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Notes:

- 1- Project No.: 19545
- 2- Data Source - SWFWMD Aerial Imagery (2011);
Dade City Stormwater Geodatabase
- 3- This map is intended to be
used for planning purposes
only. It is not a survey.



Explanation of Features



City Outfalls

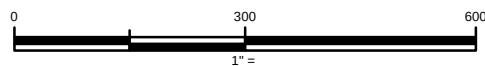


Figure B-1A
City of Dade City Stormwater Outfalls
Outfall Number 1

AMEC Environment & Infrastructure, Inc.
2000 E. Edgewood Drive Ste #215 - Lakeland, FL 33803 - CA-5392 - (863) 667-2345



Notes:

- 1- Project No.: 19545
- 2- Data Source - SWFWMD Aerial Imagery (2011);
Dade City Stormwater Geodatabase
- 3- This map is intended to be
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Explanation of Features



City Outfalls

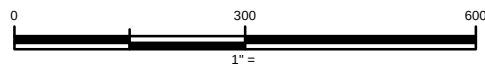


Figure B-1B City of Dade City Stormwater Outfalls Outfall Number 2

AMEC Environment & Infrastructure, Inc.
2000 E. Edgewood Drive Ste #215 - Lakeland, FL 33803 - CA-5392 - (863) 667-2345



Notes:

- 1- Project No.: 19545
- 2- Data Source - SWFWMD Aerial Imagery (2011);
Dade City Stormwater Geodatabase
- 3- This map is intended to be
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Explanation of Features



City Outfalls

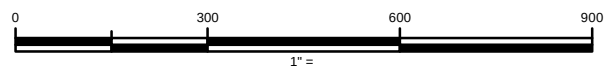
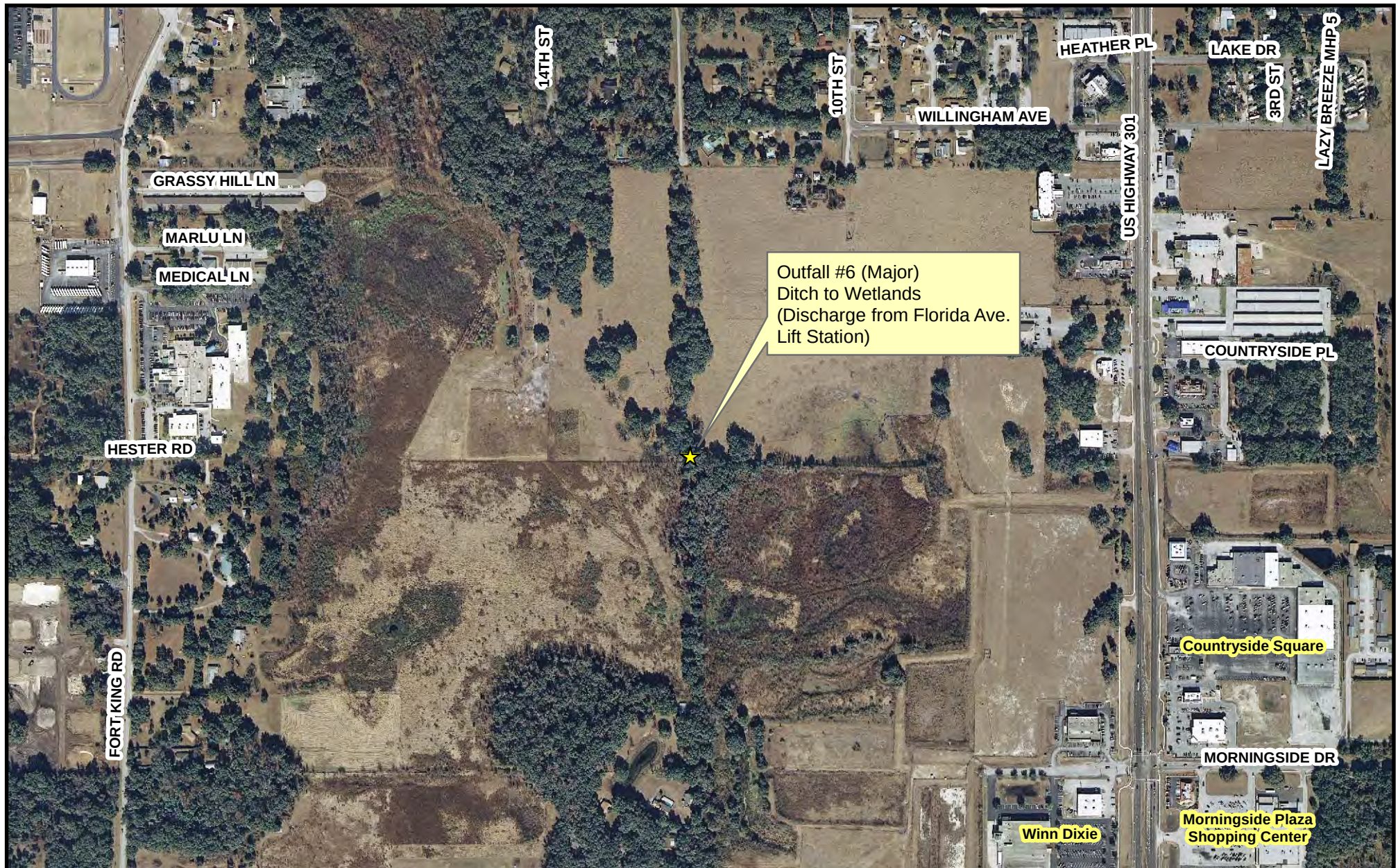


Figure B-1C City of Dade City Stormwater Outfalls Outfall Number 5

AMEC Environment & Infrastructure, Inc.
2000 E. Edgewood Drive Ste #215 - Lakeland, FL 33803 - CA-5392 - (863) 667-2345



Notes:

- 1- Project No.: 19545
- 2- Data Source - SWFWMD Aerial Imagery (2011);
Dade City Stormwater Geodatabase
- 3- This map is intended to be
used for planning purposes
only. It is not a survey.



Explanation of Features



City Outfalls

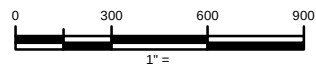
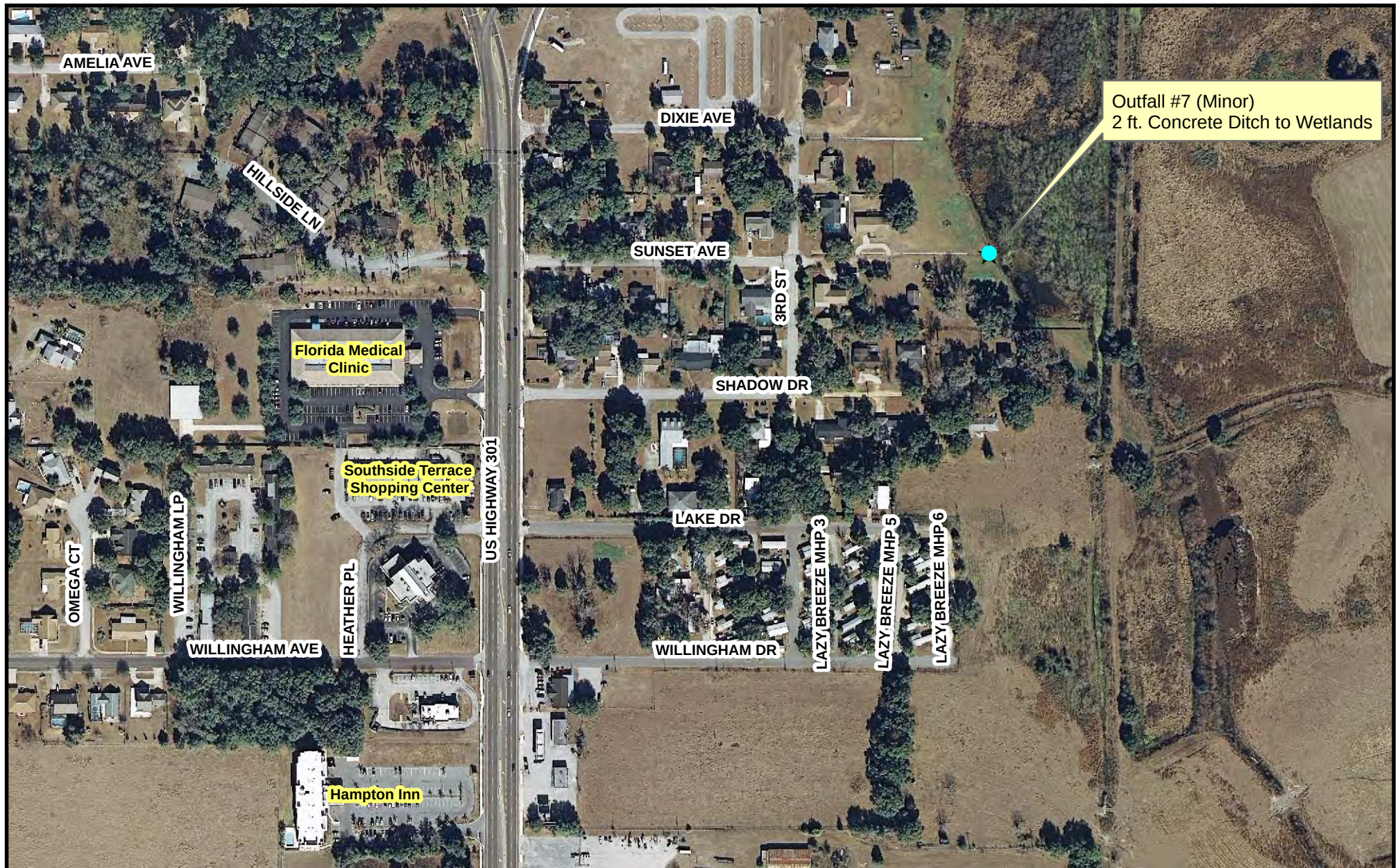


Figure B-1D
City of Dade City Stormwater Outfalls
Outfall Number 6

AMEC Environment & Infrastructure, Inc.
2000 E. Edgewood Drive Ste #215 - Lakeland, FL 33803 - CA-5392 - (863) 667-2345



Notes:

- 1- Project No.: 19545
- 2- Data Source - SWFWMD Aerial Imagery (2011); Dade City Stormwater Geodatabase
- 3- This map is intended to be used for planning purposes only. It is not a survey.



Explanation of Features

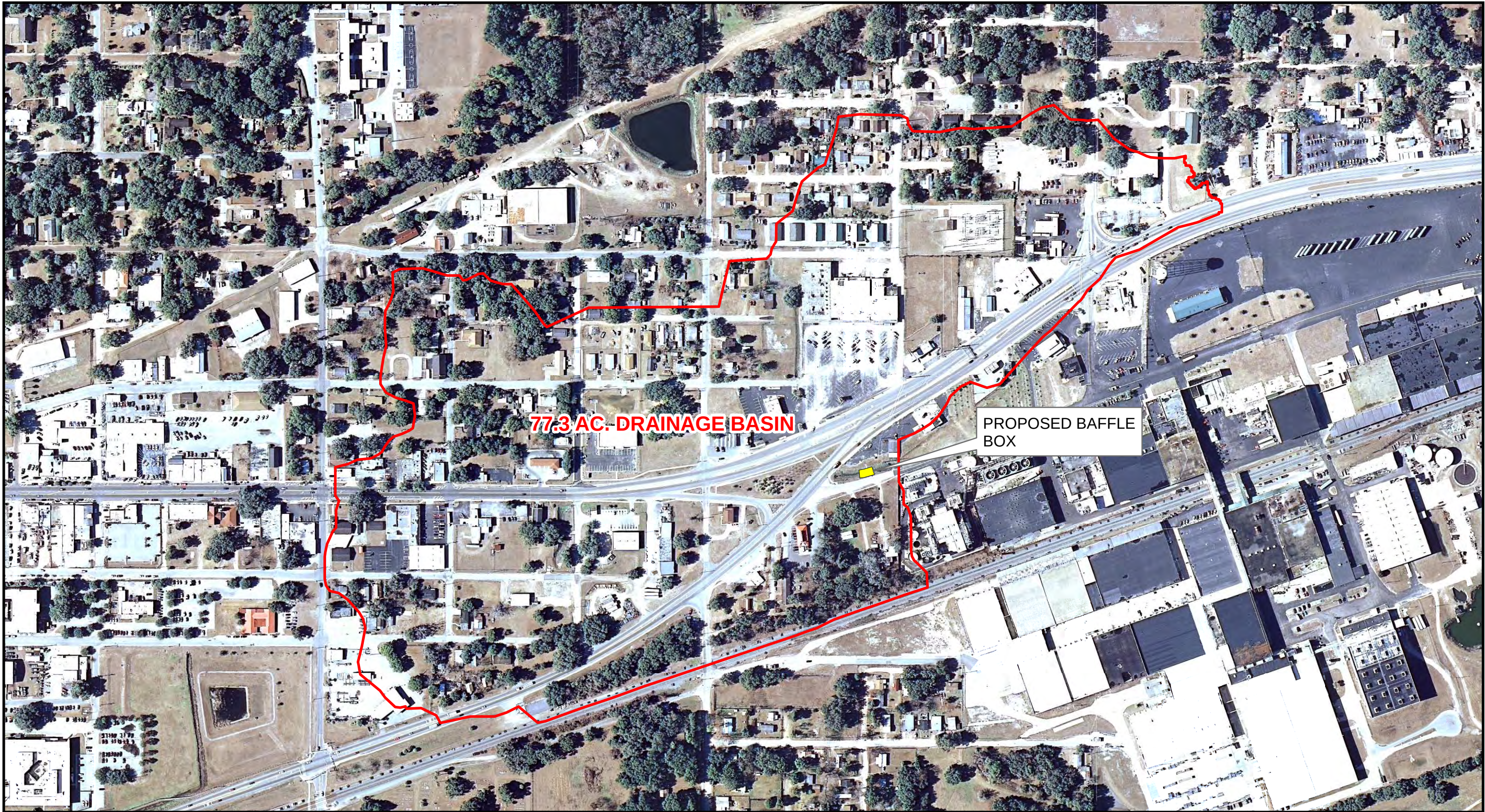


City Outfalls



Figure B-1E City of Dade City Stormwater Outfalls Outfall Number 7

AMEC Environment & Infrastructure, Inc.
2000 E. Edgewood Drive Ste #215 - Lakeland, FL 33803 - CA-5392 - (863) 667-2345



Notes:
1- Project No.: 19545
2- Data Sources - SWFWMD Aerial Imagery
3- This map is intended to be used for planning purposes only. It is not a survey.

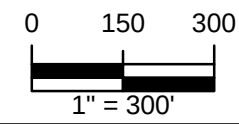
Date: Mar. 2012
Prepared By: MJF
Checked By: JDP

Explanation of Features

 Drainage Basin Boundary

 Proposed Baffle Box

 N





DADE CITY STORMWATER MASTER PLAN

CONCEPT BAFFLE BOX LOCATION AND CONTRIBUTING DRAINAGE AREA

FIGURE B-2

AMEC Environment & Infrastructure, Inc. - 2000 E. Edgewood Drive Ste #215 - Lakeland, FL 33803 - CA-5392 - (863) 667-2345



Table B-1A Pollutant Load Estimates for Major Outfall #1
City of Dade City Stormwater Master Plan

51 Inches Annual Rainfall ¹																							
Basin ID	Acres	Landuse (Primary)	Landuse (Secondary)	% Landuse Primary	% Landuse Secondary	Acres Landuse Primary	Acres Landuse Secondary	C (runoff Coefficient) ²	Existing Annual Runoff Volume (Ac-Ft) ³	TN EMC for Current Landuse ⁴	Estimated Existing Annual TN Load (lb)	TP EMC for Current Landuse ⁴	Estimated Existing Annual TP Load (lb)	BOD EMC for Current Landuse ⁴	Estimated Existing Annual BOD Load (lb)	TSS EMC for Current Landuse ⁴	Estimated Existing Annual TSS Load (lb)	Cu EMC for Current Landuse ⁴	Estimated Existing Annual Cu Load (lb)	Pb EMC for Current Landuse ⁴	Estimated Existing Annual Pb Load (lb)	Zn EMC for Current Landuse ⁴	Estimated Existing Annual Zn Load (lb)
4th & Church	12.95	1200	1400	94.7	5.3	12.264	0.686	0.163	8.97	1.80	43.9	0.30	7.4	7.89	192	38.6	941	0.016	0.39	0.004	0.10	0.064	1.55
4th & Meridian	4.621	1400	1400	100	0	4.621	0.000	0.63	12.37	0.93	31.3	0.16	5.4	7.70	259	57.5	1935	0.018	0.61	0.005	0.17	0.094	3.16
533& Meridian N	0.257	1400	1400	100	0	0.257	0.000	0.685	0.75	0.93	1.9	0.16	0.3	7.70	16	57.5	117	0.018	0.04	0.005	0.01	0.094	0.19
533&Meridian S	0.32	1400	1400	100	0	0.320	0.000	0.156	0.21	0.93	0.5	0.16	0.1	7.70	4	57.5	33	0.018	0.01	0.005	0.00	0.094	0.05
533& MLK E	2.024	8100	8100	100	0	2.024	0.000	0.177	1.52	1.37	5.7	0.17	0.7	5.20	22	37.3	154	0.032	0.13	0.011	0.05	0.126	0.52
533&MLK W	0.828	1400	1400	100	0	0.828	0.000	0.195	0.69	0.93	1.7	0.16	0.3	7.70	14	57.5	107	0.018	0.03	0.005	0.01	0.094	0.18
533& Pasco	0.963	1400	1400	100	0	0.963	0.000	0.406	1.66	0.93	4.2	0.16	0.7	7.70	35	57.5	260	0.018	0.08	0.005	0.02	0.094	0.42
533@Hampton	1.537	8100	8100	100	0	1.537	0.000	0.168	1.10	1.37	4.1	0.17	0.5	5.20	16	37.3	111	0.032	0.10	0.011	0.03	0.126	0.38
533@NewCourt	0.299	1400	1400	100	0	0.299	0.000	0.34	0.43	0.93	1.1	0.16	0.2	7.70	9	57.5	68	0.018	0.02	0.005	0.01	0.094	0.11
533ChurchN	1.796	1400	1400	100	0	1.796	0.000	0.485	3.70	0.93	9.4	0.16	1.6	7.70	78	57.5	579	0.018	0.18	0.005	0.05	0.094	0.95
533SB@Bwalk	0.636	8100	8100	100	0	0.636	0.000	0.412	1.11	1.37	4.1	0.17	0.5	5.20	16	37.3	113	0.032	0.10	0.011	0.03	0.126	0.38
5th&Church	8.752	1400	1200	60	40	5.251	3.501	0.356	13.24	1.30	46.7	0.22	7.9	7.78	280	49.5	1783	0.017	0.62	0.005	0.17	0.081	2.92
5th&Liveoak	0.456	1400	1400	100	0	0.456	0.000	0.823	1.59	0.93	4.0	0.16	0.7	7.70	33	57.5	249	0.018	0.08	0.005	0.02	0.094	0.41
5th&Meridian	15.32	1400	1400	100	0	15.320	0.000	0.607	39.52	0.93	100.0	0.16	17.2	7.70	828	57.5	6181	0.018	1.93	0.005	0.54	0.094	10.10
5th&MLK	1.747	1400	1400	100	0	1.747	0.000	0.713	5.29	0.93	13.4	0.16	2.3	7.70	111	57.5	828	0.018	0.26	0.005	0.07	0.094	1.35
5th&Robinson	0.414	1400	1400	100	0	0.414	0.000	0.606	1.07	0.93	2.7	0.16	0.5	7.70	22	57.5	167	0.018	0.05	0.005	0.01	0.094	0.27
5thLiveOakInt	0.317	1400	1400	100	0	0.317	0.000	0.823	1.11	0.93	2.8	0.16	0.5	7.70	23	57.5	173	0.018	0.05	0.005	0.02	0.094	0.28
5thPond	2.758	1900	1900	100	0	2.758	0.000	0.0102	0.12	1.15	0.4	0.06	0.0	1.40	0	8.4	3	0.000	0.00	0.000	0.00	0.000	0.00
5thAveEast	0.227	1400	1400	100	0	0.227	0.000	0.823	0.79	0.93	2.0	0.16	0.3	7.70	17	57.5	124	0.018	0.04	0.005	0.01	0.094	0.20
6th&Meridian	0.391	1400	1400	100	0	0.391	0.000	0.823	1.37	0.93	3.5	0.16	0.6	7.70	29	57.5	214	0.018	0.07	0.005	0.02	0.094	0.35
6th&MLK	2.058	1400	1400	100	0	2.058	0.000	0.297	2.60	0.93	6.6	0.16	1.1	7.70	54	57.5	406	0.018	0.13	0.005	0.04	0.094	0.66
6th&Robinson	0.414	1400	1400	100	0	0.414	0.000	0.777	1.37	0.93	3.5	0.16	0.6	7.70	29	57.5	214	0.018	0.07	0.005	0.02	0.094	0.35
6thatPineapple	0.541	1400	1400	100	0	0.541	0.000	0.69	1.59	0.93	4.0	0.16	0.7	7.70	33	57.5	248	0.018	0.08	0.005	0.02	0.094	0.41
6thParking	0.624	1400	1400	100	0	0.624	0.000	0.77	2.04	0.93	5.2	0.16	0.9	7.70	43	57.5	319	0.018	0.10	0.005	0.03	0.094	0.52
7th&MLK	9.53	1400	1400	100	0	9.530	0.000	0.263	10.65	0.93	26.9	0.16	4.6	7.70	223	57.5	1666	0.018	0.52	0.005	0.14	0.094	2.72
7th&Ross	7.51	1400	1200	92	8	6.909	0.601	0.341	10.88	1.00	29.7	0.17	5.1	7.72	228	55.9	1655	0.018	0.53	0.005	0.15	0.091	2.71
7thDTown	1.134	1400	1400	100	0	1.134	0.000	0.697	3.36	0.93	8.5	0.16	1.5	7.70	70	57.5	525	0.018	0.16	0.005	0.05	0.094	0.86
7thSt	27.8	1400	1400	100	0	27.800	0.000	0.49	57.89	0.93	146.4	0.16	25.2	7.70	1212	57.5	9054	0.018	2.83	0.005	0.79	0.094	14.80
AmtrakN	0.43	8100	8100	100	0	0.430	0.000	0.299	0.55	1.37	2.0	0.17	0.3	5.20	8	37.3	55	0.032	0.05	0.011	0.02	0.126	0.19
AmtrakS	0.534	8100	8100	100	0	0.534	0.000	0.264	0.60	1.37	2.2	0.17	0.3	5.20	8	37.3	61	0.032	0.05	0.011	0.02	0.126	0.21
Boardwalk	1.845	1400	1400	100	0	1.845	0.000	0.043	0.34	0.93	0.9	0.16	0.1	7.70	7	57.5	53	0.018	0.02	0.005	0.00	0.094	0.09
Church&533	2.227	1400	1400	100	0	2.227	0.000	0.216	2.04	0.93	5.2	0.16	0.9	7.70	43	57.5	320	0.018	0.10	0.005	0.03	0.094	0.52
Church&7th	10.39	1400	1400	100	0	10.390	0.000	0.482	21.28	0.93	53.8	0.16	9.3	7.70	446	57.5	3328	0.018	1.04	0.005	0.29	0.094	5.44
Courthouse	5.688	1400	1400	100	0	5.688	0.000	0.652	15.76	0.93	39.9	0.16	6.9										

Appendix B

Basin ID	Acres	Landuse (Primary)	Landuse (Secondary)	% Landuse Primary	% Landuse Secondary	Acres Landuse Primary	Acres Landuse Secondary	C (runoff Coefficient) ²	Existing Annual Runoff Volume (Ac-Ft) ³	TN EMC for Current Landuse ⁴	Estimated Existing Annual TN Load (lb)	TP EMC for Current Landuse ⁴	Estimated Existing Annual TP Load (lb)	BOD EMC for Current Landuse ⁴	Estimated Existing Annual BOD Load (lb)	TSS EMC for Current Landuse ⁴	Estimated Existing Annual TSS Load (lb)	Cu EMC for Current Landuse ⁴	Estimated Existing Annual Cu Load (lb)	Pb EMC for Current Landuse ⁴	Estimated Existing Annual Pb Load (lb)	Zn EMC for Current Landuse ⁴	Estimated Existing Annual Zn Load (lb)
NewCourtS	2.94	1400	1400	100	0	2.940	0.000	0.518	6.47	0.93	16.4	0.16	2.8	7.70	136	57.5	1012	0.018	0.32	0.005	0.09	0.094	1.65
NewCourtSE	2.3	1400	1400	100	0	2.300	0.000	0.774	7.57	0.93	19.1	0.16	3.3	7.70	158	57.5	1183	0.018	0.37	0.005	0.10	0.094	1.93
Park&533	0.705	1400	1400	100	0	0.705	0.000	0.487	1.46	0.93	3.7	0.16	0.6	7.70	31	57.5	228	0.018	0.07	0.005	0.02	0.094	0.37
ParkN	1.542	1400	1400	100	0	1.542	0.000	0.49	3.21	0.93	8.1	0.16	1.4	7.70	67	57.5	502	0.018	0.16	0.005	0.04	0.094	0.82
ParkPond1	0.975	1400	1400	100	0	0.975	0.000	0.823	3.41	0.93	8.6	0.16	1.5	7.70	71	57.5	533	0.018	0.17	0.005	0.05	0.094	0.87
ParkPond2	0.66	1400	1400	100	0	0.660	0.000	0.823	2.31	0.93	5.8	0.16	1.0	7.70	48	57.5	361	0.018	0.11	0.005	0.03	0.094	0.59
ParkW	1.278	1400	1400	100	0	1.278	0.000	0.102	0.55	0.93	1.4	0.16	0.2	7.70	12	57.5	87	0.018	0.03	0.005	0.01	0.094	0.14
Pasco&533_S	1.103	1400	1400	100	0	1.103	0.000	0.269	1.26	0.93	3.2	0.16	0.5	7.70	26	57.5	197	0.018	0.06	0.005	0.02	0.094	0.32
Pasco&7th	1.134	1400	1400	100	0	1.134	0.000	0.823	3.97	0.93	10.0	0.16	1.7	7.70	83	57.5	620	0.018	0.19	0.005	0.05	0.094	1.01
PasdcoatTrail	0.906	1400	1400	100	0	0.906	0.000	0.78	3.00	0.93	7.6	0.16	1.3	7.70	63	57.5	470	0.018	0.15	0.005	0.04	0.094	0.77
PascoAve	0.589	1400	1400	100	0	0.589	0.000	0.823	2.06	0.93	5.2	0.16	0.9	7.70	43	57.5	322	0.018	0.10	0.005	0.03	0.094	0.53
PascoMotors	0.851	1400	1400	100	0	0.851	0.000	0.742	2.68	0.93	6.8	0.16	1.2	7.70	56	57.5	420	0.018	0.13	0.005	0.04	0.094	0.69
Pineapple&6th	1.472	1400	1200	80	20	1.178	0.294	0.823	5.15	1.11	15.6	0.19	2.7	7.74	108	53.5	749	0.018	0.25	0.005	0.07	0.088	1.23
Pond1	10.33	1900	1900	100	0	10.330	0.000	0.823	36.13	1.15	113.0	0.06	5.4	1.40	138	8.4	825	0.000	0.00	0.000	0.00	0.000	0.00
Robinson	0.278	1400	1400	100	0	0.278	0.000	0.823	0.97	0.93	2.5	0.16	0.4	7.70	20	57.5	152	0.018	0.05	0.005	0.01	0.094	0.25
Robinson&5th	0.545	1400	1400	100	0	0.545	0.000	0.823	1.91	0.93	4.8	0.16	0.8	7.70	40	57.5	298	0.018	0.09	0.005	0.03	0.094	0.49
RRCulvertN	3.055	8100	8100	100	0	3.055	0.000	0.124	1.61	1.37	6.0	0.17	0.7	5.20	23	37.3	163	0.032	0.14	0.011	0.05	0.126	0.55
RRCulvertS	0.926	8100	8100	100	0	0.926	0.000	0.271	1.07	1.37	4.0	0.17	0.5	5.20	15	37.3	108	0.032	0.09	0.011	0.03	0.126	0.37
TinCanPams	0.776	1400	1400	100	0	0.776	0.000	0.089	0.29	0.93	0.7	0.16	0.1	7.70	6	57.5	46	0.018	0.01	0.005	0.00	0.094	0.08
WWTP	15.77	1200	1500	80	20	12.616	3.154	0.107	7.17	1.71	33.3	0.29	5.7	7.84	153	42.0	819	0.013	0.26	0.004	0.07	0.061	1.19
HamptonAve	5.13	1200	1200	100	0	5.130	0.000	0.181	3.95	1.85	19.9	0.31	3.3	7.90	85	37.5	402	0.016	0.17	0.004	0.04	0.062	0.67
Estimated Existing Totals into Irvin Park Pond (Existing Condition)									362.26		1011.3		158.1		6927		50025		16.05		4.48		81.65
Estimated Removal Efficiency of Irvin Park Pond (Existing Condition)											33.5% ^b		61.92% ^b		80% ^b		85% ^b		85% ^b		85% ^b		85% ^b
Adjusted Estimated Total Pollutant Discharge at Outfall #1											672.5		60.2		1385		7504		2.4		0.7		12.2

- Notes:
- Rainfall is taken from Appendix A.3 of of the Document "*Evaluation of Current Stormwater Design Criteria within the State of Florida*" (Environmental Research & Design, Inc.- Harper, Baker; June 2007)
 - The runoff coefficient comes from Appendix E (Zone 4) of the document "*Environmental Resource Permit Stormwater Quality Applicant's Handbook*" (FDEP and the State Water Management Districts, Draft- March 2010
The CN_{nonDCIA} and DCIA required in Appendix E were taken from the ICPR model to return C values.
 - Runoff Volume is calculated as Drainage Area x Runoff Coefficient x Rainfall x Conversion Factor to obtain Acre-Feet/Year Units
 - The effective EMC values are based on the area-weighted percentages of each pertinent landuse within the drainage area.
 - See Tables A-3 for nutrient load reduction estimates. A reduction of 85% was assumed for TSS and metals based on literature review. A reduction value of 80% for BOD is assumed based on Figure 6-1 of the referenced 2007 document.

Table B-1B Pollutant Load Estimates for Major Outfall #6
City of Dade City Stormwater Master Plan



51 Inches Annual Rainfall ¹																							
Basin ID	Acres	Landuse (Primary)	Landuse (Secondary)	% Landuse Primary	% Landuse Secondary	Acres Landuse Primary	Acres Landuse Secondary	C (runoff Coefficient) ²	Existing Annual Runoff Volume (Ac-Ft) ³	TN EMC for Current Landuse ⁴	Estimated Existing Annual TN Load (lb)	TP EMC for Current Landuse ⁴	Estimated Existing Annual TP Load (lb)	BOD EMC for Current Landuse ⁴	Estimated Existing Annual BOD Load (lb)	TSS EMC for Current Landuse ⁴	Estimated Existing Annual TSS Load (lb)	Cu EMC for Current Landuse ⁴	Estimated Existing Annual Cu Load (lb)	Pb EMC for Current Landuse ⁴	Estimated Existing Annual Pb Load (lb)	Zn EMC for Current Landuse ⁴	Estimated Existing Annual Zn Load (lb)
Basin 3-11	75.92	1100	1200	27.6	72.4	20.954	54.966	0.1754	56.59	1.75	269.9	0.27	42.2	7.02	1080	33.5	5156	0.014	2.12	0.003	0.53	0.053	8.23
Basin 3-11	1.99	1300	1300	100	0	1.990	0.000	0.4452	3.77	1.91	19.6	0.48	4.9	11.30	116	77.8	797	0.009	0.09	0.006	0.06	0.086	0.88
Basin 3-11	1.93	1400	1400	100	0	1.930	0.000	0.701	5.75	0.93	14.5	0.16	2.5	7.70	120	57.5	899	0.018	0.28	0.005	0.08	0.094	1.47
Basin 3-11	2.98	1900	1900	100	0	2.980	0.000	0.011	0.14	1.15	0.4	0.06	0.0	1.40	1	8.4	3	0.000	0.00	0.000	0.00	0.000	0.00
Basin 3-11	6.41	2100	2100	100	0	6.410	0.000	0.011	0.30	2.47	2.0	0.51	0.4	0.00	0	19.8	16	0.022	0.02	0.004	0.00	0.030	0.02
Basin 3-11	1.24	4300	4300	100	0	1.240	0.000	0.011	0.06	1.15	0.2	0.06	0.0	1.40	0	8.4	1	0.000	0.00	0.000	0.00	0.000	0.00
Basin 2SW9	6.08	1300	1400	56.2	43.8	3.417	2.663	0.4452	11.50	1.48	46.3	0.34	10.6	9.72	304	68.9	2156	0.013	0.40	0.006	0.17	0.090	2.80
Basin 2SW10	3.39	1200	1200	100	0	3.390	0.000	0.0765	1.10	1.85	5.5	0.31	0.9	7.90	24	37.5	112	0.016	0.05	0.004	0.01	0.062	0.19
Basin 2NW17	2.59	1200	1200	100	0	2.590	0.000	0.1754	1.93	1.85	9.7	0.31	1.6	7.90	41	37.5	197	0.016	0.08	0.004	0.02	0.062	0.33
Basin 2NW17	0.85	1400	1400	100	0	0.850	0.000	0.701	2.53	0.93	6.4	0.16	1.1	7.70	53	57.5	396	0.018	0.12	0.005	0.03	0.094	0.65
Basin 2SW9	38.65	1200	1200	100	0	38.650	0.000	0.1594	26.18	1.85	131.7	0.31	22.1	7.90	563	37.5	2670	0.016	1.14	0.004	0.28	0.062	4.42
Basin 2SW12	2.25	1200	1200	100	0	2.250	0.000	0.1754	1.68	1.85	8.4	0.31	1.4	7.90	36	37.5	171	0.016	0.07	0.004	0.02	0.062	0.28
Basin 2SW9	3.6	1400	1400	100	0	3.600	0.000	0.701	10.73	0.93	27.1	0.16	4.7	7.70	225	57.5	1677	0.018	0.53	0.005	0.15	0.094	2.74
Basin 2NW17	11.37	1400	1400	100	0	11.370	0.000	0.701	33.87	0.93	85.7	0.16	14.7	7.70	709	57.5	5297	0.018	1.66	0.005	0.46	0.094	8.66
Estimated Totals from Outfall #6									156.14		627.6		107.2		3272		19550		6.57		1.82		30.66
Estimated Removal Efficiency of Howard St. Pond (Existing Condition)											32.1		5.7		195.5		2535.5		0.8		0.2		4.0
Adjusted Estimated Annual Total Pollutants Discharged at Outfall #6											595.5		101.5		3076.4		17014.5		5.8		1.6		26.6

- Notes:
- Rainfall is taken from Appendix A.3 of the Document "*Evaluation of Current Stormwater Design Criteria within the State of Florida*" (Environmental Research & Design, Inc.- Harper, Baker; June 2007)
 - The runoff coefficient comes from Appendix E (Zone 4) of the document "*Environmental Resource Permit Stormwater Quality Applicant's Handbook*" (FDEP and the State Water Management Districts, Draft- March 2010
CN_{nonDCIA} and DCIA required in Appendix E were estimated and assumed based on standard landuse values, respectively, to return C values.
 - Runoff Volume is calculated as Drainage Area x Runoff Coefficient x Rainfall x Conversion Factor to obtain Acre-Feet/Year Units
 - The effective EMC values are based on the area-weighted percentages of each pertinent landuse within the drainage area.
 - Institutional landuse was considered consistent for light commercial for EMC values.
 - Communications landuse was considered consistent with light commercial for EMC values and runoff parameters.
 - Pollutant removal efficiency for the contributing basin to Howard Avenue pond is assumed at 20% for TSS and 10% for nutrients as the system will operate somewhat as a dry detention system.



Table B-2 Event Mean Concentration by Landuse
City of Dade City Stormwater Master Plan

Florida Landuse		Event Mean Concentrations (mg/L)						
Classifical	Landuse Description	TN	TP	BOD	TSS	Cu	Pb	Zn
1100	Low-Density Residential	1.5	0.18	4.7	23	0.008	0.002	0.031
1200	Single-Family	1.85	0.31	7.9	37.5	0.016	0.004	0.062
1300	Multi-Family	1.91	0.48	11.3	77.8	0.009	0.006	0.086
1400	Low-Intensity Commercial	0.93	0.16	7.7	57.5	0.018	0.005	0.094
1450	High-Intensity Commercial	2.48	0.23	11.3	69.7	0.015		0.16
1500	Light Industrial	1.14	0.23	7.6	60	0.003	0.002	0.057
1900	Open Land	1.15	0.055	1.4	8.4			
4300	Undeveloped/Rangeland/Forest	1.15	0.055	1.4	8.4			
7400	Mining/Extractive	1.18	0.15	7.6	60	0.003	0.002	0.057
8100	Highway	1.37	0.17	5.2	37.3	0.032	0.011	0.126
		TN	TP	BOD	TSS	Cu	Pb	Zn

Notes

1. The majority of the EMC values are taken from Table 3.4 of the March 2010 Draft Document "*Environmental Resource Permit Stormwater Quality Applicant's Handbook*" (FDEP and the State Water Management Districts, Draft- March 2010)
2. Supplemental information to fill in EMC data gaps was obtained from Table 4-17 of the Document "*Evaluation of Current Stormwater Design Criteria within the State of Florida*" (Environmental Research & Design, Inc.- Harper, Baker; June 2007)



Tables B-3 Pollutant Load Removal Adjustments for Irvin Park Pond (Existing Condition)
Pond Permanent Pool Characteristics

Table B-3.1 Stage/Volume for Existing Irvin Park Pond

Elevation	Area (Acre)	P.P.V. (ac ft)
67	6.51	14.22
66	5.29	8.32
65	3.81	3.77
64	1.65	1.04
63	0.42	0.00

PPV= Permanent Pool Volume

Detention Time (t_d) = 14.3 days

Table B-3.2 Existing Loads into Irvin Park Pond (from Existing Loads Calculations Table B-1)

TP	158.1 Lb/yr
TN	1011.3 Lb/yr
Runoff Volume	362.26 Ac-ft/Year

$t_d = PPV * 365 / \text{Runoff Volume (days)}$

Table B-3.3 Pollutant Load Reductions Currently Provided by Irvin Park Pond

Total Phosphorus Removal Rate in Wet Detention Pond

Percent Removal Total Phosphorus¹ = $44.53 + 6.146 * \ln(t_d) + 0.145 * (\ln(t_d))^2$

¹Figure 13.3 Environmental Resource Permit Stormwater Applicant's Handbook, FDEP & WMDs, Draft March 2010

TP Efficiency of Pond
61.92 %

TP Load Removed by the Pond
97.9

Total Nitrogen Removal Rates in Wet Detention Pond

Percent Removal Total Nitrogen² = $43.75 * t_d / (4.38 + t_d)$

²Figure 13.2 Environmental Resource Permit Stormwater Applicant's Handbook, FDEP & WMDs, Draft March 2010

TN Efficiency of Pond
33.50 %

TN Load Removed by the Pond
338.8



Table B-4 Concept Baffle Box/Dade City Canal Drainage Basin Opinion of Probable Cost

AMEC Environment & Infrastructure, Inc.

03/12/12

Item #	UoM	Approx Qty	Item	Unit Price In Figures	Total Amount
101-1	LS	1.0	Mobilization	\$4,000.00	\$4,000.00
101-1-1	LS	1.0	Clearing and Grubbing	\$2,000.00	\$2,000.00
102-1	LS	1.0	Maintenance of Traffic	\$3,000.00	\$3,000.00
104-13-1	LF	100.0	Staked Silt Fence (Type III)	\$4.63	\$463.00
120-1	LS	1.0	Regular Excavation	\$1,000.00	\$1,000.00
570-1-2	SY	250.0	Performance Turf (Sod)(Bahia/St. Augustine)	\$1.65	\$412.50
SPECIAL 1	LS	1.0	Suntree Technologies Baffle Box	\$80,000.00	\$80,000.00
SPECIAL 2	LS	1.0	Installation of Baffle Box - including miscellaneous items	\$10,000.00	\$10,000.00
SPECIAL 3	LS	1.0	Pipe Removal	\$1,000.00	\$1,000.00
SPECIAL 4	LF	300.0	Orange Construction Fence	\$2.00	\$600.00
SPECIAL 4	LS	1.0	Utility Coordination with City and other Utilities	\$1,000.00	\$1,000.00
SPECIAL 5	LS	1.0	Engineering Design and Permitting	\$35,000.00	\$35,000.00
				Subtotal	\$138,475.50
				Contingency 10%	\$13,847.55
				TOTAL	\$152,323.05

This Engineer's Opinion of Probable Construction Costs was based on available costs data from the FDOT "Listing of Master Payitems" with an effective date of 6/7/11. Costs do vary with time.