

STORM DRAINAGE FACILITIES IMPROVEMENTS

The City's storm water management program for FY2005-2009 has several new features and projects to accelerate the mission of the program, which is to reduce the risk of structural flooding within the City by protecting properties from flood damage during a 100-year (1% probability) rainfall event. The City program targets local drainage systems and integrates with the primary drainage channels and bayous, which are the responsibility of the Harris County Flood Control District.

This FY2005-2009 program has several major components for implementation:

- Texas Medical Center Projects
- Storm Water Management Program (SWMP) Initial Projects (11+7)
- Localized Drainage Projects -- Small Projects typically less than \$500,000
- New Comprehensive Drainage Plan Prioritized Projects (26)
- Storm Drainage for TxDOT funded street reconstruction (6)

The Texas Medical Center Projects are scheduled for construction in FY2005 & 2006 and total about \$73 million. These projects are planned to use \$46 million of FEMA grant funds to finance 75% of the cost of the projects. The Texas Medical Center is also providing \$5 million towards the projects.

The Storm Water Management Program (SWMP) will undertake eleven (11) program projects in FY 2005 - 2007. In addition, seven other projects (Rustling Oaks & Fonn Villas, Kirkwood & Briar Forest, Whiteheather, Edloe, Japhet Gully, Yorkshire & Notingham, and Kirby Relief Phase II) are also included in the FY2005-2009 program. These neighborhood drainage projects total about \$120 million for the five-year period.

The Localized Drainage Improvements Projects Program (M-0126) has been in the CIP for many years with small amounts of funding. These smaller projects are now funded at the \$12 million level for the FY2005-2009 program.

There is a backlog of small drainage issues which when resolved can protect many homes from structural flooding. In many cases one section of pipe, a missing overflow section, or inadequate inlets are the only improvements needed to solve the problem. A quick solution will resolve the problems of an otherwise adequate system. On-call engineering and construction contracts will be used to address these problems quickly and cost effectively.

The Comprehensive Drainage Plan has identified approximately \$1.6 billion of inadequate systems in the City to be upgraded. This five-year program will be the first to start prioritizing, scoping, designing, and constructing solutions to the inadequacies identified for this long-term program. The 26 projects selected to start the program have the highest numbers of flood-damaged properties by drainage area. Each project will be designed to keep the localized drainage in the piping or street sheet flow system to protect the structures from flooding during the 100-year rainfall event. Properties within a riverine 100-year flood zone will be protected from local drainage flooding, but may not be protected from the riverine flooding until the Harris County Flood Control District projects are completed.

Street reconstruction projects sponsored by TxDOT require the local sponsor to pay for storm drainage improvements associated with the paving project. The FY2005-2009 program has identified \$13 million in six (6) projects that will support storm drainage to complete these projects.

While the project is not shown in the FY2005-2009 CIP at this time, the City has requested the Corps of Engineers to study the possibility of incorporating storm water detention parks throughout the City to mitigate the increased flow from City drainage and street projects. Without a regional approach, the detention is incorporated into each individual project. A regional approach may be more cost effective and add park amenities to the City landscape, while saving the City on the cost of mitigation. This study will be 100% funded by the Corps. As the project progresses beyond the study stage, local matching funds may be required beyond FY2005. The request is currently under review by the Corps of Engineers in Galveston.

2005-2009 CAPITAL IMPROVEMENT PLAN

CITY OF HOUSTON

SOURCE OF FUNDS SUMMARY (\$THOUSANDS)										
Source of Funds	Appropriations through Dec. 31, 2003	Estimated Appropriations Jan. 1 - June 30 2004	Fiscal Year Planned Appropriations					Total	Total	
			2005	2006	2007	2008	2009	2005-2009		
FEMA			39,068	15,608					54,676	54,676
Tex Med Center Participation			5,000						5,000	5,000
Prop. Ser-F Storm Sewer C.F.						50,000	50,000		100,000	100,000
Proposed CDBG				4,000	4,000				8,000	8,000
Storm Sewer Cons. Const. Fund	32,763	12,497							0	45,260
Community Development Blk Grant			4,000						4,000	4,000
Accumulated Unexpended Fund	4,618								0	4,618
Ser-F Storm Sewer Const. Fund		3,230	44,999	48,328	41,672				134,999	138,229
Total	37,381	15,727	93,067	67,936	45,672	50,000	50,000		306,675	359,783

Storm Drainage Facilities
 FY2005 - 2009 CAPITAL IMPROVEMENT PLAN
 (\$THOUSANDS)

CIP NO.	COUNCIL DISTRICT	PROJECT NAME	FY2005	FY2006	FY2007	FY2008	FY2009	TOTAL FY2005 - 2009
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Storm Drainage Facilities

M-0126	VAR	LOCAL DRAINAGE IMPROVEMENT PROJECTS	1,520 C	2,000 C	3,000 C	3,000 C	3,000 C	12,520C
M-0168	HI	JAPHET GULLY STORM SEWER - CLINTON TO BUFFALO BAYOU	200 D		1,000 C			1,200DC
M-0184	B	KASHMERE AREA STORM SEWER IMPROVEMENTS			2,750 C			2,750C
M-0186	I	CENTRAL PARK SUBDIVISION RELIEF LATERALS	2,000 C					2,000C
M-0189		DUNVALE-LIPAN RELIEF STORM SEWER PROJECT	500 C					500C
M-0209	A	SHERWOOD OAKS, SHERWOOD ESTATES AND BRITTMORE VILLAGE STORM SEWER SYSTEM		426 D		1,706 C		2,132DC
M-0210	B	CRANE / ENGLEWOOD STORM SEWER	4,625 C					4,625C
M-0217	D	SUNNYSIDE COURT STORM SEWER LATERALS		4,600 C				4,600C
M-0220	ALL	STORM WATER MANAGEMENT PROGRAM (SWMP)	4,822 D	4,900 D	3,400 D	3,000 D	3,000 D	19,122D
M-0226	I	GARDEN VILLAS RELIEF STORM SEWER	4,168 C					4,168C
M-0228	I	LANCASTER RELIEF STORM SEWER		3,992 C				3,992C

LEGEND: A = ACQUISITION D = DESIGN C = CONSTRUCTION E = EQUIPMENT O = OTHER R = ART

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Storm Drainage Facilities

M-0230	G	KIRBY RELIEF STORM SEWER PHASE I & II		650 D		7,200 C		7,850DC
M-0241	VAR	STORMWATER PUMP STATION IMPROVEMENTS AT VARIOUS UNDERPASSES		2,700 C				2,700C
M-0247	G	YORKSHIRE AND NOTTINGHAM STORM SEWER IMPROVEMENTS			5,500 C			5,500C
M-0248	G	WILCHESTER, MEMORIAL WAY, AND MEMORIAL TRAILS DRAINAGE IMPROVEMENTS		6,290 C				6,290C
M-0249	G	RUSTLING OAKS AND FONN VILLAS SUBDIVISION STORM SEWER IMPROVEMENTS	450 D			3,000 C		3,450DC
M-0250	G	KIRKWOOD AND BRIARFOREST STORM SEWER IMPROVEMENTS			450 D		3,000 C	3,450DC
M-0253	C	EDLOE STREET AREA STORM SEWER - BRAESWOOD PLACE SUBDIVISION	760 D		2,500 C		2,700 C	5,960DC
M-0254	A	TIMBERGROVE SUBDIVISION STORM SEWER IMPROVEMENTS	5,396 C					5,396C
M-0255	C	BRAES BLVD. AND ACADEMY ST.: NEW STORM DRAINAGE TRUNK LINE	4,000 C		2,700 C	2,500 C		9,200C
M-0256	CF	SHARPSTOWN STORM SEWER IMPROVEMENTS		3,328 C	3,000 C			6,328C
M-0257	H	WOODLAND HEIGHTS STORM SEWER IMPROVEMENTS	1,000 A		6,779 C			7,779AC

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Storm Drainage Facilities

M-0260	C/D	TEXAS MEDICAL CENTER DRAINAGE IMPROVEMENTS	27,473 C	1,755 C				29,228C
M-0261	G	BUFFALO BAYOU DETENTION POND		2,100 C				2,100C
M-0262	D	WHITEHEATHER STORM SEWER IMPROVEMENTS	600 D	600 D	4,600 C	3,600 C	4,000 C	13,400DC
M-0263	G	SHERWOOD FOREST STORM SEWER SYSTEM			4,783 C			4,783C
M-0265	C,F	WESTMORELAND, SHARPTOWN, BRAEBURN, MAPLEWOOD (PHASES - IV)		1,030 D	1,030 D		10,296 DC	12,356DC
M-0266	E	FREEWAY MANOR, SOUTH HOUSTON, KIRKWOOD AND SOUTH SAGEMONT	306 D		1,225 C			1,531DC
M-0267	C,D,G	RIVER OAKS (PHASES I, II,III)		767 D	767 D	767 D	6,138 C	8,439DC
M-0268	E	GULF MEADOWS, KIRKWOOD SOUTH, SAGEMONT		332 D		1,329 C		1,661DC
M-0269	B	CLAIRMONT PLACE		336 D		1,344 C		1,680DC
M-0270	B	LAKWOOD ESTATES		240 D		959 C		1,199DC
M-0271	C	MEYERLAND EAST		306 D		1,224 C		1,530DC
M-0272	D,E	CRESTMONT PARK, SOUTH ACRES (PHASES I AND II)		310 D	310 D	1,241 C	1,241 C	3,102DC

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Storm Drainage Facilities

M-0273	I	CAPISTRANO VILLAS, GLENBROOK VALLEY, HOLIDAY FOREST		405 D		1,622 C		2,027DC
M-0274	H	GLEN OAKS NORTHLINE TO CAMINO PHASES I, & 11)		849 D	849 D	3,394 C		5,092DC
M-0275	G	LAKESIDE PLACE, VILLAGE WEST, ASHFORD VILLAGE		818 D		3,272 C		4,090DC
M-0276	E	SCARSDALE (ASTORIA FROM FLUSHING MEADOWS TO BINGHAMPTON)				460 D	1,841 C	2,301DC
M-0277	D,I	SOUTHPARK, SOUTHCREST (PHASES I & 11)		752 D		752 D	3,009 C	4,513DC
M-0278	C,D,G	UPPER KIRBY PHASE IA				5,000 C		5,000C
M-0279	C	MEYERLAND WEST			208 D		832 C	1,040DC
M-0280	G	ASHFORD VILLAGE, NOTTINGHAM FOREST, BRAES VILLAGE			340 D		1,360 C	1,700DC
M-0281	C	MEYERLAND, WESTBURY				306 D	1,225 C	1,531DC
M-0282	B	HOUSTON GARDEN, HOMESTEAD					1,191 D	1,191D
M-0283	F	CATALINA SQUARE, ROBINDALE				389 D		389D
M-0284	H	GLEN OAKS (AIRLINE DRIVE FROM CAINO LITTLE YORK PHASE 1)					1,101 D	1,101D

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Storm Drainage Facilities

M-0285	A,H	GARDEN OAKS, SHEPHERD FOREST PHASE I					887 D	887D
M-0286	B	PLEASANTVILLE					756 D	756D
M-0287	A,H	RIGECREST, HILLENDAHL ACRES, MONARCH OAKS, AFTON VILLAGE					714 D	714D
M-0288	I	EDGEBROOK, EASTHAVEN					816 D	816D
M-0289	D	HOLLOWAY HEIGHTS, ALMEDA-GENOA PHASE I					1,280 D	1,280D
M-0290	C,D,I	FOURTH WARD, AVONDALE PHASE I					1,093 D	1,093D
M-0291	E	FREEWAY MANOR, SAGEMONT				380 D		380D
M-0372	E	Freeway Manor Drainage for Neighborhood Street Reconstruction	2,000 C					2,000C
M-0531	BH	SOUTH OF LITTLE YORK FROM HARDY TOLL ROAD TO HALLS BAYOU	6,000 C					6,000C
M-0574	E	MONROE STORM SEWER		1,700 C				1,700C
M-0582	E	SOUTH SHAVER STORM SEWER		1,300 C				1,300C
M-0589	A	TANNER ROAD DRAINAGE IMPROVEMENTS		2,100 C				2,100C

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Storm Drainage Facilities

M-0596	A	BRITTMOORE:IH-10 TO HAMMERLY STORM SEWERS		1,700 C				1,700C
M-0597	A	BRITTMOORE: HAMMERLY TO CLAY DETENTION POND		2,000 C				2,000C
M-0672	VAR	Storm Sewer Improvement Associated with Street Paving & Reconstruction	880 C			1,700 C		2,580C
M-0771	C	KIRBY DRIVE STORM IMPROVEMENTS: S. W. FRWY TO BRAYS BAYOU	24,617 C	19,056 C				43,673C
M-NA	ALL	CONTINGENCIES FOR STORM DRAINAGE PROGRAM	1,750 O	594 O	481 O	1,855 O	520 O	5,200O

TOTAL PLAN:

93,067	67,936	45,672	50,000	50,000	306,675
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