

The cost estimates provided in this study were prepared to assist City staff in making planning level decisions and prioritizing improvements. These cost estimates are not final design estimates. These costs were developed using recent bid tabulations from other communities and NCDOT projects within North Carolina and include easement acquisition, surveying, engineering, legal, and administrative costs and potential mitigation costs. Mitigation costs will vary based on the presence of private mitigation bankers, the current rate of fee-in-lieu mitigation, and the amount of impacts. Land acquisition costs are excluded due to the variability of the real estate market. A detailed breakdown of the costs for the flood control projects listed below in Table 8-1 is included in Appendix G. The cost estimates are approximate and are subject to change due to local costs for materials, delivery, construction, land or easement acquisitions, as well as other factors.

Timeframes may vary based on regulatory agency reviews and easement negotiations/acquisition. All timeframes and cost estimates assume projects will be designed, permitted, and constructed individually. Combining the design and permitting of multiple projects may provide increased efficiencies and cost savings to the City.

The stormwater drainage systems evaluated in this report are composed of a series of culverts, closed drainage systems, open channels, floodplain grading, and BMPs. For these drainage systems to function as designed they must be properly maintained.

**SECTION 8**  
**COST ESTIMATES**

**Table 8-1: Preliminary Cost Estimates**

<b>Primary System</b>	<b>Preliminary Project Costs</b>	<b>Estimated Design/Permitting Timeframe</b>
Ferncreek Floodplain Bench and Floodwall	\$749,600	18 months
Raeford Road Culvert	\$352,700	12 months
Raeford Road Floodplain Bench	\$906,400	18 months
Coventry Road Culvert and Floodplain Bench	\$866,100	12 months
Devonshire Drive Floodplain Bench and Glenwick Drive Berm	\$421,400	18 months
Lake Francis Wetland Enhancement/Restoration	\$423,400	12 months
<b>Secondary System</b>		
Buckhead Kingsford System	\$2,212,700	12 months
Broyhill System	\$163,800	3 months
Ferncreek Norwood System	\$107,000	3 months
Westwood System	\$672,900	6 months
Raeford Faison System	\$260,400	6 months
Montclair System	\$330,700	6 months
Coventry System	\$89,400	3 months
Roxie Avenue System	\$3,089,700	12 months
Ashton Road Ramblewood Drive System	\$261,000	4 months
Ashton Road Friar Avenue System	\$567,300	6 months
Ashton Road System	\$224,000	3 months
Kimberly Drive System	\$103,000	6 months
<b>BMPs</b>		
Mary McArthur Elementary School – Bioretention Pond	\$54,000	3 months
Mary McArthur Elementary School – Grass Swale	\$16,300	1 month
Douglas Byrd High School – Bioretention Pond	\$171,900	6 months
Douglas Byrd Middle School – Bioretention Pond	\$107,800	6 months
Intersection of Sandra Dr and Ireland Dr – Infiltration Basin	\$33,500	3 months
Ireland Drive Elementary School – Infiltration Basin	\$27,800	3 months
Ireland Drive Elementary School – Bioretention Pond	\$47,900	3 months
William H. Owen Elementary School – Bioretention Pond	\$46,300	3 months
William H. Owen Elementary School – Concrete Flume	\$13,800	1 month
Ashton Road – Extended Detention Wetland	\$114,500	6 months