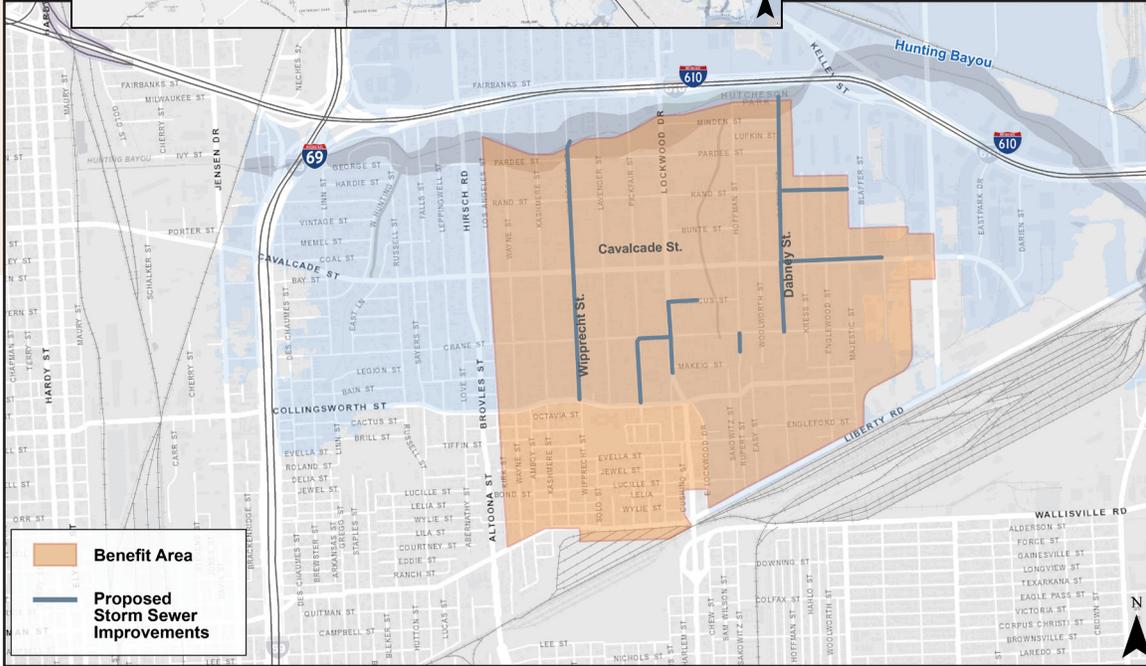
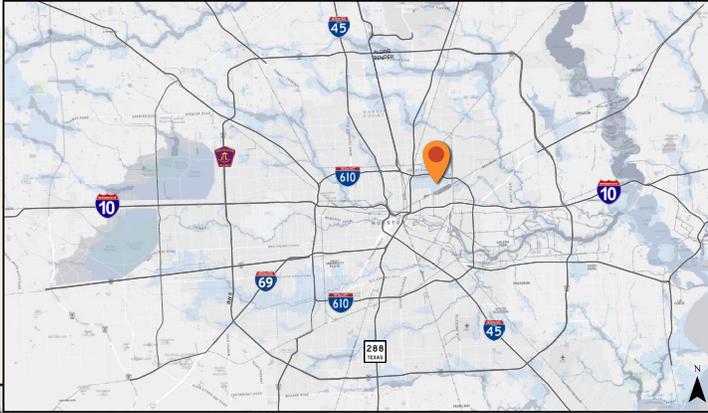


# HOUSTON KASHMERE GARDENS AREA FLOOD MITIGATION



## Scope of Work

The project area is located in the eastern half of the Kashmere Gardens neighborhood, bounded by Wipprecht St. on the west, Liberty Rd. on the south, Homestead Rd. on the east, and Hunting Bayou on the north.

The project includes major storm sewer improvements beneath Wipprecht St., Pickfair St., Crane St., Lockwood Dr., Marcus St., Dabney St., Rand St., and Cavalcade St., improvements to roadside ditch systems and culverts east of Channel H110-00-00, and sewer inlet replacement in the area southwest of Channel H110-00-00. Green storm water infrastructure improvements will be constructed in the western portion of the project area. The project will also include construction of detention basins that will incorporate pedestrian trails and green space amenities.

## Budget

**\$94,235,560**

## Sources of Funding

Community Development Block Grant (CDBG) Mitigation and Dedicated Drainage and Street Reconstruction Fund (DDSRF)



# Project SCOPE OF WORK

*Section 1 of 3: Project Scope of Work*



## **Hazard Mitigation**

The Houston Kashmere Gardens Area Flood Mitigation Project will address risks associated with hurricanes/tropical storms/tropical depressions in the Kashmere Gardens area.

The Houston Kashmere Gardens Area Flood Mitigation Project will reduce the long-term risk of loss of life, injury, damage to and loss of property, and suffering and hardship by more rapidly conveying water from the identified service areas to reduce flooding. Dynamic hydraulic and hydrologic (H&H) modeling was used to identify existing ponding impacts and illustrate the benefits of reduced ponding associated with the proposed project.

The H&H modeling identified flooding issues under existing conditions, including structures inundated and ponding above the curb (6 inches of water) that impacts safe roadway mobility. The impacts are further validated by other data points including FEMA National Flood Insurance Program (NFIP) data, FEMA Individual Assistance (IA) data, and/or calls for service.

The Kashmere Gardens Area neighborhood drainage infrastructure was constructed beginning in the 1930's. Harris County Flood Control (HCFCD) Channel H110-00-00 provides drainage for much of the area, conveying water to Hunting Bayou. The existing drainage system is a mix of curb and gutter and roadside ditch systems and provides less than 2-year level of service (LOS) under Atlas 14 rainfall. The H&H models show that 1,389 properties are inundated in the 100-year rain event, and 16.7 miles of street experience more than 6 inches of water.

The proposed project will replace and improve existing storm sewers, convert some existing roadside ditches to curb and gutter with storm sewers, improve existing roadside ditches and driveway culverts, and replace existing inlets with larger inlets. The proposed improvements will increase the capacity of the existing system, increasing the LOS to 50-year, reduce ponding on 14.1 miles of street, and remove 1,392 properties from flood risk. Green storm water infrastructure will also be constructed to supplement grey infrastructure improvements to increase the overall drainage benefits in the area. Detention basins will be constructed to mitigate the proposed infrastructure improvements, and these basins will include park amenities and trails.

## **Project Summary**

- **Proposed Improvements**
- Replace or improve storm sewer systems on the following streets:
  - Wipprecht Street, Collingsworth St. - Hunting Bayou

- 482 LF of 24" RCP
  - 4,560 LF of 12'x8' RCB
  - 4 junction boxes
  - 32 Type "BB" inlets
  - 16 48" manholes
  - 15,763 SY of 11" reinforced concrete pavement
  - 5,500 SF 6" concrete driveway replacement
  - 9,795 LF of 6" concrete curb
  - 39,728 SF of sidewalk replacement/improvement
- Marcus Street, Lockwood Dr. - Channel H110-00-00
  - 30 LF of 24" RCP
  - 1,048 LF of 6'x4' RCB
  - 1 12'x12' junction box
  - 2 Type "BB" inlets
  - 1 Type "C" manhole
  - 2,044 SY of 11" reinforced concrete pavement
  - 4,250 SF 6" concrete driveway replacement
  - 1,510 LF of 6" concrete curb
  - 7,450 SF of sidewalk replacement/improvement
- Lockwood Drive, Crane St. - Marcus St.
  - 820 LF of 24" RCP
  - 2,338 LF of 6'x4' RCB
  - 4 junction boxes
  - 16 Type "BB" inlets
  - 4 Type "C" manholes
  - 13,500 SY of 11" reinforced concrete pavement
  - 7,931 SF 6" concrete driveway replacement
  - 9,167 LF of 6" concrete curb
  - 17,581 SF of sidewalk replacement/improvement
- Crane Street, Pickfair St. - Lockwood Dr.
  - 380 LF of 6'x3' RCB
  - 4 junction boxes
  - 1,664 SY of 11" reinforced concrete pavement
  - 4,837 SF 6" concrete driveway replacement
  - 1,220 LF of 6" concrete curb
  - 6,250 SF of sidewalk replacement/improvement
- Pickfair Street, Crane St. - Collingsworth St.
  - 283 LF of 24" RCP
  - 1,218 LF of 6'x3' RCB
  - 5 junction boxes
  - 10 Type "BB" inlets
  - 2 Type "C" manholes
  - 4,567 SY of 11" reinforced concrete pavement
  - 6,159 SF 6" concrete driveway replacement

- 2,974 LF of 6" concrete curb
    - 13,448 SF of sidewalk replacement/improvement
  - Cavalcade Street, Dabney St. - Blaffer St.
    - 250 LF of 36" RCP
    - 1,831 LF of 10'x5' RCB
    - 1 junction boxes
    - 8 Type "BB" inlets
    - 5 Type "C" manholes
    - 14,123 SY of 11" reinforced concrete pavement
    - 5,030 SF 6" concrete driveway replacement
    - 7,542 LF of 6" concrete curb
    - 16,445 SF of sidewalk replacement/improvement
  - Hoffman Street, makeig St. - Crane St.
    - 42 LF of 24" RCP
    - 375 LF of 54" RCP
    - 2 Type "BB" inlets
    - 2 48" manholes
    - 750 SY of 11" reinforced concrete pavement
    - 350 SF 6" concrete driveway replacement
    - 283 LF of 6" concrete curb
    - 2,850 SF of sidewalk replacement/improvement
  - Dabney Street, Crane St. - Hunting Bayou
    - 240 LF of 24" RCP
    - 4,168 LF of 10'x8' RCB
    - 6 junction boxes
    - 22Type "BB" inlets
    - 4 48" manholes
    - 13,968 SY of 11" reinforced concrete pavement
    - 4,200 SF 6" concrete driveway replacement
    - 8,966 LF of 6" concrete curb
    - 38,404 SF of sidewalk replacement/improvement
  - Rand Street, Dabney St. - Majestic St.
    - 225 LF of 24" RCP
    - 1,350 LF of 36" RCP
    - 14 Type "BB" inlets
    - 10 Type "C" manholes
    - 4,596 SY of 11" reinforced concrete pavement
    - 560 SF 6" concrete driveway replacement
    - 2,902 LF of 6" concrete curb
    - 12,859 SF of sidewalk replacement/improvement
- Replace existing Type "B" inlets with Type "BB" inlets on the following streets:
  - Octavia Street, Schweikhardt St. - Wipprecht St.
  - Engleford Street, Schweikhardt St. - Wipprecht St.
  - Salina Street, Schweikhardt St. - Wipprecht St.

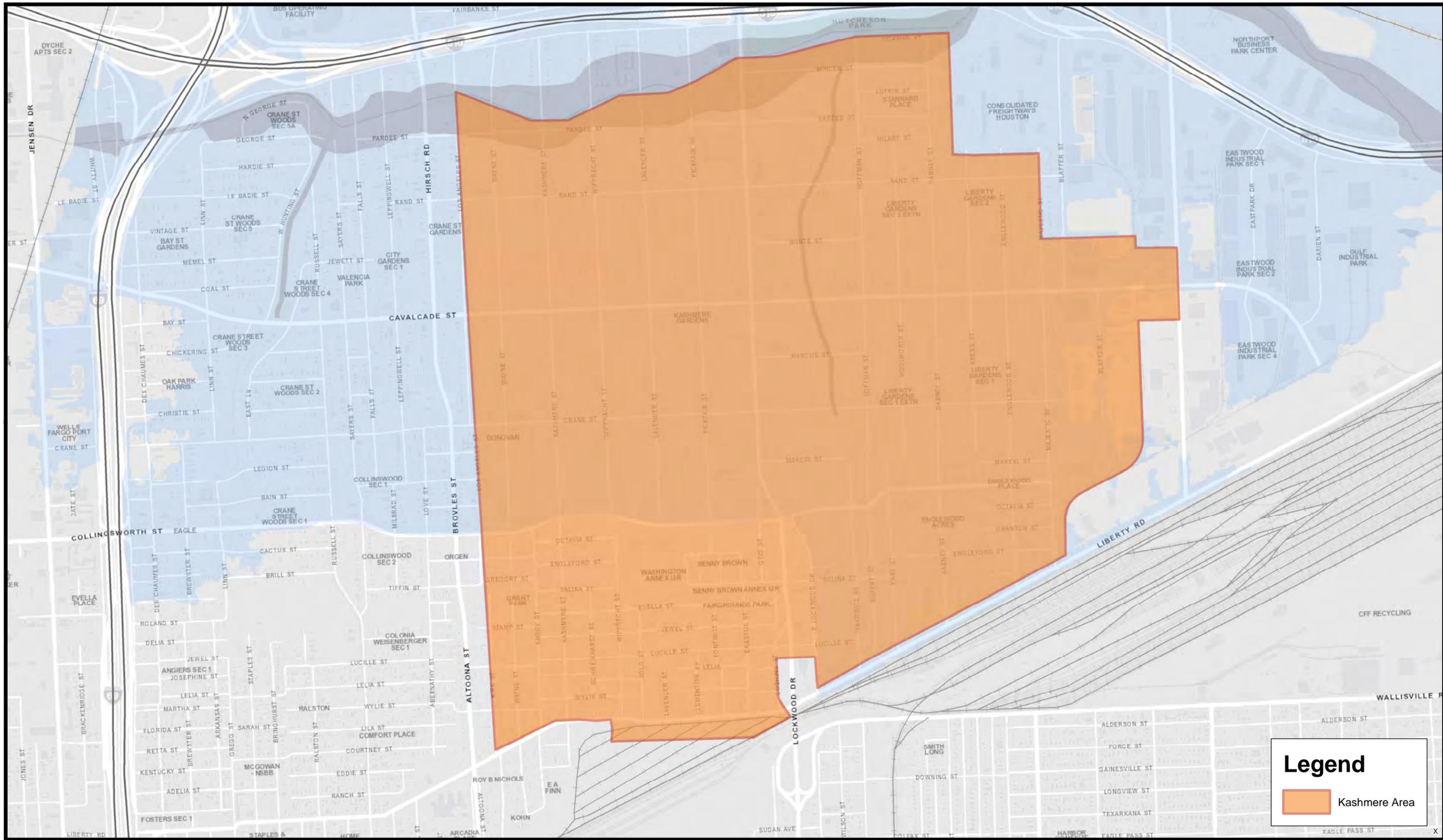
- Jewel Street, Wipprecht St. - Cushing St.
- Lucille Street, Wipprecht St. - Cushing St.
- Wylie Street, Fontinot St. - Cushing St.
- Liberty Street, Wipprecht St. - Cushing St.
- Wipprecht Street, Collingsworth St. - Octavia St.
- Solo Street, Wylie St. - Liberty St.
- Pickfair Street, Collingsworth St. - Engleford St.
- Fontinot Street, Evella St. - Lelia St.
- Erastus Street, Salina St. - Liberty St.
- Desilt and improve existing roadside ditches, replace culverts, and repair disturbed driveways on the following streets:
  - Schweikhardt Street, Lelia St. - Octavia St.
  - Octavia Street, Schweikhardt St. - Wipprecht St.
  - Engleford Street, Schweikhardt St. - Wipprecht St.
  - Engleford Street, 3rd St. - Erastus St.
  - Salina Street, Lockwood Dr. - Rupert St.
  - Lucille Street, Cushing St. - Rupert St.
  - Sakowitz Street, Liberty Rd. - Makeig St.
  - Makeig Street, Lockwood Dr. - Majestic St.
  - Hoffman Street, Collingsworth St. - Hunting Bayou
  - Rupert Street, Liberty Rd. - Collingsworth St.
  - Easy Street, Liberty Rd. - Makeig St.
  - Woolworth Street, Makeig St. - Hilary St.
  - Dabney Street, Liberty Rd. - Crane St.
  - Englewood Street, Liberty Rd. - Rand St.
  - Majestic Street, Liberty Rd. - Rand St.
  - Salina Street, west of Englewood St.
  - Granton Street, Englewood St. - Majestic St.
  - Octavia Street, Englewood St. - Majestic St.
  - Makeig Street, Majestic St. - Kress St.
  - Marcus Street, Lockwood Dr. - Hoffman St.
  - Bunte Street, Lockwood Dr. - Hoffman St.
  - Rand Street, Lockwood Dr. - Dabney St.
  - Hilary Street, Hoffman St. - Dabney St.
  - Pardee Street, Lockwood Dr. - Dabney St.
  - Lufkin Street, Hoffman St. - Dabney St.
  - Minden Street, Channel H110-00-00 to Dabney St.
- Construct the following dry-bottom detention facility with green space, pedestrian trail, and amenities to contribute to the overall required mitigation volume of 55 acre-feet:
  - Detention Basin A, 21.72 acre-feet (8 feet deep)
  - Detention Pond C, 4.05 acre-feet (7 feet deep)
  - Detention Pond F, 4.38 acre-feet (8 feet deep)
  - Detention Pond K, 2.37 acre-feet (10 feet deep)

- Detention Pond M, 3.78 acre-feet (5 feet deep)
- Detention Pond N, 4.99 acre-feet (7 feet deep)
- Detention Pond Q, 10.30 acre-feet (11 feet deep)
- Detention Pond R, 13.35 acre-feet (10 feet deep)
- Install green stormwater infrastructure on the following streets:
  - Cavalcade Street, Pickfair St. - H110-00-00
    - 1,555 LF of structured rain gardens
    - 1,111 SY of landscape improvements
    - 17 concrete drive replacements with culverts
    - 1,037 SY of sidewalk replacement
    - 4 ADA ramps
  - Lockwood Drive, Liberty Rd. - Hunting Bayou
    - 10,000 LF of structured rain gardens
    - 124 concrete drive replacements with culverts
  - Crane Street, Hirsch St. - Lockwood Dr.
    - 4,898 LF of ditch improvements
    - 8,980 SY of landscape improvements
    - 43 concrete drive replacements with culverts
    - 2,060 SY of sidewalk replacement
    - 12 ADA ramps
  - Los Angeles Street, Collingsworth St. - IH-610
    - 8,724 LF of ditch improvements
    - 20,356 SY of landscape improvements
    - 95 concrete drive replacements with culverts
    - 1,483 SY of sidewalk replacement
    - 22 ADA ramps
  - Wayne Street, Liberty Rd. - IH-610
    - 12,230 LF of ditch improvements
    - 24,460 SY of landscape improvements
    - 124 concrete drive replacements with culverts
    - 2,698 SY of sidewalk replacement
    - 40 ADA ramps
  - Kashmere Street, Liberty Rd. - IH-610
    - 11,944 LF of ditch improvements
    - 26,542 SY of landscape improvements
    - 163 concrete drive replacements with culverts
    - 1,031 SY of sidewalk replacement
    - 52 ADA ramps

# MAPPING

## *Section 2 of 3: Mapping*



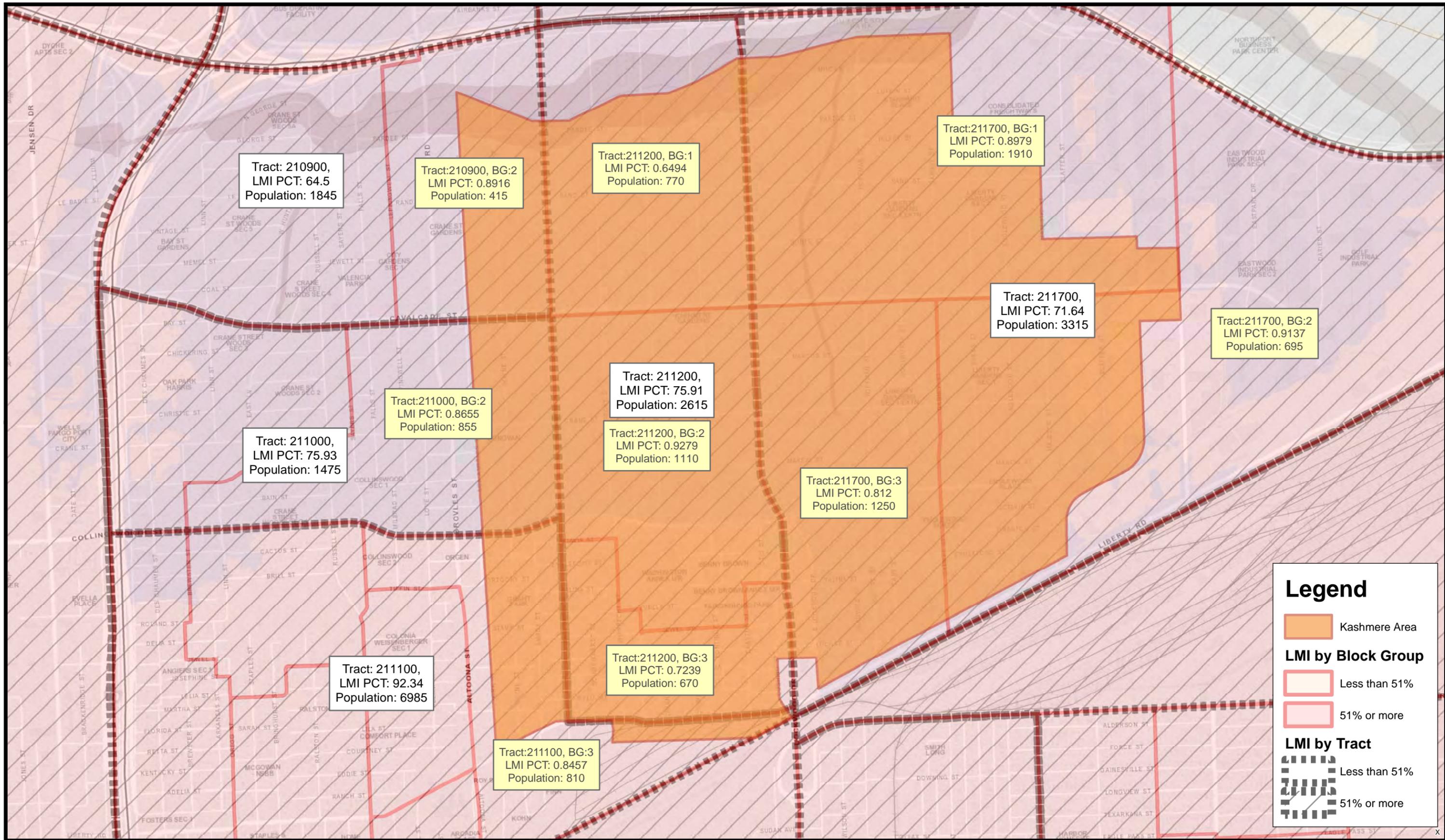


**Legend**

Kashmere Area



Location Map: Latitude 29.797898, Longitude -95.31633



Beneficiary Map



# BUDGET & SOURCES OF FUNDING

*Section 3 of 3: Budget and Sources of Funding*



**KASHMERE GARDENS**

<b>Grand Total</b>	<b>\$94,235,560.10</b>
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**FUNDING SOURCES**

<b>BUDGET CATEGORIES</b>	<b>Estimated Cost</b>	<b>Local</b>	<b>CDBG-MIT</b>
<b>Construction</b>	\$ 71,346,897.72	\$ 713,468.98	\$ 70,633,428.74
<b>Engineering</b>	\$ 10,702,034.66	\$ 107,020.35	\$ 10,595,014.31
<b>Acquisition</b>	\$ 3,625,000.00	\$ 36,250.00	\$ 3,588,750.00
<b>Environmental</b>	\$ 4,280,813.86	\$ 42,808.14	\$ 4,238,005.72
<b>Administration</b>	\$ 4,280,813.86	\$ 42,808.14	\$ 4,238,005.72

<b>TOTAL</b>	<b>\$ 94,235,560.10</b>	<b>\$ 942,355.60</b>	<b>\$ 93,293,204.50</b>
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## CDBG-MIT: Budget Justification of Retail Costs (Former Table 2)

Cost Verification Controls must be in place to assure that construction costs are reasonable and consistent with market costs at the time and place of construction.

<b>Applicant/Subrecipient:</b>	City of Houston					
<b>Site/Activity Title:</b>	City of Houston Kashmere Gardens Drainage Improvements - Drainage Improvements					
<b>Eligible Activity:</b>	Flood control and drainage improvements					
<b>Materials/Facilities/Services</b>	<b>\$/Unit</b>	<b>Unit</b>	<b>Quantity</b>	<b>Construction</b>	<b>Acquisition</b>	<b>Total</b>
<b>Wipprecht Street (Collingsworth Street to Hunting Bayou - P1)</b>						
Mobilization	\$ 800,000.00	LS	1	\$ 800,000.00	\$ -	\$ 800,000.00
Traffic Control & Regulation	\$ 350,000.00	LS	1	\$ 350,000.00	\$ -	\$ 350,000.00
SWPPP	\$ 120,000.00	LS	1	\$ 120,000.00	\$ -	\$ 120,000.00
Tree Mitigation	\$ 65,000.00	LS	1	\$ 65,000.00	\$ -	\$ 65,000.00
Adjusting Manholes, inlets, and valve boxes to grade	\$ 750.00	EA	14	\$ 10,500.00	\$ -	\$ 10,500.00
Service stubs or reconnections with or without stack on sanitary sewer	\$ 70.00	LF	1855	\$ 129,850.00	\$ -	\$ 129,850.00
48-Inch Diameter Manhole for RCB	\$ 4,200.00	EA	16	\$ 67,200.00	\$ -	\$ 67,200.00
Remove and Dispose Manholes all Sizes/Depth	\$ 900.00	EA	11	\$ 9,900.00	\$ -	\$ 9,900.00
Adjust Manhole Frame and Cover to New Grade	\$ 750.00	EA	2	\$ 1,500.00	\$ -	\$ 1,500.00
Remove and Dispose Inlets all Sizes/Depth	\$ 600.00	EA	16	\$ 9,600.00	\$ -	\$ 9,600.00
Remove and Dispose Culvert 12" to 18"	\$ 12.00	LF	555	\$ 6,657.60	\$ -	\$ 6,657.60
Remove and Dispose Storm Pipe 24-Inch Diameter	\$ 12.00	LF	851	\$ 10,212.00	\$ -	\$ 10,212.00
Remove and Dispose Storm Pipe 30-Inch Diameter	\$ 14.00	LF	406	\$ 5,684.00	\$ -	\$ 5,684.00
Remove and Dispose Storm Pipe 36-Inch Diameter	\$ 16.00	LF	1720	\$ 27,520.00	\$ -	\$ 27,520.00
Remove and Dispose Storm Pipe 42-Inch Diameter	\$ 18.00	LF	303	\$ 5,454.00	\$ -	\$ 5,454.00
Trench Safety System for Storm Sewer Trench Excavation	\$ 5.00	LF	5042	\$ 25,210.00	\$ -	\$ 25,210.00
Junction Box	\$ 18,000.00	EA	4	\$ 72,000.00	\$ -	\$ 72,000.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	482	\$ 40,970.00	\$ -	\$ 40,970.00
12' x 8' RCB	\$ 1,220.00	LF	4560	\$ 5,563,200.00	\$ -	\$ 5,563,200.00
Type "BB" Inlet	\$ 3,800.00	EA	32	\$ 121,600.00	\$ -	\$ 121,600.00
Remove/Dispose Pavement with Base 12 inch Thick	\$ 7.00	SY	15763	\$ 110,344.11	\$ -	\$ 110,344.11
Excavation & Haul off	\$ 15.00	CY	6800	\$ 102,000.00	\$ -	\$ 102,000.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	15763	\$ 63,053.78	\$ -	\$ 63,053.78
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	284	\$ 42,561.30	\$ -	\$ 42,561.30
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	15763	\$ 1,103,441.11	\$ -	\$ 1,103,441.11
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	5500	\$ 55,000.00	\$ -	\$ 55,000.00
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	9795	\$ 176,310.00	\$ -	\$ 176,310.00
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	39278	\$ 255,307.00	\$ -	\$ 255,307.00
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	120	\$ 2,400.00	\$ -	\$ 2,400.00
8-Inch Diameter Water Line by Open-Cut with Restrained Joints	\$ 110.00	LF	61	\$ 6,710.00	\$ -	\$ 6,710.00
6-Inch Diameter Water Line by Open-Cut with Restrained Joints	\$ 80.00	LF	67	\$ 5,360.00	\$ -	\$ 5,360.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	54	\$ 48,600.00	\$ -	\$ 48,600.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	50	\$ 62,500.00	\$ -	\$ 62,500.00
<b>Marcus Street (Lockwood Drive to Channel H110-00-00 - P2)</b>						

Mobilization	\$ 100,000.00	LS	1	\$ 100,000.00	\$ -	\$ 100,000.00
Traffic Control & Regulation	\$ 45,000.00	LS	1	\$ 45,000.00	\$ -	\$ 45,000.00
SWPPP	\$ 15,000.00	LS	1	\$ 15,000.00	\$ -	\$ 15,000.00
Tree Mitigation	\$ 8,000.00	LS	1	\$ 8,000.00	\$ -	\$ 8,000.00
Adjusting Manholes, inlets, and valve boxes to grade	\$ 750.00	EA	1	\$ 750.00	\$ -	\$ 750.00
Service stubs or reconnections with or without stack on sanitary sewer	\$ 70.00	LF	180	\$ 12,600.00	\$ -	\$ 12,600.00
Type C Manhole for 48-Inch Diameter Sewers	\$ 15,000.00	EA	1	\$ 15,000.00	\$ -	\$ 15,000.00
Junction Box	\$ 18,000.00	EA	1	\$ 18,000.00	\$ -	\$ 18,000.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	30	\$ 2,550.00	\$ -	\$ 2,550.00
6' x 4' RCB	\$ 580.00	LF	1048	\$ 607,840.00	\$ -	\$ 607,840.00
Type "BB" Inlet	\$ 3,800.00	EA	2	\$ 7,600.00	\$ -	\$ 7,600.00
Remove/Dispose Conc Driveway 6-inch Thick/More	\$ 3.00	SY	472	\$ 1,416.63	\$ -	\$ 1,416.63
Remove/Dispose Pavement with Base 12 inch Thick	\$ 7.00	SY	2044	\$ 14,308.17	\$ -	\$ 14,308.17
Excavation & Haul off	\$ 15.00	CY	1150	\$ 17,250.00	\$ -	\$ 17,250.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	2044	\$ 8,176.10	\$ -	\$ 8,176.10
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	37	\$ 5,518.87	\$ -	\$ 5,518.87
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	2044	\$ 143,081.70	\$ -	\$ 143,081.70
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	4250	\$ 42,498.89	\$ -	\$ 42,498.89
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	1510	\$ 27,179.42	\$ -	\$ 27,179.42
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	7450	\$ 48,426.96	\$ -	\$ 48,426.96
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	80	\$ 1,600.00	\$ -	\$ 1,600.00
8-Inch Diameter Water Line by Open-Cut with Restrained Joints	\$ 110.00	LF	88	\$ 9,680.00	\$ -	\$ 9,680.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	7	\$ 6,300.00	\$ -	\$ 6,300.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	7	\$ 8,750.00	\$ -	\$ 8,750.00
Fire Hydrant Assembly, All Depths, Including 6-Inch Diameter Gate Valve and Box	\$ 10,000.00	EA	1	\$ 10,000.00	\$ -	\$ 10,000.00
<b>Lockwood Drive (Crane Street to Marcus Street - P2)</b>						
Mobilization	\$ 320,000.00	LS	1	\$ 320,000.00	\$ -	\$ 320,000.00
Traffic Control & Regulation	\$ 180,000.00	LS	1	\$ 180,000.00	\$ -	\$ 180,000.00
SWPPP	\$ 65,000.00	LS	1	\$ 65,000.00	\$ -	\$ 65,000.00
Tree Mitigation	\$ 36,000.00	LS	1	\$ 36,000.00	\$ -	\$ 36,000.00
Adjusting Manholes, inlets, and valve boxes to grade	\$ 750.00	EA	12	\$ 9,000.00	\$ -	\$ 9,000.00
Type C Manhole for 48-Inch Diameter Sewers	\$ 15,000.00	EA	4	\$ 60,000.00	\$ -	\$ 60,000.00
Remove and Dispose Manholes all Sizes/Depth	\$ 900.00	EA	6	\$ 5,400.00	\$ -	\$ 5,400.00
Adjust Manhole Frame and Cover to New Grade	\$ 750.00	EA	2	\$ 1,500.00	\$ -	\$ 1,500.00
Remove and Dispose Inlets all Sizes/Depth	\$ 600.00	EA	10	\$ 6,000.00	\$ -	\$ 6,000.00
Remove and Dispose Storm Pipe 24-Inch Diameter	\$ 12.00	LF	1011	\$ 12,132.00	\$ -	\$ 12,132.00
Junction Box	\$ 18,000.00	EA	3	\$ 54,000.00	\$ -	\$ 54,000.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	820	\$ 69,700.00	\$ -	\$ 69,700.00
6' x 4' RCB	\$ 580.00	LF	2338	\$ 1,356,040.00	\$ -	\$ 1,356,040.00
Type "BB" Inlet	\$ 3,800.00	EA	16	\$ 60,800.00	\$ -	\$ 60,800.00
Remove/Dispose Conc Driveway 6-inch Thick/More	\$ 3.00	SY	881	\$ 2,643.51	\$ -	\$ 2,643.51
Remove/Dispose Pavement with Base 12 inch Thick	\$ 7.00	SY	13500	\$ 94,499.84	\$ -	\$ 94,499.84

Excavation & Haul off	\$ 15.00	CY	1250	\$ 18,750.00	\$ -	\$ 18,750.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	13500	\$ 53,999.91	\$ -	\$ 53,999.91
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	243	\$ 36,449.94	\$ -	\$ 36,449.94
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	13500	\$ 944,998.40	\$ -	\$ 944,998.40
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	7931	\$ 79,305.35	\$ -	\$ 79,305.35
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	9167	\$ 165,001.19	\$ -	\$ 165,001.19
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	17581	\$ 114,277.52	\$ -	\$ 114,277.52
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	160	\$ 3,200.00	\$ -	\$ 3,200.00
12-Inch Diameter Water Line by Open-Cut	\$ 140.00	LF	132	\$ 18,480.00	\$ -	\$ 18,480.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	18	\$ 16,200.00	\$ -	\$ 16,200.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	20	\$ 25,000.00	\$ -	\$ 25,000.00
Fire Hydrant Assembly, All Depths, Including 6-Inch Diameter Gate Valve and Box	\$ 10,000.00	EA	4	\$ 40,000.00	\$ -	\$ 40,000.00
<b>Crane Street (Pickfair Street to Lockwood Drive - P2)</b>						
Mobilization	\$ 65,000.00	LS	1	\$ 65,000.00	\$ -	\$ 65,000.00
Traffic Control & Regulation	\$ 34,000.00	LS	1	\$ 34,000.00	\$ -	\$ 34,000.00
SWPPP	\$ 11,000.00	LS	1	\$ 11,000.00	\$ -	\$ 11,000.00
Tree Mitigation	\$ 6,500.00	LS	1	\$ 6,500.00	\$ -	\$ 6,500.00
Adjusting Manholes, inlets, and valve boxes to grade	\$ 750.00	EA	1	\$ 750.00	\$ -	\$ 750.00
Service stubs or reconnections with or without stack on sanitary sewer	\$ 70.00	LF	210	\$ 14,700.00	\$ -	\$ 14,700.00
6' x 3' RCB	\$ 520.00	LF	380	\$ 197,600.00	\$ -	\$ 197,600.00
Remove/Dispose Conc Driveway 6-inch	\$ 3.00	SY	537	\$ 1,612.22	\$ -	\$ 1,612.22
Remove/Dispose Pavement with Base 12 inch Thick	\$ 7.00	SY	1309	\$ 9,160.00	\$ -	\$ 9,160.00
Excavation & Haul off	\$ 15.00	CY	655	\$ 9,825.00	\$ -	\$ 9,825.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	1664	\$ 6,656.00	\$ -	\$ 6,656.00
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	30	\$ 4,492.80	\$ -	\$ 4,492.80
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	1664	\$ 116,480.00	\$ -	\$ 116,480.00
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	4837	\$ 48,366.65	\$ -	\$ 48,366.65
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	1220	\$ 21,960.00	\$ -	\$ 21,960.00
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	6250	\$ 40,625.00	\$ -	\$ 40,625.00
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	80	\$ 1,600.00	\$ -	\$ 1,600.00
12-Inch Diameter Water Line by Open-Cut	\$ 140.00	LF	213	\$ 29,820.00	\$ -	\$ 29,820.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	5	\$ 4,500.00	\$ -	\$ 4,500.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	5	\$ 6,250.00	\$ -	\$ 6,250.00
12-Inch Diameter Wet Connection	\$ 1,600.00	EA	1	\$ 1,600.00	\$ -	\$ 1,600.00
8-Inch Diameter Wet Connection	\$ 1,200.00	EA	1	\$ 1,200.00	\$ -	\$ 1,200.00
Fire Hydrant Assembly, All Depths, Including 6-Inch Diameter Gate Valve and Box	\$ 10,000.00	EA	1	\$ 10,000.00	\$ -	\$ 10,000.00
<b>Pickfair Street (Crane Street to Collingsworth Street - P2)</b>						
Mobilization	\$ 150,000.00	LS	1	\$ 150,000.00	\$ -	\$ 150,000.00
Traffic Control & Regulation	\$ 60,000.00	LS	1	\$ 60,000.00	\$ -	\$ 60,000.00
SWPPP	\$ 25,000.00	LS	1	\$ 25,000.00	\$ -	\$ 25,000.00
Tree Mitigation	\$ 23,000.00	LS	1	\$ 23,000.00	\$ -	\$ 23,000.00
Adjusting Manholes, inlets, and valve boxes to grade	\$ 750.00	EA	2	\$ 1,500.00	\$ -	\$ 1,500.00

Service stubs or reconnections with or without stack on sanitary sewer	\$ 70.00	LF	240	\$ 16,800.00	\$ -	\$ 16,800.00
Type C Manhole for 48-Inch Diameter Sewers	\$ 15,000.00	EA	2	\$ 30,000.00	\$ -	\$ 30,000.00
Remove and Dispose Manholes all Sizes/Depth	\$ 900.00	EA	4	\$ 3,600.00	\$ -	\$ 3,600.00
Remove and Dispose Inlets all Sizes/Depth	\$ 600.00	EA	10	\$ 6,000.00	\$ -	\$ 6,000.00
Remove and Dispose Storm Pipe 24-Inch Diameter	\$ 12.00	LF	1800	\$ 21,600.00	\$ -	\$ 21,600.00
Junction Box	\$ 18,000.00	EA	5	\$ 90,000.00	\$ -	\$ 90,000.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	283	\$ 24,055.00	\$ -	\$ 24,055.00
6' x 3' RCB	\$ 520.00	LF	1218	\$ 633,360.00	\$ -	\$ 633,360.00
Type "BB" Inlet	\$ 3,800.00	EA	10	\$ 38,000.00	\$ -	\$ 38,000.00
Remove/Dispose Conc Driveway 6-inch Thick/More	\$ 3.00	SY	684	\$ 2,052.84	\$ -	\$ 2,052.84
Remove/Dispose Pavement with Base 12 inch Thick	\$ 7.00	SY	4567	\$ 31,966.67	\$ -	\$ 31,966.67
Excavation & Haul off	\$ 15.00	CY	2650	\$ 39,750.00	\$ -	\$ 39,750.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	4567	\$ 18,266.67	\$ -	\$ 18,266.67
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	82	\$ 12,330.00	\$ -	\$ 12,330.00
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	4567	\$ 319,666.67	\$ -	\$ 319,666.67
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	6159	\$ 61,585.28	\$ -	\$ 61,585.28
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	2974	\$ 53,530.63	\$ -	\$ 53,530.63
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	13448	\$ 87,411.48	\$ -	\$ 87,411.48
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	80	\$ 1,600.00	\$ -	\$ 1,600.00
8-Inch Diameter Water Line by Open-Cut with Restrained Joints	\$ 110.00	LF	60	\$ 6,600.00	\$ -	\$ 6,600.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	10	\$ 9,000.00	\$ -	\$ 9,000.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	10	\$ 12,500.00	\$ -	\$ 12,500.00
8-Inch Diameter Wet Connection	\$ 1,200.00	EA	1	\$ 1,200.00	\$ -	\$ 1,200.00
6-Inch Diameter Wet Connection	\$ 1,000.00	EA	1	\$ 1,000.00	\$ -	\$ 1,000.00
Fire Hydrant Assembly, All Depths, Including 6-Inch Diameter Gate Valve and Box	\$ 10,000.00	EA	2	\$ 20,000.00	\$ -	\$ 20,000.00
<b>Calvacade Street (Dabney Street to Blaffer Street - P3)</b>						
Mobilization	\$ 450,000.00	LS	1	\$ 450,000.00	\$ -	\$ 450,000.00
Aluminum Signs (Ground Mounted)-Furnish & Install	\$ 150,000.00	LS	1	\$ 150,000.00	\$ -	\$ 150,000.00
SWPPP	\$ 85,000.00	LS	1	\$ 85,000.00	\$ -	\$ 85,000.00
Tree Mitigation	\$ 25,000.00	LS	1	\$ 25,000.00	\$ -	\$ 25,000.00
Adjusting Manholes, inlets, and valve boxes to grade	\$ 750.00	EA	14	\$ 10,500.00	\$ -	\$ 10,500.00
Trench Safety System for Sanitary Sewer Trench Excavation	\$ 2.00	LF	3236	\$ 6,472.00	\$ -	\$ 6,472.00
Service stubs or reconnections with or without stack on sanitary sewer	\$ 70.00	LF	992	\$ 69,440.00	\$ -	\$ 69,440.00
Type C Manhole On Box Culvert	\$ 4,200.00	EA	5	\$ 21,000.00	\$ -	\$ 21,000.00
Remove and Dispose Storm Pipe 24-Inch Diameter	\$ 12.00	LF	250	\$ 3,000.00	\$ -	\$ 3,000.00
Junction Box 10 FTx 10 FT	\$ 18,000.00	EA	1	\$ 18,000.00	\$ -	\$ 18,000.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	250	\$ 21,250.00	\$ -	\$ 21,250.00
10' x 5' RCB	\$ 780.00	LF	1831	\$ 1,428,180.00	\$ -	\$ 1,428,180.00
Type "BB" Inlet	\$ 3,800.00	EA	8	\$ 30,400.00	\$ -	\$ 30,400.00
Remove/Dispose Pavement with Base 12 inch Thick	\$ 7.00	SY	14123	\$ 98,861.00	\$ -	\$ 98,861.00
Excavation & Haul off	\$ 15.00	CY	7355	\$ 110,325.00	\$ -	\$ 110,325.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	14123	\$ 56,492.00	\$ -	\$ 56,492.00

Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	254	\$ 38,132.10	\$ -	\$ 38,132.10
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	14123	\$ 988,610.00	\$ -	\$ 988,610.00
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	5030	\$ 50,300.00	\$ -	\$ 50,300.00
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	7542	\$ 135,756.00	\$ -	\$ 135,756.00
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	16445	\$ 106,892.50	\$ -	\$ 106,892.50
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	120	\$ 2,400.00	\$ -	\$ 2,400.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	18	\$ 16,200.00	\$ -	\$ 16,200.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	20	\$ 25,000.00	\$ -	\$ 25,000.00
<b>Hoffman Street (Crane Street to Pond C - P4)</b>						
Mobilization	\$ 22,000.00	LS	1	\$ 22,000.00	\$ -	\$ 22,000.00
Traffic Control & Regulation	\$ 10,000.00	LS	1	\$ 10,000.00	\$ -	\$ 10,000.00
SWPPP	\$ 8,500.00	LS	1	\$ 8,500.00	\$ -	\$ 8,500.00
Tree Mitigation	\$ 5,600.00	LS	1	\$ 5,600.00	\$ -	\$ 5,600.00
Service stubs or reconnections with or without stack on sanitary sewer	\$ 70.00	LF	85	\$ 5,950.00	\$ -	\$ 5,950.00
48-Inch Diameter Manhole for RCB	\$ 4,200.00	EA	2	\$ 8,400.00	\$ -	\$ 8,400.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	42	\$ 3,570.00	\$ -	\$ 3,570.00
54-inch Diameter Storm Sewer by open cut	\$ 320.00	LF	375	\$ 120,000.00	\$ -	\$ 120,000.00
Type "BB" Inlet	\$ 3,800.00	EA	2	\$ 7,600.00	\$ -	\$ 7,600.00
Remove/Dispose reinforced concrete with or without base including existing Metro bus pad	\$ 7.00	SY	750	\$ 5,250.00	\$ -	\$ 5,250.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	750	\$ 3,000.00	\$ -	\$ 3,000.00
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	14	\$ 2,025.00	\$ -	\$ 2,025.00
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	750	\$ 52,500.00	\$ -	\$ 52,500.00
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	350	\$ 3,500.00	\$ -	\$ 3,500.00
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	283	\$ 5,094.00	\$ -	\$ 5,094.00
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	2850	\$ 18,525.00	\$ -	\$ 18,525.00
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	40	\$ 800.00	\$ -	\$ 800.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	4	\$ 3,600.00	\$ -	\$ 3,600.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	4	\$ 5,000.00	\$ -	\$ 5,000.00
<b>Dabney Street (Crane Street to Hunting Bayou - P5)</b>						
Mobilization	\$ 690,000.00	LS	1	\$ 690,000.00	\$ -	\$ 690,000.00
Traffic Control & Regulation	\$ 225,000.00	LS	1	\$ 225,000.00	\$ -	\$ 225,000.00
SWPPP	\$ 98,000.00	LS	1	\$ 98,000.00	\$ -	\$ 98,000.00
Tree Mitigation	\$ 60,000.00	LS	1	\$ 60,000.00	\$ -	\$ 60,000.00
Adjusting Manholes, inlets, and valve boxes to grade	\$ 750.00	EA	10	\$ 7,500.00	\$ -	\$ 7,500.00
Service stubs or reconnections with or without stack on sanitary sewer	\$ 70.00	LF	1596	\$ 111,720.00	\$ -	\$ 111,720.00
48-Inch Diameter Manhole for RCB	\$ 4,200.00	EA	4	\$ 16,800.00	\$ -	\$ 16,800.00
Trench Safety System for Storm Sewer Trench Excavation	\$ 5.00	LF	4168	\$ 20,840.00	\$ -	\$ 20,840.00
Junction Box 10 FTx 10 FT	\$ 18,000.00	EA	6	\$ 108,000.00	\$ -	\$ 108,000.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	240	\$ 20,400.00	\$ -	\$ 20,400.00
10' x 8' RCB	\$ 1,150.00	LF	4168	\$ 4,793,200.00	\$ -	\$ 4,793,200.00
Type "BB" Inlet	\$ 3,800.00	EA	22	\$ 83,600.00	\$ -	\$ 83,600.00
Remove/Dispose Pavement with Base 12 inch Thick	\$ 7.00	SY	13968	\$ 97,772.89	\$ -	\$ 97,772.89

Excavation & Haul off	\$ 15.00	CY	6580	\$ 98,700.00	\$ -	\$ 98,700.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	13968	\$ 55,870.22	\$ -	\$ 55,870.22
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	251	\$ 37,712.40	\$ -	\$ 37,712.40
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	13968	\$ 977,728.89	\$ -	\$ 977,728.89
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	4200	\$ 42,000.00	\$ -	\$ 42,000.00
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	8966	\$ 161,388.00	\$ -	\$ 161,388.00
Sidewalk 5-1/2-Inch Thick	\$ 6.50	SF	38404	\$ 249,626.00	\$ -	\$ 249,626.00
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	120	\$ 2,400.00	\$ -	\$ 2,400.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	40	\$ 36,000.00	\$ -	\$ 36,000.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	48	\$ 60,000.00	\$ -	\$ 60,000.00
<b>Rand Street (Dabney Street to Majestic Street - P6)</b>						
Mobilization	\$ 125,000.00	LS	1	\$ 125,000.00	\$ -	\$ 125,000.00
Traffic Control & Regulation	\$ 45,000.00	LS	1	\$ 45,000.00	\$ -	\$ 45,000.00
SWPPP	\$ 35,000.00	LS	1	\$ 35,000.00	\$ -	\$ 35,000.00
Tree Mitigation	\$ 15,000.00	LS	1	\$ 15,000.00	\$ -	\$ 15,000.00
Service stubs or reconNECTIONS with or without stack on sanitary sewer	\$ 70.00	LF	126	\$ 8,820.00	\$ -	\$ 8,820.00
Type C Manhole for 36-Inch Diameter Sewers	\$ 4,200.00	EA	10	\$ 42,000.00	\$ -	\$ 42,000.00
24-inch Diameter Storm Sewer by open cut	\$ 85.00	LF	225	\$ 19,125.00	\$ -	\$ 19,125.00
36-inch Diameter Storm Sewer by open cut	\$ 160.00	LF	1350	\$ 216,000.00	\$ -	\$ 216,000.00
Type "BB" Inlet	\$ 3,800.00	EA	14	\$ 53,200.00	\$ -	\$ 53,200.00
Remove/Dispose Pavement with Base	\$ 7.00	SY	4596	\$ 32,169.67	\$ -	\$ 32,169.67
Excavation & Haul	\$ 18.00	CY	1532	\$ 27,574.00	\$ -	\$ 27,574.00
Lime Stabilized Subgrade 8-inch Thick	\$ 4.00	SY	4596	\$ 18,382.67	\$ -	\$ 18,382.67
Lime for Lime Stabilized Subgrade (Dry Weight)	\$ 150.00	TON	83	\$ 12,408.30	\$ -	\$ 12,408.30
Reinforced Concrete Pavement 11-inch Thick	\$ 70.00	SY	4596	\$ 321,696.67	\$ -	\$ 321,696.67
Concrete Driveways Including Excavation 6-inch Thick	\$ 10.00	SF	560	\$ 5,600.00	\$ -	\$ 5,600.00
6-Inch Concrete Curb (Monolithic)	\$ 18.00	LF	2902	\$ 52,236.00	\$ -	\$ 52,236.00
Sidewalk 4-1/2-Inch Thick	\$ 6.50	SF	12859	\$ 83,583.50	\$ -	\$ 83,583.50
Wheelchair Ramps and Sidewalks, Complete in Place	\$ 20.00	SF	80	\$ 1,600.00	\$ -	\$ 1,600.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Short Side	\$ 900.00	EA	6	\$ 5,400.00	\$ -	\$ 5,400.00
3/4-Inch to 1-Inch Diameter Water Taps and Copper Service Line with Meter Box, Long Side	\$ 1,250.00	EA	7	\$ 8,750.00	\$ -	\$ 8,750.00
<b>Roadside Ditch Improvements</b>						
Mobilization	\$ 450,000.00	LS	1	\$ 450,000.00	\$ -	\$ 450,000.00
Traffic Control & Temporary Pavement	\$ 150,000.00	LS	1	\$ 150,000.00	\$ -	\$ 150,000.00
SWPPP	\$ 98,000.00	LS	1	\$ 98,000.00	\$ -	\$ 98,000.00
Desilt Roadside Ditch	\$ 12.00	LF	45500	\$ 546,000.00	\$ -	\$ 546,000.00
Replace Driveway Culvert & Pavement	\$ 6,500.00	EA	546	\$ 3,549,000.00	\$ -	\$ 3,549,000.00
<b>Inlet Replacement</b>						
Mobilization	\$ 55,000.00	LS	1	\$ 55,000.00	\$ -	\$ 55,000.00
Traffic Control & Temporary Pavement	\$ 35,000.00	LS	1	\$ 35,000.00	\$ -	\$ 35,000.00
SWPPP	\$ 40,000.00	LS	1	\$ 40,000.00	\$ -	\$ 40,000.00
Replace B inlets with BB inlets	\$ 3,800.00	EA	65	\$ 247,000.00	\$ -	\$ 247,000.00
Sawcut Pavement/Curb and Replace	\$ 8,500.00	EA	65	\$ 552,500.00	\$ -	\$ 552,500.00
<b>DETENTION POND Q</b>						
Mobilization	\$ 50,000.00	LS	1	\$ 50,000.00	\$ -	\$ 50,000.00

Traffic Control & Temporary Pavement	\$ 5,000.00	LS		1	\$ 5,000.00	\$ -	\$ 5,000.00
SWPPP	\$ 8,000.00	LS		1	\$ 8,000.00	\$ -	\$ 8,000.00
Tree Mitigation	\$ 2,000.00	LS		1	\$ 2,000.00	\$ -	\$ 2,000.00
Excavation and Haul	\$ 25.00	CY		16617	\$ 415,433.33	\$ -	\$ 415,433.33
Backslope Drain & Swale	\$ 41,543.33	LS		1	\$ 41,543.33	\$ -	\$ 41,543.33
Outfall & Extreme Event Overflow	\$ 62,315.00	LS		1	\$ 62,315.00	\$ -	\$ 62,315.00
Intake Pipe	\$ 124,630.00	LS		1	\$ 124,630.00	\$ -	\$ 124,630.00
Hydromulch Seeding	\$ 5,000.00	AC		3	\$ 12,500.00	\$ -	\$ 12,500.00
Sodding	\$ 5.00	SY		1500	\$ 7,500.00	\$ -	\$ 7,500.00
Concrete Pilot Channel	\$ 35,000.00	LS		1	\$ 35,000.00	\$ -	\$ 35,000.00
<b>DETENTION POND K</b>							
Mobilization	\$ 25,000.00	LS		1	\$ 25,000.00	\$ -	\$ 25,000.00
Traffic Control & Temporary Pavement	\$ 5,000.00	LS		1	\$ 5,000.00	\$ -	\$ 5,000.00
SWPPP	\$ 8,000.00	LS		1	\$ 8,000.00	\$ -	\$ 8,000.00
Tree Mitigation	\$ 2,000.00	LS		1	\$ 2,000.00	\$ -	\$ 2,000.00
Excavation and Haul	\$ 25.00	CY		3824	\$ 95,590.00	\$ -	\$ 95,590.00
Backslope Drain & Swale	\$ 9,559.00	LS		1	\$ 9,559.00	\$ -	\$ 9,559.00
Outfall & Extreme Event Overflow	\$ 14,338.50	LS		1	\$ 14,338.50	\$ -	\$ 14,338.50
Intake Pipe	\$ 28,677.00	LS		1	\$ 28,677.00	\$ -	\$ 28,677.00
Hydromulch Seeding	\$ 5,000.00	AC		1	\$ 5,000.00	\$ -	\$ 5,000.00
Sodding	\$ 5.00	SY		500	\$ 2,500.00	\$ -	\$ 2,500.00
Concrete Pilot Channel	\$ 20,000.00	LS		1	\$ 20,000.00	\$ -	\$ 20,000.00
<b>DETENTION POND R</b>							
Mobilization	\$ 35,000.00	LS		1	\$ 35,000.00	\$ -	\$ 35,000.00
Traffic Control & Temporary Pavement	\$ 5,000.00	LS		1	\$ 5,000.00	\$ -	\$ 5,000.00
SWPPP	\$ 8,000.00	LS		1	\$ 8,000.00	\$ -	\$ 8,000.00
Tree Mitigation	\$ 2,000.00	LS		1	\$ 2,000.00	\$ -	\$ 2,000.00
Excavation and Haul	\$ 25.00	CY		7663	\$ 191,583.33	\$ -	\$ 191,583.33
Backslope Drain & Swale	\$ 19,158.33	LS		1	\$ 19,158.33	\$ -	\$ 19,158.33
Outfall & Extreme Event Overflow	\$ 28,737.50	LS		1	\$ 28,737.50	\$ -	\$ 28,737.50
Intake Pipe	\$ 57,475.00	LS		1	\$ 57,475.00	\$ -	\$ 57,475.00
Hydromulch Seeding	\$ 5,000.00	AC		2	\$ 10,000.00	\$ -	\$ 10,000.00
Sodding	\$ 5.00	SY		800	\$ 4,000.00	\$ -	\$ 4,000.00
Concrete Pilot Channel	\$ 25,000.00	LS		1	\$ 25,000.00	\$ -	\$ 25,000.00
<b>DETENTION POND N</b>							
Mobilization	\$ 38,000.00	LS		1	\$ 38,000.00	\$ -	\$ 38,000.00
Traffic Control & Temporary Pavement	\$ 5,000.00	LS		1	\$ 5,000.00	\$ -	\$ 5,000.00
SWPPP	\$ 8,000.00	LS		1	\$ 8,000.00	\$ -	\$ 8,000.00
Tree Mitigation	\$ 2,000.00	LS		1	\$ 2,000.00	\$ -	\$ 2,000.00
Excavation and Haul	\$ 25.00	CY		8051	\$ 201,263.33	\$ -	\$ 201,263.33
Backslope Drain & Swale	\$ 20,126.33	LS		1	\$ 20,126.33	\$ -	\$ 20,126.33
Outfall & Extreme Event Overflow	\$ 30,189.50	LS		1	\$ 30,189.50	\$ -	\$ 30,189.50
Intake Pipe	\$ 60,379.00	LS		1	\$ 60,379.00	\$ -	\$ 60,379.00
Hydromulch Seeding	\$ 5,000.00	AC		2	\$ 10,000.00	\$ -	\$ 10,000.00
Sodding	\$ 5.00	SY		650	\$ 3,250.00	\$ -	\$ 3,250.00
Concrete Pilot Channel	\$ 15,000.00	LS		1	\$ 15,000.00	\$ -	\$ 15,000.00
<b>DETENTION POND F</b>							
Mobilization	\$ 32,000.00	LS		1	\$ 32,000.00	\$ -	\$ 32,000.00
Traffic Control & Temporary Pavement	\$ 5,000.00	LS		1	\$ 5,000.00	\$ -	\$ 5,000.00
SWPPP	\$ 8,000.00	LS		1	\$ 8,000.00	\$ -	\$ 8,000.00
Tree Mitigation	\$ 2,000.00	LS		1	\$ 2,000.00	\$ -	\$ 2,000.00
Excavation and Haul	\$ 25.00	CY		7066	\$ 176,660.00	\$ -	\$ 176,660.00
Backslope Drain & Swale	\$ 17,666.00	LS		1	\$ 17,666.00	\$ -	\$ 17,666.00
Outfall & Extreme Event Overflow	\$ 26,499.00	LS		1	\$ 26,499.00	\$ -	\$ 26,499.00
Intake Pipe	\$ 52,998.00	LS		1	\$ 52,998.00	\$ -	\$ 52,998.00
Hydromulch Seeding	\$ 5,000.00	AC		1	\$ 7,000.00	\$ -	\$ 7,000.00
Sodding	\$ 5.00	SY		500	\$ 2,500.00	\$ -	\$ 2,500.00
Concrete Pilot Channel	\$ 12,000.00	LS		1	\$ 12,000.00	\$ -	\$ 12,000.00
<b>DETENTION POND A</b>							
Mobilization	\$ 150,000.00	LS		1	\$ 150,000.00	\$ -	\$ 150,000.00
Traffic Control & Temporary Pavement	\$ 8,000.00	LS		1	\$ 8,000.00	\$ -	\$ 8,000.00
SWPPP	\$ 15,000.00	LS		1	\$ 15,000.00	\$ -	\$ 15,000.00

Tree Mitigation	\$ 5,000.00	LS	1	\$ 5,000.00	\$ -	\$ 5,000.00				
Excavation and Haul	\$ 25.00	CY	35042	\$ 876,040.00	\$ -	\$ 876,040.00				
Backslope Drain & Swale	\$ 87,604.00	LS	1	\$ 87,604.00	\$ -	\$ 87,604.00				
Outfall & Extreme Event Overflow	\$ 131,406.00	LS	1	\$ 131,406.00	\$ -	\$ 131,406.00				
Intake Pipe	\$ 262,812.00	LS	1	\$ 262,812.00	\$ -	\$ 262,812.00				
Hydromulch Seeding	\$ 5,000.00	AC	5	\$ 25,000.00	\$ -	\$ 25,000.00				
Sodding	\$ 5.00	SY	1800	\$ 9,000.00	\$ -	\$ 9,000.00				
Concrete Pilot Channel	\$ 35,000.00	LS	1	\$ 35,000.00	\$ -	\$ 35,000.00				
<b>DETENTION POND C</b>										
Mobilization	\$ 30,000.00	LS	1	\$ 30,000.00	\$ -	\$ 30,000.00				
Traffic Control & Temporary Pavement	\$ 5,000.00	LS	1	\$ 5,000.00	\$ -	\$ 5,000.00				
SWPPP	\$ 8,000.00	LS	1	\$ 8,000.00	\$ -	\$ 8,000.00				
Tree Mitigation	\$ 2,000.00	LS	1	\$ 2,000.00	\$ -	\$ 2,000.00				
Excavation and Haul	\$ 25.00	CY	6534	\$ 163,350.00	\$ -	\$ 163,350.00				
Backslope Drain & Swale	\$ 16,335.00	LS	1	\$ 16,335.00	\$ -	\$ 16,335.00				
Outfall & Extreme Event Overflow	\$ 24,502.50	LS	1	\$ 24,502.50	\$ -	\$ 24,502.50				
Intake Pipe	\$ 49,005.00	LS	1	\$ 49,005.00	\$ -	\$ 49,005.00				
Hydromulch Seeding	\$ 5,000.00	AC	1	\$ 6,500.00	\$ -	\$ 6,500.00				
Sodding	\$ 5.00	SY	450	\$ 2,250.00	\$ -	\$ 2,250.00				
Concrete Pilot Channel	\$ 12,000.00	LS	1	\$ 12,000.00	\$ -	\$ 12,000.00				
<b>DETENTION POND M</b>										
Mobilization	\$ 280,000.00	LS	1	\$ 280,000.00	\$ -	\$ 280,000.00				
Traffic Control & Temporary Pavement	\$ 5,000.00	LS	1	\$ 5,000.00	\$ -	\$ 5,000.00				
SWPPP	\$ 8,000.00	LS	1	\$ 8,000.00	\$ -	\$ 8,000.00				
Tree Mitigation	\$ 2,000.00	LS	1	\$ 2,000.00	\$ -	\$ 2,000.00				
Excavation and Haul	\$ 25.00	CY	6098	\$ 152,460.00	\$ -	\$ 152,460.00				
Backslope Drain & Swale	\$ 15,246.00	LS	1	\$ 15,246.00	\$ -	\$ 15,246.00				
Outfall & Extreme Event Overflow	\$ 22,869.00	LS	1	\$ 22,869.00	\$ -	\$ 22,869.00				
Intake Pipe	\$ 45,738.00	LS	1	\$ 45,738.00	\$ -	\$ 45,738.00				
Hydromulch Seeding	\$ 5,000.00	AC	1	\$ 6,500.00	\$ -	\$ 6,500.00				
Sodding	\$ 5.00	SY	450	\$ 2,250.00	\$ -	\$ 2,250.00				
Concrete Pilot Channel	\$ 12,000.00	LS	1	\$ 12,000.00	\$ -	\$ 12,000.00				
<b>Park &amp; Trail</b>										
Mobilization	\$ 120,000.00	LS	1	\$ 120,000.00	\$ -	\$ 120,000.00				
Traffic Control & Temporary Pavement	\$ 5,000.00	LS	1	\$ 5,000.00	\$ -	\$ 5,000.00				
SWPPP	\$ 15,000.00	LS	1	\$ 15,000.00	\$ -	\$ 15,000.00				
Tree Mitigation	\$ 65,000.00	LS	1	\$ 65,000.00	\$ -	\$ 65,000.00				
Trailhead, Bench, Trash Can, Canopy	\$ 185,000.00	EA	5	\$ 925,000.00	\$ -	\$ 925,000.00				
Trail	\$ 10.50	SF	38400	\$ 403,200.00	\$ -	\$ 403,200.00				
<b>SUB TOTAL</b>				\$ 42,199,190.0	\$ -	\$ 42,199,190.00				
<b>1. Identify and explain the annual projected operation and maintenance costs associated with the proposed activities.</b>										
<b>2. Identify and explain any special engineering activities.</b>										
<b>Risk Assessment Mark-Ups</b>										
Construction Contingency (30%)	\$ 12,659,757.00	EA	1	\$ 12,659,757.00	\$ -	\$ 12,659,757.00				
<b>SUB TOTAL</b>				\$ 12,659,757.0	\$ -	\$ 12,659,757.00				
<b>Soft Costs</b>										
Engineering (Design and Bidding) (15%)	\$ 8,228,842.05	EA	1	\$ 8,228,842.05	\$ -	\$ 8,228,842.05				
Environmental Investigation and Permitting	\$ 3,291,536.82	EA	1	\$ 3,291,536.82	\$ -	\$ 3,291,536.82				
Grant Administration (6%)	\$ 3,291,536.82	EA	1	\$ 3,291,536.82	\$ -	\$ 3,291,536.82				
<b>SUB TOTAL</b>				\$ 6,583,073.6	\$ -	\$ 14,811,915.69				
<b>TOTAL</b>				\$ 61,442,020.6	\$ -	\$ 69,670,862.69				
				<table border="1"> <tr> <td>Date:</td> <td></td> </tr> <tr> <td>Phone Number:</td> <td></td> </tr> </table>			Date:		Phone Number:	
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Signature of Registered Engineer/Architect Responsible For  
Budget Justification:



## CDBG-MIT: Budget Justification of Retail Costs (Former Table 2)

Cost Verification Controls must be in place to assure that construction costs are reasonable and consistent with market costs at the time and place of construction.

<b>Applicant/Subrecipient:</b>	City of Houston					
<b>Site/Activity Title:</b>	City of Houston Kashmere Gardens Drainage Improvements - Green Storm Water Infrastructure					
<b>Eligible Activity:</b>	Flood control and drainage improvements					
<b>Materials/Facilities/Services</b>	<b>\$/Unit</b>	<b>Unit</b>	<b>Quantity</b>	<b>Construction</b>	<b>Acquisition</b>	<b>Total</b>
<b>Cavalcade Street (Pickfair Street to H110-00-00)</b>						
Replace Driveway Culvert & Pavement	\$ 6,500.00	EA	17	\$ 110,500.00	\$ -	\$ 110,500.00
Structured Rain Garden	\$ 600.00	LF	1555	\$ 933,000.00	\$ -	\$ 933,000.00
Sidewalk	\$ 58.50	SY	1037	\$ 60,645.02	\$ -	\$ 60,645.02
ADA Ramp	\$ 2,000.00	EA	4	\$ 8,000.00	\$ -	\$ 8,000.00
Landscape Improvements	\$ 31.50	SY	1111	\$ 35,000.00	\$ -	\$ 35,000.00
<b>Lockwood Drive (Liberty Road to Hunting Bayou)</b>						
Replace Driveway Culvert & Pavement	\$ 6,500.00	EA	124	\$ 806,000.00	\$ -	\$ 806,000.00
Structured Rain Garden	\$ 600.00	LF	10000	\$ 6,000,000.00	\$ -	\$ 6,000,000.00
<b>Crane Street (Hirsch Street to Lockwood Drive)</b>						
Replace Driveway Culvert & Pavement	\$ 6,500.00	EA	43	\$ 279,500.00	\$ -	\$ 279,500.00
Ditch Improvements	\$ 15.00	LF	4898	\$ 73,470.00	\$ -	\$ 73,470.00
Sidewalk	\$ 58.50	SY	2060	\$ 120,510.00	\$ -	\$ 120,510.00
ADA Ramp	\$ 2,000.00	EA	12	\$ 24,000.00	\$ -	\$ 24,000.00
Landscape Improvements	\$ 9.00	SY	8980	\$ 80,820.00	\$ -	\$ 80,820.00
<b>Los Angeles Street (Collingsworth Street to IH-610)</b>						
Replace Driveway Culvert & Pavement	\$ 6,500.00	EA	95	\$ 617,500.00	\$ -	\$ 617,500.00
Ditch Improvements	\$ 15.00	LF	8724	\$ 130,860.00	\$ -	\$ 130,860.00
Sidewalk	\$ 58.50	SY	1483	\$ 86,755.50	\$ -	\$ 86,755.50
ADA Ramp	\$ 2,000.00	EA	22	\$ 44,000.00	\$ -	\$ 44,000.00
Landscape Improvements	\$ 9.00	SY	20356	\$ 183,204.00	\$ -	\$ 183,204.00
<b>Wayne Street (Liberty Road to IH-610)</b>						
Replace Driveway Culvert & Pavement	\$ 6,500.00	EA	124	\$ 806,000.00	\$ -	\$ 806,000.00
Ditch Improvements	\$ 15.00	LF	12230	\$ 183,450.00	\$ -	\$ 183,450.00
Sidewalk	\$ 58.50	SY	2698	\$ 157,833.00	\$ -	\$ 157,833.00
ADA Ramp	\$ 2,000.00	EA	40	\$ 80,000.00	\$ -	\$ 80,000.00
Landscape Improvements	\$ 9.00	SY	24460	\$ 220,140.00	\$ -	\$ 220,140.00
<b>Kashmere Street (Liberty Road to IH-610)</b>						
Replace Driveway Culvert & Pavement	\$ 6,500.00	EA	163	\$ 1,059,500.00	\$ -	\$ 1,059,500.00
Ditch Improvements	\$ 15.00	LF	11944	\$ 179,160.00	\$ -	\$ 179,160.00
Sidewalk	\$ 58.50	SY	1031	\$ 60,313.50	\$ -	\$ 60,313.50
ADA Ramp	\$ 2,000.00	EA	52	\$ 104,000.00	\$ -	\$ 104,000.00
Landscape Improvements	\$ 9.00	SY	26542	\$ 238,878.00	\$ -	\$ 238,878.00
<b>SUB TOTAL</b>				\$ 12,683,039.02	\$ -	\$ 12,683,039.02
<b>1. Identify and explain the annual projected operation and maintenance costs associated with the proposed activities.</b>						
<b>2. Identify and explain any special engineering activities.</b>						
<b>Risk Assessment Mark-Ups</b>						
Construction Contingency (30%)	\$ 3,804,911.70	EA	1	\$ 3,804,911.70	\$ -	\$ 3,804,911.70
Mobilization (4%)	\$ 507,321.56	EA	1	\$ 507,321.56	\$ -	\$ 507,321.56
<b>SUB TOTAL</b>				\$ 4,312,233.27	\$ -	\$ 4,312,233.27
<b>Soft Costs</b>						
Engineering (Design and Bidding) (15%)	\$ 2,473,192.61	EA	1	\$ 2,473,192.61	\$ -	\$ 2,473,192.61
Environmental Investigation and Permitting	\$ 989,277.04	EA	1	\$ 989,277.04	\$ -	\$ 989,277.04
Grant Administration (6%)	\$ 989,277.04	EA	1	\$ 989,277.04	\$ -	\$ 989,277.04
<b>SUB TOTAL</b>				\$ 4,451,746.69	\$ -	\$ 4,451,746.69

<b>TOTAL</b>				\$ 21,447,019.0	\$ -	\$ 20,939,697.42
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<b>Date:</b>	
<b>Phone Number:</b>	

Signature of Registered Engineer/Architect Responsible For  
Budget Justification:



## CDBG-MIT: Budget Justification of Retail Costs (Former Table 2)

Cost Verification Controls must be in place to assure that construction costs are reasonable and consistent with market costs at the time and place of construction.

<b>Applicant/Subrecipient:</b>	City of Houston					
<b>Site/Activity Title:</b>	City of Houston Kashmere Gardens Drainage Improvements - Acquisition					
<b>Eligible Activity:</b>	Acquisition					
<b>Materials/Facilities/Services</b>	<b>\$/Unit</b>	<b>Unit</b>	<b>Quantity</b>	<b>Construction</b>	<b>Acquisition</b>	<b>Total</b>
<b>DETENTION POND Q</b>						
Pond A	\$ -	LS	1	\$ -	\$ 1,224,000.00	\$ 1,224,000.00
Pond C	\$ -	LS	1	\$ -	\$ 818,000.00	\$ 818,000.00
Pond F	\$ -	LS	1	\$ -	\$ 773,000.00	\$ 773,000.00
Pond K	\$ -	LS	1	\$ -	\$ 130,000.00	\$ 130,000.00
Pond N	\$ -	LS	1	\$ -	\$ 680,000.00	\$ 680,000.00
Pond Q	\$ -	LS	1	\$ -	\$ -	\$ -
Pond R	\$ -	LS	1	\$ -	\$ -	\$ -
	\$ -					
<b>SUB TOTAL</b>				\$ -	\$ 3,625,000.00	\$ 3,625,000.0

**1. Identify and explain the annual projected operation and maintenance costs associated with the proposed activities.**

**2. Identify and explain any special engineering activities.**

<b>TOTAL</b>				\$ -	\$ 3,625,000.0	\$ 3,625,000.0
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<b>Date:</b>					
<b>Phone Number:</b>					