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APPENDICIES

The following pages have been reprinted from various documents and news publications to provide an overview of the perceptions and historic events related to the I-16 Exit Ramp and its Removal. Also included are various case studies of other highway removal projects. The pages included within Appendix IV, Urban Ecology, is from an independent study conducted for the MLK, Jr. Boulevard corridor by Gunn Meyerhoff Shay Architects, PC, October 2010.

DETAILED COST ESTIMATE
CONCEPT 1 - PART I

The following planning level cost estimates are based on the Georgia Department of Transportation Cost Estimation Tool. Estimates include relocation of water, sewer, electricity and gas where present but do not include right-of-way acquisition.

Map ID	Road Name	Street Type	Street Length (ft)	Excavation and Grading			Bridge Removal			Maintenance of Traffic		*Demolition*	Asphalt			Base/aggregate			Earthwork		Drainage	
				Unit (CYD) Cost	Qty	Cost	Unit (SF) Cost	Qty	Cost	Unit	Cost		Unit (TN) Cost	Qty	Cost	Unit (TN) Cost	Qty	Cost	%	Cost	%	Cost
NA	Off ramp	NA	3,928	$5	32593	162,963	$10	13500	$135,000	LS	$100,000	$397,963	$95		$0	$30		$0	50%		5%	
NA	On-ramp	NA	2,345	$5	4506	22,528	$10		$0	LS	$30,000	$52,528	$95		$0	$30		$0	50%		5%	
Street A	Selma Blvd	Boulevard	955										$95	4553	$432,554	$30	4011	$120,330	50%		5%	$61,819
Street B	Wayne St	Neighborhood	230										$95	169	$16,027	$30	242	$7,245	50%	$148,884	5%	$14,888
Street C	Alice St	Neighborhood	230										$95	169	$16,027	$30	242	$7,245	50%	$148,884	5%	$14,888
Street D	Gaston St	Neighborhood	230										$95	169	$16,027	$30	242	$7,245	50%	$148,884	5%	$14,888
Street E	Allison St	Neighborhood	230										$95	169	$16,027	$30	242	$7,245	50%	$148,884	5%	$14,888
Street F	Morris Brown Dr	Neighborhood	1,475										$95	814	$77,348	$30	2581	$77,438	50%	$954,797	5%	$95,480
Street AJ	Montgomery St	Commercial/ Retail	2,040										$95		$0	$30		$0	50%		5%	
Street AK	MLK	Commercial/ Retail	2,040										$95		$0	$30		$0	50%		5%	
	SUBTOTAL		*13,703*			*185,491*			*$135,000*		*$130,000*	*$450,491*			*$574,010*			*$226,748*		*$1,550,331*		*$216,852*

DETAILED COST ESTIMATE
CONCEPT 1 - PART II

The following planning level cost estimates are based on the Georgia Department of Transportation Cost Estimation Tool. Estimates include relocation of water, sewer, electricity and gas where present but do not include right-of-way acquisition.

Map ID	Erosion control		Signs		Pavement Markings		Maintenance of Traffic		Lighting		Landscape and Amenities		Intersection Improvement		Sidewalk		Contingency		*New Construction*	*Total Construction*	*PE*	*Utility*	*Total*
	%	Cost	%	Cost	%	Cost	%	Cost	%	Cost	%	Cost	Unit	Cost	Unit	Cost	%	Cost					
NA	5%	$254,267	4%		3%	$5,000	15%		4%		5%	$254,267	LS		LS		20%	$628,246	$1,141,780	$1,539,743	$153,974	$70,400	$1,764,118
NA	5%	$151,796	4%		1%	$10,000	15%		4%		5%	$151,796	LS		LS		20%	$375,060	$688,653	$741,182	$74,118	$79,200	$894,500
Street A	5%	$61,819	4%	$49,455	3%	$37,091	15%	$130,238	4%	$49,455	5%	$61,819	LS	$261,450	LS	$109,535	20%	$152,743	$1,528,309	$1,528,309	$152,831	$334,250	$2,015,390
Street B	5%	$14,888	4%	$11,911	3%	$8,933	15%	$25,000	4%	$11,911	5%	$14,888	LS	$261,450	LS	$26,380	20%	$36,786	$599,191	$599,191	$59,919	$80,500	$739,610
Street C	5%	$14,888	4%	$11,911	3%	$8,933	15%	$25,000	4%	$11,911	5%	$14,888	LS	$261,450	LS	$26,380	20%	$36,786	$599,191	$599,191	$59,919	$80,500	$739,610
Street D	5%	$14,888	4%	$11,911	3%	$8,933	15%	$25,000	4%	$11,911	5%	$14,888	LS	$261,450	LS	$26,380	20%	$36,786	$599,191	$599,191	$59,919	$80,500	$739,610
Street E	5%	$14,888	4%	$11,911	3%	$8,933	15%	$25,000	4%	$11,911	5%	$14,888	LS	$261,450	LS	$26,380	20%	$36,786	$599,191	$599,191	$59,919	$80,500	$739,610
Street F	5%	$95,480	4%	$10,000	3%	$57,288	15%	$25,000	4%	$76,384	5%	$95,480	LS		LS	$169,177	20%	$235,912	$1,969,782	$1,969,782	$196,978	$516,250	$2,683,010
Street AJ	5%		4%	$10,000	3%	$10,000	15%		4%		5%		LS		LS		20%	$326,278	$346,278	$346,278	$34,628		$380,906
Street AK	5%		4%		3%		15%		4%		5%		LS		LS		20%	$326,278	$326,278	$326,278	$32,628		$358,906
		$622,916		*$117,098*		*$155,111*		*$255,238*		*$173,482*		*$622,916*		*$1,307,248*		*$384,233*		*$2,191,663*	$8,397,845	*$8,848,336*	*$884,834*	*$1,322,100*	*$11,055,270*

DETAILED COST ESTIMATE
CONCEPT 1

APPENDIX III: COST ESTIMATE

Information contained herein has been compiled from various sources and may contain inaccuracies based on available data. Compliance with applicable codes and ordinances and approval by authorities having jurisdiction is not guaranteed. This material is intended to create an overview and analysis of site conditions and provide a framework for future redevelopment.

I-16 EXIT RAMP REMOVAL PROJECT
SAVANNAH GEORGIA
City of Savannah
Chatham County
Metropolitan Planning Commission
CORE Metropolitan Planning Organization
Savannah Development & Renewal Authority

DETAILED COST ESTIMATE
CONCEPT 2 - PART I

The following planning level cost estimates are based on the Georgia Department of Transportation Cost Estimation Tool. Estimates include relocation of water, sewer, electricity and gas where present but do not include right-of-way acquisition.

Map ID	Road Name	Street Type	Street Length (ft)	Excavation and Grading			Bridge Removal			Maintenance of Traffic		*Demolition*	Asphalt			Base/aggregate			Earthwork		Drainage	
				Unit (CYD) Cost	Qty	Cost	Unit (SF) Cost	Qty	Cost	Unit	Cost		Unit (TN) Cost	Qty	Cost	Unit (TN) Cost	Qty	Cost	%	Cost	%	Cost
NA	Off ramp	NA	3,928	$5	68,271	$341,353	$10	27,900	$279,000	LS	$300,000	$920,353	$95		$0	$30			50%		5 %	
NA	On-ramp	NA	2,345	$5	27,243	$136,215	$10	4,400	$44,000	LS	$150,000	$330,215	$95		$0	$30			50%		5 %	
Street G	Selma Blvd	Boulevard	740										$95	977	$92,817	$30	1,865	$55,944	50%	$625,474	5%	$62,547
Street H	Roberts Street	Neighborhood	2,480										$95	5,457	$518,438	$30	6,250	$187,488	50%	$2,096,183	5 %	$209,618
Street I	Purse St	Neighborhood	165										$95	133	$12,647	$30	127	$3,812	50%	$139,464	5%	$13,946
Street J	Gaston St	Neighborhood	470										$95	431	$40,938	$30	411	$12,338	50%	$397,260	5%	$39,726
Street K	Huntington St	Neighborhood	433										$95	572	$54,311	$30	546	$16,367	50%	$365,987	5 %	$36,599
Street L	Morris Brown Dr	Neighborhood	1,090										$95	879	$83,549	$30	1,25 9	$37,769	50%	$921,306	5 %	$92,131
Street M	Cohen St	Neighborhood	1,038										$95	685	$65,097	$30	981	$29,427	50%	$877,354	5 %	$87,735
Street N	Gerard St	Neighborhood	501										$95	184	$17,455	$30	263	$7,891	50%	$423,463	5%	$42,346
Street O	Union St	Neighborhood	452										$95	332	$31,496	$30	475	$14,238	50%	$382,046	5 %	$38,205
Street P	Allison St	Neighborhood	230										$95	202	$19,232	$30	290	$8,694	50%	$194,404	5 %	$19,440
Street AD	Gwinnett St	Commercial/Retail	2,580										$95		$0	$30		$0	50%		5%	
Street AE	Montgomery St	Commercial/Retail	2,098										$95		$0	$30		$0	50%		5%	
Street AF	Boundary St	Neighborhood	1,698										$95		$0	$30		$0	50%		5%	
Street AL	MLK	Commercial/Retail	2,098										$95		$0	$30		$0	50%		5%	
Subtotal			*22,346*			*$477,56 9*			*$323,000*		*$450,000*	*$1,250,569*			*$935,982*			*$373,967*		*$6,422,940*		*$642,294*

Information contained herein has been compiled from various sources and may contain inaccuracies based on available data. Compliance with applicable codes and ordinances and approval by authorities having jurisdiction is not guaranteed. This material is intended to create an overview and analysis of site conditions and provide a framework for future redevelopment.

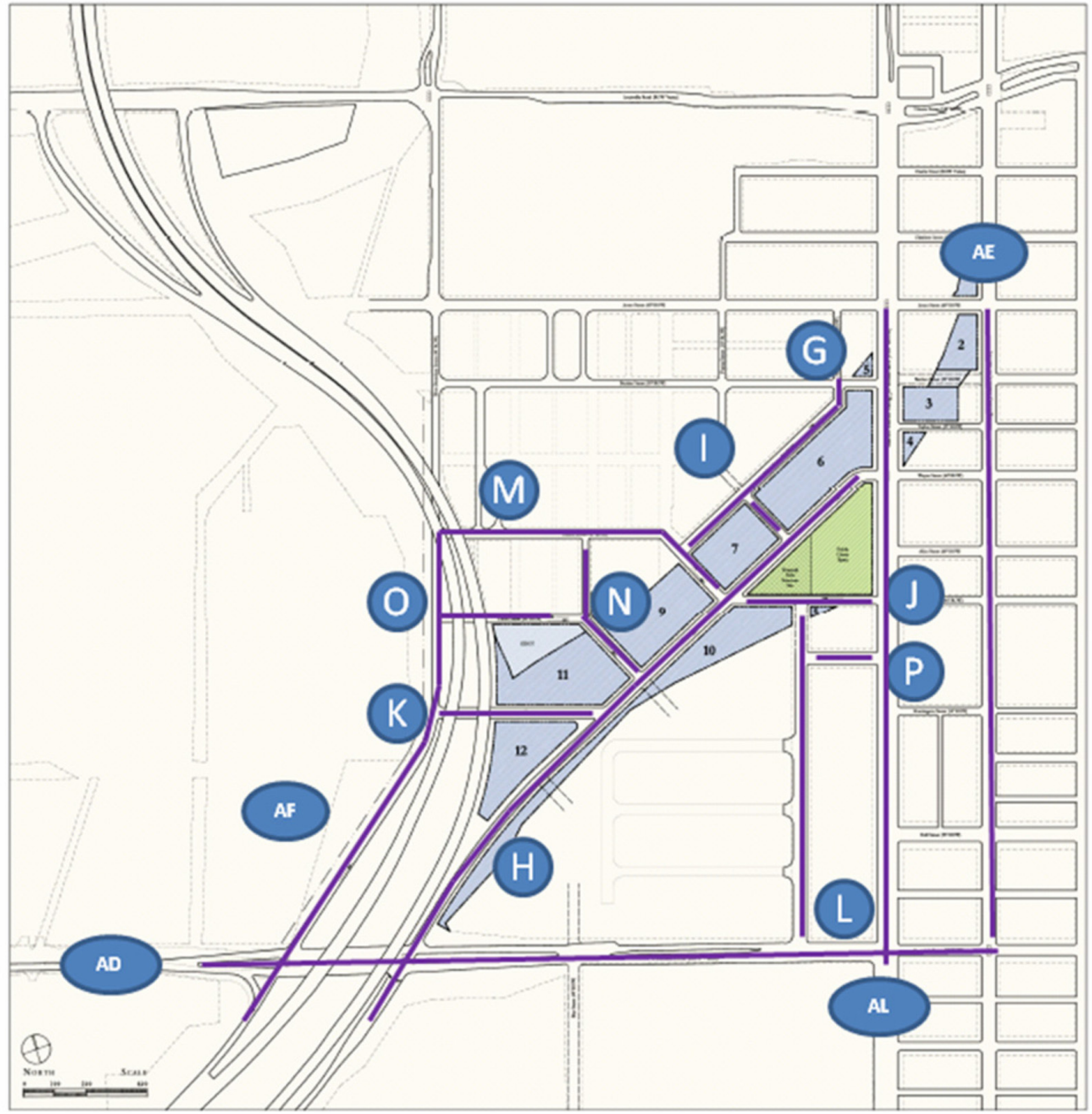
City of Savannah
Chatham County
Metropolitan Planning Commission
CORE Metropolitan Planning Organization
Savannah Development & Renewal Authority

DETAILED COST ESTIMATE
CONCEPT 2 - PART II

The following planning level cost estimates are based on the Georgia Department of Transportation Cost Estimation Tool. Estimates include relocation of water, sewer, electricity and gas where present but do not include right-of-way acquisition.

Map ID	Erosion control		Signs		Pavement Markings		Maintenance of Traffic		Lighting		Landscape and Amenities		Intersection Improvement		Sidewalk		Contingency		*New Construction*	*Total Construction*	*PE*	*Utility*	*Total*
	%	Cost	%	Cost	%	Cost	%	Cost	%	Cost	%	Cost	Unit	Cost	Unit	Cost	%	Cost					
NA	5%		4%		3%	$20,000	15%		4%		5%		LS		LS		20%	$824,419	$844,419	$1,764,772	$176,477	$88,000	$2,029,250
NA	5%		4%		3%	$20,000	15%		4%		5%		LS		LS		20%	$492,175	$512,175	$842,390	$84,239	$96,800	$1,023,429
Street G	5%	$114,180	4%	$91,344	3%	$68,508	15%	$250,000	4%	$91,344	5%	$114,180	LS		LS	$84,875	20%	$155,313	$1,806,529	$1,806,529	$180,653	$259,000	$2,246,182
Street H	5%	$382,659	4%	$306,127	3%	$229,595	15%	$250,000	4%	$306,127	5%	$382,659	LS	$261,450	LS	$284,447	20%	$520,509	$5,935,300	$5,935,300	$593,530	$868,000	$7,396,830
Street I	5%	$25,459	4%	$20,367	3%	$15,275	15%	$25,000	4%	$20,367	5%	$25,459	LS		LS	$18,925	20%	$34,631	$355,353	$355,353	$35,535	$57,750	$448,638
Street J	5%	$72,520	4%	$58,016	3%	$43,512	15%	$25,000	4%	$58,016	5%	$72,520	LS	$261,450	LS	$53,907	20%	$98,645	$1,233,848	$1,233,848	$123,385	$164,500	$1,521,733
Street K	5%	$66,811	4%	$53,449	3%	$40,087	15%	$25,000	4%	$53,449	5%	$66,811	LS		LS	$49,664	20%	$90,879	$919,412	$919,412	$91,941	$151,550	$1,162,904
Street L	5%	$168,185	4%	$134,548	3%	$100,911	15%	$25,000	4%	$134,548	5%	$168,185	LS	$261,450	LS	$125,019	20%	$228,772	$2,481,371	$2,481,371	$248,137	$381,500	$3,111,008
Street M	5%	$160,161	4%	$128,129	3%	$96,097	15%	$25,000	4%	$128,129	5%	$160,161	LS		LS	$119,055	20%	$217,858	$2,094,204	$2,094,204	$209,420	$363,300	$2,666,925
Street N	5%	$77,303	4%	$61,843	3%	$46,382	15%	$25,000	4%	$61,843	5%	$77,303	LS		LS	$57,463	20%	$105,151	$1,003,443	$1,003,443	$100,344	$175,350	$1,279,137
Street O	5%	$69,743	4%	$55,794	3%	$41,846	15%	$25,000	4%	$55,794	5%	$69,743	LS		LS	$51,843	20%	$94,867	$930,614	$930,614	$93,061	$158,200	$1,181,876
Street P	5%	$35,489	4%	$28,391	3%	$21,293	15%	$25,000	4%	$28,391	5%	$35,489	LS	$261,450	LS	$26,380	20%	$48,273	$751,925	$751,925	$75,193	$80,500	$907,618
Street AD	5%		4%		3%		15%		4%		5%		LS	$261,450	LS		20%	$541,497	$802,947	$802,947	$80,295		$883,242
Street AE	5%		4%		3%		15%		4%		5%		LS		LS		20%	$440,334	$440,334	$440,334	$44,033		$484,367
Street AF	5%		4%		3%		15%		4%		5%		LS	$261,450	LS		20%	$356,381	$617,830	$617,830	$61,783		$679,613
Street AL	5%		4%		3%		15%		4%		5%		LS		LS		20%	$440,334	$440,334	$440,334	$44,033		$484,367
Subtotal		*$1,172,510*		*$938,008*		*$743,506*		*$700,000*		*$938,008*		*$1,172,510*		*$1,568,697*		*$871,578*		*$4,690,040*	*$21,170,040*	*$22,420,609*	*$2,242,061*	*$2,844,450*	*$27,507,119*

DETAILED COST ESTIMATE
CONCEPT 2



APPENDIX III: COST ESTIMATE

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DETAILED COST ESTIMATE
CONCEPT 3 - PART I

The following planning level cost estimates are based on the Georgia Department of Transportation Cost Estimation Tool. Estimates include relocation of water, sewer, electricity and gas where present but do not include right-of-way acquisition.

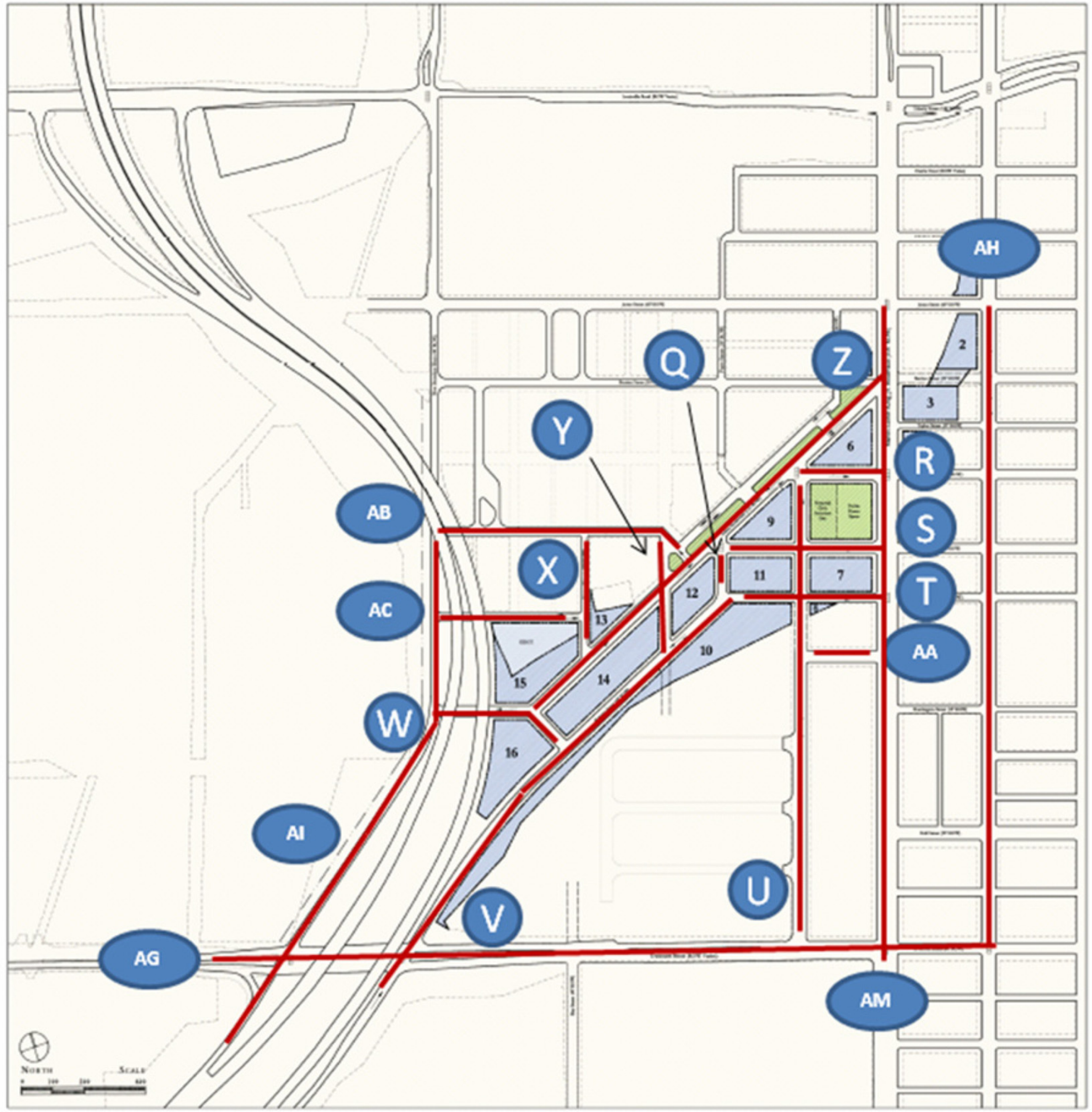
Map ID	Road Name	Street Type	Street Length (ft)	Excavation and Grading			Bridge Removal			Maintenance of Traffic		*Demolition*	Asphalt			Base/aggregate			Earthwork		Drainage	
				Unit (CYD) Cost	Qty	Cost	Unit (SF) Cost	Qty	Cost	Unit	Cost		Unit (TN) Cost	Qty	Cost	Unit (TN) Cost	Qty	Cost	%	Cost	%	Cost
NA	Off ramp	NA	3,928	$5	68,271	$341,353	$10	27,900	$279,000	LS	$300,000	$920,353	$95		$0	$30		$0	50%		5%	
NA	On-ramp	NA	2,345	$5	27,243	$136,215	$10	4,400	$44,000	LS	$150,000	$330,215	$95		$0	$30		$0	50%		5%	
Street Q	Purse St	Neighborhood	120										$95	88	$8,362	$30	126	$3,780	50%		5%	
Street R	Wayne St	Neighborhood	200										$95	220	$20,905	$30	210	$6,300	50%	$193,141	5%	$19,314
Street S	Alice St	Neighborhood	470										$95	517	$49,126	$30	494	$14,805	50%	$453,881	5%	$45,388
Street T	Gaston St	Neighborhood	470										$95	431	$40,938	$30	411	$12,338	50%	$453,881	5%	$45,388
Street U	Morris Brown Dr	Neighborhood	1,491										$95	1,640	$155,845	$30	1,566	$46,967	50%	$1,439,865	5%	$143,987
Street V	Roberts St	Neighborhood	1,925										$95	4,118	$391,238	$30	4,716	$141,488	50%	$1,858,981	5%	$185,898
Street W	Huntington St	Neighborhood	490										$95	647	$61,460	$30	617	$18,522	50%	$473,195	5%	$47,320
Street X	Gerard St	Neighborhood	390										$95	257	$24,459	$30	246	$7,371	50%	$376,625	5%	$37,662
Street Y	Cohen St	Neighborhood	370										$95	380	$36,096	$30	363	$10,878	50%	$357,311	5%	$35,731
Street Z	Selma Blvd	Boulevard	1,490										$95	4,401	$418,095	$30	4,200	$126,000	50%	$1,438,900	5%	$143,890
Street AA	Allison St	Neighborhood	200										$95	264	$25,086	$30	252	$7,560	50%	$193,141	5%	$19,314
Street AB	Cohen St	Neighborhood	857										$95	1,131	$107,492	$30	1,080	$32,395	50%	$827,609	5%	$82,761
Street AC	Union St	Neighborhood	455										$95	601	$57,070	$30	573	$17,199	50%	$439,395	5%	$43,940
Street AG	Gwinnett St	Commercial/Retail	2,580										$95		$0	$30		$0	50%		5%	
Street AH	Montgomery St	Commercial/Retail	2,098										$95		$0	$30		$0	50%		5%	
Street AI	Boundary St	Neighborhood	1,698										$95		$0	$30		$0	50%		5%	
Street AM	MLK	Commercial/Retail	2,098										$95		$0	$30		$0	50%		5%	
Subtotal			*23,675*			*$477,569*			*$323,000*		*$450,000*	*$1,250,569*			*$1,396,171*			*$445,601*		*$8,505,924*		*$850,592*

DETAILED COST ESTIMATE
CONCEPT 3 - PART II

The following planning level cost estimates are based on the Georgia Department of Transportation Cost Estimation Tool. Estimates include relocation of water, sewer, electricity and gas where present but do not include right-of-way acquisition.

Map ID	Erosion control		Signs		Pavement Markings		Maintenance of Traffic		Lighting		Landscape and Amenities		Intersection Improvement		Sidewalk		Contingency		*New Construction*	*Total Construction*	*PE*	*Utility*	*Total*
	%	Cost	%	Cost	%	Cost	%	Cost	%	Cost	%	Cost	Unit	Cost	Unit	Cost	%	Cost					
NA	5%		4%		3%		15%		4%		5%		LS		LS		20%	$974,222	$974,222	$1,894,575	$189,457	$88,000	$2,172,032
NA	5%		4%		3%	$20,000	15%		4%		5%		LS		LS		20%	$581,606	$601,606	$931,822	$93,182	$96,800	$1,121,804
Street Q	5%		4%		3%	$20,000	15%	$25,000	4%	$15,785	5%	$19,731	LS		LS	$13,764	20%	$29,762	$136,183	$136,183	$13,618	$42,000	$191,802
Street R	5%	$32,885	4%	$26,308	3%	$19,731	15%	$25,000	4%	$26,308	5%	$32,885	LS		LS	$22,939	20%	$49,604	$475,318	$475,318	$47,532	$70,000	$592,850
Street S	5%	$77,279	4%	$61,823	3%	$46,367	15%	$25,000	4%	$61,823	5%	$77,279	LS	$261,450	LS	$53,907	20%	$116,569	$1,344,697	$1,344,697	$134,470	$164,500	$1,643,667
Street T	5%	$77,279	4%	$61,823	3%	$46,367	15%	$25,000	4%	$61,823	5%	$77,279	LS	$261,450	LS	$53,907	20%	$116,569	$1,334,042	$1,334,042	$133,404	$164,500	$1,631,946
Street U	5%	$245,154	4%	$196,124	3%	$147,093	15%	$25,000	4%	$196,124	5%	$245,154	LS	$261,450	LS	$171,012	20%	$369,798	$3,643,571	$3,643,571	$364,357	$521,850	$4,529,779
Street V	5%	$316,514	4%	$253,211	3%	$189,908	15%	$250,000	4%	$253,211	5%	$316,514	LS	$261,450	LS	$220,791	20%	$477,438	$5,116,642	$5,116,642	$511,664	$673,750	$6,302,056
Street W	5%	$80,567	4%	$64,454	3%	$48,340	15%	$25,000	4%	$64,454	5%	$80,567	LS		LS	$56,201	20%	$121,530	$1,141,610	$1,141,610	$114,161	$171,500	$1,427,271
Street X	5%	$64,125	4%	$51,300	3%	$38,475	15%	$25,000	4%	$51,300	5%	$64,125	LS		LS	$44,732	20%	$96,728	$881,901	$881,901	$88,190	$136,500	$1,106,591
Street Y	5%	$60,836	4%	$48,669	3%	$36,502	15%	$25,000	4%	$48,669	5%	$60,836	LS		LS	$42,438	20%	$91,767	$854,733	$854,733	$85,473	$129,500	$1,069,707
Street Z	5%	$244,990	4%	$195,992	3%	$146,994	15%	$250,000	4%	$195,992	5%	$244,990	LS	$261,450	LS	$170,898	20%	$369,550	$4,207,739	$4,207,739	$420,774	$521,500	$5,150,013
Street AA	5%	$32,885	4%	$26,308	3%	$19,731	15%	$25,000	4%	$26,308	5%	$32,885	LS	$261,450	LS	$22,939	20%	$49,604	$742,209	$742,209	$74,221	$70,000	$886,430
Street AB	5%	$140,910	4%	$112,728	3%	$84,546	15%	$25,000	4%	$112,728	5%	$140,910	LS		LS	$98,295	20%	$212,553	$1,977,928	$1,977,928	$197,793	$299,950	$2,475,671
Street AC	5%	$74,812	4%	$59,850	3%	$44,887	15%	$25,000	4%	$59,850	5%	$74,812	LS		LS	$52,187	20%	$112,849	$1,061,852	$1,061,852	$106,185	$159,250	$1,327,287
Street AG	5%		4%		3%		15%		4%		5%		LS	$261,450	LS		20%	$639,891	$901,341	$901,341	$90,134	$903,000	$1,894,475
Street AH	5%		4%		3%		15%		4%		5%		LS		LS		20%	$520,346	$520,346	$520,346	$52,035	$734,300	$1,306,680
Street AI	5%		4%		3%		15%		4%		5%		LS		LS		20%	$421,138	$421,138	$421,138	$42,114	$594,300	$1,057,551
Street AM	5%		4%		3%		15%		4%		5%		LS		LS		20%	$520,346	$520,346	$520,346	$52,035	$734,300	$1,306,680
Subtotal		*$1,448,236*		*$1,158,589*		*$908,942*		*$775,000*		*$1,174,374*		*$1,467,967*		*$1,830,147*		*$1,024,010*		*$5,871,869*	*$26,857,423*	*$28,107,991*	*$2,810,799*	*$6,275,500*	*$37,194,291*

DETAILED COST ESTIMATE
PREFERRED CONCEPT 3



Information contained herein has been compiled from various sources and may contain inaccuracies based on available data. Compliance with applicable codes and ordinances and approval by authorities having jurisdiction is not guaranteed. This material is intended to create an overview and analysis of site conditions and provide a framework for future redevelopment.

APPENDIX III: COST ESTIMATE

I-16 EXIT RAMP REMOVAL PROJECT
SAVANNAH GEORGIA
City of Savannah
Chatham County
Metropolitan Planning Commission
CORE Metropolitan Planning Organization
Savannah Development & Renewal Authority