



Flooding Areas for Alternative 2

- Floods During 10-yr., 25-yr., & 100-yr. Storms
- Floods During 25-yr. & 100-yr. Storms
- Floods During 100-yr. Storm
- Main Outfall Channel

Figure 4-3

Note: Numbers indicate node numbers in the XP-SWMM Model.

TABLE 4-5				
ESTIMATED COST ALTERNATIVE 2				
Description	Quantity	Unit	Unit Price	Total
Mobilization	1	LS	\$30,000.00	\$30,000.00
Existing Channel Improvements	5900	LF	\$30.00	\$177,000.00
24" RCP	40	LF	\$45.00	\$1,800.00
36" RCP	44	LF	\$50.00	\$2,200.00
42" RCP	76	LF	\$55.00	\$4,180.00
72" RCP	228	LF	\$2000.00	\$456,000.00
Pavement Repair	1000	SY	\$40.00	\$40,000.00
Rip Rap	10	TON	\$100.00	\$1,000.00
Pond Excavation	16,000	CY	\$5.00	\$80,000.00
Seeding	10	ACRE	\$800.00	\$8,000.00
Clearing/Demolition	5	ACRE	\$1,500.00	\$6,500.00
Lake Elizabeth Weir	1	LS	\$70,000.00	\$70,000.00
Dogwood Lake Weir	1	LS	\$250,000.00	\$250,000.00
SUBTOTAL CONSTRUCTION				\$1,126,680.00
CONTINGENCIES & ENGINEERING (15%)				\$169,002.00
TOTAL CONSTRUCTION COST				\$1,295,682.00
LAND ACQUISITION				
Upstream of Glens Bay Road	1	ACRE	\$300,000.00	\$300,000.00
TOTAL LAND ACQUISITION				\$300,000.00
TOTAL COST OF ALTERNATIVE 2				\$1,600,000.00

4.3 ALTERNATIVE 3

4.3.1 Proposed Improvements

Alternative 3 consists of a combination of providing storage upstream of U.S. Route 17 Business, increasing pipe sizes at several locations, and modifying the outlet structures at Lake Elizabeth and Dogwood Lake. Table 4-6 lists the locations where detention is proposed and the amount of storage required.

TABLE 4-6 PROPOSED POND LOCATIONS ALTERNATIVE 3		
Location	Minimum Storage Required (Acre-feet)	Land Availability
Spanish Oaks Drive	69	Land is currently being developed.
Pine Valley Lane	7	This area is fully developed and would require acquisition of a developed parcel(s).
Glens Bay Road	3	This area is fully developed and would require acquisition of a developed parcel(s).
Plantation Drive	122	There is some area available on the existing golf course and within the residential subdivision.
U.S. 17 Business Frontage Road	6	Small undeveloped area adjacent to a small existing pond. Also, two vacant residential lots behind the shopping center and approximately 14 acres to the right of the shopping center. Storage within a pipe system could be placed under the existing shopping center parking lot.

In addition to the storage listed above, the pipes given in Table 4-7 would be modified or added for the improvements in Alternative 3.

TABLE 4-7 ADDITIONAL PIPE REPLACEMENTS FOR ALTERNATIVE 3				
Location	Existing Culvert Size (inches)	Proposed Culvert Size (inches)	Proposed U.S. Invert (feet)	Proposed D.S. Invert (feet)
Stub into Junction Box Upstream of Frontage Road	48	72	15.3	14.8
Frontage Road	48	72	14.8	13.3
U.S. Highway 17 Southbound	48	72	13.3	11.6
U.S. Highway 17 Northbound	48	72	11.6	9.9
Cedar Lane	54	2 - 54	5.4	5.2

Note: These pipe replacements are in addition to those described in Table 4-1.

Similar to Alternative 2, this alternative requires the following modifications to the outlet structures at Lake Elizabeth and Dogwood Lake:

- Adding a 4-foot by 5-foot inlet box similar to the existing structure at Lake Elizabeth;
- Adding a second pipe under Cedar Lane; and,
- Modifying the weir at Dogwood Lake from 50 feet to an effective length of 200 feet.

As in Alternative 2, the final design of the weirs at each lake will be set so that the additional flow will be passed through the lake without increasing the existing water surface elevations for the design storm events.

4.3.2 Results of Analysis

An XP-SWMM model was created to include the proposed improvements for Alternative 3. Portions of the XP-SWMM output for this model are included in Appendix E. Figure 4-4 indicates the number of flooding sites that result with the Alternative 3 modifications in place.

4.3.3 Estimated Construction Cost

A preliminary estimate of the construction cost for Alternative 3 is provided in Table 4-8, page 4-14. Alternative 3 can be broken into two phases. Phase I being those improvements downstream of U.S. 17 Business and Phase II being the



Flooding Areas for Alternative 3

- Floods During 10-yr., 25-yr., & 100-yr. Storms
- Floods During 25-yr. & 100-yr. Storms
- Floods During 100-yr. Storm
- Main Outfall Channel

Figure 4-4

Note: Numbers indicate node numbers in the XP-SWMM Model.

TABLE 4-8				
ESTIMATED COST ALTERNATIVE 3				
Description	Quantity	Unit	Unit Price	Total
Mobilization	1	LS	\$75,000.00	\$75,000.00
Existing Channel Improvements	5900	LF	\$30.00	\$177,000.00
24" RCP	40	LF	\$45.00	\$1,800.00
36" RCP	44	LF	\$50.00	\$2,200.00
42" RCP	76	LF	\$55.00	\$4,180.00
72" RCP	228	LF	\$1,250.00	\$285,000.00
Pavement Repair	1000	SY	\$40.00	\$40,000.00
Rip Rap	10	TON	\$100.00	\$1,000.00
Pond Excavation	350,000	CY	\$5.00	\$1,750,000.00
Seeding	60	ACRE	\$800.00	\$48,000.00
Clearing/Demolition	55	ACRE	\$1,500.00	\$82,500.00
Timber Bulkhead	500	LF	\$160.00	\$80,000.00
Sluice Gate at Lake Elizabeth Weir	1	LS	\$25,000.00	\$25,000.00
Lake Elizabeth Weir	1	LS	\$70,000.00	\$70,000.00
Sluice Gate at Dogwood Lake Weir	1	LS	\$25,000.00	\$25,000.00
Dogwood Lake Weir	1	LS	\$250,000.00	\$250,000.00
SUBTOTAL CONSTRUCTION				\$2,916,680.00
CONTINGENCIES & ENGINEERING (15%)				\$437,502.00
TOTAL CONSTRUCTION COST				\$3,354,182.00
LAND ACQUISITION				
Upstream of Glens Bay Road	1	ACRE	\$300,000.00	\$300,000.00
Upstream of Pine Valley Lane	2.5	ACRE	\$360,000.00	\$900,000.00
Upstream of Spanish Oaks Drive	23	ACRE	\$47,400.00	\$1,090,200.00
Upstream of Plantation Drive	27	ACRE	\$70,000.00	\$1,890,000.00
Upstream of U.S. 17 Business	1	ACRE	\$120,000.00	\$120,000.00
TOTAL LAND ACQUISITION				\$4,300,200.00
TOTAL COST OF ALTERNATIVE 3				\$7,654,382.00

remaining improvements recommended in Alternative 3. Preliminary construction cost estimates for Phase I and Phase II are provided in Table 4-8a, page 4-15 and Table 4-8b, page 4-16.

TABLE 4-8a				
ESTIMATED COST ALTERNATIVE 3 - PHASE I				
Location	Quantity	Unit	Unit Price	Total
Mobilization	1	LS	\$40,000.00	\$40,000.00
Sluice Gate Lake Elizabeth Weir	1	LS	\$25,000.00	\$25,000.00
Sluice Gate at Dogwood Lake Weir	1	LS	\$25,000.00	\$25,000.00
Timber Bulkhead	500	LF	\$160.00	\$80,000.00
72" RCP	228	LF	\$1,250.00	\$285,000.00
Lake Elizabeth Weir	1	LS	\$70,000.00	\$70,000.00
Dogwood Lake Weir	1	LS	\$250,000.00	\$250,000.00
SUBTOTAL CONSTRUCTION				\$775,000.00
CONTINGENCIES & ENGINEERING (15%)				\$116,250.00
TOTAL CONSTRUCTION COST				\$891,250.00
TOTAL COST OF ALTERNATIVE 3 - PHASE I				\$891,250.00

TABLE 4-8b				
ESTIMATED COST ALTERNATIVE 3 – PHASE II				
Location	Quantity	Unit	Unit Price	Total
UPSTREAM OF U.S. 17 BUSINESS				
Mobilization	1	LS	\$20,000.00	\$20,000.00
Existing Channel Improvements	5,900	LF	\$30.00	\$177,000.00
Pond Excavation	16,000	CY	\$5.00	\$80,000.00
Seeding	10	ACRE	\$800.00	\$8,000.00
Clearing/Demolition	5	ACRE	\$1,500.00	\$7,500.00
24" RCP	40	LF	\$45.00	\$1,800.00
36" RCP	44	LF	\$50.00	\$2,200.00
42" RCP	76	LF	\$55.00	\$4,180.00
Pavement Repair	1,000	SY	\$40.00	\$40,000.00
Rip Rap	10	TON	\$100.00	\$1,000.00
SUBTOTAL CONSTRUCTION				\$341,680.00
CONTINGENCIES & ENGINEERING (15%)				\$51,252.00
TOTAL CONSTRUCTION COST				\$392,932.00
TOTAL COST OF ALTERNATIVE 3 – PHASE II				\$692,932.00

TABLE 4-8c				
ESTIMATED COST ALTERNATIVE 3 - PHASE III				
Location	Quantity	Unit	Unit Price	Total
UPSTREAM OF U.S. 17 BUSINESS				
Mobilization	1	LS	\$20,000.00	\$20,000.00
Existing Channel Improvements	5,900	LF	\$30.00	\$177,000.00
Pond Excavation	16,000	CY	\$5.00	\$80,000.00
Seeding	10	ACRE	\$800.00	\$8,000.00
Clearing/Demolition	5	ACRE	\$1,500.00	\$7,500.00
SUBTOTAL CONSTRUCTION				\$1,840,000.00
CONTINGENCIES & ENGINEER (15%)				\$276,000.00
TOTAL CONSTRUCTION COST				\$2,116,000.00
LAND ACQUISITION				
Upstream of Pine Valley Lane	3	ACRE	\$360,000.00	\$900,000.00
Upstream of Spanish Oaks Drive	23	ACRE	\$47,400.00	\$1,090,200.00
Upstream of Plantation Drive	27	ACRE	\$70,000.00	\$1,890,000.00
Upstream of U.S. 17 Business	1	ACRE	\$120,000.00	\$120,000.00
TOTAL LAND ACQUISITION				\$4,000,200.00
TOTAL COST OF ALTERNATIVE 3 - PHASE III				\$6,116,200.00

Section 5.0

CONCLUSION

Three alternative solutions for alleviating flooding within the Caropines and Deerfield Subdivisions have been presented in this Drainage Study Report. In summary, Alternative 1 proposes various detention locations upstream of U.S. Route 17 Business. Alternative 2 involves upgrading and replacing several pipes as well as modifying the outlet structures at Lake Elizabeth and Dogwood Lake to pass the additional flow conveyed from upstream. Alternative 3 combines the use of detention ponds upstream of U.S. Route 17 Business, upgrading and replacing several pipes, and modifying the outlet structures at Lake Elizabeth and Dogwood Lake. All three alternatives provide flooding relief in varying degrees. However, Alternative 3 provides the most relief during the 25-year storm.

APPENDIX A

TOWN OF SURFSIDE BEACH
STORMWATER MANAGEMENT STUDY
FINAL REPORT

Town of Surfside Beach, South Carolina
December, 1985

PROCTOR-DAVIS-RAY ENGINEERS
P.O. Box 1684, Eagles Nest Plaza
North Myrtle Beach, South Carolina 29598

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SECTION I

EXECUTIVE SUMMARY

I. OBJECTIVES AND SCOPE

The Stormwater Management Study was commissioned through a cooperative effort of the Town of Surfside Beach and Horry County. The primary objective of this Study is to provide a comprehensive, rational master drainage plan for programming needed improvements to the existing drainage systems while making maximum use of the existing man-made and natural systems.

The Study includes all incorporated areas within the town limits of Surfside Beach (965 acres) as well as the unincorporated areas of Horry County contributing stormwater to the Surfside Beach drainage system. These areas outside the town limits (885 acres) include Caropines Subdivision and a portion of the Deerfield Plantation. The total drainage area included in the Study is approximately 1850 acres.

The scope of work included in this Study includes two phases of a comprehensive multi-phased Stormwater Management Program. This phased program (Figure I-1) assures the orderly development and construction of the drainage system improvements necessary to mitigate the effects of flooding generated by increase urbanization of the watershed area.

A brief description of each phase of this Program follows:

Phase I - Topographic Maps

Utilizing aerial photography flown by Santee Cooper Electric Cooperative in 1982, topographic maps were generated for the entire watershed area included in the study. These maps illustrate all prominent natural and man-made features at a scale of 1 inch = 100 feet, and a contour interval of 2 feet.

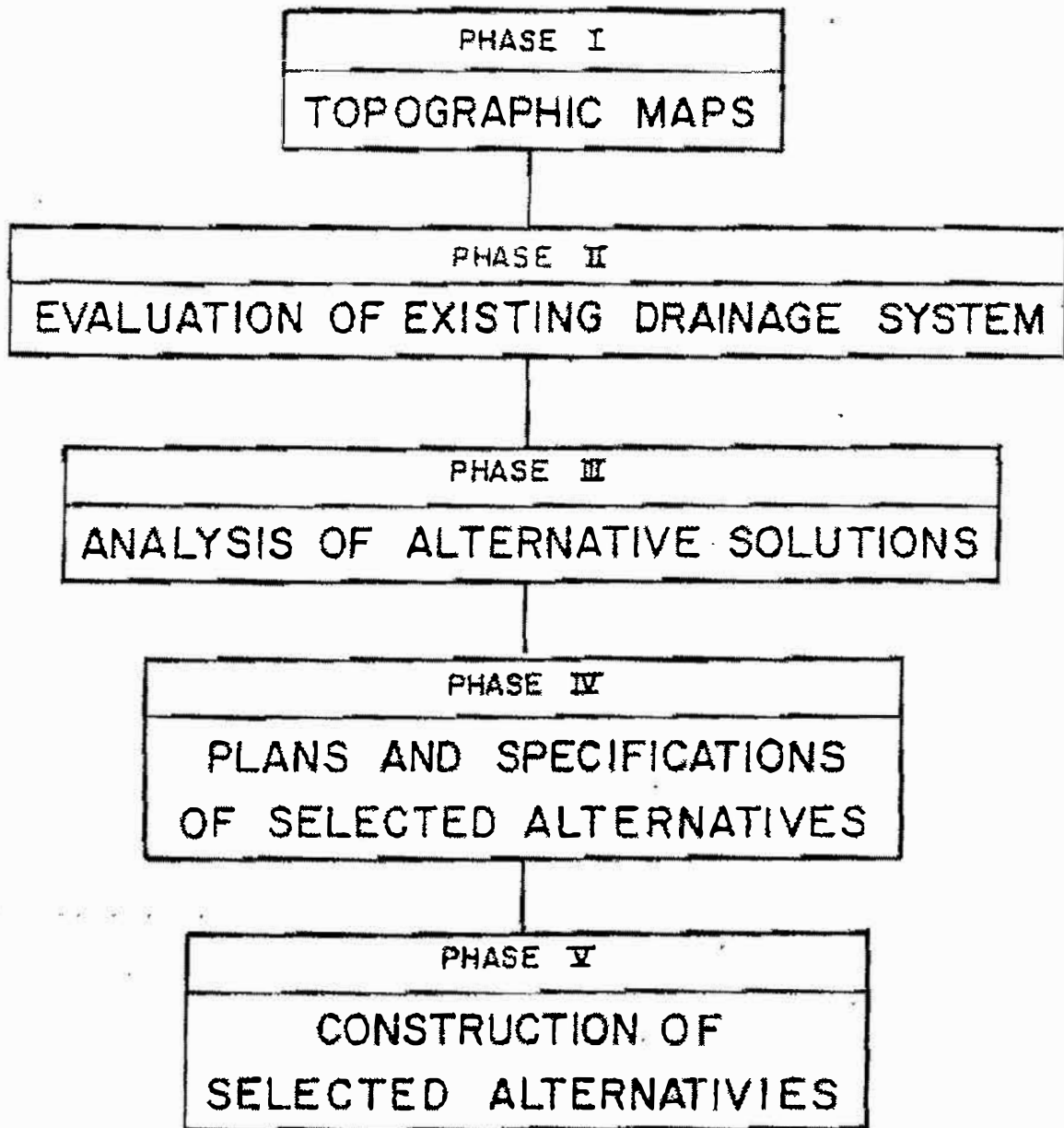
Phase II - Evaluation of Existing Drainage Facilities

This phase includes the delineation of the contributing watershed areas, and inventory of the existing drainage facilities, computation of runoff rates, and identification of the major drainage problems.

Phase III - Analysis of Alternative Solutions

An evaluation was made of various strategies for improving the existing drainage system to reduce and control the drainage problems identified in each basin. Each strategy was evaluated on the basis of cost-effectiveness, performance of intended function, and disturbance to the environment of the area. A recommended strategy was selected for each basin, and an implementation plan was formulated for subsequent construction based on the severity of the drainage problem.

STORMWATER MANAGEMENT PROGRAM
SURFSIDE BEACH, S.C.



Phase IV - Preparation of Construction Plans

This phase will include the preparation of plans, specifications, and regulatory permits necessary for the construction of the selected drainage improvements. This work will follow the implementation plan recommended in Phase III and be accomplished on a priority basis.

Phase V - Construction of Drainage Improvements

The construction of the various components of the drainage system will commence upon final approval of plans and permits, and availability of funding.

The Study contained within includes the accomplishment of Phases II and III of the overall Program. These phases are concerned with identification of the drainage problems and deficiencies, and formulates specific cost-effective solutions to those problems. The methodology and results of these phases are discussed and summarized in the following paragraphs.

II. PHASE II - EVALUATION OF EXISTING DRAINAGE FACILITIES

A. Delineation of Watershed Areas

Utilizing the 1" = 100' scale topographic maps, photographic reproductions were made and compiled into five base maps of 1" = 200' scale. These maps were used to determine the extent of the watershed area contributing runoff to the study area. As shown on Figure I-2, the study area extends beyond the limits of Surfside Beach to include approximately 885 acres of land in the county as well as the 965 acres within the town limits.

The study areas was then further divided into six drainage basin areas for more extensive evaluation. Each basin was identified according to a prominent feature contained within the basin boundaries. The basins delineated on the base maps include: Magnolia Lake, Myrtle Lake, Dogwood Lake, Floral Lake, Melody Lane, and Deerfield/Caropines.

B. Soil Survey

Soil type and characteristics are essential for quantifying stormwater and evaluating alternative strategies for drainage improvements. Because of these important considerations, soil maps were obtained from the Soil Conservation Service (SCS) district office in Conway for use in this Study. This data included the location and identification of the soil type as well as the physical and engineering characteristics of each soil. The soil characteristics aid in determining the behavior of soils, particularly the soils ability to absorb stormwater. Based on this ability (permeability), soils are classified as being in soil group A, B, C, or D. 'A' soils are typically sandy soils

and have a great permeability, thus generate small amounts of runoff. 'D' soils, conversely, are typically mucky or clayey soils, absorb very little stormwater, and produce greater amounts of runoff to be carried by the drainage system.

C. Existing Drainage Facilities

An inventory of all major drainage facilities was completed within each basin area. The drainage facilities included pipes, culverts, catch basins, and ditches. The size and location of the facilities are shown on the base maps and coded numerically for easy identification of pipe material, length, invert elevation, and hydraulic capacity.

The inventory results reveal that all the basins contain pipes that are either positioned on adverse slopes (in an uphill direction) or are partially or completely buried. As shown in Table I-1 below, approximately one-half of the pipes in the Melody Lane basin are on adverse slopes or are buried. In the Floral Lake and Deerfield/Caropines basins, approximately one-fourth of the total pipes surveyed are in the same condition. Overall, twenty percent of the more than 400 pipes inventoried are either on an uphill grade, or partially or completely buried. This fact alone helps to explain the widespread drainage problems exhibited during even minor storm events.

D. Quantification of Runoff

Utilizing the Illinois Urban Drainage Area Simulator, known as the ILLUDAS computer model, peak runoff rates were computed for each drainage basin using the 25-year design storm event (7.6 inches rain in 24 hours). The ILLUDAS program was specifically designed for use in urban areas and requires the input of a significant amount of watershed characteristics. Such characteristics include soils type, % impervious area, % connected impervious area, % pervious area, basin slope and length, and total basin area. This data was determined for each small division of area, or sub-basin, in each drainage basin. Such sub-basins are frequently as small as a city block in size.

ILLUDAS computes the peak runoff rates at each major drainage facility, and compares this runoff rate with the computed capacity of each pipe, culvert, or ditch. If the facility is inadequate for the calculated runoff rate, the model will note this inadequacy and determine a new pipe size adequate to handle the peak flow rate.

A summary of inadequate pipes is shown below in Table I-2 for each drainage basin based on the 25-year design storm event. (Peak runoff rates for each drainage facility can be found in Table A-4, Appendix.) It is evident from this data that the existing drainage facilities are woefully inadequate to handle the design storm. Overall, the drainage facilities within the study area are capacity-limited to handle only the 2 to 5 year design storm event.

TABLE I-1
SUMMARY OF PIPES IN EACH BASIN

BASIN AREA	PIPE DATA				
	TOTAL PIPES SURVEYED	NO. ON ADVERSE SLOPE*	% ON ADVERSE SLOPE	NO. OF BURIED PIPES**	% OF BURIED PIPES
DOGWOOD LAKE	53	1	1.9	7	13.2
DEERFIELD & CAROPINES	49	5	10.2	6	12.2
MYRTLE LAKE	153	14	9.2	14	9.2
SUBTOTAL	255	20	7.8	27	10.6
MAGNOLIA LAKE	58	3	5.2	6	10.3
FLORAL LAKE	105	22	20.9	3	2.9
MELODY LANE	19	4	21.1	4	21.1
TOTALS	437	49	11.2	40	9.2

* ADVERSE SLOPE - refers to pipe on flat or uphill slope.

** BURIED PIPES - either fully or partially buried.

TABLE I-2
BASIN DATA

BASIN	AREA (ACRES)	IMPERVIOUS (%)*	SLOPE (%)	SOIL TYPE				
				% A	% B	% C	% D	% B/D
DOGWOOD LAKE	173.5	15.9	1.0	69.0	4.6	0	2.2	24.2
DEERFIELD & CAROPINES	882.7	7.7	1.0	2.6	17.7	0	30.0	49.7
MAGNOLIA LAKE	112.5	12.6	1.0	81.3	0.0	0	11.2	7.5
MYRTLE LAKE	327.2	23.2	1.0	49.1	4.7	0	15.3	30.9
FLORAL LAKE	244.2	11.4	2.0	35.1	2.5	0	17.0	45.4
MELODY LANE	107.7	11.0	2.0	29.1	27.3	0	0.0	43.6
TOTAL	1847.8							

* IMPERVIOUS - refers to present land use conditions.

F.

DEERFIELD & CAROPINES BASIN

Background

The Deerfield and Caropines Basin lies outside the Town limits of Surfside Beach, west of Highway 17, and is under the jurisdiction of Horry County. It is the largest contributing basin in the Surfside Beach study area, containing approximately 900 acres. The basin includes the Caropines Subdivision south of Glens Bay Road, and the Deerfield Plantation development north of Glens Bay Road extending to Platt Drive. Over 75% of soils in this basin are poorly drained and have a high runoff potential. The area contains very flat slopes and mostly residential development. Land use along Highway 17 is predominantly commercial.

The existing drainage system in the basin consists mostly of open drainage ditches and connecting roadway pipes. A large channel extending through the Caropines Subdivision and Deerfield Plantation serves as the major collection system for the area. The major channel discharges via a 48-inch pipe adjacent to the Bi-Lo Shopping Center where it discharges into Lake Elizabeth, located in the Dogwood Lake Basin. The pipe only has a fraction of the capacity needed for the 25-year storm event. As a result, during heavy rains, water backs up in the channel, flooding areas of Caropines Subdivision and Deerfield Plantation. The drainage pipes located upstream in the developments are also undersized and cannot handle storms that exceed the two year event. Approximately 80% of the major pipes in the basin are undersized for both the 10- and 25-year storm events. The problem is compounded by almost one-fourth of the total pipes surveyed containing either buried invert or having adverse (uphill) slopes.

The lack of ditch maintenance drastically reduces the effectiveness of the drainage system. Maintenance in both the Deerfield Plantation and Caropines Subdivision is county regulated. In some areas channels are overgrown with vegetation and contain steep side slopes. The steep side slopes are prone to erosion and make maintenance difficult and costly. The overgrowth decreases the capacity of the ditch to convey stormwater. The poor soils in the area add to the complication with low infiltration rates and by sustaining a wet and mucky environment.

Alternative Analysis

Alternative 1

Drainage improvements, proposed for the Deerfield and Caropines Basin include upgrading pipes and channel sections to handle the 25-year storm event. A 20 x 5-foot box culvert is required under Highway 17 to carry the 25-year flows. A 16 x 4-

foot box culvert is required under Glens Bay Road. Channel improvements are recommended along the primary drainage route. Additional easements would not be required to maintain the channel. It is recommended that improvements to the Deerfield and Caropines developments be made only in conjunction with improvements in the Dogwood Lake and Myrtle Lake Basins. If larger sized pipes are installed in the upstream areas without similar improvements downstream, severe flooding will occur. Close coordination between the Town of Surfside Beach and Horry County is imperative in solving the existing drainage problems in the basin.

Alternative 2

Proposed improvements for Alternative 2 include improvements as recommended in Alternative 1 as well as the addition of a retention/detention area adjacent to Bi-Lo Shopping Center, just east of Plantation Drive. Approximately 5 acres of land at an estimated cost of \$40,000 per acre or \$200,000 is required to significantly reduce peak runoff rates. With a storage depth of 4-5 feet, flows could be lowered by approximately 200 cubic feet per second (cfs). The benefits of a storage area would reduce proposed facility sizes in the downstream areas of both Dogwood Lake Basin and Myrtle Lake Basin. The retention area would not greatly effect pipe sizes in the Deerfield and Caropines Basin since it is downstream of most improvements. The result of smaller outfalls would mean less runoff would be allowed to discharge to the beach. Although the flows would be significantly lower, the costs of excavation and land acquisition would outweigh any reduction in cost that would be incurred as a result of smaller sized facilities downstream. Proposed culvert sizes at major outlets (ie. Bi-Lo outfall, Lake Elizabeth outfall, Dogwood Lake outfall, Myrtle Lake outfall) would result in a decrease in width of approximately 2 feet if the proposed detention area was utilized.

Selected Alternative

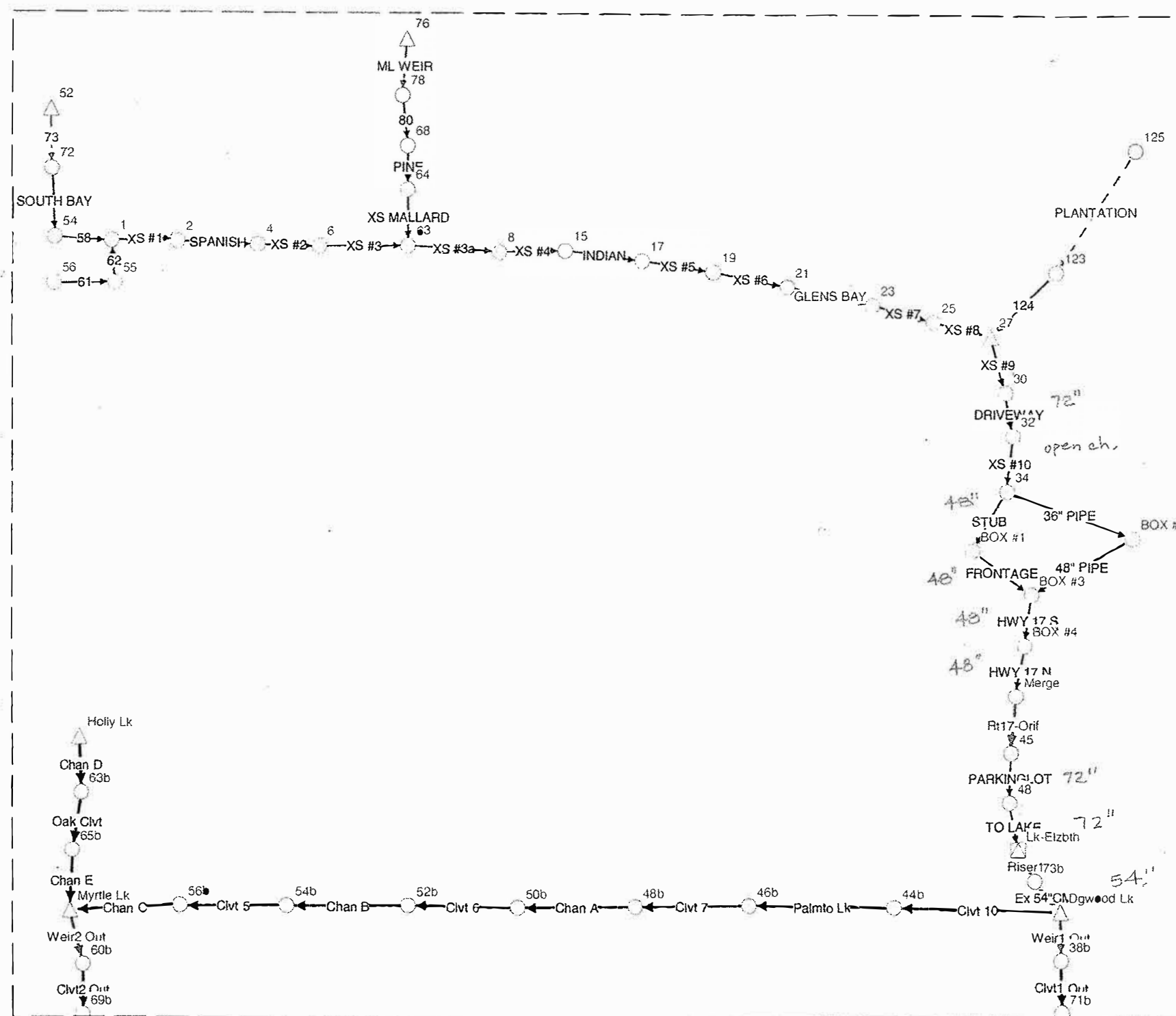
The cost of implementing improvements for Alternative 1 is the most economical solution and, although a new detention area would reduce runoff rates to the beach, the cost of obtaining valuable land in the Deerfield area outweighs any benefits that would be incurred as a result of smaller pipe facilities downstream. This reduction of runoff to the Dogwood Lake and Myrtle Lake Basins would not significantly decrease proposed facility costs to compensate for the cost of an additional detention area. It is also recommended that improvements be

undertaken only in conjunction with improvements in the Dogwood Lake and Myrtle Lake Basins.

100% Buildout Condition

If the basin develops to a 100% buildout condition, runoff rates will increase 10% for the 10-year storm event and 9% for the 25-year storm event. As a result, proposed improvements would become inadequate in a short period of time. It is imperative that a Stormwater Management Ordinance be extended into these County regulated drainage areas to control runoff rates from new development and minimize drainage improvement costs.

APPENDIX B



EXISTING CONDITIONS

Existing Condition - 10 year storm

1 of 3

Table E1 - Conduit Data

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft ²)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 SPANISH	45.00 Circular	7.07	0.01300	3.00	3.00		
3 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
4 XS #3	191.00 Natural	81.11	0.03000	45.03	4.93		
5 XS #4	130.00 Natural	99.88	0.03000	57.76	5.62		
6 INDIAN	42.00 Circular	7.07	0.01300	3.00	3.00		
7 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
8 XS #6	586.00 Natural	161.13	0.03000	60.60	6.34		
9 XS #7	1608.00 Natural	181.54	0.03000	41.07	9.11		
10 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
11 XS #9	318.00 Natural	201.97	0.03000	59.08	9.84		
12 DRIVEWAY	59.00 Circular	28.27	0.01300	6.00	6.00		
13 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
14 STUB	8.00 Circular	12.57	0.01400	4.00	4.00		
15 FRONTAGE	66.00 Circular	12.57	0.01300	4.00	4.00		
16 HWY 17 S	75.00 Circular	12.57	0.01300	4.00	4.00		
17 HWY 17 N	77.00 Circular	12.57	0.01300	4.00	4.00		
18 PARKINGLOT	73.00 Circular	28.27	0.01300	6.00	6.00		
19 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
20 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
21 58	1490.00 Natural	52.60	0.03000	50.00	3.40		
22 61	350.00 Natural	49.50	0.03000	50.00	3.50		
23 62	1300.00 Natural	49.20	0.03500	50.00	3.30		
24 XS #3a	66.00 Natural	87.00	0.03000	67.00	4.90		
25 PINE	40.00 Circular	3.14	0.01300	2.00	2.00		
26 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
27 80	150.00 Natural	18.00	0.03000	39.00	2.50		
28 Ex 54 CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
29 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
30 Palmt Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
31 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
32 Chan A	270.00 Natural	54.55	0.05000	23.95	4.90		
33 Clvt 6	41.00 Circular	12.57	0.01300	4.00	4.90		
34 Chan B	210.00 Natural	58.35	0.05000	20.00	5.30		
35 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
36 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
37 Chan D	150.00 Trapezoid	81.25	0.02000	25.00	3.25	0.00	0.00
38 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
39 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
40 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
41 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
42 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
43 36" PIPE	104.00 Circular	7.07	0.01400	3.00	3.00		
44 48" PIPE	58.00 Circular	12.57	0.01400	4.00	4.00		
45 42" RCP	61.00 Circular	9.62	0.01300	3.50	3.50		
46 24" RCP	61.00 Circular	3.14	0.01300	2.00	2.00		
47 36" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
48 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14769.0000 feet					

Existing Condition - 10 year storm

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 # Table E16. New Conduit Information Section
 # Conduit Invert (IE) Elevation and Conduit
 # Maximum Water Surface (WS) Elevations
 #*****

Conduit Name	Upstream Node	Downstream Node	IE Up	IE Dn	WS Up	WS Dn	Conduit Type
XS #1	1	2	21.10	20.70	26.05	26.10	Natural
SPANISH	4	2	18.53	18.41	26.00	26.10	Circular
XS #2	4	6	20.50	20.40	26.00	26.00	Natural
XS #3	6	63	20.40	20.40	26.00	26.01	Natural
XS #4	8	15	20.40	19.10	26.02	26.02	Natural
INDIAN	15	17	19.10	18.70	26.02	26.28	Circular
XS #5	19	17	19.40	18.70	26.28	26.28	Natural
XS #6	19	21	19.40	17.90	26.28	26.29	Natural
XS #7	23	25	17.50	17.20	24.73	24.62	Natural
XS #8	25	27	17.20	15.60	24.62	24.60	Natural
XS #9	30	27	16.20	15.60	24.58	24.60	Natural
DRIVEWAY	32	30	16.30	16.20	23.41	24.58	Circular
XS #10	32	34	16.30	15.30	23.41	23.39	Natural
STUB	BOX #1	34	16.00	15.30	30.34	23.39	Circular
FRONTAGE	BOX #1	BOX #3	16.90	16.70	30.34	22.00	Circular
HWY 17 S	BOX #3	BOX #4	16.00	15.60	22.00	21.02	Circular
HWY 17 N	BOX #4	Merge	15.13	11.43	21.03	20.06	Circular
PARKINGLOT	48	45	9.930	9.120	13.42	13.53	Circular
TO LAKE	Lk-Elzbtb	48	9.900	9.600	11.75	13.42	Circular
SOUTH BAY	72	54	21.60	20.60	25.54	25.53	Natural
58	1	54	21.10	20.60	26.05	25.53	Natural
61	56	55	22.50	22.10	26.78	26.45	Natural
62	55	1	22.10	21.10	26.45	26.05	Natural
XS #3a	63	8	20.40	20.40	26.01	26.02	Natural
PINE	68	64	20.96	20.41	26.20	25.99	Circular
XS MALLARD	64	63	20.41	20.40	25.99	26.01	Natural
80	78	68	21.50	20.96	24.41	26.20	Natural
Ex 54" CMP	73b	Dgwood Lk	5.430	5.220	9.229	7.909	Circular
Clvt 10	44b	Dgwood Lk	6.230	5.420	7.900	7.909	Rectangle
Palmtto Lk	44b	46b	6.230	5.460	7.900	7.859	Natural
Clvt 7	46b	48b	5.460	5.170	7.859	7.791	Circular
Chan A	48b	50b	5.510	5.170	7.791	7.526	Natural
Clvt 6	50b	52b	5.510	5.350	7.526	7.401	Circular
Chan B	52b	54b	5.350	4.520	7.401	7.117	Natural
Clvt 5	54b	56b	4.520	4.380	7.117	7.054	Circular
Chan C	Myrtle Lk	56b	4.500	4.380	5.802	7.054	Natural
Chan D	Holly Lk	63b	4.750	4.330	6.031	5.980	Trapezoid
Oak Clvt	63b	65b	4.330	4.240	5.980	5.907	Rectangle
Chan E	65b	Myrtle Lk	4.240	4.200	5.907	5.802	Trapezoid
Clvt2 Out	60b	69b	2.570	2.510	4.417	3.980	Rectangle
Clvt1 Out	38b	71b	4.200	3.100	5.917	4.268	Rectangle
124	27	123	15.60	15.30	24.60	24.61	Trapezoid
36" PIPE	34	BOX #2	16.50	16.22	23.39	22.10	Circular
48" PIPE	BOX #3	BOX #2	16.06	15.84	22.00	22.10	Circular
42" RCP	21	23	17.90	17.50	26.29	24.73	Circular
24" RCP	21	23	18.60	18.60	26.29	24.73	Circular
36" RCP	125	123	16.82	16.78	24.81	24.61	Circular
48" RCP	125	123	15.50	15.30	24.81	24.61	Circular
ORF # 1	Merge	45	9.120	9.110	20.06	13.53	Circ Orif

Existing Condition - 10 year storm

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Table E20 - Junction Flooding and Volume Listing.
 The maximum volume is the total volume in the node including the volume in the flooded storage area. This is the max volume at any time. The volume in the flooded storage area is the total volume above the ground elevation, where the flooded pond storage area starts.
 The fourth column is instantaneous, the fifth is the sum of the flooded volume over the entire simulation
 Units are either ft³ or m³ depending on the units.

Junction Name	Surcharged Time (min)	Flooded Time(min)	Out of System Flooded Volume	Maximum Volume	Stored in System Ponding Allowed Flood Pond Volume
1	48.1389	48.1944	0.0000	1197.7532	0.0000
2	0.0000	0.0000	0.0000	96.6656	0.0000
4	325.3889	0.0000	0.0000	93.8739	0.0000
6	336.3194	65.3472	24980.5194	70.3696	0.0000
8	0.0000	14.3056	981.2526	70.6209	0.0000
15	179.5833	179.6389	0.0000	1792.2591	0.0000
17	166.7778	166.8056	0.0000	6175.8841	0.0000
19	0.0000	0.0000	0.0000	86.4934	0.0000
21	142.2083	142.2083	0.0000	3954.8299	0.0000
23	0.0000	0.0000	0.0000	90.9137	0.0000
25	0.0000	0.0000	0.0000	93.2182	0.0000
27	0.0000	0.0000	0.0000	142159.849	0.0000
30	0.0000	0.0000	0.0000	105.3327	0.0000
32	0.0000	0.0000	0.0000	89.3311	0.0000
34	969.9653	969.9653	0.0000	21398.7417	0.0000
BOX #1	1194.828	982.0586	0.0000	180.2426	3608.4211
BOX #3	1059.952	1060.018	0.0000	5127.3240	0.0000
BOX #4	373.0670	373.2323	0.0000	1121.4121	0.0000
45	0.0000	0.0000	0.0000	55.4816	0.0000
48	0.0000	0.0000	0.0000	48.0167	0.0000
52	0.0000	0.0000	0.0000	1649554.917	0.0000
54	1480.381	1480.381	0.0000	99153.6205	0.0000
55	900.0881	900.1000	0.0000	63577.3842	0.0000
56	859.1571	859.1571	0.0000	45780.0789	0.0000
63	334.7758	334.7758	0.0000	27785.7755	0.0000
64	274.9167	274.9306	0.0000	4551.3282	0.0000
68	146.2639	146.2778	0.0000	13071.1924	0.0000
72	0.0000	0.0000	0.0000	49.4582	0.0000
76	0.0000	704.9028	872951.3554	563013.012	0.0000
78	1014.556	1014.569	0.0000	7341.6989	0.0000
Merge	1683.500	1683.500	0.0000	214917.066	0.0000
Lk-Elzbth	0.0000	0.0000	0.0000	2499145.338	0.0000
Dgwood Lk	0.0000	0.0000	0.0000	2589888.609	0.0000
38b	0.0000	0.0000	0.0000	21.5759	0.0000
44b	0.0000	0.0000	0.0000	20.9903	0.0000
46b	0.0000	0.0000	0.0000	30.1449	0.0000
48b	0.0000	0.0000	0.0000	32.9372	0.0000
50b	0.0000	0.0000	0.0000	29.6102	0.0000
52b	0.0000	0.0000	0.0000	25.7717	0.0000
54b	0.0000	0.0000	0.0000	32.6372	0.0000
56b	0.0000	0.0000	0.0000	33.6009	0.0000
Myrtle Lk	0.0000	0.0000	0.0000	83958.3911	0.0000
60b	0.0000	0.0000	0.0000	23.2031	0.0000
Holly Lk	0.0000	0.0000	0.0000	70063.8903	0.0000
63b	0.0000	0.0000	0.0000	20.7282	0.0000
65b	0.0000	0.0000	0.0000	20.9421	0.0000
69b	0.0000	0.0000	0.0000	18.4724	0.0000
71b	0.0000	0.0000	0.0000	14.6725	0.0000
73b	0.0000	0.0000	0.0000	47.7354	0.0000
123	937.6310	937.6637	0.0000	52022.1418	0.0000
125	946.6637	946.7143	0.0000	143473.295	0.0000
BOX #2	1187.053	1187.081	0.0000	73916.5155	0.0000

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Table E1 - Conduit Data

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft^2)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 SPANISH	45.00 Circular	7.07	0.01300	3.00	3.00		
3 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
4 XS #3	191.00 Natural	81.11	0.03000	45.03	4.93		
5 XS #4	130.00 Natural	99.88	0.03000	57.76	5.62		
6 INDIAN	42.00 Circular	7.07	0.01300	3.00	3.00		
7 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
8 XS #6	586.00 Natural	161.13	0.03000	60.60	6.34		
9 XS #7	1608.00 Natural	181.54	0.03000	41.07	9.11		
10 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
11 XS #9	218.00 Natural	201.97	0.03000	59.08	9.84		
12 DRIVEWAY	59.00 Circular	28.27	0.01300	6.00	6.00		
13 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
14 STUB	8.00 Circular	12.57	0.01400	4.00	4.00		
15 FRONTAGE	66.00 Circular	12.57	0.01300	4.00	4.00		
16 HWY 17 S	75.00 Circular	12.57	0.01300	4.00	4.00		
17 HWY 17 N	77.00 Circular	12.57	0.01300	4.00	4.00		
18 PARKINGLOT	73.00 Circular	28.27	0.01300	6.00	6.00		
19 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
20 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
21 S8	1490.00 Natural	52.60	0.03000	50.00	3.40		
22 61	350.00 Natural	49.50	0.03000	50.00	3.50		
23 62	1300.00 Natural	49.20	0.03500	50.00	3.30		
24 XS #3a	66.00 Natural	87.00	0.03000	67.00	4.90		
25 PINE	40.00 Circular	3.14	0.01300	2.00	2.00		
26 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
27 80	150.00 Natural	18.00	0.03000	39.00	2.50		
28 Ex 54-CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
29 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
30 Palmto Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
31 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
32 Chan A	270.00 Natural	54.55	0.05000	23.95	4.90		
33 Clvt 6	41.00 Circular	12.57	0.01300	4.00	4.00		
34 Chan B	210.00 Natural	58.35	0.05000	20.00	5.30		
35 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
36 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
37 Chan D	150.00 Trapezoid	81.25	0.02000	25.00	3.25	0.00	0.00
38 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
39 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
40 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
41 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
42 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
43 36" PIPE	104.00 Circular	7.07	0.01400	3.00	3.00		
44 48" PIPE	58.00 Circular	12.57	0.01400	4.00	4.00		
45 42" RCP	61.00 Circular	9.62	0.01300	3.50	3.50		
46 24" RCP	61.00 Circular	3.14	0.01300	2.00	2.00		
47 36" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
48 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14769.0000 feet					

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 # Table E18. New Conduit Information Section #
 # Conduit Invert (IE) Elevation and Conduit #
 # Maximum Water Surface (WS) Elevations #
 #####

Conduit Name	Upstream Node	Downstream Node	IE Up	IE Dn	WS Up	WS Dn	Conduit Type
XS #1	1	2	21.10	20.70	26.20	26.33	Natural
SPANISH	4	2	18.53	18.41	26.01	26.33	Circular
XS #2	4	6	20.50	20.40	26.01	26.00	Natural
XS #3	6	63	20.40	20.40	26.00	26.02	Natural
XS #4	8	15	20.40	19.10	26.02	26.03	Natural
INDIAN	15	17	19.10	18.70	26.03	26.43	Circular
XS #5	19	17	19.40	18.70	26.44	26.43	Natural
XS #6	19	21	19.40	17.90	26.44	26.45	Natural
XS #7	23	25	17.50	17.20	24.82	24.68	Natural
XS #8	25	27	17.20	15.60	24.68	24.67	Natural
XS #9	30	27	16.20	15.60	24.65	24.67	Natural
DRIVEWAY	32	30	16.30	16.20	23.52	24.65	Circular
XS #10	32	34	16.30	15.30	23.52	23.50	Natural
STUB	BOX #1	34	16.00	15.30	31.20	23.50	Circular
FRONTAGE	BOX #1	BOX #3	16.90	16.70	31.20	22.04	Circular
HWY 17 S	BOX #3	BOX #4	16.00	15.60	22.04	21.06	Circular
HWY 17 N	BOX #4	Merge	15.13	11.43	21.06	20.10	Circular
PARKINGLOT	48	45	9.930	9.120	13.45	13.56	Circular
TO LAKE	Lk-Elzbt	48	9.900	9.600	11.88	13.45	Circular
SOUTH BAY	72	54	21.60	20.60	25.60	25.60	Natural
58	1	54	21.10	20.60	26.20	25.60	Natural
61	56	55	22.50	22.10	26.85	26.50	Natural
62	55	1	22.10	21.10	26.50	26.20	Natural
XS #3a	63	8	20.40	20.40	26.02	26.02	Natural
PINE	68	64	20.96	20.41	26.29	26.03	Circular
XS MALLARD	64	63	20.41	20.40	26.03	26.02	Natural
80	78	68	21.50	20.86	24.44	26.29	Natural
Ex 54-CMP	73b	Dgwood Lk	5.430	5.320	9.479	8.056	Circular
Clvt 10	44b	Dgwood Lk	6.230	5.420	8.047	8.056	Rectangle
Palmt Lk	44b	46b	6.230	5.460	8.047	8.007	Natural
Clvt 7	46b	48b	5.460	5.170	8.007	7.931	Circular
Chan A	48b	50b	5.510	5.170	7.931	7.635	Natural
Clvt 6	50b	52b	5.510	5.350	7.635	7.484	Circular
Chan B	52b	54b	5.350	4.520	7.484	7.132	Natural
Clvt 5	54b	56b	4.520	4.380	7.132	7.055	Circular
Chan C	Myrtle Lk	56b	4.500	4.380	5.979	7.055	Natural
Chan D	Holly Lk	63b	4.750	4.330	6.241	6.189	Trapezoid
Oak Clvt	63b	65b	4.330	4.240	6.189	6.096	Rectangle
Chan E	65b	Myrtle Lk	4.240	4.200	5.096	5.979	Trapezoid
Clvt2 Out	69b	69b	2.570	2.510	4.722	4.227	Rectangle
Clvt1 Out	38b	71b	4.200	3.100	6.231	4.459	Rectangle
124	27	123	15.60	15.30	24.67	24.67	Trapezoid
36" PIPE	34	BOX #2	16.50	16.22	23.50	22.14	Circular
48" PIPE	BOX #3	BOX #2	16.06	15.84	22.84	22.14	Circular
42" RCP	21	23	17.90	17.50	26.45	24.82	Circular
24" RCP	21	23	18.60	18.60	26.45	24.82	Circular
36" RCP	125	123	15.82	16.78	24.87	24.67	Circular
48" RCP	125	123	15.50	15.30	24.67	24.67	Circular
ORF # 1	Merge	45	9.120	9.110	20.10	13.56	Circ Orif

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Table E20 - Junction Flooding and Volume Listing.

The maximum volume is the total volume in the node including the volume in the flooded storage area. This is the max volume at any time. The volume in the flooded storage area is the total volume above the ground elevation, where the flooded pond storage area starts.

The fourth column is instantaneous, the fifth is the sum of the flooded volume over the entire simulation. Units are either ft³ or m³ depending on the units.

Junction Name	Surcharged Time (min)	Flooded Time (min)	Cut of System Flooded Volume	Maximum Volume	Stored in System Pending Allowed Flood Pond Volume
1	201.4325	201.9444	0.0000	2475.2638	0.0000
2	87.1091	87.1230	0.0000	2451.2265	0.0000
4	390.0992	0.0000	0.0000	94.0200	0.0000
6	399.4960	165.6111	228518.4349	70.3696	0.0000
8	0.0000	118.1056	148219.4536	70.6209	0.0000
15	243.2983	243.2500	0.0000	1818.1383	0.0000
17	219.4306	219.4308	0.0000	13236.8119	0.0000
19	0.0000	0.0000	0.0000	88.4998	0.0000
21	204.0595	204.0595	0.0000	8800.0373	0.0000
23	0.0000	0.0000	0.0000	92.0077	0.0000
27	0.0000	0.0000	0.0000	143607.518	0.0000
30	0.0000	0.0000	0.0000	106.1703	0.0000
32	0.0000	0.0000	0.0000	90.7453	0.0000
34	1167.542	1167.556	0.0000	37268.2949	0.0000
BOX #1	1429.466	1191.654	0.0000	191.0355	22945.0901
BOX #3	1295.494	1295.506	0.0000	6301.9915	0.0000
BOX #4	738.1560	738.2983	0.0000	1331.6160	0.0000
45	0.0000	0.0000	0.0000	55.8605	0.0000
48	0.0000	0.0000	0.0000	48.4281	0.0000
52	0.0000	0.0000	0.0000	1686541.879	0.0000
54	1825.155	1825.167	0.0000	137856.099	0.0000
55	1086.145	1086.145	0.0000	81239.4578	0.0000
56	1041.650	1041.650	0.0000	64218.1095	0.0000
63	397.6091	397.6091	0.0000	28773.5713	0.0000
64	336.1786	336.1925	0.0000	5703.5655	0.0000
66	199.0139	199.0139	0.0000	20381.1402	0.0000
72	0.0000	0.0000	0.0000	50.2707	0.0000
76	0.0000	915.0000	1204057.0801	563013.012	0.0000
78	1210.833	1210.847	0.0000	8540.6000	0.0000
Merge	2080.278	2080.278	0.0000	256434.163	0.0000
Lk-Elzbeth	0.0000	0.0000	0.0000	2555614.681	0.0000
Dywood Lk	0.0000	0.0000	0.0000	2695833.574	0.0000
38b	0.0000	0.0000	0.0000	25.5213	0.0000
44b	0.0000	0.0000	0.0000	22.8324	0.0000
46b	0.0000	0.0000	0.0000	32.0010	0.0000
48b	0.0000	0.0000	0.0000	34.6983	0.0000
50b	0.0000	0.0000	0.0000	10.9770	0.0000
52b	0.0000	0.0000	0.0000	26.8123	0.0000
54b	0.0000	0.0000	0.0000	32.8246	0.0000
56b	0.0000	0.0000	0.0000	33.6132	0.0000
Myrtle Lk	0.0000	0.0000	0.0000	95439.6758	0.0000
60b	0.0000	0.0000	0.0000	27.0483	0.0000
Holly Lk	0.0000	0.0000	0.0000	84765.5676	0.0000
63b	0.0000	0.0000	0.0000	23.3556	0.0000
65b	0.0000	0.0000	0.0000	23.3219	0.0000
69b	0.0000	0.0000	0.0000	21.5710	0.0000
71b	0.0000	0.0000	0.0000	17.0771	0.0000
73b	0.0000	0.0000	0.0000	50.8822	0.0000
123	1135.988	1136.000	0.0000	72092.5712	0.0000
125	1145.268	1145.283	0.0000	195116.428	0.0000
BOX #2	1420.161	1420.161	0.0000	91939.0675	0.0000

Existing Condition - 100 year storm

1 of 3

Table E1 - Conduit Data

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft^2)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 SPANISH	45.00 Circular	7.07	0.01300	3.00	3.00		
3 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
4 XS #3	191.00 Natural	81.11	0.03000	45.03	4.93		
5 XS #4	130.00 Natural	99.88	0.03000	57.76	5.62		
6 INDIAN	42.00 Circular	7.07	0.01300	3.00	3.00		
7 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
8 XS #6	586.00 Natural	161.13	0.03000	60.60	6.34		
9 XS #7	1608.00 Natural	181.54	0.03000	41.07	9.11		
10 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
11 XS #9	218.00 Natural	201.97	0.03000	59.08	9.84		
12 DRIVEWAY	59.00 Circular	28.27	0.01300	6.00	6.00		
13 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
14 STUB	8.00 Circular	12.57	0.01400	4.00	4.00		
15 FRONTAGE	66.00 Circular	12.57	0.01300	4.00	4.00		
16 HWY 17 S	75.00 Circular	12.57	0.01300	4.00	4.00		
17 HWY 17 N	77.00 Circular	12.57	0.01300	4.00	4.00		
18 PARKINGLOT	73.00 Circular	28.27	0.01300	6.00	6.00		
19 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
20 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
21 S8	1490.00 Natural	52.60	0.03000	50.00	3.40		
22 61	350.00 Natural	49.50	0.03000	50.00	3.50		
23 62	1300.00 Natural	49.20	0.03500	50.00	3.30		
24 XS #3a	66.00 Natural	87.00	0.03000	67.00	4.90		
25 PINE	40.00 Circular	3.14	0.01300	2.00	2.00		
26 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
27 80	150.00 Natural	18.00	0.03000	39.00	2.50		
28 Ex 54" CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
29 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
30 Palmt0 Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
31 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
32 Chan A	270.00 Natural	54.55	0.05000	23.95	4.90		
33 Clvt 6	41.00 Circular	12.57	0.01300	4.00	4.00		
34 Chan B	210.00 Natural	58.35	0.05000	20.00	5.30		
35 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
36 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
37 Chan D	150.00 Trapezoid	81.25	0.02000	25.00	3.25	0.00	0.00
38 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
39 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
40 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
41 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
42 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
43 36" PIPE	104.00 Circular	7.07	0.01400	3.00	3.00		
44 48" PIPE	58.00 Circular	12.57	0.01400	4.00	4.00		
45 42" RCP	61.00 Circular	9.62	0.01300	3.50	3.50		
46 24" RCP	61.00 Circular	3.14	0.01300	2.00	2.00		
47 36" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
48 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14769.0000	feet				

 # Table E16. New Conduit Information Section #
 # Conduit Invert (IR) Elevation and Conduit #
 # Maximum Water Surface (WS) Elevations #

Conduit Name	Upstream Node	Downstream Node	IE Up	IE Dn	WS Up	WS Dn	Conduit Type
XS #1	1	2	21.10	20.70	26.35	26.53	Natural
SPANISH	4	2	18.53	18.41	26.02	26.53	Circular
XS #2	4	5	20.50	20.40	26.02	26.00	Natural
XS #3	6	63	20.40	20.40	26.00	26.02	Natural
XS #4	8	15	20.40	19.10	26.02	26.03	Natural
INDIAN	15	17	19.13	18.70	26.03	26.54	Circular
XS #5	19	17	19.40	18.70	26.56	26.54	Natural
XS #6	19	21	19.40	17.90	26.56	26.57	Natural
XS #7	23	25	17.50	17.20	24.88	24.73	Natural
XS #8	25	27	17.20	15.60	24.73	24.71	Natural
XS #9	30	27	16.20	15.60	24.69	24.71	Natural
DRIVEWAY	32	30	16.30	16.20	23.57	24.69	Circular
XS #10	32	34	16.30	15.30	23.57	23.55	Natural
STUB	BOX #1	34	16.00	15.30	22.57	23.55	Circular
FRONTAGE	BOX #1	BOX #3	16.90	16.70	22.57	22.08	Circular
HWY 17 S	BOX #3	BOX #4	16.00	15.60	22.08	21.10	Circular
HWY 17 N	BOX #4	Merge	15.13	11.43	21.10	20.13	Circular
PARKINGLOT	48	45	9.930	9.120	13.39	13.49	Circular
TO LAKE	Lk-Elzbtth	48	9.900	9.600	11.96	13.39	Circular
SOUTH BAY	72	54	21.60	20.60	25.61	25.61	Natural
58	1	54	21.10	20.60	26.35	25.61	Natural
61	56	55	22.50	22.10	26.92	26.53	Natural
62	55	1	22.10	21.10	26.53	26.35	Natural
XS #3a	63	8	20.40	20.40	26.02	26.02	Natural
PINE	68	64	20.96	20.41	26.34	26.04	Circular
XS MALLARD	64	63	20.41	20.40	26.04	26.02	Natural
80	78	68	21.50	20.96	24.47	26.34	Natural
Ex 54" CMP	73b	Dgwood Lk	5.430	5.220	8.610	8.079	Circular
Clvt 10	44b	Dgwood Lk	6.230	5.420	8.070	8.079	Rectangle
Palmto Lk	44b	46b	5.230	5.460	8.070	8.030	Natural
Clvt 7	46b	48b	5.460	5.170	8.030	7.953	Circular
Chan A	48b	50b	5.510	5.170	7.953	7.655	Natural
Clvt 6	50b	52b	5.510	5.350	7.655	7.502	Circular
Chan B	52b	54b	5.350	4.520	7.502	7.149	Natural
Clvt 5	54b	56b	4.520	4.380	7.149	7.061	Circular
Chan C	Myrtle Lk	56b	4.500	4.390	6.220	7.061	Natural
Chan D	Holly Lk	63b	4.750	4.330	6.549	6.492	Trapezoid
Oak Clvt	63b	65b	4.330	4.240	6.492	6.362	Rectangle
Chan E	65b	Myrtle Lk	4.240	4.200	6.362	6.220	Trapezoid
Clvt2 out	60b	69b	2.570	2.510	5.141	4.563	Rectangle
Clvt1 out	38b	71b	4.200	3.100	6.280	4.489	Rectangle
124	27	123	15.60	15.30	24.71	24.71	Trapezoid
36" PIPE	34	BOX #2	16.50	16.22	23.55	22.10	Circular
48" PIPE	BOX #3	BOX #2	16.06	15.84	22.08	22.18	Circular
42" RCP	21	23	17.90	17.50	26.57	24.88	Circular
24" RCP	21	23	18.60	18.60	26.57	24.88	Circular
36" RCP	125	123	16.82	16.78	24.93	24.71	Circular
48" RCP	125	123	15.50	15.30	24.93	24.71	Circular
ORF F 1	Merge	45	9.120	9.110	20.13	13.49	Circ Orif

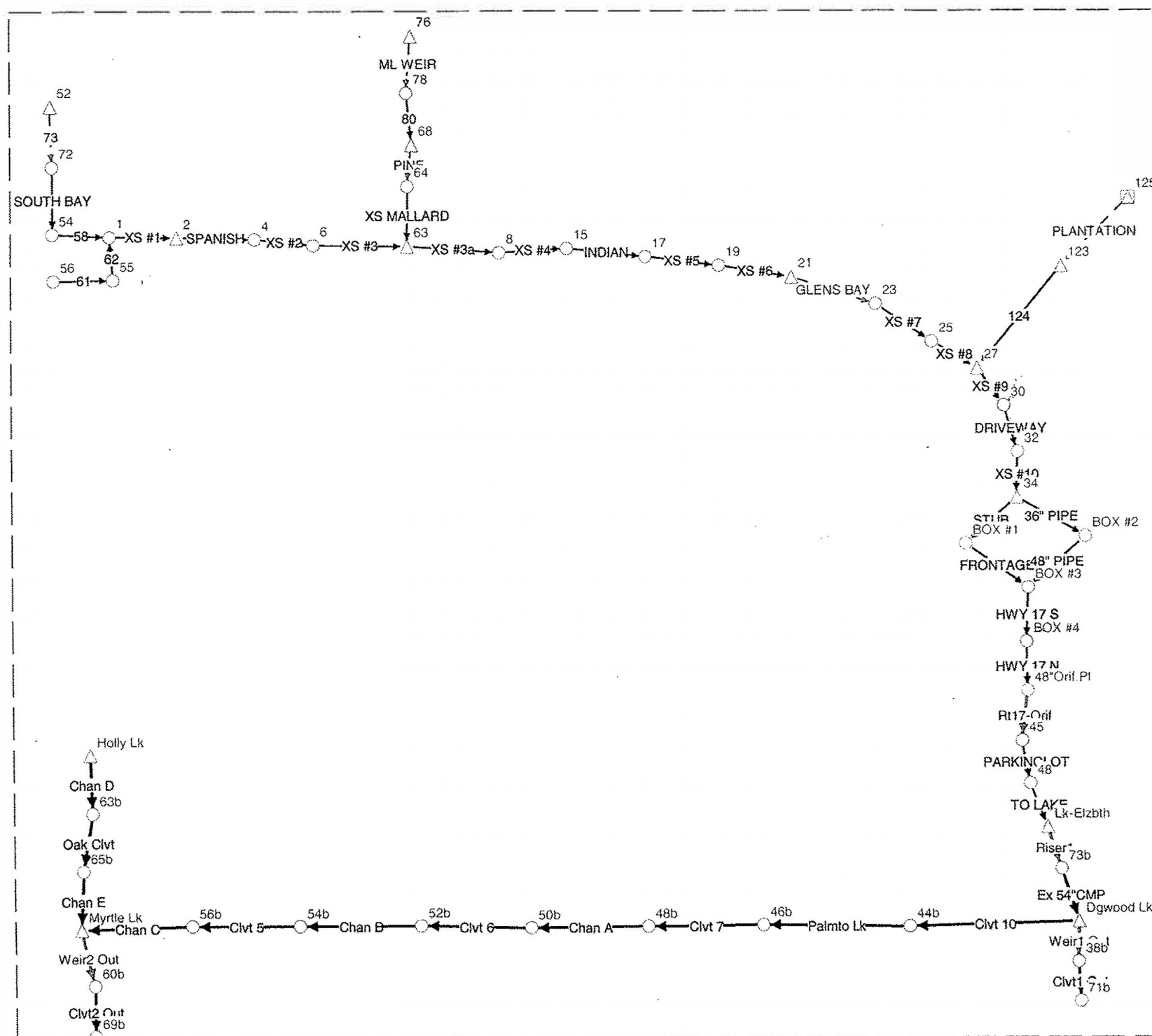
Table E20 - Junction Flooding and Volume Listing.

The maximum volume is the total volume in the node including the volume in the flooded storage area. This is the max volume at any time. The volume in the flooded storage area is the total volume above the ground elevation, where the flooded pond storage area starts.

The fourth column is instantaneous, the fifth is the sum of the flooded volume over the entire simulation. Units are either ft³ or m³ depending on the units.

Junction Name	Surcharged Time (min)	Flooded Time (min)	Out of System Flooded Volume	Maximum Volume	Stored in System Ponding Allowed Flood Pond Volume
1	348.9861	349.0972	0.0000	5036.2764	0.0000
2	151.6841	151.7097	0.0000	6678.5055	0.0000
4	526.7341	0.0000	0.0000	94.1510	0.0000
6	539.4425	261.6357	419631.1858	70.3696	0.0000
8	0.0000	200.7179	324064.4767	70.6209	0.0000
15	339.7063	339.7579	0.0000	1828.2749	0.0000
17	312.5813	312.5813	0.0000	22299.5713	0.0000
19	0.0000	0.0000	0.0000	89.9174	0.0000
21	304.1442	304.1587	0.0000	16024.4970	0.0000
23	0.0000	0.0000	0.0000	92.7104	0.0000
25	0.0000	0.0000	0.0000	94.5852	0.0000
27	0.0000	0.0000	0.0000	144557.418	0.0000
30	0.0000	0.0000	0.0000	106.7162	0.0000
32	0.0000	0.0000	0.0000	91.3928	0.0000
34	1443.764	1443.778	0.0000	47885.0469	0.0000
BOX #1	1877.587	1472.197	0.0000	92.5639	5466.6283
BOX #3	1691.498	1593.524	0.0000	7511.9893	0.0000
BOX #4	1262.093	1263.088	0.0000	1585.3449	0.0000
45	0.0000	0.0000	0.0000	55.0092	0.0000
48	0.0000	0.0000	0.0000	47.6113	0.0000
52	0.0000	0.0000	0.0000	1693689.238	0.0000
54	2140.250	2140.250	0.0000	145898.534	0.0000
55	1485.295	1485.295	0.0000	98727.0307	0.0000
56	1433.013	1433.034	0.0000	90250.4521	0.0000
63	536.8036	536.8175	0.0000	28861.6788	0.0000
64	455.5159	455.5417	0.0000	5851.6004	0.0000
68	287.8133	287.8462	0.0000	25897.6547	0.0000
72	0.0000	0.0000	0.0000	54.4184	0.0000
76	0.0000	1227.008	1665779.9249	563013.012	0.0000
78	1548.425	1548.472	0.0000	9804.9853	0.0000
Marge	2248.714	2248.714	0.0000	312311.859	0.0000
Lk-Rizbth	0.0000	0.0000	0.0000	2588798.187	0.0000
Cynood Lk	0.0000	0.0000	0.0000	2712341.213	0.0000
38b	0.0000	0.0000	0.0000	26.1413	0.0000
40b	0.0000	0.0000	0.0000	23.1193	0.0000
46b	0.0000	0.0000	0.0000	32.2896	0.0000
48b	0.0000	0.0000	0.0000	34.9709	0.0000
50b	0.0000	0.0000	0.0000	31.2267	0.0000
52b	0.0000	0.0000	0.0000	27.0396	0.0000
54b	0.0000	0.0000	0.0000	33.0309	0.0000
56b	0.0000	0.0000	0.0000	33.6893	0.0000
Myrtle Lk	0.0000	0.0000	0.0000	111104.357	0.0000
40b	0.0000	0.0000	0.0000	32.3043	0.0000
Holly Lk	0.0000	0.0000	0.0000	106768.202	0.0000
53b	0.0000	0.0000	0.0000	27.1735	0.0000
55b	0.0000	0.0000	0.0000	26.6665	0.0000
59b	0.0000	0.0000	0.0000	25.8038	0.0000
71b	0.0000	0.0000	0.0000	17.4567	0.0000
73b	0.0000	0.0000	0.0000	52.5275	0.0000
123	1405.679	1405.709	0.0000	89583.3410	0.0000
125	1421.736	1421.736	0.0000	264137.378	0.0000
BOX #2	1852.050	1852.050	0.0000	110497.934	0.0000

APPENDIX C



ALT. #1

Table E1 - Conduit Data

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft ²)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 SPANISH	45.00 Circular	7.07	0.01300	3.00	3.00		
3 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
4 XS #3	191.00 Natural	81.12	0.03000	45.03	4.93		
5 XS #4	130.00 Natural	59.88	0.03000	57.76	5.62		
6 INDIAN	42.00 Circular	7.07	0.01300	3.00	3.00		
7 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
8 XS #6	506.00 Natural	161.13	0.03000	60.60	6.34		
9 XS #7	1608.00 Natural	181.54	0.03000	41.07	9.11		
10 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
11 XS #9	75.00 Natural	124.19	0.03000	37.81	6.90		
12 DRIVEWAY	59.00 Circular	28.27	0.01300	6.00	6.00		
13 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
14 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
15 SB	1490.00 Natural	52.60	0.03000	50.00	3.40		
16 #1	350.00 Natural	49.50	0.03000	50.00	3.50		
17 #2	1300.00 Natural	49.20	0.03500	50.00	3.30		
18 XS #3a	66.00 Natural	87.00	0.03000	67.00	4.90		
19 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
20 #0	150.00 Natural	18.00	0.03000	39.00	2.50		
21 Ex 54" CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
22 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
23 Palmtc Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
24 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
25 Chan A	270.00 Natural	54.55	0.05000	23.95	4.90		
26 Clvt 6	41.00 Circular	12.57	0.01300	4.00	4.00		
27 Chan B	210.00 Natural	50.35	0.05000	20.00	5.30		
28 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
29 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
30 Chan D	150.00 Trapezoid	81.25	0.02000	25.00	3.25	0.00	0.00
31 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
32 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
33 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
34 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
35 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
36 STUB	6.00 Circular	12.57	0.01400	4.00	4.00		
37 FRONTAGE	66.00 Circular	12.57	0.01300	4.00	4.00		
38 HWY 17 S	75.00 Circular	12.57	0.01300	4.00	4.00		
39 HWY 17 N	77.00 Circular	12.57	0.01300	4.00	4.00		
40 PARKINGLOT	73.00 Circular	28.27	0.01300	6.00	6.00		
41 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
42 36" PIPE	104.00 Circular	7.07	0.01400	3.00	3.00		
43 48" PIPE	58.00 Circular	12.57	0.01400	4.00	4.00		
44 1842" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
45 New42" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
46 2024"	40.00 Circular	3.14	0.01300	2.00	2.00		
47 36" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
48 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14632.0000	Feet				

 # Table E16. New Conduit Information Section #
 # Conduit Invert (IE) Elevation and Conduit #
 # Maximum Water Surface (WS) Elevations #

Conduit Name	Upstream Node	Downstream Node	IE Up	IE Dn	WS Up	WS Dn	Conduit Type
XS #1	1	2	21.10	20.70	24.23	22.79	Natural
SPANISH	4	2	18.53	18.41	22.47	22.79	Circular
XS #2	4	6	18.53	18.40	22.47	22.41	Natural
XS #3	6	53	18.40	18.40	22.41	22.38	Natural
XS #4	8	15	18.30	18.20	22.38	22.37	Natural
INDIAN	15	17	18.20	18.10	22.37	22.69	Circular
XS #5	17	19	18.10	18.00	22.69	22.92	Natural
XS #6	19	21	18.00	17.90	22.92	22.94	Natural
XS #7	23	25	17.50	17.20	22.23	21.02	Natural
XS #8	25	27	17.20	16.60	21.02	20.93	Natural
XS #9	30	27	16.20	15.60	20.99	20.93	Natural
DRIVEWAY	32	30	16.30	16.20	20.57	20.89	Circular
XS #10	32	34	16.30	15.30	20.57	20.51	Natural
SOUTH BAY	72	54	21.60	20.60	24.26	24.24	Natural
58	1	54	21.10	20.60	24.23	24.24	Natural
61	56	55	22.50	23.10	26.00	25.60	Natural
62	55	1	22.10	21.10	25.60	24.23	Natural
XS #3a	63	8	18.40	18.30	22.38	22.38	Natural
XS MALLARD	64	53	20.41	16.40	23.00	22.38	Natural
80	78	68	21.50	20.96	24.00	25.14	Natural
Ex 54" CMP	73b	Dgwood Lk	5.430	5.220	11.10	7.540	Circular
Clvt 10	44b	Dgwood Lk	6.230	5.420	7.534	7.540	Rectangle
Palmito Lk	44b	46b	6.210	5.460	7.534	7.464	Natural
Clvt 7	46b	48b	5.460	5.170	7.464	7.445	Circular
Chan A	48b	50b	5.510	5.170	7.445	7.180	Natural
Clvt 6	50b	52b	5.510	5.350	7.180	7.083	Circular
Chan B	52b	54b	5.350	4.520	7.083	6.777	Natural
Clvt 5	54b	56b	4.520	4.380	6.777	6.742	Circular
Chan C	Myrtle Lk	56b	4.500	4.380	5.754	6.742	Natural
Chan D	Holly Lk	63b	4.750	4.330	5.962	5.914	Trapezoid
Oak Clvt	63b	65b	4.330	4.240	5.914	5.849	Rectangle
Chan E	65b	Myrtle Lk	4.240	4.200	5.849	5.754	Trapezoid
Clvt2 Out	66b	69b	2.570	2.510	4.333	3.912	Rectangle
Clvt1 Out	38b	71b	4.200	3.100	5.808	4.202	Rectangle
124	27	123	15.60	15.30	20.93	20.94	Trapezoid
STUB	BOX #1	34	16.00	15.30	20.20	20.51	Circular
FRONTAGE	BOX #1	BOX #3	16.90	16.70	20.20	20.01	Circular
HWY 17 S	BOX #3	BOX #4	16.80	15.60	20.01	19.51	Circular
HWY 17 N	BOX #4	48" Orif. Pl	15.13	11.43	19.51	18.94	Circular
PARKING LOT	48	45	9.930	9.120	12.97	13.07	Circular
TO LAKE	Lk-Blyzth	48	9.900	5.600	11.55	12.97	Circular
36" PIPE	34	BOX #2	16.50	16.22	20.51	20.07	Circular
48" PIPE	BOX #3	BOX #2	16.06	15.84	20.01	20.07	Circular
1042" RCP	21	23	17.90	17.50	22.94	22.23	Circular
New42" RCP	21	23	17.90	17.50	22.94	22.23	Circular
2024"	68	64	20.96	20.41	25.14	23.00	Circular
36" RCP	125	123	16.82	16.78	21.19	20.94	Circular
48" RCP	125	123	15.50	15.30	21.19	20.94	Circular
ORF # 1	48" Orif. Pl	45	9.120	9.110	18.94	13.07	Circ Orif

Table 620 - Junction Flooding and Volume Listing.

The maximum volume is the total volume in the node including the volume in the flooded storage area. This is the max volume at any time. The volume in the flooded storage area is the total volume above the ground elevation, where the flooded pond storage area starts.

The fourth column is instantaneous, the fifth is the sum of the flooded volume over the entire simulation. Units are either ft³ or m³ depending on the units.

Junction Name	Surcharged Time (min)	Flooded Time (min)	Out of System Flooded Volume	Maximum Volume	Stored in System Ponding Allowed Flood Pond volume
1	0.0000	0.0000	0.0000	39.3406	0.0000
2	0.0000	0.0000	0.0000	2089697.577	0.0000
4	0.0000	0.0000	0.0000	49.4491	0.0000
5	0.0000	0.0000	0.0000	50.6111	0.0000
8	0.0000	0.0000	0.0000	51.2438	0.0000
15	0.0000	0.0000	0.0000	52.4028	0.0000
17	0.0000	0.0000	0.0000	57.7197	0.0000
19	0.0000	0.0000	0.0000	61.8109	0.0000
21	0.0000	0.0000	0.0000	4777.5214	0.0000
23	0.0000	0.0000	0.0000	59.3967	0.0000
25	0.0000	0.0000	0.0000	48.0567	0.0000
27	0.0000	0.0000	0.0000	156596.750	0.0000
30	0.0000	0.0000	0.0000	50.9379	0.0000
12	0.0000	0.0000	0.0000	53.6239	0.0000
32	0.0000	0.0000	0.0000	1103045.060	0.0000
34	0.0000	0.0000	0.0000	45.7871	0.0000
55	0.0000	129.8056	48573.1167	43.9810	0.0000
56	0.0000	169.8667	773858.6149	43.9810	0.0000
63	0.0000	0.0000	0.0000	381018.020	0.0000
64	0.0000	0.0000	0.0000	32.5327	0.0000
68	0.0000	0.0000	0.0000	161166.796	0.0000
72	0.0000	0.0000	0.0000	33.4496	0.0000
76	0.0000	0.0000	0.0000	125203.449	0.0000
78	0.0000	48.3333	33375.9114	31.4150	0.0000
Lk-Elizabeth	0.0000	0.0000	0.0000	1451827.875	0.0000
Dgwood Lk	0.0000	0.0000	0.0000	2324266.811	0.0000
38b	0.0000	0.0000	0.0000	20.2079	0.0000
44b	0.0000	0.0000	0.0000	16.3847	0.0000
46b	0.0000	0.0000	0.0000	25.4389	0.0000
48b	0.0000	0.0000	0.0000	28.5934	0.0000
50b	0.0000	0.0000	0.0000	25.2515	0.0000
52b	0.0000	0.0000	0.0000	21.7791	0.0000
54b	0.0000	0.0000	0.0000	28.3618	0.0000
56b	0.0000	0.0000	0.0000	29.6797	0.0000
Myrtle Lk	0.0000	0.0000	0.0000	80818.0296	0.0000
50b	0.0000	0.0000	0.0000	22.1506	0.0000
Holly Lk	0.0000	0.0000	0.0000	65485.6548	0.0000
63b	0.0000	0.0000	0.0000	19.8985	0.0000
65b	0.0000	0.0000	0.0000	20.2134	0.0000
69b	0.0000	0.0000	0.0000	17.6225	0.0000
71b	0.0000	0.0000	0.0000	13.8434	0.0000
73b	17.0833	0.0000	0.0000	71.2031	0.0000
123	0.0000	0.0000	0.0000	62100.3864	0.0000
125	0.0000	0.0000	0.0000	2581065.967	0.0000
34	0.0000	0.0000	0.0000	1616116.448	0.0000
BOX #1	0.0000	0.0000	0.0000	52.7286	0.0000
BOX #3	0.0000	0.0000	0.0000	50.4059	0.0000
BOX #4	0.0000	0.0000	0.0000	55.0614	0.0000
45	0.0000	0.0000	0.0000	49.7976	0.0000
48	0.0000	0.0000	0.0000	42.3357	0.0000
48*Orif.#1	1501.525	0.0000	0.0000	123.4457	0.0000
BOX #2	415.7143	0.0000	0.0000	53.1970	0.0000

Alternative 1 - 25 year storm

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 | Table E1 - Conduit Data |

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft^2)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 SPANISH	45.00 Circular	7.07	0.01300	3.00	3.00		
3 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
4 XS #3	191.00 Natural	81.11	0.03000	45.03	4.93		
5 XS #4	130.00 Natural	99.88	0.03000	57.76	5.62		
6 INDIAN	42.00 Circular	7.07	0.01300	3.00	3.00		
7 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
8 XS #6	586.00 Natural	161.13	0.03000	60.60	6.34		
9 XS #7	1608.00 Natural	181.54	0.03000	61.07	9.11		
10 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
11 XS #9	75.00 Natural	124.15	0.03000	37.81	6.90		
12 DRIVEWAY	59.00 Circular	28.27	0.01300	6.00	6.00		
13 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
14 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
15 S#	1490.00 Natural	52.60	0.03000	50.00	3.40		
16 61	350.00 Natural	49.50	0.03000	50.00	3.50		
17 62	1300.00 Natural	49.20	0.03500	50.00	3.30		
18 XS #3a	66.00 Natural	27.00	0.03000	67.00	4.90		
19 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
20 8#	150.00 Natural	18.00	0.03000	39.00	2.50		
21 EX 54" CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
22 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
23 Palmtc Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
24 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
25 Chan A	270.00 Natural	54.55	0.05000	23.55	4.90		
26 Clvt 5	41.00 Circular	12.57	0.01300	4.00	4.00		
27 Chan B	210.00 Natural	58.35	0.05000	20.00	5.30		
28 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
29 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
30 Chan D	150.00 Trapezoid	21.25	0.02000	25.00	3.25	0.00	0.00
31 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
32 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
33 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
34 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
35 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
36 STUB	8.00 Circular	12.57	0.01400	4.00	4.00		
37 FRONTAGE	66.00 Circular	12.57	0.01300	4.00	4.00		
38 HWY 17 S	75.00 Circular	12.57	0.01300	4.00	4.00		
39 HWY 17 N	77.00 Circular	12.57	0.01300	4.00	4.00		
40 PARKING LOT	73.00 Circular	28.27	0.01300	6.00	6.00		
41 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
42 36" PIPE	104.00 Circular	7.07	0.01400	3.00	3.00		
43 48" PIPE	58.00 Circular	12.57	0.01400	4.00	4.00		
44 1842" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
45 New42" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
46 2024"	40.00 Circular	3.14	0.01300	2.00	2.00		
47 18" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
48 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14632.0000 feet					

 # Table E16. New Conduit Information Section #
 # Conduit Invert (IE) Elevation and Conduit #
 # Maximum Water Surface (WS) Elevations #
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Conduit Name	Upstream Node	Downstream Node	IE Up	IE Dn	WS Up	WS Dn	Conduit Type
XS #1	1	2	21.10	20.70	24.21	23.42	Natural
SPANISH	4	2	18.53	18.41	22.99	23.42	Circular
XS #2	4	6	18.53	18.40	22.99	22.95	Natural
XS #3	6	63	18.40	18.40	22.95	22.92	Natural
XS #4	8	15	18.30	18.20	22.92	22.91	Natural
INDIAN	15	17	18.20	18.10	22.91	23.16	Circular
XS #5	17	19	18.10	18.00	23.16	23.35	Natural
XS #6	19	21	18.00	17.90	23.35	23.36	Natural
XS #7	23	25	17.50	17.20	22.48	21.59	Natural
XS #8	25	27	17.20	15.60	21.59	21.53	Natural
XS #9	30	27	16.20	15.60	21.51	21.53	Natural
DRIVEWAY	32	30	16.30	16.20	21.19	21.51	Circular
XS #10	32	34	16.30	15.30	21.19	21.15	Natural
SOUTH BAY	72	54	21.60	20.60	24.43	24.33	Natural
58	1	54	21.10	20.60	24.21	24.33	Natural
61	56	55	22.50	22.10	26.00	25.60	Natural
62	55	1	22.10	21.10	25.60	24.21	Natural
XS #3a	63	8	18.40	18.30	22.92	22.92	Natural
XS MALLARD	64	63	20.41	18.40	23.02	22.92	Natural
80	78	68	21.50	20.96	24.00	25.67	Natural
Ex 54" CMP	73b	Ogwood Lk	5.430	5.220	11.10	7.623	Circular
Clvt 10	44b	Ogwood Lk	6.230	5.420	7.616	7.623	Rectangle
Palmta Lk	44b	46b	6.230	5.460	7.616	7.568	Natural
Clvt 7	46b	48b	5.460	5.170	7.568	7.526	Circular
Chan A	48b	50b	5.510	5.170	7.526	7.288	Natural
Clvt 6	50b	52b	5.510	5.350	7.248	7.145	Circular
Chan B	52b	54b	5.350	4.520	7.145	6.797	Natural
Clvt 5	54b	56b	4.520	4.380	6.797	6.753	Circular
Chan C	Myrtle Lk	56b	4.500	4.380	5.919	6.753	Natural
Chan D	Holly Lk	63b	4.750	4.330	6.165	6.110	Trapezoid
Oak Clvt	63b	65b	4.330	4.240	6.114	6.029	Rectangle
Chan E	65b	Myrtle Lk	4.240	4.200	6.029	5.919	Trapezoid
Clvt2 Out	69b	69b	2.570	2.510	4.618	4.163	Rectangle
Clvt1 Out	38b	71b	4.200	3.100	6.086	4.371	Rectangle
124	27	123	15.60	15.30	21.53	21.54	Trapezoid
STUB	BOX #1	34	16.00	15.30	20.71	21.15	Circular
FRONTAGE	BOX #1	BOX #3	16.90	16.70	20.71	20.47	Circular
HWY 17 S	BOX #3	BOX #4	16.00	15.60	20.47	19.78	Circular
HWY 17 N	BOX #4	48"Grif.Pl	15.13	11.43	19.78	18.97	Circular
PARKINGLOT	48	45	9.930	9.120	13.03	13.16	Circular
TO LAKE	Lk-Elzbtb	48	9.900	9.600	11.68	13.03	Circular
36" PIPE	34	BOX #2	16.50	16.22	21.15	20.55	Circular
48" PIPE	BOX #3	BOX #2	16.06	15.84	20.47	20.55	Circular
1842" RCP	21	23	17.90	17.50	23.36	22.48	Circular
New42" RCP	21	23	17.90	17.50	23.36	22.48	Circular
2824"	64	64	20.95	20.41	25.67	23.02	Circular
36" RCP	125	123	16.82	16.78	21.83	21.54	Circular
48" RCP	125	123	15.50	15.30	21.83	21.54	Circular
ORP # 1	48"Grif.Pl	45	9.120	9.110	18.97	13.16	Circ Grif

Table E2 - Junction Flooding and Volume Listing.
 The maximum volume is the total volume in the node including the volume in the flooded storage area. This is the max volume at any time. The volume in the flooded storage area is the total volume above the ground elevation, where the flooded pond storage area starts.
 The fourth column is instantaneous, the fifth is the sum of the flooded volume over the entire simulation. Units are either ft³ or m³ depending on the units.

Junction Name	Surcharged Time (min)	Flooded Time (min)	Out of System Flooded Volume	Maximum Volume	Stored in System Flooding Allowed Flood Pond Volume
1	0.0000	0.0000	0.0000	39.1371	0.0000
2	0.0000	0.0000	0.0000	2403370.761	0.0000
4	0.0000	0.0000	0.0000	56.0540	0.0000
6	0.0000	0.0000	0.0000	57.2272	0.0000
8	0.0000	0.0000	0.0000	58.0337	0.0000
15	0.0000	0.0000	0.0000	59.2205	0.0000
17	0.0000	0.0000	0.0000	63.5742	0.0000
19	0.0000	0.0000	0.0000	57.1805	0.0000
21	0.0000	0.0000	0.0000	52405.1033	0.0000
23	0.0000	0.0000	0.0000	62.6341	0.0000
25	0.0000	0.0000	0.0000	55.1610	0.0000
27	0.0000	0.0000	0.0000	177268.562	0.0000
30	0.0000	0.0000	0.0000	56.7089	0.0000
32	0.0000	0.0000	0.0000	61.4706	0.0000
52	0.0000	0.0000	0.0000	1296038.816	0.0000
54	0.0000	0.0000	0.0000	46.8090	0.0000
55	0.0000	168.3889	62302.1035	43.9810	0.0000
56	0.0000	194.1528	1060471.6550	43.9810	0.0000
63	0.0000	0.0000	0.0000	437055.811	0.0000
64	0.0000	0.0000	0.0000	32.8234	0.0000
68	0.0000	6.9833	4984.7877	183537.157	0.0000
72	0.0000	0.0000	0.0000	35.5779	0.0000
75	0.0000	0.0000	0.0000	244248.004	0.0000
78	0.0000	64.1000	59508.0403	31.4150	0.0000
Lk-Bizbth	0.0000	0.0000	0.0000	1503150.844	0.0000
Dogwood Lk	0.0000	0.0000	0.0000	2383733.890	0.0000
38b	0.0000	0.0000	0.0000	23.7019	0.0000
44b	0.0000	0.0000	0.0000	17.4187	0.0000
46b	0.0000	0.0000	0.0000	26.4868	0.0000
48b	0.0000	0.0000	0.0000	29.6051	0.0000
50b	0.0000	0.0000	0.0000	36.1170	0.0000
52b	0.0000	0.0000	0.0000	22.5551	0.0000
54b	0.0000	0.0000	0.0000	28.6178	0.0000
56b	0.0000	0.0000	0.0000	29.8239	0.0000
Myrtle Lk	0.0000	0.0000	0.0000	91520.8811	0.0000
60b	0.0000	0.0000	0.0000	25.7361	0.0000
Holly Lk	0.0000	0.0000	0.0000	75321.3973	0.0000
63b	0.0000	0.0000	0.0000	22.4171	0.0000
65b	0.0000	0.0000	0.0000	22.4787	0.0000
69b	0.0000	0.0000	0.0000	20.5144	0.0000
71b	0.0000	0.0000	0.0000	15.9765	0.0000
73b	17.0833	0.0000	0.0000	71.2031	0.0000
123	0.0000	0.0000	0.0000	82309.2375	0.0000
125	0.0000	0.0000	0.0000	2996759.439	0.0000
34	0.0000	0.0000	0.0000	1983128.513	0.0000
BOX #1	0.0000	0.0000	0.0000	59.1655	0.0000
BOX #3	0.0000	0.0000	0.0000	56.1381	0.0000
BOX #4	0.0000	0.0000	0.0000	58.4124	0.0000
45	0.0000	0.0000	0.0000	50.8410	0.0000
48	0.0000	0.0000	0.0000	43.1448	0.0000
48*Orif.PI	1795.233	686.1190	657286.3479	123.7751	0.0000
BOX #2	883.1429	0.0000	0.0000	59.1692	0.0000

Table E1 - Conduit Data

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft ²)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 SPANISH	45.00 Circular	7.07	0.01300	3.00	3.00		
3 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
4 XS #3	191.00 Natural	81.11	0.03000	45.03	4.93		
5 XS #4	130.00 Natural	99.88	0.03000	57.76	5.62		
6 INDIAN	42.00 Circular	7.07	0.01300	3.00	3.00		
7 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
8 XS #6	586.00 Natural	161.13	0.03000	60.60	6.34		
9 XS #7	1608.00 Natural	181.54	0.03000	41.07	9.11		
10 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
11 XS #9	75.00 Natural	124.19	0.03000	37.81	6.90		
12 DRIVEWAY	59.00 Circular	25.27	0.01300	6.00	6.00		
13 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
14 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
15 58	1499.00 Natural	52.50	0.03000	50.00	3.40		
16 61	350.00 Natural	49.50	0.03000	50.00	3.50		
17 62	1300.00 Natural	49.20	0.03500	50.00	3.30		
18 XS #3a	66.00 Natural	87.00	0.03000	67.00	4.90		
19 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
20 80	150.00 Natural	18.00	0.03000	39.00	2.50		
21 Ex 54" CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
22 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
23 Palmetto Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
24 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
25 Chan A	270.00 Natural	54.55	0.05000	23.95	4.90		
26 Clvt 6	41.00 Circular	12.57	0.01300	4.00	4.00		
27 Chan B	210.00 Natural	58.35	0.05000	20.00	5.30		
28 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
29 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
30 Chan D	150.00 Trapezoid	61.25	0.02000	25.00	3.25	0.40	0.00
31 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
32 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
33 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
34 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
35 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
36 STUB	8.00 Circular	12.57	0.01400	4.00	4.00		
37 FRONTAGE	65.00 Circular	12.57	0.01300	4.00	4.00		
38 HWY 17 S	75.00 Circular	12.57	0.01300	4.00	4.00		
39 HWY 17 N	77.00 Circular	12.57	0.01300	4.00	4.00		
40 PARKING LOT	73.00 Circular	28.27	0.01300	6.00	6.00		
41 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
42 36" PIPE	104.00 Circular	7.07	0.01400	3.00	3.00		
43 48" PIPE	58.00 Circular	12.57	0.01400	4.00	4.00		
44 1042" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
45 New 42" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
46 2024"	40.00 Circular	3.14	0.01300	2.00	2.00		
47 36" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
48 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14632.0000 feet					

Alternative 1 - 100 year storm

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 # Table E15. New Conduit Information Section #
 # Conduit Invert (IE) Elevation and Conduit #
 # Maximum Water Surface (WS) Elevations #

Conduit Name	Upstream Node	Downstream Node	IE Up	IE Dn	WS Up	WS Dn	Conduit Type
XS #1	1	2	21.10	20.70	24.49	24.39	Natural
SPANISH	4	2	18.83	18.41	23.83	24.39	Circular
XS #2	4	6	18.53	18.40	23.83	23.81	Natural
XS #3	6	63	18.43	18.40	23.81	23.76	Natural
XS #4	8	15	18.30	18.20	23.76	23.75	Natural
INDIAN	15	17	18.20	18.10	23.75	24.29	Circular
XS #5	17	19	18.10	18.00	24.29	24.43	Natural
XS #6	19	21	18.00	17.90	24.43	24.44	Natural
XS #7	23	25	17.50	17.20	23.07	22.65	Natural
XS #8	25	27	17.20	15.60	22.65	22.62	Natural
XS #9	30	27	16.20	15.60	22.50	22.62	Natural
DRIVEWAY	32	30	16.30	16.20	22.22	22.60	Circular
XS #10	32	34	15.30	15.30	22.22	22.18	Natural
SOUTH BAY	72	54	21.60	20.60	25.10	24.60	Natural
58	1	54	21.10	20.60	24.49	24.60	Natural
61	56	55	22.50	22.10	26.00	25.60	Natural
62	55	1	22.10	21.10	25.60	24.49	Natural
XS #3a	63	8	18.40	18.30	23.76	23.76	Natural
XS WALLARD	64	63	20.41	18.40	23.76	23.76	Natural
88	78	68	21.50	20.96	24.00	25.67	Natural
Ex 54" CMP	73b	Dgwood Lk	5.430	5.220	11.10	7.792	Circular
Clvt 10	44b	Dgwood Lk	6.230	5.420	7.785	7.792	Rectangle
Palmtto Lk	44b	46b	6.230	5.460	7.785	7.740	Natural
Clvt 7	46b	48b	5.460	5.170	7.740	7.692	Circular
Chan A	48b	50b	5.519	5.170	7.692	7.400	Natural
Clvt 6	50b	52b	5.510	5.350	7.400	7.292	Circular
Chan B	52b	54b	5.350	4.920	7.292	6.940	Natural
Clvt 5	54b	56b	4.920	4.380	6.940	6.886	Circular
Chan C	Myrtle Lk	56b	4.900	4.380	6.200	6.886	Natural
Chan D	Holly Lk	63b	4.750	4.330	6.510	6.456	Trapezoid
Oak Clvt	63b	65b	4.330	4.240	6.456	6.333	Rectangle
Chan E	65b	Myrtle Lk	4.240	4.200	6.333	6.200	Trapezoid
Clvt2 Out	60b	69b	2.570	2.510	5.108	4.537	Rectangle
Clvt1 Out	38b	71b	4.200	3.100	6.667	4.726	Rectangle
124	27	123	15.60	15.30	22.62	22.63	Trapezoid
STUB	BOX #1	34	16.00	15.30	21.48	22.18	Circular
FRONTAGE	BOX #1	BOX #3	16.90	16.70	21.48	21.10	Circular
HWY 17 S	BOX #3	BOX #4	16.00	15.60	21.10	20.06	Circular
HWY 17 N	BOX #4	48"Orif.P1	15.13	11.43	20.06	18.97	Circular
PARKINGLOT	48	45	9.930	9.120	13.07	13.21	Circular
TO LAKE	Lk-Elizabeth	48	9.900	9.600	12.01	13.07	Circular
36" PIPE	34	BOX #2	15.50	16.22	22.18	21.22	Circular
48" PIPE	BOX #3	BOX #2	16.06	15.84	21.10	21.22	Circular
1442" RCP	21	23	17.90	17.50	24.44	23.07	Circular
New42" RCP	21	23	17.90	17.50	24.44	23.07	Circular
2024"	60	64	20.96	20.41	25.67	23.76	Circular
35" RCP	125	123	15.82	15.78	23.07	22.63	Circular
48" RCP	125	123	15.50	15.30	23.07	22.63	Circular
ORF # 1	48"Orif.P1	45	9.120	9.110	18.97	13.21	Circ Orif

Table B20 - Junction Flooding and Volume Listing.

The maximum volume is the total volume in the node including the volume in the flooded storage area. This is the max volume at any time. The volume in the flooded storage area is the total volume above the ground elevation, where the flooded pond storage area starts.

The fourth column is instantaneous, the fifth is the sum of the flooded volume over the entire simulation. Units are either ft³ or m³ depending on the units.

Junction Name	Surcharged Time (min)	Flooded Time(min)	Out of System Flooded Volume	Maximum Volume	Stored in System Flooding Allowed Flood Pond Volume
1	0.0000	0.0000	0.0000	42.5778	0.0000
2	0.0000	0.0000	0.0000	2887357.888	0.0000
4	712.9643	0.0000	0.0000	66.6597	0.0000
6	812.5930	0.0000	0.0000	67.9258	0.0000
8	0.0000	0.0000	0.0000	68.5997	0.0000
15	0.0000	0.0000	0.0000	69.8631	0.0000
17	0.0000	0.0000	0.0000	77.7475	0.0000
19	0.0000	0.0000	0.0000	80.8467	0.0000
21	0.0000	0.0000	0.0000	96740.6190	0.0000
23	0.0000	0.0000	0.0000	70.0359	0.0000
25	0.0000	0.0000	0.0000	68.5259	0.0000
27	0.0000	0.0000	0.0000	215298.351	0.0000
30	0.0000	0.0000	0.0000	80.4659	0.0000
32	0.0000	0.0000	0.0000	74.3648	0.0000
52	0.0000	0.0000	0.0000	1501666.504	0.0000
54	0.0000	457.0533	416190.2326	59.2640	0.0000
55	0.0000	223.5461	172388.6871	43.9810	0.0000
56	0.0000	232.2917	1617514.5146	43.9810	0.0000
63	0.0000	0.0000	0.0000	524835.324	0.0000
64	0.0000	0.0000	0.0000	42.1061	0.0000
68	0.0000	29.6917	124010.0193	183537.157	0.0000
72	0.0000	0.0000	0.0000	44.0152	0.0000
75	0.0000	0.0000	0.0000	477680.063	0.0000
78	0.0000	78.7750	95211.9905	31.4150	0.0000
Lk-Elzbtth	0.0000	0.0000	0.0000	1643877.894	0.0000
Dogwood Lk	0.0000	0.0000	0.0000	2505739.488	0.0000
38b	0.0000	0.0000	0.0000	31.0055	0.0000
44b	0.0000	0.0000	0.0000	19.5444	0.0000
46b	0.0000	0.0000	0.0000	26.6457	0.0000
48b	0.0000	0.0000	0.0000	31.6967	0.0000
50b	0.0000	0.0000	0.0000	28.0245	0.0000
52b	0.0000	0.0000	0.0000	24.3970	0.0000
54b	0.0000	0.0000	0.0000	30.4130	0.0000
56b	0.0000	0.0000	0.0000	31.4930	0.0000
Myrtle Lk	0.0000	0.0000	0.0000	109850.822	0.0000
69b	0.0000	0.0000	0.0000	31.8880	0.0000
Holly Lk	0.0000	0.0000	0.0000	103980.311	0.0000
63b	0.0000	0.0000	0.0000	26.7153	0.0000
65b	0.0000	0.0000	0.0000	26.3049	0.0000
69b	0.0000	0.0000	0.0000	25.4756	0.0000
71b	0.0000	0.0000	0.0000	20.4360	0.0000
73b	17.0833	0.0000	0.0000	71.2031	0.0000
123	0.0000	0.0000	0.0000	119492.450	0.0000
125	0.0000	0.0000	0.0000	3795306.032	0.0000
34	0.0000	0.0000	0.0000	2581546.195	0.0000
BOX #1	781.5000	0.0000	0.0000	68.8665	0.0000
BOX #3	663.1500	0.0000	0.0000	64.1157	0.0000
BOX #4	0.0000	0.0000	0.0000	61.9525	0.0000
45	0.0000	0.0000	0.0000	51.4966	0.0000
48	0.0000	0.0000	0.0000	43.6559	0.0000
48*Crif.P1	2146.333	1290.175	3144020.3504	123.7751	0.0000
BOX #2	1439.575	35.9848	205.7804	67.6051	0.0000

APPENDIX D

Table E1 - Conduit Data

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft ²)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
3 XS #3	191.00 Natural	81.11	0.03000	45.03	4.93		
4 XS #4	130.00 Natural	99.88	0.03000	57.76	5.62		
5 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
6 XS #6	586.00 Natural	161.13	0.03000	60.60	6.34		
7 XS #7	1608.00 Natural	181.54	0.03000	41.07	9.11		
8 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
9 XS #9	75.00 Natural	124.19	0.03000	37.81	6.90		
10 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
11 STUB	8.00 Circular	19.63	0.01300	5.00	5.00		
12 FRONTAGE	66.00 Circular	28.27	0.01300	6.00	6.00		
13 HWY 17 S	75.00 Circular	28.27	0.01300	6.00	6.00		
14 HWY 17 N	77.00 Circular	28.27	0.01300	6.00	6.00		
15 PARKINGLOT	73.00 Circular	28.27	0.01300	6.00	6.00		
16 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
17 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
18 S8	1490.00 Natural	52.60	0.03000	50.00	3.40		
19 61	350.00 Natural	49.50	0.03000	50.00	3.50		
20 62	1300.00 Natural	49.20	0.03500	50.00	3.30		
21 XS #3a	66.00 Natural	87.00	0.03000	67.00	4.90		
22 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
23 80	150.00 Natural	18.00	0.03000	39.00	2.50		
24 Ex 54-CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
25 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
26 Palmtto Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
27 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
28 Chan A	270.00 Natural	54.55	0.05000	23.95	4.90		
29 Clvt 6	41.00 Circular	12.57	0.01300	4.00	4.00		
30 Chan B	210.00 Natural	58.35	0.05000	20.00	5.30		
31 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
32 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
33 Chan D	150.00 Trapezoid	81.25	0.02000	25.00	3.25	0.00	0.00
34 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
35 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
36 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
37 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
38 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
39 Spanish1	45.00 Circular	7.07	0.01300	3.00	3.00		
40 IndianDr1	42.00 Circular	7.07	0.01300	3.00	3.00		
41 2042" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
42 Driveway1	59.00 Circular	28.27	0.01300	6.00	6.00		
43 2024"	40.00 Circular	3.14	0.01300	2.00	2.00		
44 36" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
45 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14406.0000	feet				

 # Table E16. New Conduit Information Section #
 # Conduit Invert (IE) Elevation and Conduit #
 # Maximum Water Surface (WS) Elevations #
 #####

Conduit Name	Upstream Node	Downstream Node	IE Up	IE Dn	WS Up	WS Dn	Conduit Type
XS #1	1	2	21.10	20.70	25.63	25.72	Natural
XS #2	4	6	18.53	18.40	25.42	25.40	Natural
XS #3	6	63	18.40	18.40	25.40	25.33	Natural
XS #4	8	15	18.30	18.20	25.32	25.31	Natural
XS #5	17	19	18.10	18.00	25.01	24.97	Natural
XS #6	19	21	18.00	17.90	24.97	24.97	Natural
XS #7	23	25	17.50	17.20	24.08	23.75	Natural
XS #8	25	27	17.20	15.60	23.75	23.68	Natural
XS #9	30	27	16.20	15.60	23.60	23.68	Natural
XS #10	32	34	16.30	15.30	22.31	22.29	Natural
STUB	34	36	15.30	14.80	22.29	20.02	Circular
FRONTAGE	36	38	14.80	13.30	20.02	19.86	Circular
HWY 17 S	38	41	13.30	11.60	19.86	19.49	Circular
HWY 17 N	41	45	11.60	9.900	19.49	18.97	Circular
PARKINGLOT	48	45	9.900	9.100	18.59	18.97	Circular
TO LAKE	Lk-Elzbth	48	9.900	9.600	12.56	18.59	Circular
SOUTH BAY	72	54	21.60	20.60	24.61	24.60	Natural
58	1	54	21.10	20.60	25.63	24.60	Natural
61	56	55	22.50	22.10	26.00	25.60	Natural
62	55	1	22.10	21.10	25.60	25.63	Natural
XS #3a	63	8	18.40	18.30	25.33	25.32	Natural
XS MALLARD	64	63	20.41	18.40	25.44	25.33	Natural
80	78	68	21.50	20.96	24.00	25.91	Natural
Ex 54" CMP	73b	Dgwood Lk	5.430	5.220	10.75	7.644	Circular
Clvt 10	44b	Dgwood Lk	6.230	5.420	7.636	7.644	Rectangle
Palmtto Lk	44b	46b	6.230	5.460	7.636	7.591	Natural
Clvt 7	46b	48b	5.460	5.170	7.591	7.534	Circular
Chan A	48b	50b	5.510	5.170	7.534	7.270	Natural
Clvt 6	50b	52b	5.510	5.350	7.270	7.140	Circular
Chan B	52b	54b	5.350	4.520	7.140	6.802	Natural
Clvt 5	54b	56b	4.520	4.380	6.802	6.742	Circular
Chan C	Myrtle Lk	56b	4.500	4.380	5.758	6.742	Natural
Chan D	Holly Lk	63b	4.750	4.330	5.964	5.915	Trapezoid
Oak Clvt	63b	65b	4.330	4.240	5.915	5.852	Rectangle
Chan E	65b	Myrtle Lk	4.240	4.200	5.852	5.758	Trapezoid
Clvt2 Out	60b	69b	2.570	2.510	4.340	3.919	Rectangle
Clvt1 Out	38b	71b	4.200	3.100	7.346	5.146	Rectangle
124	27	123	15.60	15.30	23.68	23.74	Trapezoid
Spanish1	4	2	18.53	18.41	25.42	25.72	Circular
IndianDr1	15	17	18.20	18.10	25.31	25.01	Circular
2042" RCP	21	23	17.90	17.50	24.97	24.08	Circular
Driveway1	32	30	16.30	16.20	22.31	23.60	Circular
2024"	68	64	20.96	20.41	25.91	25.44	Circular
36" RCP	125	123	16.82	16.78	24.34	23.74	Circular
48" RCP	125	123	15.50	15.30	24.34	23.74	Circular

Table E20 - Junction Flooding and Volume Listing.
 The maximum volume is the total volume in the node including the volume in the flooded storage area. This is the max volume at any time. The volume in the flooded storage area is the total volume above the ground elevation, where the flooded pond storage area starts.
 The fourth column is instantaneous, the fifth is the sum of the flooded volume over the entire simulation.
 Units are either ft³ or m³ depending on the units.

Junction Name	Surcharged Time (min)	Flooded Time (min)	Out of System Flooded Volume	Maximum Volume	Stored in System Ponding Allowed Flood Pond Volume
1	0.0000	0.0000	0.0000	56.8879	0.0000
2	0.0000	0.0000	0.0000	91.8829	0.0000
4	601.9314	0.0000	0.0000	86.5689	0.0000
6	633.7233	0.0000	0.0000	87.9273	0.0000
8	464.8241	0.0000	0.0000	88.2316	0.0000
15	0.0000	0.0000	0.0000	89.3880	0.0000
17	0.0000	0.0000	0.0000	86.7733	0.0000
19	0.0000	0.0000	0.0000	87.5864	0.0000
21	0.0000	0.0000	0.0000	311415.578	0.0000
23	0.0000	0.0000	0.0000	82.6600	0.0000
25	0.0000	0.0000	0.0000	82.3278	0.0000
27	0.0000	0.0000	0.0000	121819.247	0.0000
30	425.3198	274.9818	2211005.3720	92.9884	0.0000
32	0.0000	0.0000	0.0000	75.5260	0.0000
34	0.0000	0.0000	0.0000	87.8657	0.0000
36	0.0000	0.0000	0.0000	65.6447	0.0000
38	19.0728	0.0000	0.0000	82.3850	0.0000
41	32.8946	0.0000	0.0000	99.1361	0.0000
45	47.3057	7.3566	968.7101	124.0264	0.0000
48	44.1187	0.0000	0.0000	113.0270	0.0000
52	0.0000	0.0000	0.0000	1208035.831	0.0000
54	0.0000	352.8130	718484.9903	50.2640	0.0000
55	0.0000	227.6144	533108.1502	43.9810	0.0000
56	0.0000	170.7857	789707.5869	43.9810	0.0000
63	621.9341	24.9177	28363.3867	87.0824	0.0000
64	232.2393	0.0000	0.0000	63.2419	0.0000
68	55.5788	55.5864	0.0000	3179.7495	0.0000
72	0.0000	0.0000	0.0000	37.8362	0.0000
76	0.0000	0.0000	0.0000	491632.815	0.0000
78	0.0000	269.3500	214583.3365	31.4150	0.0000
Lk-Elzbth	0.0000	0.0000	0.0000	1876634.232	0.0000
Dgwood Lk	0.0000	0.0000	0.0000	2399035.552	0.0000
38b	0.0000	0.0000	0.0000	39.5321	0.0000
44b	0.0000	0.0000	0.0000	17.6690	0.0000
46b	0.0000	0.0000	0.0000	26.7786	0.0000
48b	0.0000	0.0000	0.0000	29.7052	0.0000
50b	0.0000	0.0000	0.0000	26.3877	0.0000
52b	0.0000	0.0000	0.0000	22.4869	0.0000
54b	0.0000	0.0000	0.0000	28.6803	0.0000
56b	0.0000	0.0000	0.0000	29.6753	0.0000
Myrtle Lk	0.0000	0.0000	0.0000	81104.5749	0.0000
60b	0.0000	0.0000	0.0000	22.2474	0.0000
Holly Lk	0.0000	0.0000	0.0000	65587.9944	0.0000
63b	0.0000	0.0000	0.0000	19.9228	0.0000
65b	0.0000	0.0000	0.0000	20.2571	0.0000
69b	0.0000	0.0000	0.0000	17.7011	0.0000
71b	0.0000	0.0000	0.0000	25.7081	0.0000
73b	17.0000	0.0000	0.0000	66.8943	0.0000
123	525.4722	0.0000	0.0000	106.0126	0.0000
125	419.0068	419.3428	0.0000	13908.8858	0.0000

Table E1 - Conduit Data

Inp Conduit Num Name	Length Conduit (ft) Class	Area (ft ²)	Manning Coef.	Max Width (ft)	Depth (ft)	Trapezoid Side Slopes	
1 XS #1	550.00 Natural	100.67	0.03500	50.00	4.91		
2 XS #2	431.00 Natural	89.71	0.03000	46.39	4.95		
3 XS #3	191.00 Natural	81.11	0.03000	45.03	4.93		
4 XS #4	130.00 Natural	99.88	0.03000	57.76	5.62		
5 XS #5	1089.00 Natural	130.11	0.03000	44.40	7.20		
6 XS #6	586.00 Natural	161.13	0.03000	60.60	6.34		
7 XS #7	1608.00 Natural	181.54	0.03000	41.07	9.11		
8 XS #8	761.00 Natural	172.35	0.03000	51.30	8.77		
9 XS #9	75.00 Natural	124.19	0.03000	37.81	6.90		
10 XS #10	446.00 Natural	170.10	0.03000	44.08	7.46		
11 STUB	8.00 Circular	19.63	0.01300	5.00	5.00		
12 FRONTAGE	66.00 Circular	28.27	0.01300	6.00	6.00		
13 HWY 17 S	75.00 Circular	28.27	0.01300	6.00	6.00		
14 HWY 17 N	77.00 Circular	28.27	0.01300	6.00	6.00		
15 PARKINGLOT	73.00 Circular	28.27	0.01300	6.00	6.00		
16 TO LAKE	175.00 Circular	28.27	0.01300	6.00	6.00		
17 SOUTH BAY	1800.00 Natural	62.50	0.03000	50.00	4.00		
18 SB	1490.00 Natural	52.60	0.03000	50.00	3.40		
19 61	350.00 Natural	49.50	0.03000	50.00	3.50		
20 62	1300.00 Natural	49.20	0.03500	50.00	3.30		
21 XS #3a	66.00 Natural	87.00	0.03000	67.00	4.90		
22 XS MALLARD	158.00 Natural	40.31	0.03000	25.00	4.20		
23 80	150.00 Natural	18.00	0.03000	39.00	2.50		
24 Ex 54" CMP	50.00 Circular	15.90	0.02400	4.50	4.50		
25 Clvt 10	42.00 Rectangle	40.50	0.01500	13.50	3.00		
26 Palmt0 Lk	700.00 Natural	172.00	0.05000	56.00	4.50		
27 Clvt 7	41.00 Circular	12.57	0.01300	4.00	4.00		
28 Chan A	270.00 Natural	54.55	0.05000	23.95	4.90		
29 Clvt 6	41.00 Circular	12.57	0.01300	4.00	4.00		
30 Chan B	210.00 Natural	58.35	0.05000	20.00	5.30		
31 Clvt 5	42.00 Circular	12.57	0.01300	4.00	4.00		
32 Chan C	400.00 Natural	43.50	0.05000	28.00	4.00		
33 Chan D	150.00 Trapezoid	81.25	0.02000	25.00	3.25	0.00	0.00
34 Oak Clvt	35.00 Rectangle	24.00	0.01300	8.00	3.00		
35 Chan E	150.00 Trapezoid	106.19	0.03000	25.00	3.70	1.00	1.00
36 Clvt2 Out	40.00 Rectangle	32.00	0.01300	8.00	4.00		
37 Clvt1 Out	50.00 Rectangle	28.00	0.01300	7.00	4.00		
38 124	200.00 Trapezoid	140.00	0.03500	13.00	7.00	1.00	1.00
39 Spanish1	45.00 Circular	7.07	0.01300	3.00	3.00		
40 IndianDr1	42.00 Circular	7.07	0.01300	3.00	3.00		
41 2042" RCP	64.00 Circular	9.62	0.01300	3.50	3.50		
42 Driveway1	59.00 Circular	28.27	0.01300	6.00	6.00		
43 2024"	40.00 Circular	3.14	0.01300	2.00	2.00		
44 36" RCP	40.00 Circular	7.07	0.01300	3.00	3.00		
45 48" RCP	40.00 Circular	12.57	0.01300	4.00	4.00		
Total length of all conduits		14406.0000 feet					