00    60      105.16  104.81  0.013   0       0       0.5     1       0       2
*ERP 32689, Plan Sht 7
C1      2361159 361159  361150  0       1       0.00    2.00    2.00    67      104.88  104.74  0.013   0       0       0.5     1       0       2
*ERP 32689, Asbuilt Plan Sht 7
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*Survey 07' 31-28-22S03
C1      1361250 361250  361240  0       1       0.00    3.00    3.00    41.5    109.45  109.20  0.012   0       0       0.5     1       0       3
C1      2361250 361250  361240  0       1       0.00    3.00    3.00    41.5    109.43  108.99  0.012   0       0       0.5     1       0       3
C1      3361250 361250  361240  0       1       0.00    3.00    3.00    41.5    109.34  108.92  0.012   0       0       0.5     1       0       3
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*Survey 07' 36-28-21S02
C1      4361250 361250  361200  0       1       0.00    1.25    1.25    32.5    128.59  127.67  0.012   0       0       0.5     1       0       4
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
C1      1361259 361259  361200  0       1       0.00    3.00    3.00    150     111.13  110.13  0.013   0       0       0.5     1       0       1
*ERP 11539, Plan Sht 4,10
C1      1361400 361400  361280  0       2       0.00    6.00    9.40    100     104.92  104.82  0.030   0       0       0.5     0.5     0       1
C1      1361440 361440  361420  0       2       0.00    5.70    16.30   100     106.33  106.23  0.039   0       0       0.5     0.5     0       1
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*Survey 07' 31-28-22S01
C1      1361470 361470  361460  0       3       0.00    5.00    7.00    73      106.72  106.48  0.024   0       0       0.5     1       0       2
C1      2361470 361470  361460  0       3       0.00    5.00    7.00    73      106.77  106.90  0.024   0       0       0.5     1       0       2
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*C1     1361509 361509  361500  0       1       0.00    2.50    2.50    60      109.63  109.49  0.013   0       0       0.5     1       0       2
*ERP 7561.002, Plan Sht 7
*C1     1361514 361514  361500  0       1       0.00    3.50    3.50    28.5    105.18  105.08  0.013   0       0       0.5     1       0       4
*ERP 7561, Plan Sht 5
C1      1361520 361520  361500  0       1       0.00    3.00    3.00    100     110.53  107.13  0.050   0       0       0.5     1       0       1
C1      1361524 361524  361520  0       1       0.00    2.50    2.50    1152    108.38  106.70  0.013   0       0       0.5     1       0       1
*Walden Lake Plan Unit 13, Plan Sht 3
*C1     1361529 361529  361500  0       3       0.00    2.83    4.42    40      110.03  110.04  0.013   0       0       0.5     1       0       3
*ERP 7561, Plan Sht 5
*C1     1361539 361539  361500  0       3       0.00    2.42    3.75    45.1    111.60  111.52  0.013   0       0       0.5     1       0       3
*ERP 7561, Plan Sht 5
C1      1361541 361541  361540  0       1       0.00    3.00    3.00    104     109.56  109.45  0.013   0       0       0.5     1       0       3
*ERP 7561, Plan Sht 5
C1      1361546 361546  361544  0       1       0.00    1.50    1.50    85      112.13  111.93  0.013   0       0       0.5     1       0       2
*ERP 7561, Plan Sht 1/3
C1      2361546 361546  361544  0       1       0.00    1.50    1.50    85      112.13  111.93  0.013   0       0       0.5     1       0       2
*ERP 7561, Plan Sht 1/3
*C1     1361550 361550  361500  0       2       0.00    4.00    6.00    95      112.16  111.18  0.013   0       0       0.5     0.5     0       2
*ERP 7561, Plan Sht 1/3
C1      1361555 361555  361550  0       1       0.00    3.00    3.00    72      114.43  113.94  0.013   0       0       0.5     1       0       2
*ERP 21028.001, Plan Sht. C1.01
C1      1361559 361559  361555  0       1       0.00    2.00    2.00    45      115.03  114.93  0.013   0       0       0.5     1       0       3
*ERP 21028.001, Plan Sht. C1.01
C1      1361580 361580  361570  0       3       0.00    4.42    6.92    148     106.03  105.88  0.013   0       0       0.5     1       0       1
*Walden Lake Plan, Timerland Drive1st Extension
C1      2361580 361580  361570  0       3       0.00    4.42    6.92    148     106.03  105.88  0.013   0       0       0.5     1       0       1
*Walden Lake Plan, Timerland Drive1st Extension
C1      3361580 361580  361570  0       3       0.00    4.42    6.92    148     106.03  105.88  0.013   0       0       0.5     1       0       1
*Walden Lake Plan, Timerland Drive1st Extension
C1      1361590 361590  361580  0       1       0.00    3.00    3.00    48      105.72  105.94  0.013   0       0       0.5     1       0       3
*Walden Lake Plan Unit 10, Plan Sht 3
C1      1361659 361659  361650  0       1       0.00    1.50    1.50    50      120.43  120.13  0.013   0       0       0.5     1       0       2
*ERP 22238
C1      1361669 361669  361660  0       1       0.00    1.50    1.50    50      118.13  117.93  0.013   0       0       0.5     1       0       2
*ERP 22238
C1      1361700 361700  361680  0       2       0.00    4.80    6.00    500     107.70  107.60  0.030   0       0       0.5     0.5     0       1
C1      1361724 361724  361720  0       3       0.00    3.58    5.67    160     109.26  109.13  0.013   0       0       0.5     1       0       1
*Walden Lake Plan Unit 20 Sht 5
```

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C1      1361729 361729  361725  0       3       0.00    1.58    1.67    20      113.23  113.18  0.013   0       0       0.5     1       0       5
*Walden Lake Plan Clubhouse Dr. & Unit 14, Plan Sht 3, 6
C1      1361739 361739  361725  0       1       0.00    2.00    2.00    404     121.83  118.08  0.013   0       0       0.5     1       0       1
*Walden Lake Plan Units 19,27,28, Plan Sht 7
C1      1361745 361745  361725  0       3       0.00    2.83    4.42    90      126.30  129.51  0.013   0       0       0.5     1       0       2
*Walden Lake Plan Units 19,27,28, Plan Sht 7
C1      2361745 361745  361725  0       3       0.00    2.83    4.42    90      126.30  129.51  0.013   0       0       0.5     1       0       2
*Walden Lake Plan Units 19,27,28, Plan Sht 7
*C1     1361759 361759  361720  0       1       0.00    1.25    1.25    36      112.13  112.00  0.013   0       0       0.5     1       0       3
*Walden Lake Plan Unit 24, Plan Sht 9,16
C1      1361779 361779  361720  0       1       0.00    2.50    2.50    30      116.27  116.34  0.013   0       0       0.5     1       0       4
*Walden Lake Plan Unit 29, Asbuit Sht 4
C1      1361784 361784  361720  0       1       0.00    1.50    1.50    18      117.38  117.34  0.013   0       0       0.5     1       0       6
*Walden Lake Plan Unit 29, Asbuit Sht 5
C1      1361800 361800  361720  0       3       0.00    1.58    2.50    60      117.13  117.06  0.013   0       0       0.5     1       0       2
*Walden Lake Plan Unit 20
C1      1361839 361839  361720  0       3       0.00    1.58    2.50    100     111.64  111.23  0.013   0       0       0.5     1       0       1
*Walden Lake Plan Unit 20
C1      1361900 361900  361760  0       2       0.00    4.00    10.00   100     122.53  122.43  0.013   0       0       0.5     0.5     0       10
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*Survey 09' Twin_Oaks
*C1     1361939 361939  361900  0       1       0.00    2.00    2.00    75      135.50  135.50  0.012   0       0       0.5     1       0       2
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*C1     1361949 361949  361900  0       3       0.00    1.58    2.50    236     139.63  138.67  0.013   0       0       0.5     1       0       1
*ERP 14106
C1      1362000 362000  359080  0       3       0.00    3.00    5.00    570     118.23  117.93  0.013   0       0       0.5     1       0       1
*Plant City Westside Canal SWMMP by CDM
C1      1362009 362009  361900  0       1       0.00    2.00    2.00    30      126.17  126.18  0.013   0       0       0.5     1       0       4
*ERP 30339, Sheet 7, STR 4
C1      1362019 362019  361900  0       1       0.00    2.00    2.00    30      125.97  125.91  0.013   0       0       0.5     1       0       4
*ERP 30339, Sheet 7, STR 3
C1      1362029 362029  362020  0       1       0.00    2.00    2.00    611     126.76  124.68  0.013   0       0       0.5     1       0       1
*ERP 30339, Sheet 5
C1      1362040 362040  362030  0       1       0.00    2.00    2.00    658     124.98  126.38  0.013   0       0       0.5     1       0       1
*ERP 30339, Sheet 5
C1      1362100 362100  362000  0       1       0.00    3.00    3.00    200     126.63  126.13  0.013   0       0       0.5     1       0       1
*Plant City Westside Canal SWMMP by CDM
*CHANNELS
C1      9340050 340050  330100  0       8       0.00    0.00    0.00    420     35.31   33.97   0.045   340050  0.00319         0       0       0       1
C1      9340170 340170  340100  0       8       0.00    0.00    0.00    2600    36.03   35.31   0.060   340170  0.00028         0       0       0       1
C1      9340200 340200  340170  0       8       0.00    0.00    0.00    950     38.43   36.03   0.050   340200  0.00253         0       0       0       1
C1      9340280 340280  340200  0       8       0.00    0.00    0.00    2460    39.53   38.43   0.050   340280  0.00045         0       0       0       1
C1      9340400 340400  340300  0       8       0.00    0.00    0.00    539     44.83   44.13   0.055   340400  0.00130         0       0       0       1
C1      9340480 340480  340400  0       8       0.00    0.00    0.00    2584    46.13   44.83   0.060   340480  0.00050         0       0       0       1
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*Based on Scarola's Suvey Data 03/19/03-KTN
C1      9340550 340550  340500  0       8       0.00    0.00    0.00    203     52.98   46.23   0.060   340550  0.03325         0       0       0       1
C1      9340600 340600  340550  0       8       0.00    0.00    0.00    1040    56.71   52.98   0.060   340600  0.00359         0       0       0       1
C1      9340640 340640  340600  0       8       0.00    0.00    0.00    350     59.73   57.13   0.040   340640  0.00743         0       0       0       1
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
C1      9340650 340650  379350  0       8       0.00    0.00    0.00    808     60.26   60.23   0.030   340650  0.00004         0       0       0       1
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*Revised the invert based on Scarola's Suvey Data 03/19/03-KTN
C1      9340900 340900  340600  0       8       0.00    0.00    0.00    2100    57.33   56.71   0.060   340900  0.00030         0       0       0       1
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
C1      9340960 340960  340900  0       8       0.00    0.00    0.00    839     58.08   57.33   0.060   340960  0.00089         0       0       0       1
*-----------------------------------------------------------------------------------------------------------------------------------------------------
-----------------------------------------------
*Added new xsection based on Pemberton Creek Area Phase II CIP#47215
C1      9341000 341000  340960  0       8       0.00    0.00    0.00    1000    58.91   58.08   0.060   341000  0.00083         0       0       0       1
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D1	360930	999	109.13	0	109.13	*ERP 18022.002, Lake A, Plan Sht 2
D1	360940	999	107.00	0	107.00	
D1	360950	999	101.09	0	101.09	
D1	360960	999	101.19	0	101.19	
D1	360970	999	102.17	0	102.17	
D1	361000	999	102.25	0	102.25	
D1	361039	999	121.58	0	121.58	*ERP 2293
D1	361040	999	125.13	0	125.13	*ERP 2293
D1	361049	999	128.17	0	128.17	*ERP 11105.005, DR Node 1 Pond CS
D1	361050	999	126.13	0	126.13	*ERP 11105.005, DR Node 1 Pond
D1	361100	999	98.42	0	98.83	
D1	361150	999	99.03	0	99.03	*FDOT 10090-3536 S9
D1	361159	999	104.88	0	104.88	
D1	361160	999	106.40	0	106.40	
D1	361200	999	103.28	0	103.28	
D1	361240	999	108.92	0	108.92	*02 model/has survey 07
D1	361250	999	109.34	0	109.44	*02 model/has survey 07
D1	361259	999	111.13	0	111.13	
D1	361260	999	116.00	0	116.00	
D1	361280	999	104.82	0	104.82	
D1	361300	999	109.23	0	109.23	
*D1	361320	999	137.00	0	137.00	
D1	361350	999	148.13	0	148.13	*ERP 5222.004, Sheet 3
D1	361400	999	104.92	0	104.92	
D1	361420	999	106.23	0	106.23	
D1	361440	999	106.33	0	106.33	
D1	361460	999	106.48	0	106.48	*02 model/has survey 07
D1	361470	999	106.72	0	106.72	*survey 07
D1	361480	999	107.03	0	107.03	*02 model/has survey 07
D1	361490	999	116.00	0	116.00	
D1	361500	999	107.13	0	107.13	*02 model/has survey 07
*D1	361509	999	109.63	0	109.63	*ERP 7561.002, Plan Sht 5,6
D1	361510	999	110.63	0	110.63	*ERP 7561.002, Plan Sht 5,6
*D1	361514	999	105.18	0	105.18	*ERP 7561, Plan Sht 4,5
D1	361515	999	111.00	0	111.00	*ERP 7561, DR pg 27
D1	361520	999	106.70	0	110.53	*ERP No. 7561, DR pg 27
D1	361524	999	108.38	0	108.38	*Walden Lake Plan
D1	361525	999	106.00	0	106.00	*Walden Lake Plan
*D1	361529	999	110.03	0	110.03	*ERP 7561, Plan Sht 4,5
D1	361530	999	111.03	0	111.03	*ERP 7561, DR pg 27
*D1	361539	999	111.60	0	111.60	*ERP No 7561, Plan Sht 5
D1	361540	999	109.45	0	109.45	*ERP No 7561, Plan Sht 5
D1	361541	999	109.56	0	109.56	*ERP No 7561, Plan Sht 5
D1	361542	999	111.13	0	111.13	*ERP No 7561, Plan Sht 5
D1	361544	999	111.93	0	111.93	*ERP 7561, DR pg 27
D1	361546	999	112.13	0	112.13	*ERP 7561, DR pg 27
D1	361550	999	113.94	0	113.94	
D1	361551	999	116.00	0	116.00	
D1	361552	999	120.63	0	120.63	*ERP 18194.001, Plan Sht 3
D1	361555	999	114.43	0	114.43	*Aerials & Topography
D1	361559	999	115.03	0	115.03	*ERP 21028.001, Plan Sht C1.04
D1	361560	999	115.13	0	115.13	*ERP 21028.001, Plan Sht C1.02, DR
D1	361570	999	105.88	0	105.88	
D1	361580	999	105.94	0	105.94	
D1	361590	999	105.72	0	105.72	*Walden Lake Plan
D1	361600	999	107.53	0	107.53	
D1	361640	999	107.73	0	107.73	
D1	361650	999	115.78	0	115.78	*ERP 22238
D1	361659	999	120.43	0	120.43	*ERP 22238
D1	361660	999	117.93	0	117.93	*ERP 22238
D1	361669	999	118.13	0	118.13	*ERP 22238
D1	361670	999	118.13	0	118.13	*ERP 22238
D1	361680	999	107.60	0	107.60	
D1	361700	999	107.70	0	107.70	
D1	361720	999	109.00	0	109.00	*Walden Lake
D1	361724	999	109.26	0	109.26	*Walden Lake Plan

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D1      361725  999     111.00  0       111.00  *Walden Lake Plan
D1      361729  999     113.23  0       113.23  *Walden Lake Plan
D1      361730  999     112.00  0       112.00  *Walden Lake Plan
D1      361739  999     121.83  0       121.83  *Walden Lake Plan
D1      361740  999     118.00  0       122.63  *Walden Lake Plan
D1      361745  999     126.30  0       126.30  *Walden Lake Plan
*D1     361759  999     112.13  0       112.13  *Walden Lake Plan
D1      361760  999     111.00  0       111.00
D1      361779  999     116.27  0       116.27  *Walden Lake Plan
D1      361780  999     114.00  0       116.00  *Walden Lake Plan
D1      361784  999     117.38  0       117.38  *Walden Lake Plan
D1      361785  999     114.00  0       114.00  *Walden Lake Plan
D1      361800  999     117.13  0       117.13  *survey 07
D1      361839  999     111.64  0       111.64  *Walden Lake Plan
D1      361840  999     110.00  0       110.00  *Walden Lake Plan
D1      361850  999     114.00  0       115.00  *Walden Lake Plan
D1      361900  999     122.53  0       122.53
D1      361920  999     138.00  0       138.00
*D1     361939  999     135.50  0       135.50  *survey 09
D1      361940  999     132.00  0       132.00
*D1     361949  999     139.63  0       139.63  *ERP 14106
D1      361950  999     139.63  0       139.63  *ERP 14106
D1      362000  999     118.23  0       118.23  *Plant City Westside Canal SWMMP by CDM
D1      362009  999     126.17  0       126.17  *ERP 30339, Plan Sheet 7, Pond 4
D1      362010  999     120.00  0       120.00  *ERP 30339, DR Page 5, Pond 4
D1      362019  999     125.97  0       125.97  *ERP 30339, Plan Sheet 7, Pond 3
D1      362020  999     120.00  0       120.00  *ERP 30339, DR Page 5, Pond 3
D1      362029  999     126.76  0       126.76  *ERP 30339, Plan Sheet 5, Pond 1
D1      362030  999     120.00  0       120.00  *ERP 30339, DR Page 4&5, Pond 1
D1      362040  999     120.00  0       120.00  *ERP 30339, DR Page 4&5, Pond 2
D1      362100  999     126.63  0       126.63  *Plant City Westside Canal SWMMP by CDM
D1      363000  999     132.13  0       132.13  *ERP 17202, Sheet 5
*DUMMY JUNCTIONS
D1      550305  299     199.00  0.00    199.00
D1      550306  299     199.00  0.00    199.00
D1      550307  299     199.00  0.00    199.00
D1      550308  299     199.00  0.00    199.00
D1      550309  299     199.00  0.00    199.00
D1      550310  299     199.00  0.00    199.00
D1      550311  299     199.00  0.00    199.00
D1      550312  299     199.00  0.00    199.00
D1      550313  299     199.00  0.00    199.00
D1      550314  299     199.00  0.00    199.00
D1      550315  299     199.00  0.00    199.00
*D1     550316  299     199.00  0.00    199.00
D1      550317  299     199.00  0.00    199.00
D1      550318  299     199.00  0.00    199.00
D1      550319  299     199.00  0.00    199.00
D1      550320  299     199.00  0.00    199.00
D1      550321  299     199.00  0.00    199.00
D1      550322  299     199.00  0.00    199.00
D1      550323  299     199.00  0.00    199.00
D1      550324  299     199.00  0.00    199.00
D1      550325  299     199.00  0.00    199.00
D1      550326  299     199.00  0.00    199.00
D1      550327  299     199.00  0.00    199.00
D1      550328  299     199.00  0.00    199.00
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D1      550331  299     199.00  0.00    199.00
*D1     550332  299     199.00  0.00    199.00
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D1      550334  299     199.00  0.00    199.00
D1      550335  299     199.00  0.00    199.00
D1      550336  299     199.00  0.00    199.00
D1      550337  299     199.00  0.00    199.00
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*
E1      361670  999     -1      4       * ERP 22238
E2      0.52    118.13
        0.960   123.13
        1.000   124.13
        1.200   125.13
*
E1      361720  999     -1      24      * Walden Lake
E2      63.000  109
        64.425  110
        65.456  111
        71.972  112
        82.569  113
        122.651 114
        133.476 115
        162.981 116
        167.362 117
        172.902 118
        175.169 119
        178.702 120
        179.979 121
        182.127 122
        183.189 123
        184.848 124
        186.025 125
        195.067 126
        197.043 127
        201.494 128
        202.977 129
        204.846 130
        205.833 131
        207.669 132
*
E1      361725  999     -1      26      *
E2      0.100   111
        9.984   112
        10.685  113
        17.190  114
        20.539  115
        29.097  116
        33.275  117
        41.596  118
        47.232  119
        56.598  120
        62.152  121
        72.649  122
        79.874  123
        94.813  124
        100.528 125
        113.079 126
        119.434 127
        134.879 128
        143.146 129
        168.816 130
        180.850 131
        204.900 132
        212.156 133
        229.643 134
        233.016 135
        236.948 136
*
E1      361730  999     -1      22      *
E2      0.380   112
        0.411   114
        0.465   115
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        1.431   116
        2.158   117
        6.331   118
        7.429   119
        8.689   120
        9.501   121
        10.691  122
        11.219  123
        11.868  124
        12.509  125
        13.527  126
        13.878  127
        14.410  128
        14.521  129
        14.590  130
        14.621  131
        14.658  132
        14.706  133
        14.733  134
*
E1      361740  999     -1      26      *
E2      8.400   118
        8.588   120
        8.661   121
        9.566   122
        9.699   123
        9.898   124
        10.390  125
        11.134  126
        11.850  127
        13.277  128
        14.291  129
        16.256  130
        17.233  131
        18.316  132
        19.024  133
        20.161  134
        21.037  135
        22.327  136
        23.304  137
        25.130  138
        26.750  139
        28.938  140
        29.977  141
        31.089  142
        31.410  143
        31.786  144
*
E1      361745  999     -1      20      *
E2      0.01    126.3
        0.036   130
        0.170   131
        2.099   132
        2.415   133
        2.897   134
        3.480   135
        4.401   136
        5.044   137
        6.374   138
        7.654   139
        11.645  140
        13.090  141
        15.351  142
        15.860  143
        16.726  144
        17.013  145
```

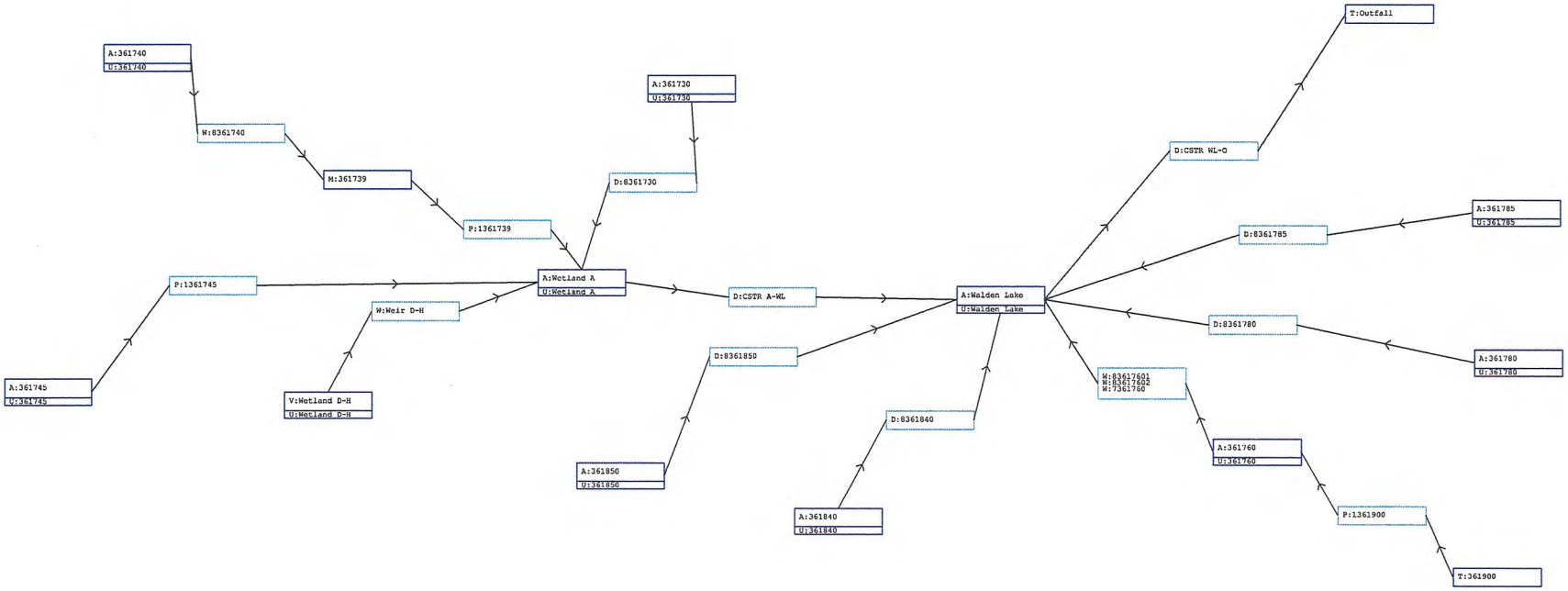
```
        17.263  146
        17.320  147
        17.384  148
*
E1      361760  999     -1      24      *
E2      4.500   111
        4.827   112
        5.041   113
        5.773   114
        6.513   115
        11.744  116
        14.632  117
        20.170  118
        22.652  119
        28.068  120
        30.156  121
        33.755  122
        36.021  123
        41.649  124
        44.637  125
        53.311  126
        54.881  127
        57.961  128
        59.610  129
        62.715  130
        64.914  131
        67.780  132
        69.524  133
        71.722  134
*
E1      361780  999     -1      18      *
E2      2.400   114
        2.689   116
        2.852   117
        3.038   118
        3.262   119
        5.781   120
        6.987   121
        12.000  122
        13.313  123
        17.962  124
        19.105  125
        20.600  126
        21.355  127
        22.960  128
        23.310  129
        23.795  130
        24.240  131
        24.467  132
*
E1      361785  999     -1      20      *
E2      0.500   114
        0.533   116
        0.602   117
        0.681   118
        0.759   119
        0.839   120
        0.926   121
        1.278   122
        1.378   123
        2.852   124
        3.930   125
        7.278   126
        8.844   127
        11.923  128
        12.498  129
```

```
        13.183  130
        13.579  131
        13.909  132
        14.103  133
        14.111  134
*
E1      361840  999     -1      18      *
E2      1.800   110
        1.938   112
        2.019   113
        2.242   114
        3.509   115
        9.087   116
        11.415  117
        15.204  118
        17.800  119
        22.404  120
        24.271  121
        28.351  122
        30.219  123
        34.223  124
        34.333  125
        34.448  126
        34.505  127
        34.657  128
*
E1      361850  999     -1      20      *
E2      18.500  114
        19.167  116
        19.595  117
        20.115  118
        21.331  119
        24.133  120
        27.547  121
        40.358  122
        44.797  123
        56.198  124
        60.976  125
        78.590  126
        85.101  127
        94.823  128
        96.313  129
        100.038 130
        100.620 131
        101.128 132
        101.140 133
        101.140 134
*
E1      361900  999     -1      5       * adopted 02 model
E2      0.10    122.53
        63.90   122.93
        77.80   128.13
        89.90   129.13
        101.50  130.13
*
E1      361920  999     -1      10      *
E2      1.800   138
        2.150   140
        2.286   141
        2.466   142
        2.738   143
        15.370  144
        17.041  145
        18.898  146
        19.534  147
        19.775  148
```

```
G1      83616701 361670  361669  1       118.13  121.86  8.00    3.1     *ERP 22238
G1      83616702 361670  361669  1       121.86  999.00  14.00   3.1     *ERP 22238
G1      83617251 361725  361724  1       112.73  114.93  5.17    3.1     *Walden Lake Plan Unit 20
G1      83617252 361725  361724  1       114.93  999.00  11.50   3.1     *Walden Lake Plan Unit 20
G1      83617301 361730  361729  1       114.63  115.13  3.50    3.1     *Walden Lake Plan Clubhouse Dr. & Unit 14, Plan Sht 6
G1      83617302 361730  361729  1       115.13  999.00  11.50   3.1     *Walden Lake Plan Clubhouse Dr. & Unit 14, Plan Sht 6
G1      8361740  361740  361739  1       124.36  999.00  11.50   3.1     *Walden Lake Plan Unit 28
G1      7361760  361760  361720  1       115.13  999.00  500.00  2.6     *Walden Lake Plan Unit 24, Plan Sht 8
G1      83617601 361760  361720  1       113.83  114.63  3.00    3.1     *Walden Lake Plan Unit 24, Plan Sht 16
G1      83617602 361760  361720  1       114.63  999.00  11.50   3.1     *Walden Lake Plan Unit 24, Plan Sht 16
G1      7361780  361780  361720  1       121.13  999.00  200.00  2.6     *Walden Lake Plan Unit 29, Asbuit Sht 4
G1      83617801 361780  361779  1       120.26  120.85  3.00    3.1     *Walden Lake Plan Unit 29, Asbuit Sht 4
G1      83617802 361780  361779  1       120.85  999.00  11.50   3.1     *Walden Lake Plan Unit 29, Asbuit Sht 4
G1      7361785  361785  361720  1       123.13  999.00  200.00  2.6     *Walden Lake Plan Unit 29, Asbuit Sht 5
G1      83617851 361785  361784  1       121.49  122.47  4.00    3.1     *Walden Lake Plan Unit 29, Asbuit Sht 5
G1      83617852 361785  361784  1       122.47  999.00  11.50   3.1     *Walden Lake Plan Unit 29, Asbuit Sht 5
G1      6361840  361840  361720  1       115.00  999.00  100.00  1.0     *Estimated from 2' Contours
G1      83618401 361840  361839  1       112.93  113.81  1.81    3.1     *Walden Lake Plan Unit 20
G1      83618402 361840  361839  1       113.81  999.00  7.17    3.1     *Walden Lake Plan Unit 20
G1      7361850  361850  361720  1       120.00  999.00  100.00  2.6     *Estimated from 2' Contours
*G1     83618501 361850  361800  1       117.93  118.60  1.83    3.1     *Walden Lake Plan Unit 20
*G1     83618502 361850  361800  1       120.23  999.00  7.17    3.1     *Walden Lake Plan Unit 20
G1      83618501 361850  361800  1       117.67  999.00  1.85    3.1     *survey 07
G1      83618502 361850  361800  1       119.20  999.00  5.15    3.1     *survey 07
G1      7361900  361900  361760  1       129.13  999.00  50.00   2.0     *Mud Lake Dr OVT
G1      6361920  361920  361900  1       144.00  999.00  200.00  1.0     *Estimated from 2' Contours
G1      7361940  361940  361900  1       136.50  999.00  200.00  2.6     *Estimated from 2' Contours
G1      83619401 361940  361900  1       137.50  139.00  0.60    3.1     *Survey 09
G1      83619402 361940  361900  1       139.00  999.00  11.50   3.1     *Survey 09
G1      83619501 361950  361900  1       140.21  142.13  2.50    3.1     *ERP 14106
G1      83619502 361950  361900  1       142.13  999.00  11.00   3.1     *ERP 14106
G1      7362010  362010  361900  1       130.20  999.00  600.00  2.6     *ERP 30339, Sheet 7, Pond 4 OVB
G1      8362010  362010  362009  1       127.82  999.00  1.50    3.1     *ERP 30339, Sheet 7, STR #4
G1      7362020  362020  361900  1       130.90  999.00  200.00  2.6     *ERP 30339, Sheet 7, Pond 3 OVB
G1      8362020  362020  362019  1       127.17  999.00  1.00    3.1     *ERP 30339, Sheet 7, STR #3
G1      8362030  362030  362029  1       127.86  999.00  1.50    3.1     *ERP 30339, Sheet 5, STR #1
G1      7362000  362000  359080  1       122.63  999.00  80.00   2.0     *S Wheeler St OVT (Plant City Westside Canal SWMMP by CDM - was 9362000)
G1      7362100  362100  362000  1       137.63  999.00  75.00   2.0     *Plant City Westside Canal SWMMP by CDM (was 9362100)
G1      7363000  363000  361900  1       136.13  999.00  1000.00 2.6     *ERP 17202, Sheet 3. OVB
*==========================================================
**
* HILLSBOROUGH RIVER SYSTEM NODE
I1    605555       1
*
* PEMBERTON CREEK SYSTEM BOUNDARY TO PLANT CITY
* It is not useful. Comment out by J. Su. 7/23/2003
*
*I1        1       2
*
*------------------------
*
J1         5
J3   0  50  1
*
J4         0   21.68
           3   21.91
           6   21.89
           9   21.89
          10   21.94
J4        11   22.05
          12   22.39
          13   25.43
          14   26.67
          15   27.58
J4        16   27.98
          17   28.28
```

APPENDIX E
PRE-DEVELOPMENT ICPR NODE DIAGRAM AND INPUT

Pre-Development Node Diagram



==== Basins ====

```
        Name: 361730                    Node: 361730                    Status: Onsite
       Group: BASE                      Type: SCS Unit Hydrograph CN

  Unit Hydrograph: Uh256                     Peaking Factor: 256.0
    Rainfall File: Flmod                Storm Duration(hrs): 24.00
Rainfall Amount(in): 8.000                Time of Conc(min): 15.00
           Area(ac): 14.730                 Time Shift(hrs): 0.00
       Curve Number: 82.60              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00
```

From Pemberton Baker SWMM Model

```
        Name: 361740                    Node: 361740                    Status: Onsite
       Group: BASE                      Type: SCS Unit Hydrograph CN

  Unit Hydrograph: Uh256                     Peaking Factor: 256.0
    Rainfall File: Flmod                Storm Duration(hrs): 24.00
Rainfall Amount(in): 8.000                Time of Conc(min): 17.00
           Area(ac): 33.080                 Time Shift(hrs): 0.00
       Curve Number: 70.80              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00
```

From Pemberton Baker SWMM Model

```
        Name: 361745                    Node: 361745                    Status: Onsite
       Group: BASE                      Type: SCS Unit Hydrograph CN

  Unit Hydrograph: Uh256                     Peaking Factor: 256.0
    Rainfall File: Flmod                Storm Duration(hrs): 24.00
Rainfall Amount(in): 8.000                Time of Conc(min): 25.00
           Area(ac): 17.380                 Time Shift(hrs): 0.00
       Curve Number: 61.30              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00
```

From Pemberton Baker SWMM Model

```
        Name: 361760                    Node: 361760                    Status: Onsite
       Group: BASE                      Type: SCS Unit Hydrograph CN

  Unit Hydrograph: Uh256                     Peaking Factor: 256.0
    Rainfall File: Flmod                Storm Duration(hrs): 24.00
Rainfall Amount(in): 8.000                Time of Conc(min): 19.00
           Area(ac): 71.720                 Time Shift(hrs): 0.00
       Curve Number: 84.70              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00
```

From Pemberton Baker SWMM Model

```
        Name: 361780                    Node: 361780                    Status: Onsite
       Group: BASE                      Type: SCS Unit Hydrograph CN

  Unit Hydrograph: Uh256                     Peaking Factor: 256.0
    Rainfall File: Flmod                Storm Duration(hrs): 24.00
Rainfall Amount(in): 8.000                Time of Conc(min): 21.00
           Area(ac): 24.470                 Time Shift(hrs): 0.00
       Curve Number: 87.30              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00
```

From Pemberton Baker SWMM Model

```
        Name: 361785                    Node: 361785                    Status: Onsite
       Group: BASE                      Type: SCS Unit Hydrograph CN

  Unit Hydrograph: Uh256                     Peaking Factor: 256.0
    Rainfall File: Flmod                Storm Duration(hrs): 24.00
Rainfall Amount(in): 8.000                Time of Conc(min): 25.00
           Area(ac): 14.110                 Time Shift(hrs): 0.00
```

```
          Curve Number: 79.80              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From Pemberton Baker SWMM Model

-----------------------------------------------------------------------------------------------------
         Name: 361840                    Node: 361840                  Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                 Time of Conc(min): 32.00
             Area(ac): 34.660                    Time Shift(hrs): 0.00
          Curve Number: 83.40              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From Pemberton Baker SWMM Model

-----------------------------------------------------------------------------------------------------
         Name: 361850                    Node: 361850                  Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                 Time of Conc(min): 115.00
             Area(ac): 101.140                   Time Shift(hrs): 0.00
          Curve Number: 80.20              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From Pemberton Baker SWMM Model

-----------------------------------------------------------------------------------------------------
         Name: Walden Lake               Node: Walden Lake             Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                 Time of Conc(min): 88.00
             Area(ac): 208.700                   Time Shift(hrs): 0.00
          Curve Number: 90.70              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Per Pemberton Baker SWMM Model information

-----------------------------------------------------------------------------------------------------
         Name: Wetland A                 Node: Wetland A               Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                 Time of Conc(min): 36.00
             Area(ac): 210.600                   Time Shift(hrs): 0.00
          Curve Number: 79.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Used SWMM Model Area with verification. Broke out Wetland D-H from total are of 247.9 acres

-----------------------------------------------------------------------------------------------------
         Name: Wetland D-H               Node: Wetland D-H             Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                 Time of Conc(min): 15.00
             Area(ac): 37.300                    Time Shift(hrs): 0.00
          Curve Number: 79.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Broken out from the SWMM Model area. Contained with only a break over at the cart path crossing per survey.

=====================================================================================
==== Nodes ==========================================================================
=====================================================================================

      Name: 361730             Base Flow(cfs): 0.000          Init Stage(ft): 112.000
     Group: BASE                                             Warn Stage(ft): 999.000
      Type: Stage/Area
```

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
112.000	0.3800
114.000	0.4110
115.000	0.4650
116.000	1.4310
117.000	2.1600
118.000	6.3300
119.000	7.4300
120.000	8.7000
121.000	9.5000
122.000	10.7000

Name: 361739 Base Flow(cfs): 0.000 Init Stage(ft): 121.830
Group: BASE Plunge Factor: 1.00 Warn Stage(ft): 126.000
Type: Manhole, Flat Floor

Per Pemberton Baker SWMM Model Information

Stage(ft)	Area(ac)

Name: 361740 Base Flow(cfs): 0.000 Init Stage(ft): 122.630
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model Information

Stage(ft)	Area(ac)
118.000	8.4000
120.000	8.6000
121.000	8.7000
122.000	9.6000
123.000	9.7000
124.000	9.9000
125.000	10.4000
126.000	11.1000
127.000	11.9000

Name: 361745 Base Flow(cfs): 0.000 Init Stage(ft): 126.300
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model Information

Stage(ft)	Area(ac)
126.300	0.0100
130.000	0.0360
131.000	0.1700
132.000	2.0990
133.000	2.4000
134.000	2.9000
135.000	3.4800
136.000	4.4000
137.000	5.0000
138.000	6.3700
139.000	7.6500

Name: 361760 Base Flow(cfs): 0.000 Init Stage(ft): 111.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
111.000	4.5000
112.000	4.8300

113.000	5.0400
114.000	5.7700
115.000	6.5100
116.000	11.7400
117.000	14.6300
118.000	20.2000
119.000	22.6500
120.000	28.1000
121.000	30.2000

Name: 361780 Base Flow(cfs): 0.000 Init Stage(ft): 116.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
114.000	2.4000
116.000	2.6900
117.000	2.8500
118.000	3.0000
119.000	3.2600
120.000	5.7810
121.000	6.9900
122.000	12.0000
123.000	13.3000
124.000	17.9000
125.000	19.1000

Name: 361785 Base Flow(cfs): 0.000 Init Stage(ft): 114.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
114.000	0.5000
116.000	0.5330
117.000	0.6020
118.000	0.6810
119.000	0.7590
120.000	0.8390
121.000	0.9300
122.000	1.2780
123.000	1.3800
124.000	2.8500
125.000	3.9300

Name: 361840 Base Flow(cfs): 0.000 Init Stage(ft): 110.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
110.000	1.8000
112.000	1.9380
113.000	2.0200
114.000	2.2400
115.000	3.5100
116.000	9.0900
117.000	11.4000
118.000	15.2000
119.000	17.8000

Name: 361850 Base Flow(cfs): 0.000 Init Stage(ft): 115.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
114.000	18.5000
116.000	19.2000
117.000	19.6000
118.000	20.1000
119.000	21.3300
120.000	24.1000
121.000	27.5500
122.000	40.3600

Name: 361900 Base Flow(cfs): 0.000 Init Stage(ft): 122.530
Group: BASE Warn Stage(ft): 0.000
Type: Time/Stage

Per Pemberton Baker SWMM Model Information

Time(hrs)	Stage(ft)
0.00	122.530
16.55	124.970
100.00	122.950

Name: Outfall Base Flow(cfs): 0.000 Init Stage(ft): 112.000
Group: BASE Warn Stage(ft): 999.000
Type: Time/Stage

Per Pemberton Baker SWMM Model Information

Time(hrs)	Stage(ft)
0.00	107.600
12.00	109.360
24.00	112.120
100.00	110.690

Name: Walden Lake Base Flow(cfs): 0.000 Init Stage(ft): 109.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Walden Lake was obtained from the Hillsborough County Pemberton Baker Watershed SWMM Model. Initial Stage = 109.

Stage(ft)	Area(ac)
109.000	63.0000
110.000	64.4000
111.000	65.5000
112.000	71.9000
113.000	82.6000
114.000	122.7000
115.000	133.5000
116.000	163.0000
117.000	167.4000
118.000	172.9000
119.000	175.2000
120.000	178.7000
121.000	179.9000
122.000	182.1000
123.000	183.0000
124.000	184.8000
125.000	186.0000
126.000	195.1000
127.000	197.0000
128.000	201.5000
129.000	202.9000
130.000	204.8000
131.000	205.8000
132.000	207.7000

Name: Wetland A Base Flow(cfs): 0.000 Init Stage(ft): 113.050
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model Information

Stage(ft)	Area(ac)
111.000	0.1000
112.000	9.9000
113.000	10.7000
114.000	17.2000
115.000	20.5000
116.000	29.1000
117.000	33.3000

Name: Wetland D-H Base Flow(cfs): 0.000 Init Stage(ft): 125.600
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Volume

Stage(ft)	Volume(af)
125.600	0.0000
127.600	5.4000

==== Pipes ====

Name: 1361739 From Node: 361739 Length(ft): 404.00
Group: BASE To Node: Wetland A Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	121.830	118.080
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 1361745 From Node: 361745 Length(ft): 90.00
Group: BASE To Node: Wetland A Count: 2
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Horz Ellipse	Horz Ellipse
Span(in):	53.00	53.00
Rise(in):	34.00	34.00
Invert(ft):	126.300	129.510
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Name: 1361900 From Node: 361900 Length(ft): 100.00
Group: BASE To Node: 361760 Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Rectangular	Rectangular
Span(in):	120.00	120.00
Rise(in):	48.00	48.00
Invert(ft):	122.530	122.430
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Downstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

==== Channels ====

Name:		From Node:	Length(ft): 0.00
Group:	BASE	To Node:	Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Trapezoidal	Trapezoidal
Invert(ft):	0.000	0.000
TClpInitZ(ft):	9999.000	9999.000
Manning's N:	0.000000	0.000000
Top Clip(ft):	0.000	0.000
Bot Clip(ft):	0.000	0.000
Main XSec:		
AuxElev1(ft):		
Aux XSec1:		
AuxElev2(ft):		
Aux XSec2:		
Top Width(ft):		
Depth(ft):		
Bot Width(ft):	0.000	0.000
LtSdSlp(h/v):	0.00	0.00
RtSdSlp(h/v):	0.00	0.00

Friction Equation:	Automatic
Solution Algorithm:	Automatic
Flow:	Both
Contraction Coef:	0.100
Expansion Coef:	0.300
Entrance Loss Coef:	0.000
Exit Loss Coef:	0.000
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

==== Drop Structures ====

Name:	8361730	From Node: 361730	Length(ft): 20.00
Group:	BASE	To Node: Wetland A	Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Horz Ellipse	Horz Ellipse
Span(in):	30.00	30.00
Rise(in):	19.00	19.00
Invert(ft):	113.230	113.180
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.000
Exit Loss Coef:	1.000
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

*** Weir 1 of 2 for Drop Structure 8361730 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600

```
              Span(in): 42.00                        Invert(ft): 114.630
              Rise(in): 6.00                   Control Elev(ft): 114.630

*** Weir 2 of 2 for Drop Structure 8361730 ***
                                                                          TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Horizontal                 Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 47.00                        Invert(ft): 115.130
              Rise(in): 36.00                  Control Elev(ft): 115.130


-----------------------------------------------------------------------------------------------------
         Name: 8361780             From Node: 361780            Length(ft): 30.00
        Group: BASE                  To Node: Walden Lake            Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
     Span(in): 30.00          30.00                                Flow: Both
     Rise(in): 30.00          30.00                     Entrance Loss Coef: 0.000
   Invert(ft): 116.270        116.340                       Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 3 for Drop Structure 8361780 ***
                                                                          TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Vertical: Mavis            Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 36.00                        Invert(ft): 120.260
              Rise(in): 7.08                   Control Elev(ft): 120.260

*** Weir 2 of 3 for Drop Structure 8361780 ***
                                                                          TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Vertical: Mavis            Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 3.200
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 138.00                       Invert(ft): 120.850
              Rise(in): 3.36                   Control Elev(ft): 120.850

*** Weir 3 of 3 for Drop Structure 8361780 ***
                                                                          TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Vertical: Mavis            Top Clip(in): 0.000
                  Flow: Both                     Weir Disc Coef: 2.600
              Geometry: Rectangular            Orifice Disc Coef: 0.600

              Span(in): 2400.00                      Invert(ft): 121.130
              Rise(in): 999.00                 Control Elev(ft): 121.130


-----------------------------------------------------------------------------------------------------
         Name: 8361785             From Node: 361785            Length(ft): 18.00
        Group: BASE                  To Node: Walden Lake            Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
     Span(in): 18.00          18.00                                Flow: Both
     Rise(in): 18.00          18.00                     Entrance Loss Coef: 0.000
   Invert(ft): 117.380        117.340                       Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
```

```
 Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 3 for Drop Structure 8361785 ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 48.00                       Invert(ft): 121.490
              Rise(in): 11.76                  Control Elev(ft): 121.490

*** Weir 2 of 3 for Drop Structure 8361785 ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 138.00                      Invert(ft): 122.470
              Rise(in): 7.92                   Control Elev(ft): 122.470

*** Weir 3 of 3 for Drop Structure 8361785 ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 2.600
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 2400.00                     Invert(ft): 123.130
              Rise(in): 999.00                 Control Elev(ft): 123.130


-------------------------------------------------------------------------------------------------------
         Name: 8361840            From Node: 361840            Length(ft): 100.00
        Group: BASE                 To Node: Walden Lake            Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Horz Ellipse   Horz Ellipse              Solution Algorithm: Most Restrictive
     Span(in): 30.00          30.00                                 Flow: Both
     Rise(in): 19.00          19.00                     Entrance Loss Coef: 0.000
   Invert(ft): 111.640        111.230                       Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                         Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                           Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


*** Weir 1 of 3 for Drop Structure 8361840 ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 21.72                       Invert(ft): 112.930
              Rise(in): 10.56                  Control Elev(ft): 112.930

*** Weir 2 of 3 for Drop Structure 8361840 ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
```

```
                Flow: Both                    Weir Disc Coef: 3.200
            Geometry: Rectangular           Orifice Disc Coef: 0.600

            Span(in): 86.04                       Invert(ft): 113.810
            Rise(in): 14.28                  Control Elev(ft): 113.810

*** Weir 3 of 3 for Drop Structure 8361840 ***
                                                                          TABLE
               Count: 1                      Bottom Clip(in): 0.000
                Type: Vertical: Mavis           Top Clip(in): 0.000
                Flow: Both                    Weir Disc Coef: 2.600
            Geometry: Rectangular           Orifice Disc Coef: 0.600

            Span(in): 1200.00                     Invert(ft): 115.000
            Rise(in): 999.00                 Control Elev(ft): 115.000


-----------------------------------------------------------------------------------------------------
        Name: 8361850            From Node: 361850            Length(ft): 60.00
       Group: BASE                 To Node: Walden Lake            Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Horz Ellipse   Horz Ellipse              Solution Algorithm: Most Restrictive
    Span(in): 30.00          30.00                                 Flow: Both
    Rise(in): 19.00          19.00                     Entrance Loss Coef: 0.000
  Invert(ft): 117.130        117.060                       Exit Loss Coef: 1.000
 Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000          0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


*** Weir 1 of 3 for Drop Structure 8361850 ***
                                                                          TABLE
               Count: 1                      Bottom Clip(in): 0.000
                Type: Vertical: Mavis           Top Clip(in): 0.000
                Flow: Both                    Weir Disc Coef: 3.200
            Geometry: Rectangular           Orifice Disc Coef: 0.600

            Span(in): 22.20                       Invert(ft): 117.670
            Rise(in): 18.36                  Control Elev(ft): 117.670

*** Weir 2 of 3 for Drop Structure 8361850 ***
                                                                          TABLE
               Count: 1                      Bottom Clip(in): 0.000
                Type: Vertical: Mavis           Top Clip(in): 0.000
                Flow: Both                    Weir Disc Coef: 3.200
            Geometry: Rectangular           Orifice Disc Coef: 0.600

            Span(in): 61.80                       Invert(ft): 119.200
            Rise(in): 9.60                   Control Elev(ft): 119.200

*** Weir 3 of 3 for Drop Structure 8361850 ***
                                                                          TABLE
               Count: 1                      Bottom Clip(in): 0.000
                Type: Vertical: Mavis           Top Clip(in): 0.000
                Flow: Both                    Weir Disc Coef: 2.600
            Geometry: Rectangular           Orifice Disc Coef: 0.600

            Span(in): 1200.00                     Invert(ft): 120.000
            Rise(in): 999.00                 Control Elev(ft): 120.000


-----------------------------------------------------------------------------------------------------
        Name: CSTR A-WL          From Node: Wetland A         Length(ft): 100.00
       Group: BASE                 To Node: Walden Lake            Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Horz Ellipse   Horz Ellipse              Solution Algorithm: Most Restrictive
    Span(in): 60.00          60.00                                 Flow: Both
    Rise(in): 46.00          46.00                     Entrance Loss Coef: 0.000
```

```
   Invert(ft): 108.610        109.010                      Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


*** Weir 1 of 2 for Drop Structure CSTR A-WL ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 62.00                       Invert(ft): 113.050
              Rise(in): 18.00                  Control Elev(ft): 113.050

*** Weir 2 of 2 for Drop Structure CSTR A-WL ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 108.00                      Invert(ft): 114.550
              Rise(in): 40.00                  Control Elev(ft): 114.550


-------------------------------------------------------------------------------------------------------
         Name: CSTR WL-O           From Node: Walden Lake        Length(ft): 60.00
        Group: BASE                  To Node: Outfall                 Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Horz Ellipse   Horz Ellipse              Solution Algorithm: Most Restrictive
     Span(in): 84.00          84.00                                 Flow: Both
     Rise(in): 48.00          48.00                   Entrance Loss Coef: 0.000
   Invert(ft): 106.510        106.200                     Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                  Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                        Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Surveyed by Brooks Land Surveying, Inc.

*** Weir 1 of 2 for Drop Structure CSTR WL-O ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 216.00                      Invert(ft): 111.850
              Rise(in): 18.96                  Control Elev(ft): 111.850

*** Weir 2 of 2 for Drop Structure CSTR WL-O ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 180.00                      Invert(ft): 113.430
              Rise(in): 52.00                  Control Elev(ft): 113.430


=======================================================================================================
```

```
==== Weirs ==========================================================================
=====================================================================================

        Name: 7361760             From Node: 361760
       Group: BASE                  To Node: Walden Lake
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 6000.00
                   Rise(in): 999.00
                 Invert(ft): 115.130
      Control Elevation(ft): 115.130
                                        TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600


-------------------------------------------------------------------------------------
        Name: 8361740             From Node: 361740
       Group: BASE                  To Node: 361739
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 138.00
                   Rise(in): 999.00
                 Invert(ft): 124.360
      Control Elevation(ft): 124.360
                                        TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600

Per Pemberton Baker SWMM Model Information

-------------------------------------------------------------------------------------
        Name: 83617601            From Node: 361760
       Group: BASE                  To Node: Walden Lake
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 36.00
                   Rise(in): 9.60
                 Invert(ft): 113.830
      Control Elevation(ft): 113.830
                                        TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600


-------------------------------------------------------------------------------------
        Name: 83617602            From Node: 361760
       Group: BASE                  To Node: Walden Lake
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 138.00
                   Rise(in): 4.44
                 Invert(ft): 114.630
      Control Elevation(ft): 114.630
                                        TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600


-------------------------------------------------------------------------------------
        Name: Weir D-H            From Node: Wetland D-H
       Group: BASE                  To Node: Wetland A
```

```
         Flow: Both                    Count: 1
         Type: Vertical: Mavis      Geometry: Trapezoidal

           Bottom Width(ft): 1200.00
       Left Side Slope(h/v): 10.00
      Right Side Slope(h/v): 10.00
                Invert(ft): 127.600
      Control Elevation(ft): 127.600
     Struct Opening Dim(ft): 9999.00
                                          TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
        Weir Discharge Coef: 2.600
     Orifice Discharge Coef: 0.600


==========================================================================================
==== Percolation Links ===================================================================
==========================================================================================

         Name:                      From Node:                          Flow: Both
        Group: BASE                   To Node:                         Count: 1

         Surface Area Option: Use 1st Point in Stage/Area Table
   Vertical Flow Termination: Horizontal Flow Algorithm
       Aquifer Base Elev(ft): 0.000                        Perimeter 1(ft): 0.000
        Water Table Elev(ft): 0.000                        Perimeter 2(ft): 0.000
  Ann Recharge Rate(in/year): 0.000                        Perimeter 3(ft): 0.000
  Horiz Conductivity(ft/day): 0.000                   Distance 1 to 2(ft): 0.000
   Vert Conductivity(ft/day): 0.000                   Distance 2 to 3(ft): 0.000
     Effective Porosity(dec): 0.000                      Num Cells 1 to 2: 0
            Suction Head(in): 0.000                      Num Cells 2 to 3: 0
         Layer Thickness(ft): 0.000


==========================================================================================
==== Hydrology Simulations ===============================================================
==========================================================================================

         Name: RUN10024
     Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Pre\10024RH.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: FLMOD
    Rainfall Amount(in): 11.00

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

------------------------------------------------------------------------------------------------------
         Name: RUN2524
     Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Pre\2524RH.R32

      Override Defaults: No

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

==========================================================================================
==== Routing Simulations =================================================================
==========================================================================================

         Name: RUN10024            Hydrology Sim: RUN10024
     Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Pre\10024I32.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                     Delta Z Factor: 0.01000
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                     End Time(hrs): 100.00
```

Min Calc Time(sec): 10.0000 Max Calc Time(sec): 30.0000
Boundary Stages: 100-yr 24-hr Boundary Flows:

100-YEAR STORM EVENT

Time(hrs)	Print Inc(min)
10.000	60.000
14.000	15.000
100.000	60.000

Group	Run
BASE	Yes

Name: RUN2524 Hydrology Sim: RUN2524
Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Pre\2524I32.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.01000
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 100.00
Min Calc Time(sec): 10.0000 Max Calc Time(sec): 30.0000
Boundary Stages: 25-yr 24-hr Boundary Flows:

25-YEAR STORM EVENT

Time(hrs)	Print Inc(min)
10.000	60.000
14.000	15.000
100.000	60.000

Group	Run
BASE	Yes

==== Boundary Conditions ====

Name: 25-yr 24-hr Node: 361900 Type: Stage

Time(hrs)	Stage(ft)
0.000	122.530
2.000	122.530
3.000	122.530
4.000	122.540
5.000	122.580
6.000	122.620
7.000	122.660
8.000	122.710
9.000	122.760
10.000	122.820
11.000	122.880
12.000	122.970
13.000	123.340
14.000	123.930
15.000	124.210
16.000	124.280
17.000	124.290
18.000	124.290
19.000	124.280
20.000	124.270
21.000	124.240
22.000	124.220
23.000	124.200

24.000	124.170
30.000	123.900
36.000	123.670
48.000	123.370
60.000	123.200
100.000	122.950

Name: 25-yr 24-hr Node: Outfall Type: Stage

Time(hrs)	Stage(ft)
0.000	107.600
1.000	107.600
2.000	107.600
3.000	107.600
4.000	107.600
5.000	107.600
6.000	107.600
7.000	107.600
8.000	107.600
9.000	107.730
10.000	108.460
11.000	109.200
12.000	109.360
13.000	109.780
14.000	110.390
15.000	110.820
16.000	111.150
17.000	111.410
18.000	111.580
19.000	111.730
20.000	111.840
21.000	111.940
22.000	112.010
23.000	112.070
24.000	112.120
30.000	112.240
36.000	112.190
48.000	111.870
60.000	111.540
100.000	100.690

Name: 100-yr 24-hr Node: 361900 Type: Stage

Time(hrs)	Stage(ft)
0.000	122.530
1.000	122.530
2.000	122.530
3.000	122.540
4.000	122.570
5.000	122.620
6.000	122.680
7.000	122.740
8.000	122.800
9.000	122.860
10.000	122.920
11.000	123.010
12.000	123.130
13.000	123.710
14.000	124.520
15.000	124.890
16.000	124.960
17.000	124.960
18.000	124.940
19.000	124.910
20.000	124.880
21.000	124.840
22.000	124.790
23.000	124.750
24.000	124.700
30.000	124.280
36.000	123.980
48.000	123.520
60.000	123.290

100.000	122.950

Name: 100-yr 24-hr Node: Outfall Type: Stage

Time(hrs)	Stage(ft)
0.000	107.600
1.000	107.600
2.000	107.600
3.000	107.600
4.000	107.600
5.000	107.600
6.000	107.600
7.000	107.610
8.000	108.110
9.000	108.750
10.000	109.300
11.000	109.420
12.000	109.590
13.000	110.210
14.000	111.100
15.000	111.680
16.000	112.110
17.000	112.380
18.000	112.590
19.000	112.730
20.000	112.840
21.000	112.920
22.000	112.990
23.000	113.050
24.000	113.100
30.000	113.160
36.000	113.080
48.000	112.790
60.000	112.470
100.000	111.280

APPENDIX F

PRE-DEVELOPMENT ICPR RESULTS

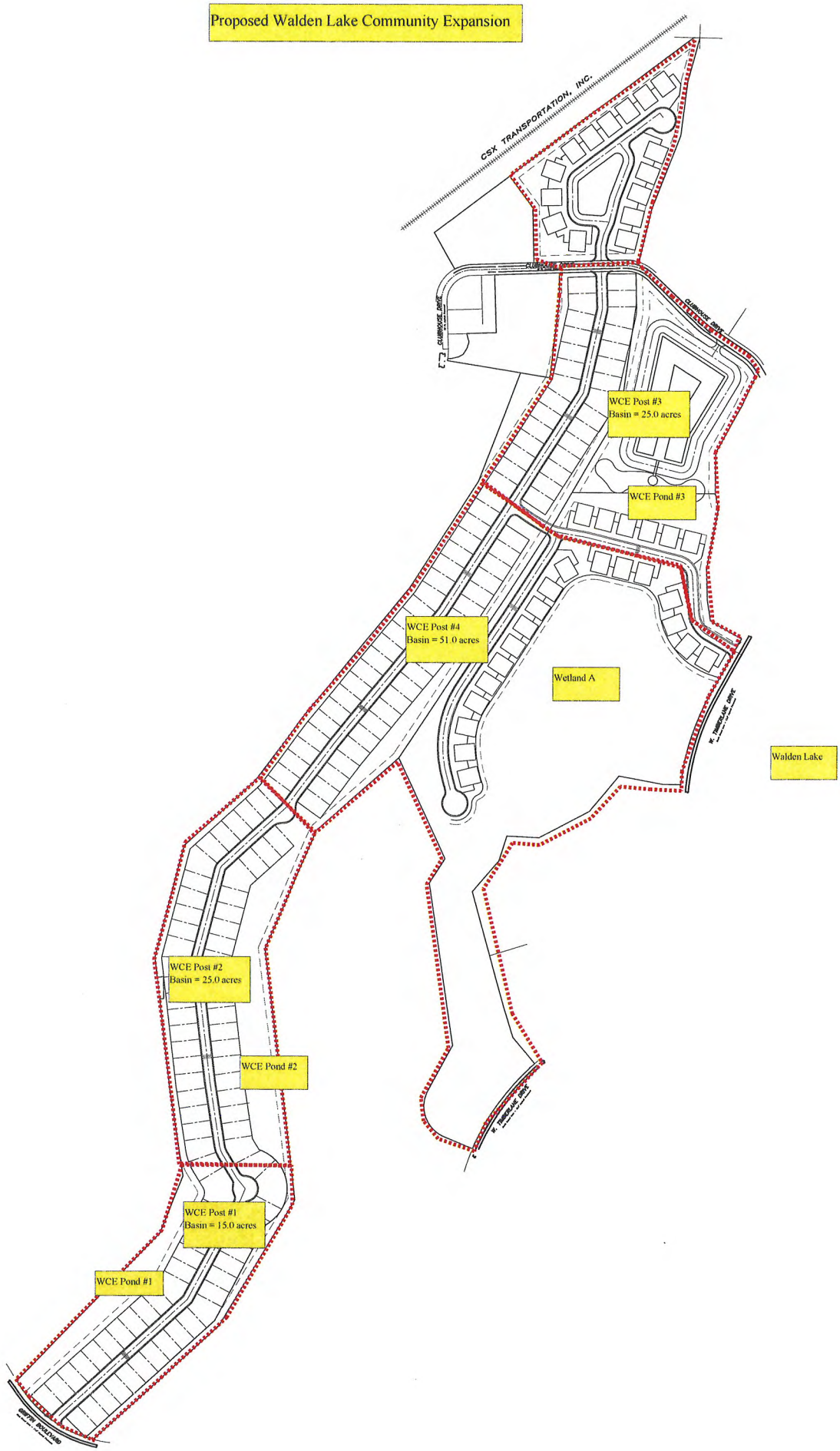
- 25-YR / 24-HR
- 100-YR / 24-HR

PRE CONDITION WALDEN LAKE COMMUNITY EXPANSION

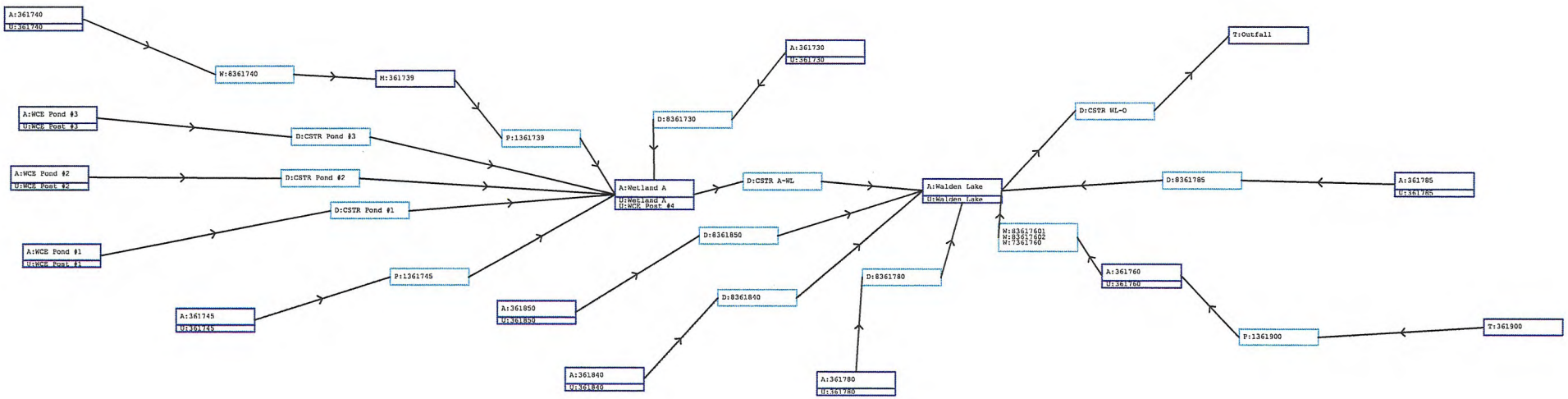
Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
361730	BASE	RUN10024	13.23	117.20	999.00	0.0075	129572	12.08	74.92	12.31	24.42
361739	BASE	RUN10024	24.00	122.67	126.00	0.0037	499	23.99	3.01	23.99	3.01
361740	BASE	RUN10024	23.99	124.55	999.00	0.0031	443193	12.08	132.41	23.99	3.01
361745	BASE	RUN10024	12.49	131.51	999.00	-0.0108	50016	12.25	46.75	12.49	40.51
361760	BASE	RUN10024	12.42	115.42	999.00	0.0120	380070	12.17	343.75	12.42	280.18
361780	BASE	RUN10024	23.99	120.70	999.00	0.0082	288566	12.17	110.90	23.99	2.78
361785	BASE	RUN10024	13.90	122.43	999.00	0.0167	57572	12.17	54.14	13.90	11.63
361840	BASE	RUN10024	14.33	115.68	999.00	0.0123	319179	12.25	121.48	14.33	27.54
361850	BASE	RUN10024	24.00	118.42	999.00	0.0043	898179	13.33	148.79	24.00	3.39
361900	BASE	RUN10024	16.00	124.96	0.00	0.0055	500	0.00	0.00	16.00	86.69
Outfall	BASE	RUN10024	30.00	113.16	999.00	-4.4000	0	24.70	128.57	0.00	0.00
Walden Lake	BASE	RUN10024	25.10	114.04	999.00	0.0061	5361656	12.67	815.99	24.70	128.57
Wetland A	BASE	RUN10024	14.52	117.09	999.00	0.0082	1466449	12.25	868.82	14.52	190.57
Wetland D-H	BASE	RUN10024	12.10	127.75	999.00	0.0093	117612	12.08	181.60	12.10	179.70
361730	BASE	RUN2524	12.76	116.37	999.00	0.0099	74035	12.08	51.10	12.63	22.46
361739	BASE	RUN2524	0.00	121.83	126.00	0.0000	133	0.00	0.00	0.00	0.00
361740	BASE	RUN2524	24.00	123.91	999.00	0.0020	430438	12.08	82.92	0.00	0.00
361745	BASE	RUN2524	12.36	131.07	999.00	0.0100	13659	12.25	26.90	12.36	26.10
361760	BASE	RUN2524	13.02	115.26	999.00	0.0099	343971	12.16	236.40	13.02	102.97
361780	BASE	RUN2524	24.00	119.96	999.00	0.0061	247662	12.17	77.57	0.00	0.00
361785	BASE	RUN2524	18.81	121.78	999.00	0.0135	52313	12.17	36.17	18.81	1.98
361840	BASE	RUN2524	14.21	114.76	999.00	0.0096	139814	12.25	82.95	14.21	20.98
361850	BASE	RUN2524	24.00	117.33	999.00	0.0032	860911	13.33	98.95	0.00	0.00
361900	BASE	RUN2524	17.01	124.29	0.00	0.0049	500	0.00	0.00	17.01	53.84
Outfall	BASE	RUN2524	30.00	112.24	999.00	-4.4000	0	28.03	57.25	0.00	0.00
Walden Lake	BASE	RUN2524	29.50	112.95	999.00	0.0049	3573988	13.08	548.20	28.03	57.25
Wetland A	BASE	RUN2524	14.25	115.95	999.00	0.0068	1250452	12.33	583.67	14.25	155.99
Wetland D-H	BASE	RUN2524	12.22	127.71	999.00	0.0103	117612	12.08	121.13	12.22	109.16

APPENDIX G
POST-DEVELOPMENT ICPR NODE DIAGRAM AND INPUT

Proposed Walden Lake Community Expansion



Post-Development Node Diagram



```
==========================================================================================
==== Basins ==============================================================================
==========================================================================================

         Name: 361730                    Node: 361730                    Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                  Time of Conc(min): 15.00
              Area(ac): 14.730                    Time Shift(hrs): 0.00
           Curve Number: 82.60               Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From Pemberton Baker SWMM Model

------------------------------------------------------------------------------------------
         Name: 361740                    Node: 361740                    Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                  Time of Conc(min): 17.00
              Area(ac): 33.080                    Time Shift(hrs): 0.00
           Curve Number: 70.80               Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From Pemberton Baker SWMM Model

------------------------------------------------------------------------------------------
         Name: 361745                    Node: 361745                    Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                  Time of Conc(min): 25.00
              Area(ac): 17.380                    Time Shift(hrs): 0.00
           Curve Number: 61.30               Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From Pemberton Baker SWMM Model

------------------------------------------------------------------------------------------
         Name: 361760                    Node: 361760                    Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                  Time of Conc(min): 19.00
              Area(ac): 71.720                    Time Shift(hrs): 0.00
           Curve Number: 84.70               Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From Pemberton Baker SWMM Model

------------------------------------------------------------------------------------------
         Name: 361780                    Node: 361780                    Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                  Time of Conc(min): 21.00
              Area(ac): 24.470                    Time Shift(hrs): 0.00
           Curve Number: 87.30               Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From Pemberton Baker SWMM Model

------------------------------------------------------------------------------------------
         Name: 361785                    Node: 361785                    Status: Onsite
        Group: BASE                      Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                     Peaking Factor: 256.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                  Time of Conc(min): 25.00
              Area(ac): 14.110                    Time Shift(hrs): 0.00
```

```
          Curve Number: 79.80              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From Pemberton Baker SWMM Model

-----------------------------------------------------------------------------------------------------------
        Name: 361840                   Node: 361840                  Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                   Peaking Factor: 256.0
         Rainfall File: Flmod               Storm Duration(hrs): 24.00
   Rainfall Amount(in): 8.000                 Time of Conc(min): 32.00
             Area(ac): 34.660                   Time Shift(hrs): 0.00
          Curve Number: 83.40              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From Pemberton Baker SWMM Model

-----------------------------------------------------------------------------------------------------------
        Name: 361850                   Node: 361850                  Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                   Peaking Factor: 256.0
         Rainfall File: Flmod               Storm Duration(hrs): 24.00
   Rainfall Amount(in): 8.000                 Time of Conc(min): 115.00
             Area(ac): 101.140                  Time Shift(hrs): 0.00
          Curve Number: 80.20              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From Pemberton Baker SWMM Model

-----------------------------------------------------------------------------------------------------------
        Name: Walden Lake              Node: Walden Lake             Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                   Peaking Factor: 256.0
         Rainfall File: Flmod               Storm Duration(hrs): 24.00
   Rainfall Amount(in): 8.000                 Time of Conc(min): 88.00
             Area(ac): 208.700                  Time Shift(hrs): 0.00
          Curve Number: 90.70              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Per Pemberton Baker SWMM Model information

-----------------------------------------------------------------------------------------------------------
        Name: WCE Post #1              Node: WCE Pond #1             Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                   Peaking Factor: 256.0
         Rainfall File: Flmod               Storm Duration(hrs): 24.00
   Rainfall Amount(in): 8.000                 Time of Conc(min): 15.00
             Area(ac): 15.000                   Time Shift(hrs): 0.00
          Curve Number: 90.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Post Condtions for Walden Lakes Communtiy Expansion. Total Approx. 130 acres of development

-----------------------------------------------------------------------------------------------------------
        Name: WCE Post #2              Node: WCE Pond #2             Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                   Peaking Factor: 256.0
         Rainfall File: Flmod               Storm Duration(hrs): 24.00
   Rainfall Amount(in): 8.000                 Time of Conc(min): 15.00
             Area(ac): 25.000                   Time Shift(hrs): 0.00
          Curve Number: 90.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Post Condtions for Walden Lakes Communtiy Expansion. Total Approx. 130 acres of development

-----------------------------------------------------------------------------------------------------------
        Name: WCE Post #3              Node: WCE Pond #3             Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                   Peaking Factor: 256.0
         Rainfall File: Flmod               Storm Duration(hrs): 24.00
   Rainfall Amount(in): 8.000                 Time of Conc(min): 15.00
```

```
              Area(ac): 25.000                  Time Shift(hrs): 0.00
          Curve Number: 90.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Post Condtions for Walden Lakes Communtiy Expansion. Total Approx. 130 acres of development

-----------------------------------------------------------------------------------------------
         Name: WCE Post #4              Node: Wetland A              Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                   Peaking Factor: 256.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                 Time of Conc(min): 20.00
              Area(ac): 51.000                   Time Shift(hrs): 0.00
          Curve Number: 90.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Post Condtions for Walden Lakes Communtiy Expansion. Total Approx. 130 acres of development

-----------------------------------------------------------------------------------------------
         Name: Wetland A                Node: Wetland A              Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                   Peaking Factor: 256.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 8.000                 Time of Conc(min): 36.00
              Area(ac): 131.900                  Time Shift(hrs): 0.00
          Curve Number: 79.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Used SWMM Model Area with verification. The original Basin Area = 247.9 acres - 116 acres of development area =

===============================================================================================
==== Nodes ====================================================================================
===============================================================================================

      Name: 361730              Base Flow(cfs): 0.000          Init Stage(ft): 112.000
     Group: BASE                                               Warn Stage(ft): 999.000
      Type: Stage/Area

Per Pemberton Baker SWMM Model

      Stage(ft)        Area(ac)
--------------- ---------------
        112.000          0.3800
        114.000          0.4110
        115.000          0.4650
        116.000          1.4310
        117.000          2.1600
        118.000          6.3300
        119.000          7.4300
        120.000          8.7000
        121.000          9.5000
        122.000         10.7000

-----------------------------------------------------------------------------------------------
      Name: 361739              Base Flow(cfs): 0.000          Init Stage(ft): 121.830
     Group: BASE                 Plunge Factor: 1.00           Warn Stage(ft): 126.000
      Type: Manhole, Flat Floor

Per Pemberton Baker SWMM Model Information

      Stage(ft)        Area(ac)
--------------- ---------------

-----------------------------------------------------------------------------------------------
      Name: 361740              Base Flow(cfs): 0.000          Init Stage(ft): 122.630
     Group: BASE                                               Warn Stage(ft): 999.000
      Type: Stage/Area

Per Pemberton Baker SWMM Model Information

      Stage(ft)        Area(ac)
--------------- ---------------
        118.000          8.4000
        120.000          8.6000
        121.000          8.7000
```

122.000	9.6000
123.000	9.7000
124.000	9.9000
125.000	10.4000
126.000	11.1000
127.000	11.9000

Name: 361745 Base Flow(cfs): 0.000 Init Stage(ft): 126.300
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model Information

Stage(ft)	Area(ac)
126.300	0.0100
130.000	0.0360
131.000	0.1700
132.000	2.0990
133.000	2.4000
134.000	2.9000
135.000	3.4800
136.000	4.4000
137.000	5.0000
138.000	6.3700
139.000	7.6500

Name: 361760 Base Flow(cfs): 0.000 Init Stage(ft): 111.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
111.000	4.5000
112.000	4.8300
113.000	5.0400
114.000	5.7700
115.000	6.5100
116.000	11.7400
117.000	14.6300
118.000	20.2000
119.000	22.6500
120.000	28.1000
121.000	30.2000

Name: 361780 Base Flow(cfs): 0.000 Init Stage(ft): 116.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
114.000	2.4000
116.000	2.6900
117.000	2.8500
118.000	3.0000
119.000	3.2600
120.000	5.7810
121.000	6.9900
122.000	12.0000
123.000	13.3000
124.000	17.9000
125.000	19.1000

Name: 361785 Base Flow(cfs): 0.000 Init Stage(ft): 114.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
114.000	0.5000
116.000	0.5330
117.000	0.6020
118.000	0.6810
119.000	0.7590
120.000	0.8390
121.000	0.9300
122.000	1.2780
123.000	1.3800
124.000	2.8500
125.000	3.9300

Name: 361840 Base Flow(cfs): 0.000 Init Stage(ft): 110.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
110.000	1.8000
112.000	1.9380
113.000	2.0200
114.000	2.2400
115.000	3.5100
116.000	9.0900
117.000	11.4000
118.000	15.2000
119.000	17.8000

Name: 361850 Base Flow(cfs): 0.000 Init Stage(ft): 115.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model

Stage(ft)	Area(ac)
114.000	18.5000
116.000	19.2000
117.000	19.6000
118.000	20.1000
119.000	21.3300
120.000	24.1000
121.000	27.5500
122.000	40.3600

Name: 361900 Base Flow(cfs): 0.000 Init Stage(ft): 122.530
Group: BASE Warn Stage(ft): 0.000
Type: Time/Stage

Per Pemberton Baker SWMM Model Information

Time(hrs)	Stage(ft)
0.00	122.530
16.55	124.970
100.00	122.950

Name: Outfall Base Flow(cfs): 0.000 Init Stage(ft): 112.000
Group: BASE Warn Stage(ft): 999.000
Type: Time/Stage

Per Pemberton Baker SWMM Model Information

Time(hrs)	Stage(ft)
0.00	107.600
12.00	109.360
24.00	112.120
100.00	110.690

Name: Walden Lake Base Flow(cfs): 0.000 Init Stage(ft): 109.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Walden Lake was obtained from the Hillsborough County Pemberton Baker Watershed SWMM Model. Initial Stage = 109.

Stage(ft)	Area(ac)
109.000	63.0000
110.000	64.4000
111.000	65.5000
112.000	71.9000
113.000	82.6000
114.000	122.7000
115.000	133.5000
116.000	163.0000
117.000	167.4000
118.000	172.9000
119.000	175.2000
120.000	178.7000
121.000	179.9000
122.000	182.1000
123.000	183.0000
124.000	184.8000
125.000	186.0000
126.000	195.1000
127.000	197.0000
128.000	201.5000
129.000	202.9000
130.000	204.8000
131.000	205.8000
132.000	207.7000

Name: WCE Pond #1 Base Flow(cfs): 0.000 Init Stage(ft): 125.600
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Post Condtions for Walden Lakes Communtiy Expansion
Estimated SHW = 125.6
Needs to be verified in the Design Phase

Stage(ft)	Area(ac)
125.600	1.1000
127.600	1.2000
128.000	1.5000

Name: WCE Pond #2 Base Flow(cfs): 0.000 Init Stage(ft): 120.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Post Condtions for Walden Lakes Communtiy Expansion
Estimated SHW = 125.6
Needs to be verified in the Design Phase

Stage(ft)	Area(ac)
120.000	2.2000
122.000	2.4000
125.000	2.8000

Name: WCE Pond #3 Base Flow(cfs): 0.000 Init Stage(ft): 120.000
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Post Condtions for Walden Lakes Communtiy Expansion
Estimated SHW = 120.0
Needs to be verified in the Design Phase

Stage(ft)	Area(ac)
120.000	2.2000

122.000	2.4000
125.000	2.8000

Name: Wetland A Base Flow(cfs): 0.000 Init Stage(ft): 113.050
Group: BASE Warn Stage(ft): 999.000
Type: Stage/Area

Per Pemberton Baker SWMM Model Information

Stage(ft)	Area(ac)
111.000	0.1000
112.000	9.9000
113.000	10.7000
114.000	17.2000
115.000	20.5000
116.000	29.1000
117.000	33.3000

Pipes

Name: 1361739 From Node: 361739 Length(ft): 404.00
Group: BASE To Node: Wetland A Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	121.830	118.080
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 1361745 From Node: 361745 Length(ft): 90.00
Group: BASE To Node: Wetland A Count: 2
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Horz Ellipse	Horz Ellipse
Span(in):	53.00	53.00
Rise(in):	34.00	34.00
Invert(ft):	126.300	129.510
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Name: 1361900 From Node: 361900 Length(ft): 100.00
Group: BASE To Node: 361760 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00

	UPSTREAM	DOWNSTREAM
Geometry:	Rectangular	Rectangular
Span(in):	120.00	120.00
Rise(in):	48.00	48.00

```
   Invert(ft): 122.530        122.430                      Bend Loss Coef: 0.00
  Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                     Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Downstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares


==========================================================================================
==== Channels ============================================================================
==========================================================================================

          Name:                      From Node:                    Length(ft): 0.00
         Group: BASE                   To Node:                         Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Trapezoidal    Trapezoidal               Solution Algorithm: Automatic
    Invert(ft): 0.000          0.000                                 Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.000000       0.000000                     Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                            Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                             Inlet Ctrl Spec: Use dc
     Aux XSec1:                                            Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 0.000          0.000
  LtSdSlp(h/v): 0.00           0.00
  RtSdSlp(h/v): 0.00           0.00


==========================================================================================
==== Drop Structures =====================================================================
==========================================================================================

          Name: 8361730            From Node: 361730             Length(ft): 20.00
         Group: BASE                 To Node: Wetland A                Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Horz Ellipse   Horz Ellipse              Solution Algorithm: Most Restrictive
      Span(in): 30.00          30.00                                 Flow: Both
      Rise(in): 19.00          19.00                     Entrance Loss Coef: 0.000
    Invert(ft): 113.230        113.180                       Exit Loss Coef: 1.000
   Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
  Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
  Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


*** Weir 1 of 2 for Drop Structure 8361730 ***
                                                                                  TABLE
                  Count: 1                      Bottom Clip(in): 0.000
                   Type: Vertical: Mavis           Top Clip(in): 0.000
                   Flow: Both                    Weir Disc Coef: 3.200
               Geometry: Rectangular           Orifice Disc Coef: 0.600

               Span(in): 42.00                        Invert(ft): 114.630
               Rise(in): 6.00                   Control Elev(ft): 114.630

*** Weir 2 of 2 for Drop Structure 8361730 ***
```

```
                                                                                    TABLE
                 Count: 1                          Bottom Clip(in): 0.000
                  Type: Horizontal                    Top Clip(in): 0.000
                  Flow: Both                       Weir Disc Coef: 3.200
              Geometry: Rectangular              Orifice Disc Coef: 0.600

              Span(in): 47.00                          Invert(ft): 115.130
              Rise(in): 36.00                     Control Elev(ft): 115.130


-----------------------------------------------------------------------------------------------------
         Name: 8361780            From Node: 361780            Length(ft): 30.00
        Group: BASE                 To Node: Walden Lake            Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 30.00          30.00                               Flow: Both
     Rise(in): 30.00          30.00                  Entrance Loss Coef: 0.000
   Invert(ft): 116.270        116.340                    Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                 Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                     Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                       Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 3 for Drop Structure 8361780 ***
                                                                                    TABLE
                 Count: 1                          Bottom Clip(in): 0.000
                  Type: Vertical: Mavis               Top Clip(in): 0.000
                  Flow: Both                       Weir Disc Coef: 3.200
              Geometry: Rectangular              Orifice Disc Coef: 0.600

              Span(in): 36.00                          Invert(ft): 120.260
              Rise(in): 7.08                      Control Elev(ft): 120.260

*** Weir 2 of 3 for Drop Structure 8361780 ***
                                                                                    TABLE
                 Count: 1                          Bottom Clip(in): 0.000
                  Type: Vertical: Mavis               Top Clip(in): 0.000
                  Flow: Both                       Weir Disc Coef: 3.200
              Geometry: Rectangular              Orifice Disc Coef: 0.600

              Span(in): 138.00                         Invert(ft): 120.850
              Rise(in): 3.36                      Control Elev(ft): 120.850

*** Weir 3 of 3 for Drop Structure 8361780 ***
                                                                                    TABLE
                 Count: 1                          Bottom Clip(in): 0.000
                  Type: Vertical: Mavis               Top Clip(in): 0.000
                  Flow: Both                       Weir Disc Coef: 2.600
              Geometry: Rectangular              Orifice Disc Coef: 0.600

              Span(in): 2400.00                        Invert(ft): 121.130
              Rise(in): 999.00                    Control Elev(ft): 121.130


-----------------------------------------------------------------------------------------------------
         Name: 8361785            From Node: 361785            Length(ft): 18.00
        Group: BASE                 To Node: Walden Lake            Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 18.00          18.00                               Flow: Both
     Rise(in): 18.00          18.00                  Entrance Loss Coef: 0.000
   Invert(ft): 117.380        117.340                    Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                 Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                     Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                       Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall
```

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 3 for Drop Structure 8361785 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	48.00	Invert(ft):	121.490
Rise(in):	11.76	Control Elev(ft):	121.490

*** Weir 2 of 3 for Drop Structure 8361785 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	138.00	Invert(ft):	122.470
Rise(in):	7.92	Control Elev(ft):	122.470

*** Weir 3 of 3 for Drop Structure 8361785 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	2.600
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	2400.00	Invert(ft):	123.130
Rise(in):	999.00	Control Elev(ft):	123.130

Name:	8361840	From Node:	361840	Length(ft):	100.00
Group:	BASE	To Node:	Walden Lake	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Horz Ellipse	Horz Ellipse	Friction Equation:	Automatic
Span(in):	30.00	30.00	Solution Algorithm:	Most Restrictive
Rise(in):	19.00	19.00	Flow:	Both
Invert(ft):	111.640	111.230	Entrance Loss Coef:	0.000
Manning's N:	0.012000	0.012000	Exit Loss Coef:	1.000
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

*** Weir 1 of 3 for Drop Structure 8361840 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	21.72	Invert(ft):	112.930
Rise(in):	10.56	Control Elev(ft):	112.930

*** Weir 2 of 3 for Drop Structure 8361840 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	86.04	Invert(ft):	113.810
Rise(in):	14.28	Control Elev(ft):	113.810

```
*** Weir 3 of 3 for Drop Structure 8361840 ***
                                                                                    TABLE
                 Count: 1                        Bottom Clip(in): 0.000
                  Type: Vertical: Mavis             Top Clip(in): 0.000
                  Flow: Both                      Weir Disc Coef: 2.600
             Geometry: Rectangular            Orifice Disc Coef: 0.600

             Span(in): 1200.00                       Invert(ft): 115.000
             Rise(in): 999.00                  Control Elev(ft): 115.000


-----------------------------------------------------------------------------------------------------------
         Name: 8361850             From Node: 361850             Length(ft): 60.00
        Group: BASE                  To Node: Walden Lake             Count: 1

              UPSTREAM       DOWNSTREAM                  Friction Equation: Automatic
     Geometry: Horz Ellipse   Horz Ellipse               Solution Algorithm: Most Restrictive
     Span(in): 30.00          30.00                                  Flow: Both
     Rise(in): 19.00          19.00                     Entrance Loss Coef: 0.000
   Invert(ft): 117.130        117.060                       Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


*** Weir 1 of 3 for Drop Structure 8361850 ***
                                                                                    TABLE
                 Count: 1                        Bottom Clip(in): 0.000
                  Type: Vertical: Mavis             Top Clip(in): 0.000
                  Flow: Both                      Weir Disc Coef: 3.200
             Geometry: Rectangular            Orifice Disc Coef: 0.600

             Span(in): 22.20                         Invert(ft): 117.670
             Rise(in): 18.36                   Control Elev(ft): 117.670

*** Weir 2 of 3 for Drop Structure 8361850 ***
                                                                                    TABLE
                 Count: 1                        Bottom Clip(in): 0.000
                  Type: Vertical: Mavis             Top Clip(in): 0.000
                  Flow: Both                      Weir Disc Coef: 3.200
             Geometry: Rectangular            Orifice Disc Coef: 0.600

             Span(in): 61.80                         Invert(ft): 119.200
             Rise(in): 9.60                    Control Elev(ft): 119.200

*** Weir 3 of 3 for Drop Structure 8361850 ***
                                                                                    TABLE
                 Count: 1                        Bottom Clip(in): 0.000
                  Type: Vertical: Mavis             Top Clip(in): 0.000
                  Flow: Both                      Weir Disc Coef: 2.600
             Geometry: Rectangular            Orifice Disc Coef: 0.600

             Span(in): 1200.00                       Invert(ft): 120.000
             Rise(in): 999.00                  Control Elev(ft): 120.000


-----------------------------------------------------------------------------------------------------------
         Name: CSTR A-WL           From Node: Wetland A          Length(ft): 100.00
        Group: BASE                  To Node: Walden Lake             Count: 1

              UPSTREAM       DOWNSTREAM                  Friction Equation: Automatic
     Geometry: Horz Ellipse   Horz Ellipse               Solution Algorithm: Most Restrictive
     Span(in): 60.00          60.00                                  Flow: Both
     Rise(in): 46.00          46.00                     Entrance Loss Coef: 0.000
   Invert(ft): 108.610        109.010                       Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                          Solution Incs: 10
```

```
Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


*** Weir 1 of 2 for Drop Structure CSTR A-WL ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 48.00                       Invert(ft): 113.050
              Rise(in): 24.00                  Control Elev(ft): 113.050

*** Weir 2 of 2 for Drop Structure CSTR A-WL ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 108.00                      Invert(ft): 115.050
              Rise(in): 40.00                  Control Elev(ft): 115.050


-------------------------------------------------------------------------------------------------------
         Name: CSTR Pond #1        From Node: WCE Pond #1        Length(ft): 1200.00
        Group: BASE                  To Node: Wetland A               Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                                Flow: Both
     Rise(in): 36.00          36.00                    Entrance Loss Coef: 0.000
   Invert(ft): 118.000        112.000                      Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 2 for Drop Structure CSTR Pond #1 ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 36.00                       Invert(ft): 125.600
              Rise(in): 18.00                  Control Elev(ft): 125.600

*** Weir 2 of 2 for Drop Structure CSTR Pond #1 ***
                                                                                TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 47.00                       Invert(ft): 127.100
              Rise(in): 36.00                  Control Elev(ft): 127.100


-------------------------------------------------------------------------------------------------------
         Name: CSTR Pond #2        From Node: WCE Pond #2        Length(ft): 800.00
        Group: BASE                  To Node: Wetland A               Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
```

```
     Span(in): 36.00          36.00                                  Flow: Both
     Rise(in): 36.00          36.00                     Entrance Loss Coef: 0.000
   Invert(ft): 114.000        110.000                       Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 2 for Drop Structure CSTR Pond #2 ***
                                                                                    TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Vertical: Mavis            Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 36.00                       Invert(ft): 120.000
              Rise(in): 18.00                  Control Elev(ft): 120.000

*** Weir 2 of 2 for Drop Structure CSTR Pond #2 ***
                                                                                    TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Horizontal                 Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 47.00                       Invert(ft): 121.500
              Rise(in): 36.00                  Control Elev(ft): 121.500


-----------------------------------------------------------------------------------------------------------
         Name: CSTR Pond #3        From Node: WCE Pond #3        Length(ft): 500.00
        Group: BASE                  To Node: Wetland A               Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                                  Flow: Both
     Rise(in): 36.00          36.00                     Entrance Loss Coef: 0.000
   Invert(ft): 114.000        110.000                       Exit Loss Coef: 1.000
  Manning's N: 0.012000       0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 2 for Drop Structure CSTR Pond #3 ***
                                                                                    TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Vertical: Mavis            Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 36.00                       Invert(ft): 120.000
              Rise(in): 18.00                  Control Elev(ft): 120.000

*** Weir 2 of 2 for Drop Structure CSTR Pond #3 ***
                                                                                    TABLE
                 Count: 1                       Bottom Clip(in): 0.000
                  Type: Horizontal                 Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 47.00                       Invert(ft): 121.500
              Rise(in): 36.00                  Control Elev(ft): 121.500
```

```
-----------------------------------------------------------------------------------------------------
        Name: CSTR WL-O          From Node: Walden Lake        Length(ft): 60.00
       Group: BASE                 To Node: Outfall                 Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
    Geometry: Horz Ellipse   Horz Ellipse              Solution Algorithm: Most Restrictive
    Span(in): 84.00          84.00                                 Flow: Both
    Rise(in): 48.00          48.00                     Entrance Loss Coef: 0.000
   Invert(ft): 106.510       106.200                       Exit Loss Coef: 1.000
  Manning's N: 0.012000      0.012000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000         0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000         0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Surveyed by Brooks Land Surveying, Inc.

*** Weir 1 of 2 for Drop Structure CSTR WL-O ***
                                                                                          TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 180.00                      Invert(ft): 111.850
              Rise(in): 24.00                  Control Elev(ft): 111.850

*** Weir 2 of 2 for Drop Structure CSTR WL-O ***
                                                                                          TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 180.00                      Invert(ft): 113.850
              Rise(in): 52.00                  Control Elev(ft): 113.850


=================================================================================================
==== Weirs ======================================================================================
=================================================================================================

        Name: 7361760            From Node: 361760
       Group: BASE                 To Node: Walden Lake
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 6000.00
                   Rise(in): 999.00
                 Invert(ft): 115.130
      Control Elevation(ft): 115.130
                                                TABLE
           Bottom Clip(in): 0.000
              Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600


-----------------------------------------------------------------------------------------------------
        Name: 8361740            From Node: 361740
       Group: BASE                 To Node: 361739
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 138.00
                   Rise(in): 999.00
                 Invert(ft): 124.360
      Control Elevation(ft): 124.360
                                                TABLE
           Bottom Clip(in): 0.000
              Top Clip(in): 0.000
```

```
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600

Per Pemberton Baker SWMM Model Information

-----------------------------------------------------------------------------------------------------
        Name: 83617601            From Node: 361760
       Group: BASE                  To Node: Walden Lake
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 36.00
                   Rise(in): 9.60
                 Invert(ft): 113.830
      Control Elevation(ft): 113.830
                                                TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600



-----------------------------------------------------------------------------------------------------
        Name: 83617602            From Node: 361760
       Group: BASE                  To Node: Walden Lake
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 138.00
                   Rise(in): 4.44
                 Invert(ft): 114.630
      Control Elevation(ft): 114.630
                                                TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
        Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600


=====================================================================================================
==== Bridges ========================================================================================
=====================================================================================================

        Name:                     From Node:                          Flow: Both
       Group: BASE                  To Node:                     Run WSPRO: No

     XSEC TYPE            NAME         INV(ft)        STAT(ft)       SKEW(deg)           EXPAN         CONTRAC
          Exit                          0.000            0.00           0.000           0.500           0.000
   Full Valley                          0.000            0.00           0.000           0.500           0.000
      Approach                          0.000            0.00           0.000           0.500           0.000
       Roadway                          0.000            0.00           0.000

           Road Surface Material: Paved
   Road Embankment Top Width(ft): 0.00
    Road Unsubmerged Weir Q Coef: 0.000


RATING CURVE CONTROL
        TW(ft)       QMin(cfs)       QMax(cfs)       QInc(cfs)
--------------- --------------- --------------- ---------------
         0.000           0.000           0.000           0.000


=====================================================================================================
==== Percolation Links ==============================================================================
=====================================================================================================

        Name:                     From Node:                          Flow: Both
       Group: BASE                  To Node:                         Count: 1

        Surface Area Option: Use 1st Point in Stage/Area Table
   Vertical Flow Termination: Horizontal Flow Algorithm
       Aquifer Base Elev(ft): 0.000                        Perimeter 1(ft): 0.000
        Water Table Elev(ft): 0.000                        Perimeter 2(ft): 0.000
```

```
  Ann Recharge Rate(in/year): 0.000                        Perimeter 3(ft): 0.000
  Horiz Conductivity(ft/day): 0.000                   Distance 1 to 2(ft): 0.000
   Vert Conductivity(ft/day): 0.000                   Distance 2 to 3(ft): 0.000
     Effective Porosity(dec): 0.000                      Num Cells 1 to 2: 0
            Suction Head(in): 0.000                      Num Cells 2 to 3: 0
        Layer Thickness(ft): 0.000


==========================================================================================
==== Hydrology Simulations ===============================================================
==========================================================================================

         Name: RUN10024
     Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Post\10024RH.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: FLMOD
    Rainfall Amount(in): 11.00

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

------------------------------------------------------------------------------------------------------
         Name: RUN2524
     Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Post\2524RH.R32

      Override Defaults: No

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

==========================================================================================
==== Routing Simulations =================================================================
==========================================================================================

         Name: RUN10024            Hydrology Sim: RUN10024
     Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Post\10024I32.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                     Delta Z Factor: 0.01000
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                     End Time(hrs): 100.00
     Min Calc Time(sec): 10.0000              Max Calc Time(sec): 30.0000
        Boundary Stages: 100-yr 24-hr             Boundary Flows:

100-YEAR STORM EVENT


Time(hrs)       Print Inc(min)
--------------- ---------------
10.000          60.000
14.000          15.000
100.000         60.000

Group           Run
--------------- ------
BASE            Yes


------------------------------------------------------------------------------------------------------
         Name: RUN2524             Hydrology Sim: RUN2524
     Filename: C:\Users\Brian A. Acken\Documents\Advantage Engineering\Visions Golf\ICPR\Post\2524I32.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                     Delta Z Factor: 0.01000
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                     End Time(hrs): 100.00
```

Min Calc Time(sec): 10.0000 Max Calc Time(sec): 30.0000
Boundary Stages: 25-yr 24-hr Boundary Flows:

25-YEAR STORM EVENT

Time(hrs)	Print Inc(min)
10.000	60.000
14.000	15.000
100.000	60.000

Group	Run
BASE	Yes

==== Boundary Conditions ====

Name: 25-yr 24-hr Node: 361900 Type: Stage

Time(hrs)	Stage(ft)
0.000	122.530
2.000	122.530
3.000	122.530
4.000	122.540
5.000	122.580
6.000	122.620
7.000	122.660
8.000	122.710
9.000	122.760
10.000	122.820
11.000	122.880
12.000	122.970
13.000	123.340
14.000	123.930
15.000	124.210
16.000	124.280
17.000	124.290
18.000	124.290
19.000	124.280
20.000	124.270
21.000	124.240
22.000	124.220
23.000	124.200
24.000	124.170
30.000	123.900
36.000	123.670
48.000	123.370
60.000	123.200
100.000	122.950

Name: 25-yr 24-hr Node: Outfall Type: Stage

Time(hrs)	Stage(ft)
0.000	107.600
1.000	107.600
2.000	107.600
3.000	107.600
4.000	107.600
5.000	107.600
6.000	107.600
7.000	107.600
8.000	107.600
9.000	107.730
10.000	108.460
11.000	109.200
12.000	109.360
13.000	109.780
14.000	110.390
15.000	110.820

16.000	111.150
17.000	111.410
18.000	111.580
19.000	111.730
20.000	111.840
21.000	111.940
22.000	112.010
23.000	112.070
24.000	112.120
30.000	112.240
36.000	112.190
48.000	111.870
60.000	111.540
100.000	100.690

Name: 100-yr 24-hr Node: 361900 Type: Stage

Time(hrs)	Stage(ft)
0.000	122.530
1.000	122.530
2.000	122.530
3.000	122.540
4.000	122.570
5.000	122.620
6.000	122.680
7.000	122.740
8.000	122.800
9.000	122.860
10.000	122.920
11.000	123.010
12.000	123.130
13.000	123.710
14.000	124.520
15.000	124.890
16.000	124.960
17.000	124.960
18.000	124.940
19.000	124.910
20.000	124.880
21.000	124.840
22.000	124.790
23.000	124.750
24.000	124.700
30.000	124.280
36.000	123.980
48.000	123.520
60.000	123.290
100.000	122.950

Name: 100-yr 24-hr Node: Outfall Type: Stage

Time(hrs)	Stage(ft)
0.000	107.600
1.000	107.600
2.000	107.600
3.000	107.600
4.000	107.600
5.000	107.600
6.000	107.600
7.000	107.610
8.000	108.110
9.000	108.750
10.000	109.300
11.000	109.420
12.000	109.590
13.000	110.210
14.000	111.100
15.000	111.680
16.000	112.110
17.000	112.380
18.000	112.590
19.000	112.730
20.000	112.840

21.000	112.920
22.000	112.990
23.000	113.050
24.000	113.100
30.000	113.160
36.000	113.080
48.000	112.790
60.000	112.470
100.000	111.280

APPENDIX H

POST-DEVELOPMENT ICPR RESULTS

- 25-YR / 24-HR
- 100-YR / 24-HR

POST CONDITIONS WALDEN LAKE COMMUNITY EXPANSION

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
361730	BASE	RUN10024	14.90	117.42	999.00	0.0075	169941	12.08	74.92	12.12	22.45
361739	BASE	RUN10024	24.00	122.67	126.00	0.0037	499	24.00	3.02	24.00	3.01
361740	BASE	RUN10024	24.00	124.55	999.00	0.0031	443194	12.08	132.41	24.00	3.02
361745	BASE	RUN10024	12.49	131.51	999.00	-0.0108	50016	12.25	46.75	12.49	40.51
361760	BASE	RUN10024	12.42	115.42	999.00	0.0120	380070	12.17	343.75	12.42	280.18
361780	BASE	RUN10024	24.00	120.70	999.00	0.0082	288566	12.17	110.90	24.00	2.78
361785	BASE	RUN10024	13.90	122.43	999.00	0.0167	57572	12.17	54.14	13.90	11.63
361840	BASE	RUN10024	14.32	115.68	999.00	0.0123	319177	12.25	121.48	14.32	27.54
361850	BASE	RUN10024	24.00	118.42	999.00	0.0041	898192	13.33	148.79	24.00	3.39
361900	BASE	RUN10024	16.01	124.96	0.00	0.0055	500	0.00	0.00	16.01	86.69
Outfall	BASE	RUN10024	30.00	113.16	999.00	-4.4000	0	25.57	119.86	0.00	0.00
Walden Lake	BASE	RUN10024	26.03	114.15	999.00	0.0060	5415044	12.75	820.82	25.57	119.86
WCE Pond #1	BASE	RUN10024	12.36	127.94	999.00	0.0089	63228	12.08	81.54	12.36	61.06
WCE Pond #2	BASE	RUN10024	12.74	122.99	999.00	0.0088	110307	12.08	135.90	12.27	58.48
WCE Pond #3	BASE	RUN10024	12.63	122.82	999.00	0.0088	109311	12.08	135.90	12.33	68.79
Wetland A	BASE	RUN10024	14.43	117.38	999.00	0.0074	1519786	12.25	877.59	14.43	197.58
361730	BASE	RUN2524	13.00	116.42	999.00	0.0099	75815	12.08	51.10	12.44	21.96
361739	BASE	RUN2524	0.00	121.83	126.00	0.0000	133	0.00	0.00	0.00	0.00
361740	BASE	RUN2524	24.00	123.91	999.00	0.0020	430438	12.08	82.92	0.00	0.00
361745	BASE	RUN2524	12.36	131.07	999.00	0.0100	13659	12.25	26.90	12.36	26.10
361760	BASE	RUN2524	13.02	115.26	999.00	0.0099	343971	12.16	236.40	13.02	102.97
361780	BASE	RUN2524	24.00	119.96	999.00	0.0061	247662	12.17	77.57	0.00	0.00
361785	BASE	RUN2524	18.81	121.78	999.00	0.0135	52313	12.17	36.17	18.81	1.98
361840	BASE	RUN2524	14.21	114.76	999.00	0.0096	139814	12.25	82.95	14.21	20.98
361850	BASE	RUN2524	24.00	117.33	999.00	0.0032	860911	13.33	98.95	0.00	0.00
361900	BASE	RUN2524	17.01	124.29	0.00	0.0049	500	0.00	0.00	17.01	53.84
Outfall	BASE	RUN2524	30.00	112.24	999.00	-4.4000	0	31.86	57.21	0.00	0.00
Walden Lake	BASE	RUN2524	31.15	113.07	999.00	0.0049	3728534	13.08	540.26	31.86	57.21
WCE Pond #1	BASE	RUN2524	12.43	127.58	999.00	0.0076	52233	12.08	57.78	12.43	38.85
WCE Pond #2	BASE	RUN2524	12.58	122.19	999.00	0.0074	105655	12.08	96.30	12.58	51.44
WCE Pond #3	BASE	RUN2524	12.58	122.19	999.00	0.0074	105655	12.08	96.30	12.58	51.44
Wetland A	BASE	RUN2524	14.25	116.32	999.00	0.0064	1326062	12.33	597.96	14.25	156.52

APPENDIX I
PHOTOS

Looking at the existing control structure from Wetland A west from Timberlane Drive

Looking north towards the existing Control Structure at Wetland A. Based on the Preliminary Modeling, it appears this structure will need to be modified.

Control Structure for Walden Lake located on the west side of Golfview Drive

Looking north at the Existing Control Structure for Walden Lake. Based on Preliminary Modeling, this structure will need some modifications.

Looking at the downstream channel from the Golfview Drive. This is the Outfall location for Pre and Post comparison in the ICPR Model.

Looking west from Golfview Drive at the upstream side of the Control Structure at Walden Lake.

APPENDIX J
CORRESPONDENCE

THIS FORM IS INTENDED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING BY PROVIDING A PARTIAL ○PROMPT LIST○ OF DISCUSSION SUBJECTS. IT IS NOT A LIST OF REQUIREMENTS FOR SUBMITTAL BY THE APPLICANT.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES

FILE NUMBER:

PA 401848

Date:	1/15/2015
Time:	11:00
Project Name:	Walden Lakes Community Expansion
Attendees:	Richard Alt, Blake Meinecke; Brian Acken - Advantage Engineering aeiba@verizon.net Steve Mercer

County:	Hillsborough	**Sec/Twp/Rge:**	1/29/21
Total Land Acreage:	320	**Project Acreage:**	106 acres

Prior On-Site/Off-Site Permit Activity:

- Existing golf course

Project Overview:

- Renovate golf course and add multiple use residences

Environmental Discussion: (Wetlands On-Site, Wetlands on Adjacent Properties, Delineation, T&E species, Easements, Drawdown Issues, Setbacks, Justification, Elimination/Reduction, Permanent/Temporary Impacts, Secondary and Cumulative Impacts, Mitigation Options, SHWL, Upland Habitats, Site Visit, etc.)

- Provide the limits wetlands and surface waters on plans. EPC currently reviewing wetland limits.
- Ponds and golf course construction occurred prior to 1984, no existing permits. Some ponds may have been dug within wetlands.
- Provide appropriate mitigation using UMAM for wetland and/or surface water impacts, if applicable.
- Demonstrate elimination and reduction of wetland impacts.
- Maintain minimum 15 foot, average 25 foot wetland conservation area setback or address secondary impacts.
- If the project is located in a county which is listed as a coastal county under the Coastal Zone Management Act (CZM) and the project has wetland impacts, it will require a noticing period once the permit application is deemed complete. Wetland and/or surface waters impacts less than 1 acre in size will require a 10 day noticing period, prior to the issuance of the permit. Wetland and/or surface water impacts greater than 1 acre in size will require a 30 day noticing period, prior to the issuance of the permit. Permits could be issued as early as the 11th or 31st day, but staffs' schedule and workload will determine the actual issuance date.

Site Information Discussion: (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)

- Existing golf course
- WBIDs need to be independently verified by the consultant - WBID – 1561 – impaired for DO and nutrients
- Discharging to impaired waters.
- Need to have DEP verify that the site is not contaminated and provide written documentation to that effect.

Water Quantity Discussions: (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Demonstrate that discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase flood stages up- or down-stream of the project area(s).
- Provide equivalent compensating storage for all 100-year, 24-hour riverine floodplain impacts if applicable.

Water Quality Discussions: (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Provide water quality treatment for entire project area and all contributing off-site flows.
- In addition, if the project discharges to an impaired water body, must provide a net environmental improvement.
- Applicant must demonstrate a net improvement for the parameters of concern by performing a pre/post pollutant loading analysis based on existing land use and the proposed land use.

Sovereign Lands Discussion: (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- N/A

Operation and Maintenance/Legal Information: (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to the property owner(s).
- Provide proof of ownership in the form of a deed or contract for sale.
- Provide appropriate O&M instructions.
- Provide detailed construction surface water management plan.

Application Type and Fee Required:

- SWERP – Sections A, C, and E of the ERP Application.
- < 640 acres of project area and < 50 acres of wetland or surface water impacts - $3,105.75

Other: (Future Pre-Application Meetings, Fast Track, Submittal Date, Construction Start Date, Required District Permits – WUP, WOD, Well Construction, etc.)

- Need HOA documents, affidavit
- May need to modify WUP for the golf course
- In accordance with Rule 40D-1.603(2), F.A.C., no later than 30 days after submittal of an initial application of an Individual surface water management permit the applicant shall publish at the applicant's expense a notice of the District's receipt of the application in a newspaper having general circulation as defined in Chapter 50, F.S., in the county or counties in which the activity is proposed. Please provide documentation that such noticing has been accomplished. Note that the published notices of receipt for an ERP must be in accordance with the language provided in Rule 40D-1.603(11), F.A.C., and receipt of an affidavit establishing proof of this publication will be considered a completeness item of this ERP Application. Per Rule 40D-1.603(13), F.A.C., this must be received before the application will be considered complete and the 60-day timeframe for taking agency action on the application will commence.

40D-1.603(13) – "Applicants required to publish a notice of receipt of application must provide to the District a publisher's affidavit establishing proof of publication pursuant to Sections 50.041and 50.051, F.S., before the application will be considered complete and the applicable timeframe for taking agency action on the application will commence."

- provide a copy of the legal description (of all applicable parcels within the project area) in one of the following forms:
  a. Deed with complete Legal Description attachment.
  b. Plat.
  c. Boundary survey of the property(s) with a sketch.

Disclaimer: The District ERP pre-application meeting process is a service made available to the public to assist interested parties in preparing for submittal of a permit application. Information shared at pre-application meetings is superseded by the actual permit application submittal. District permit decisions are based upon information submitted during the application process and Rules in effect at the time the application is complete.

Walden Lake Community Expansion
Meeting Minutes for March27th, 2014

Location: City of Plant City
302 West Reynolds Street
Plant City, FL 33563

Present at Meeting

Brett Gocka, P.E.	City Engineer, City of Plant City	813-659-4200	bgocka@plantcitygov.com
Brian Acken, P.E.	Advantage Engineering, Inc.	813-975-9638	aeiba@verizon.net

The preliminary drainage meeting was held Thursday, March 27th, 2014 at the City of Plant City at 3:00 PM.

Specific Discussion

- Brian spoke about the general intent of the proposed development known as Walden Lake Community Expansion. Brett was familiar with the proposed development and had requested information to feel comfortable with the stormwater design.

- Brett mentioned that he wanted to have a level of comfort with the stormwater conditions pre and post at the preliminary phase. He was mostly concerned about the proposed impacts to the existing or historical storage on the vacant golf course site. He wanted a preliminary model that clearly shows the pre and post conditions for the 25-year / 24-hr and 100-year / 24-hr storm events.

- Brian explained what information was available to date which included the master drainage plan prepared by Heidt & Associates, Inc. Brian mentioned that Visions Golf, LLC (developer) was also obtaining survey in the area that should help in the data collection effort. The survey would include some minor spot elevations and the data for the existing control structures.

- Brett stressed that he wanted to see model / documentation that demonstrates no adverse impacts to the surrounding residents.

- The meeting was adjourned.