



Memorandum

Memorandum No: 22-121

Date: October 17, 2022

To: Honorable Mayor, Vice Mayor, and Commissioners

From: Greg Chavarria, City Manager *gc*

Re: Melrose Park Drainage System Maintenance Plan Update

Please find attached the update for the Melrose Park Drainage System Maintenance Plan. The plan provides an overview of the drainage system, highlights how and when each component is inspected and maintained, and features the increased frequency and services the City intends to provide in the coming year.

Melrose Park stormwater management system was designed and built by Broward County at the turn of the century. When Fort Lauderdale annexed this area in 2002 from Broward County, the City took over maintenance and operation of the system within the boundaries of the neighborhood. As a result of flooding caused by extreme rain events in October of 2020 and Tropical Storm Eta, the entire Melrose Park stormwater management system required rehabilitation. Efforts were coordinated with the City of Lauderdale on stormwater conveyance infrastructure running north through their jurisdiction. The original drainage conveyance has been restored and the ability to discharge excess stormwater runoff towards the C-12 canal was reestablished as of May 2021. The newly revamped stormwater management system provided effective flood protection for the Melrose Park neighborhood during the 10-inch rainfall from Potential Tropical Cyclone #1 on June 3-4, 2022, and the 5-inch rainfall associated with Hurricane Ian on September 27-28, 2022.

Maintenance activities have been adjusted to address the new components of the stormwater management system and in consideration of the improving functionality and aesthetics of the drainage ditch. The frequency of mowing and line trimming has been increased from five (5) times per year in the previous maintenance contract to eight (8) times per year in the new contract starting in November 2022. To address weed control in the new rip rap near the culverts, vegetative debris from trees in the ditch and other barriers to effective maintenance, two (2) new maintenance services have been added: herbicide application and tree removal. Staff will be meeting with the Melrose Park neighborhood prior to the end of the calendar year to present the updated maintenance plan.

The table below compares the 2022 maintenance activities to those contracted for in 2023.

Stormwater Asset Type (quantity)	Inspection Frequency	Maintenance Frequency 2022	Maintenance Frequency 2023
Storm drains (571)	Twice annually	Based on inspection results	Based on inspection results
Exfiltration trenches (3.9 miles)	Based on service request	Based on service request	Based on service request
Stormwater pipes (7.28 miles)	Based on service request	Based on service request	Based on service request
Culverts (19)	Twice annually	Based on inspection results	Based on inspection results
Drainage ditch – Litter removal (2.5 miles)	Monthly	Monthly (takes 1-2 days to complete)	Monthly (takes 1-2 days to complete)
Drainage ditch – Mowing (2.5 miles)	Monthly and quarterly	5 times (Nov 21, Feb, May, Aug, Sep) (Takes 60-70 hours and several weeks to complete)	8 times (Jan, Mar, May, Jun, Jul, Aug, Sep, Nov) (Takes 60-70 hours and several weeks to complete)
Drainage ditch – Tree and Overgrowth Trimming (2.5 miles)	At least twice annually	May and Aug	At least twice annually
Drainage ditch Debris removal (2.5 miles)	Monthly and based on service request	Conducted as needed in coordination with Community Enhancement and Compliance	Based on service request
Drainage ditch tree removal (2.5 miles)	90 trees identified	Service not previously provided	90 trees scheduled for removal
Drainage ditch herbicide application (2.5 miles)		Service not previously provided	Quarterly

Attachment: Melrose Park Drainage System Maintenance Plan

- c: Anthony G. Fajardo, Assistant City Manager
- Susan Grant, Assistant City Manager
- Alain E. Boileau, City Attorney
- David R. Soloman, City Clerk
- Patrick Reilly, City Auditor
- Department Directors
- CMO Managers

Melrose Park Drainage System Maintenance Plan



City of Fort Lauderdale

Department of Public Works

Stormwater Operations

October, 2022



Contents

Executive Summary	1
Introduction	3
Intent	5
Stormwater Assets	6
Catch Basins (Inlets)	7
Exfiltration (Perforated Pipe Surrounded by Rock)	7
Solid Gravity Main (Stormwater Pipe)	8
Swales	8
Culverts	9
Drainage Ditch	10
Sedimentation Structure – Kentucky Ave	12
Conveyance Pipes North of Drainage Ditch to the Centerline of Broward Boulevard	12
Stormwater Structures North of Melrose Park in the City of Lauderhill	13
Future Considerations	14
Melrose Park Maintenance Agreement	16

Executive Summary

The Melrose Park stormwater management system was designed and built by Broward County at the turn of the century. When Fort Lauderdale annexed this area in 2002, the City took over maintenance and operation of the system within the boundaries of the neighborhood. Drainage is accomplished using a combination of street drainage swales, catch basins, underground exfiltration trenches, storm pipe, culverts under the roadways, a 2.5-mile drainage ditch, and multiple discharge points. This reports outlines each of the components of the system and maintenance activities.

As a result of flooding caused by extreme rain events in October of 2020 followed by more rain from Tropical Storm Eta, the entire Melrose Park stormwater management system, including the drainage ditch, was rehabilitated. All the systems were cleaned and inspected within six (6) months of the storm event. The newly revamped stormwater management system provided effective flood protection for the Melrose Park neighborhood during the 10-inch rainfall from Potential Tropical Cyclone #1 on June 3-4, 2022 and a 5-inch rainfall associated with Hurricane Ian on September 27-28, 2022.

The September 2021 Melrose Park Drainage Maintenance Plan outlined a series of future considerations and action steps. Of those identified needs, the City has made progress on:

- 1) Refining the stormwater asset inventory;
- 2) Pursuing an Interlocal Agreement with the City of Lauderhill to clarify roles and responsibilities to ensure that the stormwater conveyance outside of Fort Lauderdale's jurisdictional boundaries;
- 3) Performing a comprehensive review of the ditch in September 2021 to address landscaping needs following the rehabilitation, identifying trees in the ditch that should be removed, locating and reporting illicit discharges to the ditch; and noting properties having two private fences which are trapping vegetation and weeds between them;
- 4) Soliciting a new maintenance contract to expand the number and frequency of landscape services;
- 7) Continuing to work with the City vendor to identify hot spots of illegal dumping into the ditch and coordinate with Community Enhancement and Compliance to take enforcement action where possible; and
- 8) Providing outreach to the Melrose Park community with a flyer explaining how the stormwater system works and giving the dates of scheduled maintenance.

Maintenance activities have been adjusted to address the new components of the stormwater

management system and in consideration of the improving functionality and aesthetics of the drainage ditch. The frequency of mowing and line trimming has been increased from five (5) times per year in the previous maintenance contract to eight (8) times per year. To address weed control in the new rip rap near the culverts, vegetative debris from trees in the ditch and other barriers to effective maintenance, two new maintenance services have been added: herbicide application and tree removal.

The table below compares the 2022 maintenance activities to those contracted for in 2023.

Stormwater Asset Type (quantity)	Inspection Frequency	Maintenance Frequency 2022	Maintenance Frequency 2023
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Drainage ditch – Litter removal (2.5 miles)	Monthly	Monthly (takes 1-2 days to complete)	Monthly (takes 1-2 days to complete)
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Drainage ditch – Tree and Overgrowth Trimming (2.5 miles)	At least twice annually	May and Aug	At least twice annually
Drainage ditch Debris removal (2.5 miles)	Monthly and based on service request	Conducted as needed in coordination with Community Enhancement and Compliance	Based on service request
Drainage ditch tree removal (2.5 miles)	90 trees identified	No trees removed	90 trees scheduled for removal
Drainage ditch herbicide application (2.5 miles)		Service not provided	Quarterly

Introduction

The Melrose Park stormwater management system was designed and built by Broward County at the turn of the century. When Fort Lauderdale annexed this area in 2002 from Broward County, the City took over maintenance and operation of the system within the boundaries of the neighborhood. Drainage is accomplished using a combination of street drainage swales, catch basins, underground exfiltration trenches, storm pipe, culverts under the roadways, a 2.5-mile drainage ditch, and two discharge points (one on the east towards SW 31 Avenue and one to the north towards Broward Boulevard) to manage stormwater. This system was purposely designed to hold water to a set elevation prior to discharge.

As a result of flooding caused by extreme rain events in October of 2020 and Tropical Storm Eta, the entire Melrose Park stormwater management system required rehabilitation. Early in 2021, every catch basin was pumped out and cleaned. Each pipe connected to the ditch was thoroughly flushed. Drainage swales were reviewed and rehabilitated as appropriate. The drainage ditch was scraped down, regraded, and seeded to the original permitted specifications as of March 2021. Rip-rap (rock base) was applied to the entry points of the culverts connecting the drainage ditch under the roadways. Structures and conveyance pipes were inspected and cleaned. Efforts were coordinated with the City of Lauderdale on stormwater conveyance infrastructure running north through their jurisdiction. The original drainage conveyance has been restored and the ability to discharge excess stormwater runoff towards the C-12 canal was reestablished as of May 2021. The newly revamped stormwater management system provided effective flood protection for the Melrose Park neighborhood during the 10-inch rainfall from Potential Tropical Cyclone #1 on June 3-4, 2022 and a 5-inch rainfall associated with Hurricane Ian on September 27-28, 2022.

Since the system was rehabilitated, every catch basin has been inspected twice annually and additional cleaning and repairs were scheduled and executed as necessary. As the soils in the ditch settled and the grass became established, the ditch has been mowed by the City's contractor three times in calendar 2021 and four times through September in 2022. Each time, staff performed follow-up inspections to confirm vendor compliance with their contract. Monthly staff and vendor inspections have been conducted to address litter concerns and Community Enhancement and Compliance has been engaged as necessary in illegal debris dumping.

In the summer of 2022, the City solicited a new landscape maintenance contract with enhanced services. Maintenance activities have been adjusted to address the new components of the stormwater management system and in consideration of the improving functionality and aesthetics of the drainage ditch. The frequency of mowing and line trimming has been increased

from five (5) times per year in the previous maintenance contract to eight (8) times per year. To address weed control in the new rip rap near the culverts, vegetative debris from trees in the ditch and other barriers to effective maintenance, two new maintenance services have been added: herbicide application and tree removal. The increased level of service addresses community concerns about the comprehensive nature of landscape maintenance in the ditch and the frequency of scheduled maintenance of the drainage system and the drainage ditch.

Intent

This document is intended to provide an overview of how maintenance activities of the core drainage system in Melrose Park and its Drainage Ditch will be conducted. For each stormwater asset type, the frequency of inspection or maintenance activity to ensure design performance will be provided along with the designated maintenance staff conducting the work. This will provide clear documentation of how the system is intended to be maintained.

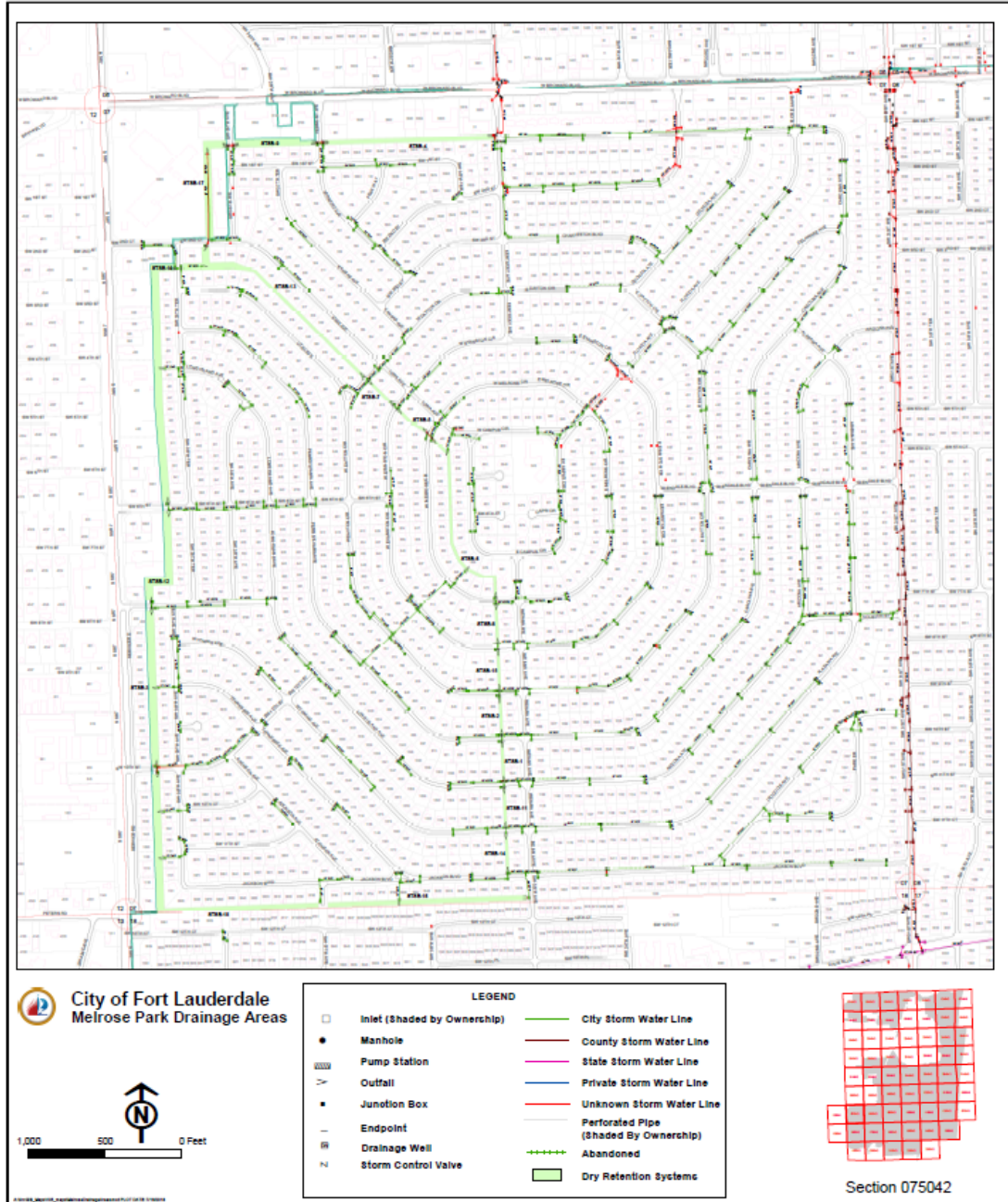


Figure 1: Melrose Park Drainage System

Stormwater Assets

Figure 2: Active Stormwater Assets Inventory Dashboard



One of the many goals of the City’s Watershed Asset Management Plan is to identify and characterize all City-owned stormwater assets and to verify ownership within our borders. As part of this effort, the City is in the process of maintaining and regularly updating the stormwater asset inventory (Figure 2, Table 1).

Asset type	City owned	Broward County owned	State Owned	Unknown ownership
Catch Basin (inlet)	571	27	17	4
Stormwater Gravity Main (miles)	11.171 (7.288 solid) (3.883 perforated)	0.124	0.266	0.343
Weirs	3			1
Outlets	40			3
Drainage Swales	TBD	TBD	TBD	TBD

Table 1: Quantification and Jurisdiction of Key Stormwater Assets within the Melrose Park Neighborhood. Drainage swales are one of the stormwater assets which are currently being quantified city-wide as part of the Watershed Asset Management Plan.

Catch Basins (Inlets)

Function: To receive the stormwater in the right of way and hold it creating an opportunity for particles to settle improving the quality of the water before discharge.

Quantity: 619 catch basins (571 within City jurisdiction)

Preventive Inspections: All city-owned catch basins are schedule for regular inspection twice annually. Melrose Park inspections for the current half-year cycle took place in September 2022.

Reactive Inspections: Staff will response to catch basin-related service requests (e.g., holding water, blocked by surface debris etc.) within a reasonable period based on the nature and severity of the reported concern.

Description of Maintenance: Potential maintenance includes:

- 1) Manual removal of surface debris;
- 2) Cleaning of the catch basins using a jet vactor;
- 3) Repair of cracks in the basin or of the catch basin apron; and
- 4) Replacement of the catch basin.

Frequency of Maintenance: All catch basins in this neighborhood were cleaned between Dec 2020-Mar 2021. Additional catch basins have been cleaned since that time. Future maintenance will be scheduled and performed based on the outcome of proactive inspections and reported service requests.

Exfiltration (Perforated Pipe Surrounded by Rock)

Function: To hold stormwater underground for percolation into the groundwater while providing storage capacity to reduce ponding of stormwater on the roadway.

Quantity: 3.9 miles

Preventive Inspections: Not currently performed.

Reactive Inspections: Staff will respond to exfiltration-related service requests (e.g., water ponding over a catch basin when there is groundwater capacity for percolation) within a reasonable time period based on the nature and severity of the reported concern.

Description of Maintenance: Potential maintenance includes:

- 1) Visual inspection through closed circuit television (CCTV);
- 2) Cleaning of the trench using a jet vactor; and
- 3) Rehabilitation of the exfiltration trench.

Frequency of Maintenance: All exfiltration pipe pump out was completed Dec 2020. Current maintenance is scheduled and performed based on the frequency of reported concerns of a given exfiltration trench. In the future, as part of continuing development of asset management, staff is exploring establishing an annual preventive inspection schedule for perforated pipe.

Solid Gravity Main (Stormwater Pipe)

Function: To convey stormwater underground to a location for discharge.

Quantity: 7.28 miles

Preventive Inspections: Not currently performed.

Reactive Inspections: Staff will response to flooding service requests within a reasonable time period based on the nature and severity of the reported concern.

Description of Maintenance: Potential maintenance includes:

- 1) Visual inspection through closed circuit television (CCTV);
- 2) Cleaning of the gravity pipe using a jet vactor;
- 3) Repair of the pipe;
- 4) Lining of the pipe; and
- 5) Replacement of the pipe.

Frequency of Maintenance: All stormwater gravity mains in Melrose Park were pumped down or flushed between Dec 2020 – Mar 2021. Future maintenance will be scheduled and performed based on the outcome of twice per year inspections and reported service requests.

Swales

Function: To capture stormwater running off the road to provide both capacity and water quality treatment.

Quantity: Drainage swales are one of the stormwater assets which are currently being quantified city-wide as part of the Watershed Asset Management Plan.

Preventive Inspections: Not currently performed.

Reactive Inspections: Staff will response to swale-related service requests (e.g. lack of timely percolation, water ponding on the roadway and not in the drainage swale for more than 48 hours) within a reasonable time period based on the nature and severity of the reported concern. Staff will review applications under the “Save our Swales”

program within one month of receipt. The applicant will be contacted and, as appropriate, rehabilitation will be scheduled at the earliest possible time in the priority received. It should be noted that swale rehabilitation at the request of the homeowner will be performed once for their period of ownership. The requesting property owner must sign a waiver and properly care for the swale including prohibiting parking on it.

Description of Maintenance: Potential maintenance includes:

- 1) Rehabilitation of the impacted or nearby swale(s).

Frequency of Maintenance: 19,000 sq feet of swales were rehabilitated in Melrose Park through June 2021. Swale inspection and maintenance in this neighborhood are primarily service-request based. As the stormwater asset management inventory is compiled and enhanced, the City will be better able to track the age and function of drainage swales to schedule proactive replacement. A preventive swale inspection program is planned in future years.

Culverts

Function: Allow stormwater to pass under structures such as roadways. The Melrose Park culverts were designed to slow the energy of flowing stormwater, provide storage capacity and convey the permitted rate of stormwater flow to the Melrose Park Drainage Ditch. Stone or concrete rip-rap is placed on either side of the culvert.

Quantity: 19 culverts (Figure 3)

Preventive Inspections: All culverts will be inspected twice annually.

Reactive Inspections: Staff will respond to culvert-related service requests (e.g., weeds in the rip-rap, debris, blockage of conveyance) within a reasonable period based on the nature and severity of the reported concern.

Description of Maintenance: Potential maintenance includes:

- 1) Manual removal of surface debris;
- 2) Trimming or herbicide application for weeds in the rip-rap;
- 3) Pump down of the interior of the culvert;
- 4) Replacement of rip-rap and
- 5) Repair of cracks.

Frequency of Maintenance: All culverts were cleaned between Jan-Mar 2021 and the rip-rap rehabilitated. Culvert cleaning is currently scheduled for the fall of 2021 and at least annually thereafter. The maintenance schedule for 2023 will include twice per year inspections and herbicide application.

Figure 3: Culverts and Drainage Ditch Segments in the Melrose Park Neighborhood



Drainage Ditch

Function: Serves as a collection point for stormwater discharge from approximately 30% of the Melrose Park neighborhood. The Melrose Park Drainage Ditch is designed to collect stormwater run-off; provide storage capacity; allow for particulate settlement and improvement of water quality; and support percolation of stormwater into the ground. In the event of high groundwater tables or extreme rain events, the ditch has an outfall at the northern end to allow discharge to a conveyance pipe running under Broward Blvd and connected through the City of Lauderhill to the C-12 Canal near Sunrise Blvd.

Quantity: 2.5 miles of drainage ditch in 18 segments (see Figure 3)

Preventive Inspections: The ditch is inspected for a number of purposes at different frequencies. The function of the ditch and its ability to hold and convey water is included in every inspection.

- 1) Litter: Inspected monthly by staff and the landscape vendor, follow-up inspections by staff of litter removal after vendor service is reported to be complete.
- 2) Grass: Inspected eight (8) times annually by staff prior to scheduling mowing services, follow-up inspections by staff of mowing after vendor service is reported to be complete.
- 3) Overgrowth: Considered in inspection for grass mowing as well as dedicated inspections twice per year, follow-up inspections by staff of trimming after vendor service.
- 4) Grate at the northern discharge point: Monthly by staff

Reactive Inspections: Staff will respond to service requests on the following schedule:

- 1) Grass needs mowing, ditch needs trimming – Inspection and contact of the resident within three (3) business days with information on when additional service will be provided; and
- 2) Illegal dumping of debris in the ditch – Inspection and contact of resident within three (3) business days and coordination with Community Enhancement and Compliance.

Description and Frequency of Maintenance: Current maintenance includes:

- 1) Litter Removal: Monthly removal of litter by the vendor based on the agreement at the end of this Maintenance Plan. This service takes one to two days for the vendor to walk the entire 2.5 miles to inspect for and remove litter;
- 2) Debris Removal: This refers to large scale items such as appliances, building materials or furniture that have been illegally placed into the ditch. Removal is conducted as needed based on staff inspection and service requests received. This activity is coordinated with Community Enhancement and Compliance;
- 3) Grass Mowing: Eight mowing services provided by the vendor based on the agreement at the end of this Maintenance Plan. Mowing is conducted one bank of the ditch at a time. A complete mowing service of the 2.5 miles of ditch takes between 60-70 hours. This may occur over the course of several weeks based on weather and the level of water in the ditch. Any areas that cannot be mechanically mowed are manually addressed with line trimmers;
- 4) Overgrowth Trimming: Twice annually by the vendor based on the agreement at the end of this Maintenance Plan as well as on demand based on inspections and service requests;
- 5) Re-sodding: Based on inspection; and
- 6) Grate at the discharge point: A new grate was installed in the fall of 2021. Removal of litter will be conducted monthly. Large scale debris will be removed as needed based on monthly inspections or service requests.

Future Maintenance: Scheduling of maintenance is based upon the City's maintenance agreement the ditch, and weather. The current schedule for future maintenance is as follows:

- 1) Mowing: The future schedule for mowing is Nov 2022 and following months in 2023: Jan, Mar, May, Jun, Jul, Aug, Sep, and Nov. This schedule provides for a higher frequency of services than previous contracts especially during the wet season when vegetation grows more rapidly.
- 2) Trimming of overgrowth: This service is performed twice a year. The next full trimming service will be scheduled in the November-December timeframe after the wet season.
- 3) Resodding/ Rip-Rap repair: Inspections are used to identify areas requiring fill or sodding as needed.

Sedimentation Structure – Kentucky Ave

Function: A large concrete box which connects the discharge pipe from the Melrose Drainage Ditch to three separate conveyance pipe and captures silts and debris.

Quantity: One large structure

Preventive Inspections: This structure is newly identified to be under City jurisdiction and as-builts (survey drawings that provide specification) have been developed. It is anticipated that it will be inspected annually beginning in 2023.

Reactive Inspections: Issues related to drainage ditch discharge will initiate an inspection of this structure.

Description of Maintenance: Potential maintenance includes:

- 1) Removal of accumulated silts and debris using a jet vector; and
- 2) Repair of cracks in the structure.

Frequency of Maintenance: The structure was cleaned in early 2021. Future maintenance will require procurement of contractor support and incorporation into future operating budgets. This work will be scheduled and performed based on the outcome of the annual inspections.

Conveyance Pipes North of Drainage Ditch to the Centerline of Broward Boulevard

Function: Convey excess stormwater from the Melrose Park Drainage Ditch northward to the ultimate discharge point in the C-12 canal.

Quantity: Three (3); two (2) 36-inch HDPE (high density polyethylene) pipes and one (1) elliptical corrugated metal pipe

Preventive Inspections: Preventive inspections will be based on inspection of the sedimentation structure on Kentucky Avenue.

Reactive Inspections: Issues related to drainage ditch discharge will initiate an inspection of these pipes.

Description of Maintenance: Potential maintenance includes:

1. Visual inspection through closed circuit television (CCTV);
2. Cleaning of the pipe using a jet vactor;
3. Repair of the pipe;
4. Lining of the pipe; and
5. Replacement of the pipe.

Frequency of Maintenance: The pipe was cleaned in the March 2021 timeframe. It is anticipated that it will be inspected annually beginning in 2023. Future maintenance will require procurement of contractor support and will be scheduled and performed based on the outcome of the annual inspections and issues related to ability to discharge from the Melrose Drainage Ditch.

Stormwater Structures North of Melrose Park in the City of Lauderhill

North of Broward Boulevard are a series of stormwater management structures including conveyance pipes, weirs, sedimentation structures, and box culverts. They are an integral part of the system that ensures drainage for Melrose Park.

Function: Convey excess stormwater from the Melrose Park Drainage Ditch northward across Broward Boulevard through the City of Lauderhill to the ultimate discharge point in the C-12 canal/ North Fork of the New River.

Quantity: Three (3) conveyance pipes - two (2) 36-inch HDPE pipes and one (1) elliptical corrugated metal pipe, one weir, three sedimentation structures, and two 7x7 ft box culverts

Inspection Schedule: Since this infrastructure is outside of the jurisdiction of the City of Fort Lauderdale, the City is working with the City of Lauderhill to clarify roles and responsibilities related to this critical conveyance.

Description of Maintenance: Potential maintenance includes:

1. Visual inspection through closed circuit television (CCTV);
2. Cleaning of the structures and piping using a jet vactor;
3. Repair of the pipes or structures;

4. Lining of the pipe; and
5. Replacement of the pipe or structures.

Frequency of Maintenance: The conveyance pipes and structures several blocks north of Broward Boulevard were cleaned in the February – April 2021 timeframe. Future maintenance responsibilities and frequencies will be outlined in the interlocal agreement with the City of Lauderhill.

Future Considerations

As Stormwater Operations continues to conduct the maintenance activities previously described, staff will move forward with the following additional efforts:

- 1) Continue to refine the stormwater asset inventory using funding already allocated for the Watershed Asset Management Plan, applying the principles of asset management to understand the ownership, specifications, materials, and conditions of the existing stormwater assets in Melrose Park.
- 2) Execute an Interlocal Agreement with the City of Lauderhill to clarify roles and responsibilities to ensure that the stormwater conveyance outside of Fort Lauderdale’s jurisdictional boundaries is consistently inspected and maintained. Allocate appropriate funding in the operational budget to perform needed work.
- 3) Engage the City of Lauderhill and the South Florida Water Management District to better understand the operational protocols for operating the gate on the C-12 Canal, the ultimate discharge point of Melrose Park stormwater.
- 4) Request a budget amendment to fund installation of a fence within the City’s right of way to reduce wind-blown trash and casual entry to the drainage ditch from the southwest corner of the neighborhood.
- 5) Continue to work with the City vendor to identify hot spots of illegal dumping into the ditch and coordinate with Community Enhancement and Compliance to take enforcement action where possible.
- 6) Provide outreach with the Melrose Park community to better set expectations on drainage system maintenance and water retention.
- 7) Work with the Melrose Park community to address activities which impact aesthetics and function of the ditch:

- a. Illegal dumping of litter and debris by residents and others into the ditch;
- b. Removal by the homeowner of double fencing on private property adjacent to the ditch (see Figure 4);
- c. Support to escalate reporting of motorcycle and recreational vehicle accessing the ditch;
- d. Elimination of illicit discharge from private property into the ditch; and
- e. Trimming of trees located on private property but impacting the drainage ditch.



Figure 4: Grass and Weeds Growing between the Chain Link Fence Facing the Ditch and a Second Fence Facing the Private Property



Melrose Park Maintenance Agreement

This work was procured through Bid # 12700-823 in September 2020 for landscape maintenance needs at Melrose Park Drainage Ditch.

MOWING AND LINE TRIMMING SERVICES

Contractor shall mow grass, weeds and/or vegetative ground cover to a low height of three (3) inches. Schedule is as follows:

- January
- March
- May
- June
- July
- August
- September
- November

Should an area within the drainage system be full of water, Contractor shall trim grass and weeds as low as possible and at a minimum to the water's height. Contractor shall notify City's Contract Administrator and provide documentation of water levels for approval prior to performing trimming in lieu of mowing. Contract Administrator shall approve in writing.

Contractor shall maintain all ditches including any adjoining City right of way up to the private property line and/or paved roadway including access roads and swales.

The Contractor shall clean the area of all debris prior to mowing and shall remove from the site all litter, palm fronds, branches or any other items. All trimmings, branches, etc. collected from each service shall be removed upon completion of that day's service. All other litter, debris, trimmings, palm fronds, branches shall be picked up, removed and properly disposed of. Any illegally dumped items that require special handling such as refrigerators, hazardous waste, etc. shall be immediately reported to the Contract Administrator for proper handling and removal by the City.

Contractor shall line trim around all obstructions including signs, posts, fences, poles, trees, walls and slabs, etc. in order to maintain a neat appearance. Line trimming shall be performed concurrently with mowing activities to a low height of three (3) inches. Contractor shall NOT utilize any defoliant, herbicide, or growth retardant for the purpose of restricting, preventing or removing growth that can be line trimmed in any manner without prior written approval from the Contract Administrator.

Contractor shall remove all invasive plants, stray trees and volunteer palm trees

that are identified in the mowing service area as mowing services are performed. Mowing activities must begin within 3 business days after notification of services needed by City staff. Contractor shall notify the Contract Administrator in writing in the event of scheduling delays or changes, as well as to communicate any comments/complaints received from the general public. Contractor must notify Contract Administrator within 48 hours once activities are completed to allow for City follow-up inspection and/or punch list.

Mowing and Line Trimming Services	Quantity	Unit of Measure	Unit Price
Melrose Park Drainage Ditch (per Service)	8	Each	\$ 8,500.00
Additional Mowing Services	100,000	Square Foot	\$ 0.50
Additional Line Trimming Services	80	Hour	\$ 155.00

LITTER AND DEBRIS AND ILLEGAL DUMPING REMOVAL

Contractor shall perform a physical inspection of the entire service area a minimum of one (1) time per month and remove litter and debris including but not limited to trash, litter and fallen tree limbs. Any illegally dumped items that cannot be easily managed, or require special handling such as refrigerators, hazardous waste, etc. shall be immediately reported to the Contract Administrator for proper handling and removal by the City. Contractor shall provide six call-outs per calendar year quarter at the request of the Contract Administrator to remove debris including but not limited to trash, litter and fallen tree limbs. Photos shall be taken to document work completed along the length of the ditch for litter and debris removal and provided electronically and as backup to invoicing from the Contractor.

Illegal dumping may be identified by the City or Contractor through inspections or complaints received by the public. Coordination of the removal of illegally dumped piles containing non- hazardous materials will be managed by the City's Contract Administrator and dispatched to the Contractor for removal and disposal. Photos of illegal dumping pile(s) before and after removal shall be taken to document size of the pile and completion of work. All photos shall be provided electronically and as back-up to invoicing from the Contractor.

Litter and Debris and Illegal Dumping Removal	Quantity	Unit of Measure	Unit Price
Litter Removal Monthly Service	12	Each	\$ 1,500.00
Illegal Dumping Removal	400	Cubic Yard	\$ 60.00

HERBICIDAL APPLICATIONS AND MECHANICAL WEED CONTROL

Contractor shall apply herbicides safe for aquatic applications where needed **quarterly**. Areas to be treated include the rip rap generally located where the ditch meets the roadways as well as between the City’s fence line and privately owned fencing along the length of the ditch. City may also request additional service for herbicidal application in the Melrose Park drainage ditch.

Contractor shall ensure that care is taken to apply only to City-owned property and application activities do not impact adjoining property. Contractor shall place City-provided signage at all major roadways while treatment is taking place to notify the public of such activities.

Contractor must have a valid commercial pesticide applicator license from the Florida Department of Agriculture and Consumer Services with Categories (5A) Aquatic pest control and (21) Natural areas weed management, to perform any herbicide application. Only chemicals, weed control products or other testing materials which have been approved by the federal or state authorities shall be used. **Glyphosate (Round-Up) may not be used.**

Contractor must have a valid commercial pesticide applicator license from the Florida Department of Agriculture and Consumer Services with Categories (5A) Aquatic pest control and (21) Natural areas weed management, to perform any herbicide application. Only chemicals, weed control products or other testing materials which have been approved by the federal or state authorities shall be used.

Aquatic and terrestrial weed control, including mechanical and herbicidal applications, may be requested in other water bodies throughout the City.

Herbicidal Applications and Mechanical Weed Control	Quantity	Unit of Measure	Unit Price	Extension
Herbicidal Application Quarterly	4	Each	\$ 1,950.00	\$ 7,800.00
Additional Herbicidal Application (Aqueous) - Cost	40	Each	\$ 470.00	\$ 18,800.00
Additional Herbicidal Application (Non- Aqueous) - Cost per .25 Acre	40	Each	\$ 385.00	\$ 15,400.00
Additional Mechanical Weed Control (Aqueous) - Hourly	40	Hour	\$ 225.00	\$ 9,000.00
Additional Mechanical Weed Control (Non-Aqueous) - Hourly	40	Hour	\$ 185.00	\$ 7,400.00

TREE TRIMMING AND OVERGROWTH

Trees and overgrowth shall be trimmed back **twice annually** as directed by the Contract Administrator, Pruning/trimming shall include removal of tree canopy (branches, scaffold limbs etc.) in order to address structural defects, and also to ensure proper height/width clearance and access necessary for proper ditch operation/maintenance. All pruning cuts shall be in accordance with *ANSI A300, pruning standards, Part 1, American National Standard for Tree Care Operations- Tree, Shrub and Other Woody Plant Management- Standard Practices (pruning) ©2017* or most current version, current City tree preservation codes, and good horticultural practices.

In addition, all pruning cuts shall always be made to the outside of the branch bark ridge and angled away from trunk. Cuts shall be made as close as possible to the trunk or parent limb, without cutting into the branch bark ridge, branch collar or leaving a protruding stub. Tree limb reduction cuts shall be the preferred option with tree limb removal cuts preformed only as a last resort. Removal of dead wood, cross branches, branches with poor angles of attachment and thinning of suckers shall be accomplished simultaneously without any reduction in crown.

Pruning of lateral branches that results in the removal of more than one-third (1/3) of all branches on one (1) side of a tree shall not be permissible. No more than twenty-five (25) percent of a tree's living canopy shall be removed within a one (1) year period.

Vines on trees shall be cut to a minimum height of five feet from ground level and roots pulled to remove as much as possible. The remaining vine on the tree should be removed to the best degree possible to discourage regrowth and appearance and avoid any mechanical damage to a tree's trunk, canopy or scaffold limbs. Vines on the City's fence, shrubs and ground shall be removed by whatever means necessary.

All chip and tree debris must be removed from City property and disposed of at a licensed disposal facility.

Contractor must have a current/in good standing International Society of Arboriculture (ISA) Certified Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist (RCA) on staff and on the job site, available to identify invasive trees, trees to remain, assist with tree protection for trees to remain in the vicinity of construction activity, and obtain City tree removal permits when required.

Contractor must possess a valid Class A Tree Trimmer License from Broward County.

Tree Trimming and Overgrowth	Quantity	Unit of Measure	Unit Price	Extension
Service Twice Annually	2	Each	\$ 3,500.00	\$ 7,000.00
Additional Tree Trimming and Overgrowth	120	Hour	\$ 225.00	\$ 27,000.00

TREE REMOVAL

The City has identified 90 trees that need to be removed from the Melrose Park Drainage Ditch.

Contractor shall remove these trees in accordance with all rules and regulations under local, State and Federal laws and standards. Contractor is responsible for all licenses or permits as required. Contractor shall provide a schedule of work acceptable to the City within 30 days of formal notice to proceed from the City's Contract Administrator.

Requirements and restrictions include:

- A.** Contractor shall coordinate with Florida Power and Light (FPL) and any other utility as required for removals near power lines and poles
 - B.** A rotary cutter (brush hog) may NOT be used to clear clusters of scrub oak, Brazilian pepper or other dense shrubs unless approved in writing by Contract Administrator
 - C.** Rubber wheeled/tracked equipment preferred, Contractor responsible to repair any damages to ground, rip rap and other infrastructure
 - D.** Trees shall be cut as close to the ground as possible (flush cut)
 - E.** Stumps shall be treated to prevent regrowth with a systemic herbicide safe for aquatic Applications. Contractor must possess a valid commercial pesticide applicator license from the Florida Department of Agriculture and Consumer Affairs performing application.
 - F.** Contractor must have a current International Society of Arboriculture (ISA) Certified Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist (RCA) on staff and on the job site, available to identify invasive trees, trees to remain, assist with tree protection for trees to remain in the vicinity of construction activity, and obtain City tree removal permits when required.
- Note climbing spikes are only to be utilized on trees to be removed. They are not permissible for any other tree pruning/evaluation activities onsite.
- G.** All chip and tree debris must be removed from City property and disposed of at a licensed disposal facility.

Allowance for Permits: Payments will be made to the contractor based on the actual cost of permits upon submission of paid permit receipts. The City shall not pay for other costs related to obtaining or securing permits.

Permit Fee Allowance	\$3,500
TOTAL	\$3,500

Tree Removal	Quantity	Unit of Measure	Unit Price	Extension
Melrose Park Drainage Ditch	90	Each	\$ 225.00	\$ 20,250.00

CONTRACTOR RESPONSIBILITIES (All Services)

Communications

Contractor must have a communication system such as a two-way radio or cellular phone to allow for on-time communications between Contractor and the City (includes Contract Administrator, office and field staff).

Contractor shall provide Contract Administrator with the name and phone number of person in charge prior to beginning any work on site.

Contractor must have capability to send and receive electronic correspondence (e-mail) in real time via cellular phone, laptop or tablet.

Scheduling

A written schedule including all mowing and trimming activities, litter inspections, tree removals, and herbicidal applications shall be provided by the Contractor to the City's Contract Administrator for approval.

City reserves the right to accept or request changes to the schedule as submitted. Should the Contractor need to amend the schedule, Contractor shall provide the Contract Administrator this request in writing. City reserves the right to accept or deny any such request and will provide notice to the Contractor within two (2) business days of Contractor's written request.

Contractor shall provide completed log of work activities to Contract Administrator upon completion of all work within two (2) business days via electronic correspondence. Photographs should be included as part of invoice submittal and approval for Melrose Park Drainage Ditch mowing, litter removal and illegal dumping activities as specified in this ITB.

City will inspect all work within three (3) business days and notify Contractor in the event deficiencies are found. Contractor will have two (2) business days to correct deficiency and resubmit updated daily worksheets. City will then reinspect within

one (1) business day to ensure corrected.

Any deficiency not addressed within the timeline established will result in a penalty of \$250 per occurrence. Should a deficiency fail to be corrected within five (5) business days, City shall notify Contractor in writing and secure alternative services to correct deficiency, including the use of City staff. Any expense shall be documented and deducted in full from Contractor's invoicing and payment.

Failure of the Contractor to appear on any scheduled workday without the advance written approval of the Contract Administrator may result in the deduction of 10% of the amount bid for the work item to have been performed. Such deductions shall continue until service is properly performed or the contract is terminated. Weather events are to be expected and service delays due to weather events should be communicated as soon as the determination is made by the Contractor that services cannot be performed.

Hours and Days of Service

Work shall be performed from 8:00 am to 6:00 pm, Monday through Saturday, unless otherwise approved in writing by Contract Administrator.

Waste Disposal

Contractor is responsible for all disposal costs.

Customer Service

The City's Customer Service Center will provide information to and receive calls from City customers. A Customer Service Representative will contact the Contract Administrator who will forward any complaints or requests to the Contractor for resolution. The Contractor will make every effort to respond within 24 hours or by 10am Monday morning in the event the call is received on a Saturday or Sunday. The Contractor will respond to the Contract Administrator in writing within 48-hours to provide a full response, including photo documentation if required, to close out the work request.

Employee Identification

Employees shall wear a uniform consisting of a Contractor shirt and cap along with a Contractor issued safety vest for identification.

Signature: 

Email: gchavarria@fortlauderdale.gov