

Memorandum

Department of Public Works



TO: Michael O. Geisel, P.E.
City Administrator

FROM: James A. Eckrich, P.E. *JAE*
Public Works Dir. / City Engineer

DATE: November 9, 2022

RE: Monarch Chesterfield Levee District MOU

As you know, stormwater management in the City of Chesterfield is primarily the responsibility of the Metropolitan St. Louis Sewer District (MSD). An exception is the levee protected area, where the Monarch Chesterfield Levee District has assumed many of these responsibilities from MSD via a Memorandum of Understanding (MOU). The MOU between MSD and the Levee District was most recently updated in 2019. After reviewing the MOU between MSD and the Levee District it has become apparent that the 2010 MOU between the City and the Levee District should also be updated to accurately reflect the role the City plays in the management of stormwater within Chesterfield Valley. As detailed in the revised MOU, the City's primary role is to review development plans in Chesterfield Valley, to administer the Chesterfield Valley Storm Water Master Plan, and to serve as the floodplain manager. The Levee District is the entity responsible for the maintenance and operation of all public stormwater and drainage improvements.

Attached is a memorandum from Assistant City Engineer Zachary Wolff which describes the MOU in detail. Also included in your packet are copies of the existing MOU, the proposed MOU, an internal policy which covers as-built requirements, an internal procedure which details the enforcement of maintenance of the stormwater drainage channels in Chesterfield Valley, and easement language the City and the Levee District will require regarding future stormwater improvements in Chesterfield Valley. The final item is recommended revisions to the City Code regarding stormwater standards. The code revisions are included in the packet for informational purposes only, as they will need to be formally approved by City Council at a later date after a required public hearing.

Should you have questions or need additional information please let me know. There is no expenditure associated with this request.

Action Recommended

This matter should be forwarded to the Planning and Public Works Committee of City Council. If recommended for approval, the matter should be forwarded to the full City Council for approval. A separate recommendation for modifications to City Code related to stormwater standards will be submitted at a later date.

Please forward to PPW for review and recommendation.



2022-11-10

Memorandum

Department of Public Works



TO: James A. Eckrich, PE
Director of Public Works / City Engineer

FROM: Zachary S. Wolff, PE *ZSW*
Assistant City Engineer

DATE: September 28, 2022

RE: Monarch Chesterfield Levee District MOU
City Code Section 405.04.120 Stormwater Standards

Stormwater management in the City of Chesterfield is primarily the responsibility of the Metropolitan St. Louis Sewer District (MSD). In accordance with their Charter, MSD is authorized to construct, operate, and maintain a drainage system within their boundaries (which includes all of Chesterfield), and to approve, revise, or reject plans and designs of all private or public stormwater facilities. MSD was created in 1954.

The Monarch Chesterfield Levee District (MCLD) is responsible for constructing and maintaining the Monarch Chesterfield Levee. In addition to constructing and maintaining the levee, MCLD is authorized to construct and maintain drainage ditches, pumping stations, and other works and improvements deemed necessary to provide internal protection from flooding by the Missouri River and its tributaries. The MCLD was formed in 1947.

Stormwater management in the levee protected area of present-day Chesterfield, commonly referred to as Chesterfield Valley, pre-dates incorporation of the City. However, since the City's incorporation in 1988 and especially after the flood of 1993, the City has had a role in stormwater management in Chesterfield Valley. The City's primary role has been management and implementation of the Chesterfield Valley Storm Water Master Plan (CVSWMP) which was previously known as the "Booker Plan". The CVSWMP is an engineering model that shows a system of existing and future channels, basins, pipes, and pump stations in Chesterfield Valley that are necessary to provide appropriate stormwater drainage.

In 2010 the City executed a Memorandum of Understanding (2010 MOU) with the MCLD regarding stormwater management within Chesterfield Valley. The 2010 MOU is attached for reference. The MOU delineates the City and MCLD's responsibilities for stormwater management related to the CVSWMP and specifically includes

development plan review, ownership and maintenance of stormwater improvements, and floodplain management in compliance with the National Flood Insurance Program.

In 2019 MCLD and MSD executed an Intergovernmental Cooperation Agreement (Agreement) for providing stormwater management in Chesterfield Valley. The Agreement delineates MCLD and MSD's responsibility with respect to stormwater management and billing, assignment of property interests, environmental regulation, plan review and enforcement powers, and other miscellaneous items. The major shift with this Agreement is that MCLD became the primary entity responsible for storm water in Chesterfield Valley including but not limited to plan review, permitting, and maintenance of the entire storm sewer system (pipes, inlets, channels, and pump stations). MSD retained responsibility for providing review of storm water quality improvements and environmental compliance.

Upon receipt of the new MCLD and MSD Agreement City staff coordinated a meeting with representatives of the MCLD to review and discuss the CVSWMP; specifically, the maintenance, responsibility, and expectations for existing storm water channels in Chesterfield Valley. Since the July 2019 meeting the City and MCLD have continued to work together to ensure there is a clear responsible party for stormwater review and management between MCLD, MSD, and the City.

In order to memorialize the City and MCLD responsibility a new MOU has been drafted and reviewed by both MCLD and City staff. The new MOU is attached for reference. As you can see, the MOU references existing MSD and MCLD responsibility in accordance with their Intergovernmental Cooperation Agreement and then goes further to define the responsibility of the City and MCLD for stormwater management in Chesterfield Valley. The MOU also includes a Public Works Department Policy for As-Built Drawings, updated easement language for CVSWMP features, and a procedure the City staff and MCLD will utilize for enforcement of maintenance of CVSWMP improvements.

Additionally, Engineering staff reviewed the City's Stormwater Standards in City Code Section 405.04.120 and recommend revisions that will simplify the City's Stormwater Standards, more clearly represent that stormwater design and management in Chesterfield is subject to MSD Rules and Regulations, and add specific requirements for stormwater in Chesterfield Valley. Stormwater Standards are part of the Unified Development Code so the revisions require a public hearing, consideration by Planning Commission, a recommendation from Planning and Public Works, and approval by City Council. Engineering staff will work with Planning on the appropriate process for the recommended City Code revisions. The proposed revisions are attached for information only at this time.

2010 CITY MCLD MOU

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF CHESTERFIELD AND THE MONARCH-CHESTERFIELD LEVEE DISTRICT REGARDING STORMWATER MANAGEMENT

WHEREAS, the Monarch-Chesterfield Levee District ("Levee District") operates and maintains a levee and storm water drainage system as described in the Levee District's Plan for Reclamation and various Supplemental Plans for Reclamation, which systems provide flood risk mitigation to an area of approximately 4,700 acres located within the City of Chesterfield, Missouri, including approximately 350 acres located within the City of Wildwood ("Chesterfield Valley");

WHEREAS, the City of Chesterfield, Missouri ("City") has developed, adopted and is implementing a storm water master plan for all watersheds within Chesterfield Valley, which prescribes the facilities and infrastructure necessary for stormwater management in coordination with the provisions of flood plain management; said plan is known as the Chesterfield Valley Stormwater Master Plan ("Master Plan");

WHEREAS, the stormwater system designed in the Master Plan has been partially constructed, and the City continues to pursue completion of construction of elements of the Master Plan, as development occurs;

WHEREAS, the Levee District has statutory authority and has accepted responsibility for operating and maintaining elements of the Master Plan, and the City has constructed and transferred ownership of various elements of the Master Plan to the Levee District for operation and maintenance;

WHEREAS, the stormwater system now serves and will continue to serve multiple functions, including (a) management of stormwater run-off through a stormwater drainage system in accordance with the Master Plan to maintain a certain internal base flood elevation as determined by the City in its capacity as the floodplain manager under 44 CFR Section 60.3 ("Stormwater Management") and (b) compliance with certain federal, state and local regulations regarding quality of stormwater run-off for environmental purposes ("Water Quality Compliance");

WHEREAS, the City and the Levee District recognize that Stormwater Management and Water Quality Compliance within Chesterfield Valley is essential to ensure public safety and environmental compliance;

WHEREAS, the City and Levee District have a mutual desire to regulate and manage development in Chesterfield Valley in a manner consistent with and in compliance with requirements for Stormwater Management and Water Quality Compliance; and,

WHEREAS, the City and the Levee District wish to enter into this Memorandum of Understanding to document their intent to cooperate and share responsibility for implementing

and maintaining Stormwater Management and Water Quality Compliance within Chesterfield Valley;

WHEREAS, the City has approved this Memorandum of Understanding by vote of the City Council on June 21, 2010;

WHEREAS, the Levee District has approved this Memorandum of Understanding by Resolution adopted by the Board of Supervisors of the Levee District on June 11, 2010;

NOW, THEREFORE, in consideration of the promises, covenants and representations in the Memorandum of Understanding, the parties agree as follows:

1. **Storm Water Master Plan**: The City will possess, manage, update and maintain the Master Plan stormwater model for Chesterfield Valley for purposes of Stormwater Management and Water Quality Compliance. The City and Levee District agree to cooperate to ensure effective implementation of the Master Plan provided that the paramount use of the stormwater system shall be for floodplain management purposes.
2. **Plan Review/Permitting**: Development plan review and permitting within the Levee District's boundaries shall be done by City of Chesterfield for Stormwater Management, flood plain development and Water Quality Compliance purposes; provided, however, that plan review and permitting for Water Quality Compliance purposes shall commence only after the Levee District adopts and the appropriate state and local agencies approve a water quality master plan for Chesterfield Valley. Said standards and requirements shall be enforced by Levee District and the City shall cooperate and assist in enforcement to the extent permitted by law, including ordinances of the City. It is not intended for the Levee District to be a co-permittee with MSD for the MS-4 permit with the Missouri Department of Natural Resources.
3. **Facility Ownership and Maintenance**: The Levee District will retain ownership and be responsible for maintenance of public stormwater and drainage improvements for all purposes. All such public stormwater and drainage improvements on new developments shall be dedicated to the City and the Levee District. The Levee District may transfer ownership and all obligations associated with stormwater facilities owned by the Levee District to other public entities, subject to operation of such facilities in accordance with this Memorandum and the Master Plan.
4. **National Flood Insurance Program**: The City of Chesterfield is the designated floodplain manager as defined by the National Flood Insurance Program. As Floodplain Manager, the City has responsibility and authority to manage any development, alteration, or additions within or adjacent to the special flood hazard area as provided by the City's flood plain management ordinance and 44 CFR Section 60.3.

5. **Federal and State Law.** This agreement shall not be construed as to conflict or supersede or otherwise limit any similar or applicable law, rule or regulation of the government of the United States, State of Missouri, or St. Louis County.
6. **Severability.** The captions included in this agreement are used for the purposes of convenience only and shall not be construed as limiting or otherwise affecting the agreement itself. In the event any portion of this agreement shall for any reason be declared invalid or unenforceable, such invalidity or unenforceability shall not affect the remaining provisions hereof.

THIS MEMORANDUM OF UNDERSTANDING is entered into by the City and the Levee District and has been executed by the duly authorized representative of each party, pursuant to authorization granted by the Board of Supervisors and the City Council.

MONARCH-CHESTERFIELD
LEVEE DISTRICT

CITY OF CHESTERFIELD, MISSOURI

By: Earl R. Hoffmann
Earl R. Hoffmann
Title: President

By: Libby Malberg
Acting Michael G. Herring
Title: City Administrator

Date: June 25, 2010

Date: 7/8/10

ATTESTED

By: H. Kimberly O'Neil
Attorney for Levee District

By: Pamela Shelton
Deputy City Clerk

AFFIX SEAL

AFFIX SEAL

New CITY MCLD MOU

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF CHESTERFIELD AND THE MONARCH-CHESTERFIELD LEVEE DISTRICT REGARDING STORMWATER MANAGEMENT

WHEREAS, the Monarch-Chesterfield Levee District (“Levee District”) operates and maintains a levee and storm water drainage system (“Stormwater System”) as described in the Levee District’s Plan for Reclamation and various Supplemental Plans for Reclamation and in accordance with the March 31, 2017 Intergovernmental Cooperation Agreement between the Metropolitan St. Louis Sewer District (“MSD”) and the Levee District (“Cooperation Agreement”), which systems provide flood protection and stormwater management to an area of approximately 4,700 acres located within the City of Chesterfield, Missouri and approximately 350 acres located within the City of Wildwood (“Chesterfield Valley”) as shown on Exhibit A;

WHEREAS, the City of Chesterfield, Missouri (“City”) has developed, adopted and is implementing a storm water master plan for all watersheds within Chesterfield Valley, which prescribes the facilities and infrastructure necessary for stormwater management in coordination with the provisions of floodplain management; said plan is known as the Chesterfield Valley Stormwater Master Plan (“Master Plan”);

WHEREAS, the Master Plan System has been partially constructed, and the City continues to require construction of elements of the Master Plan, as development occurs;

WHEREAS, the Levee District has statutory authority and has accepted responsibility for operating and maintaining the Stormwater System and for providing stormwater services as defined in Article I, Section 1.1 of the Cooperation Agreement;

WHEREAS, the Master Plan System and Stormwater System together serve and will continue to serve multiple functions, including (a) management of stormwater run-off through a stormwater drainage system in accordance with the Master Plan to maintain a certain internal base flood elevation as determined by the City in its capacity as the floodplain manager under 44 CFR Chapter 1, Subchapter B and (b) compliance with certain federal, state and local regulations regarding stormwater detention and channel protection and (c) management of stormwater run-off in the public storm system and (d) accommodation of run-off from private storm systems.

WHEREAS, the City and the Levee District recognize that stormwater management within Chesterfield Valley is essential to ensure public safety, protect public and private property; and meet environmental compliance;

WHEREAS, the City and Levee District have a mutual desire to regulate and manage development in Chesterfield Valley; and,

WHEREAS, the City and the Levee District previously entered into a Memorandum of Understanding in 2010 to document their intent to cooperate implementing the Master Plan within Chesterfield Valley and;

WHEREAS, the City and the Levee District wish to enter into an updated Memorandum of Understanding to confirm their intent to continue to cooperate implementing the Master Plan System and Stormwater System within Chesterfield Valley and clarify their specific responsibilities for said implementation;

WHEREAS, the City has approved this Memorandum of Understanding by vote of the City Council on _____, 2022.

WHEREAS, the Levee District has approved this Memorandum of Understanding by vote of the Levee District Board on _____, 2022.

TERM and DEFINITIONS:

Chesterfield Valley – Levee protected area in the City of Chesterfield generally bounded by Bonhomme Creek to the south and east and the Monarch-Chesterfield Levee to the north and west

City - City of Chesterfield

Levee District – Monarch-Chesterfield Levee District

MSD – Metropolitan St. Louis Sewer District

Cooperation Agreement - March 31, 2017 Intergovernmental Cooperation Agreement between MSD and the Levee District

Master Plan – Chesterfield Valley Storm Water Master Plan which describes the facilities and infrastructure necessary for overall stormwater and floodplain management in Chesterfield Valley.

Master Plan System – System of constructed Master Plan facilities and infrastructure including but not limited to channels, culverts, basins, and pump stations.

Stormwater System – System of constructed levees and public and private stormwater improvements as defined in the Cooperation Agreement not part of the Master Plan System.

NOW, THEREFORE, in consideration of the promises, covenants and representations in the Memorandum of Understanding, the parties agree as follows:

1. **Master Plan**: The City will possess, manage, update and

maintain the Master Plan. The City and Levee District agree to cooperate to ensure effective implementation of the Master Plan for stormwater conveyance, storage, and floodplain management purposes.

2. **Plan Review/Permitting:** Development plan review and permitting within Chesterfield Valley shall be done jointly. The City will review projects for compliance with the Master Plan and floodplain development requirements. The Levee District and MSD will review Stormwater System improvements, including but not limited to pre- and post-developed drainage area maps and calculations, pipe sizing, public and private designations, Water Quality Compliance, etc. in accordance with the Cooperation Agreement. The City will request Levee District and MSD comments and approval prior to the City issuing plan approval and permits for projects in Chesterfield Valley.

3. **Ownership and Maintenance:** The Levee District will retain ownership and be responsible for maintenance of the Master Plan System and of the Stormwater System in accordance with the Cooperation Agreement. All Master Plan System and public Stormwater System improvements required on new developments shall be dedicated to the Levee District. The Levee District may transfer ownership and all obligations associated with Master Plan System and Stormwater System owned by the Levee District to other public entities, subject to operation of such facilities in accordance with this Memorandum and the Master Plan and Cooperation Agreement. The City will retain ownership and be responsible for the maintenance of culverts, open on both ends, under City maintained roadways.

4. **National Flood Insurance Program:** The City is the designated floodplain manager as defined by the National Flood Insurance Program. As Floodplain Manager, the City has responsibility and authority to manage any development, alteration, or additions within or adjacent to the special flood hazard area as provided by the City's floodplain management ordinance and 44 CFR Chapter 1, Subchapter B.

5. **Construction Inspection and As-Built Drawings:** The City will inspect construction of the Master Plan System as part of development inspections to ensure compliance with the Master Plan. Upon completion of construction, the City will require submittal of as-built drawings in accordance with City Policy PPW-076 (Exhibit B) to confirm compliance with the Master Plan and document actual constructed elevations and size of Master

Plan System improvements. The City will share Master Plan As-Built drawings with the Levee District.

The Levee District will inspect construction of the Stormwater System, not part of the Master Plan, as part of development inspections to ensure compliance with approved plans. Upon completion of construction, the Levee District will require submittal of as-built drawings in accordance with the Cooperation Agreement. The Levee District will share Stormwater System As-Built drawings with the City and MSD.

7. **Easement Dedication:** Master Plan System and Stormwater System improvements require easements. Master Plan easements shall be obtained by the City and executed by the property owner prior to approval of Improvement Plans and issuance of a permit. The required easement language will be as included on Exhibit C and easement areas must be shown on the associated plans.

Stormwater System easements for Public facilities shall be as required by the Levee District and obtained by the Levee District prior to plan approval.

8. **Agency Contacts:** The City and Levee District will maintain current agency contacts and said contacts will be published on the City's website. As of the date of this Memorandum, the primary agency contacts are

City of Chesterfield

James A. Eckrich, P.E., Public Works Director
690 Chesterfield Pkwy W
Chesterfield, MO 63017-0760
636-537-4764
jeckrich@chesterfield.mo.us

Monarch-Chesterfield Levee District

David R. Human
Husch Blackwell LLP
190 Carondelet Plaza, Suite 600
314-480-1710
David.human@huschblackwell.com

8. **Record Keeping:** The City will maintain records associated with the Master Plan including but not limited to plans, functional equivalency analyses, and as-built drawings. The Levee District will maintain records of Master Plan maintenance

as well as record of the Stormwater System in accordance with the Cooperation Agreement.

9. **Enforcement:** Proper function of the Master Plan System and Stormwater System are vital to protect property in Chesterfield Valley. The City and Levee District agree to cooperate to ensure effective maintenance of the Master Plan System for stormwater conveyance and floodplain management purposes. As the entity responsible for maintenance of the Master Plan System and Stormwater System, the Levee District is responsible for initiating formal enforcement actions and coordinating with property owners, as necessary, to ensure proper maintenance of both systems.

In the event the Levee District's enforcement actions do not achieve the desired result the City will initiate enforcement action in accordance with City Code Chapter 215, Nuisances. Enforcement coordination shall occur in accordance with City Procedure PPW-1056 (Exhibit D).

This MEMORANDUM OF UNDERSTANDING is entered into by the City and the Levee District and has been executed by the duly authorized representative of each party, pursuant to authorization granted by the Board of Supervisors and the City Council.

**Monarch-Chesterfield
Levee District**

City of Chesterfield

Signature -

Signature -

Title

Title

ATTEST:

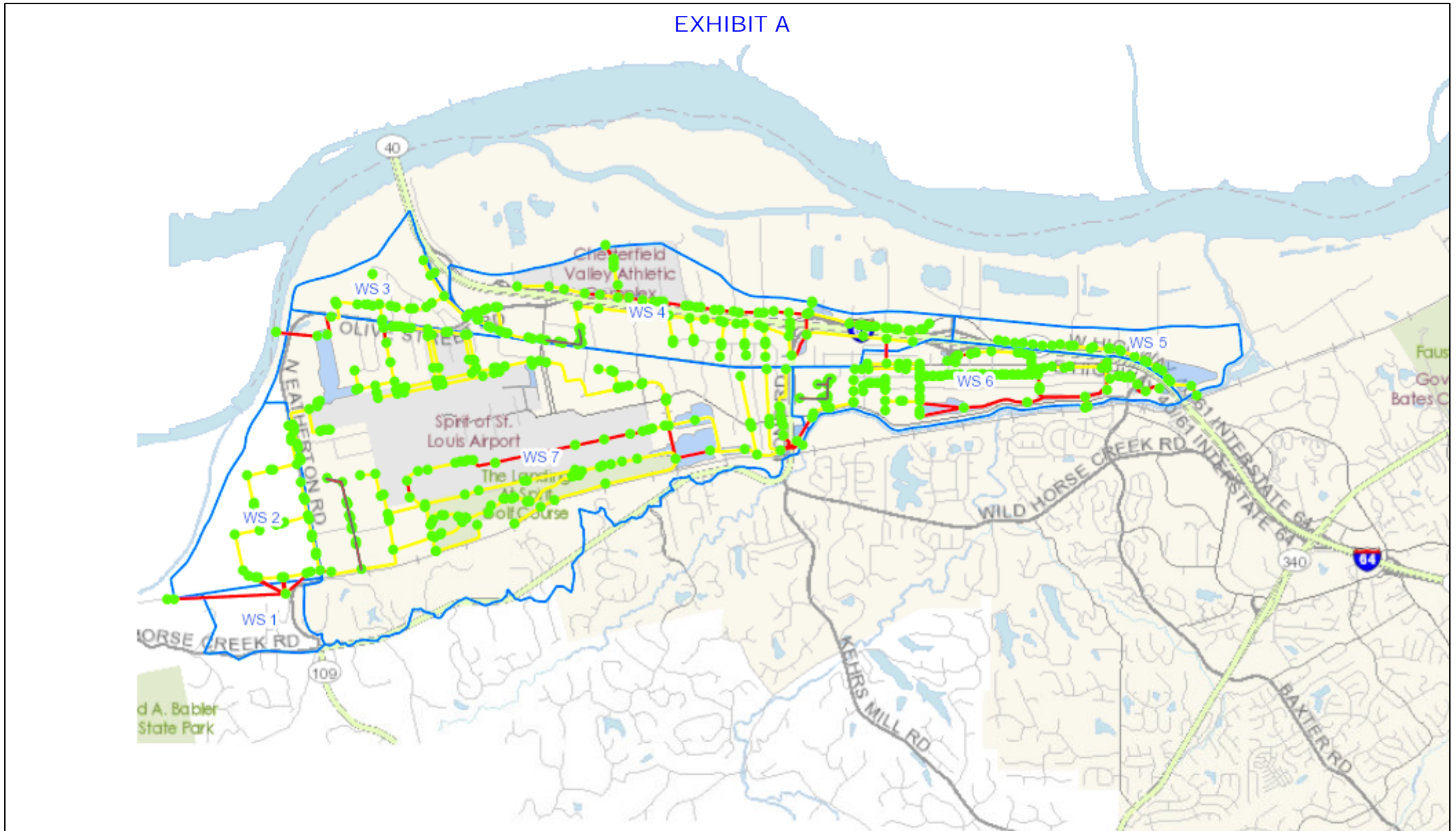
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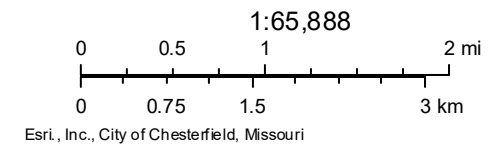
Chesterfield Valley Stormwater Master Plan

EXHIBIT A



3/11/2022, 3:52:15 PM

- | | | | |
|--|---|---|--|
| ■ 2021 FE Updates | Pipe | — Rectangular | ■ Ponds |
| ● Nodes | - - - Circular | ⋯ Pumps | |
| — Channel | - · - Horiz. Ellipse | Watershed | |





PLANNING & PUBLIC WORKS POLICY



POLICY NO: PPW-076

SUBJECT: Chesterfield Valley Stormwater
Improvements and As-Built Drawings

DATE ISSUED: 02/03/2022 **DATE REVISED:**

In accordance with City [Ordinance 1927](#), as-built information and Engineer's certifications are to be submitted to the City for all Chesterfield Valley Stormwater Master Plan (CVSWMP) improvements. As-built drawings for other stormwater improvements within Chesterfield Valley (not CVSWMP improvements, i.e. stormwater pipes, water quality features, etc.) shall be prepared in compliance with MSD criteria and submitted to the Monarch Chesterfield Levee District and Metropolitan St. Louis Sewer District, as necessary. CVSWMP as-built drawings shall be signed and sealed by a Land Surveyor or Engineer registered in the State of Missouri.

In addition, as-built drawings shall include a certification signed and sealed by a Professional Engineer registered in the State of Missouri stating that the as-built conditions of the CVSWMP improvements shown on the as-built drawings are in general conformance with the approved plans and the CVSWMP. The Engineer shall provide volume or capacity calculations necessary to support the certification and document conformance with the approved plans and CVSWMP.

At a minimum, the following information shall be provided on the as-built drawings submitted to the City.

1. Vertical and horizontal datum shall be clearly displayed on the as-built drawings and shall meet the following requirements.
 - a. Vertical datum shall be referenced to the North American Vertical Datum of 1988 (NAVD88) and a conversion to NGVD29 shall be provided.
 - b. Horizontal datum shall be State Plane Coordinates – Missouri East Zone, NAD83(HARN).
2. Stormwater Conveyance Conduit
 - a. The following shall be included and/or verified in both plan and profile views for all stormwater conveyance conduits:
 - i. Conduit shape (rectangular, circular, elliptical, etc.)

- ii. Conduit size:
 - 1. Circular: inside diameter
 - 2. Rectangular and Elliptical: inside height x inside width
 - iii. Conduit material (RCP, CMP, HDPE, etc.)
 - iv. End treatment (90° headwall, wingwalls, flared end section, mitered to slope, project from berm, etc.)
 - v. Conduit length
 - vi. Invert elevations, upstream, downstream, and at any junction box or manhole.
- b. The following shall be included and/or verified in both plan and profile views for all drainage inlets and storm water manholes.
- i. Inlet type
 - ii. Frame/top elevation
 - iii. Structure bottom elevation
 - iv. Invert elevation and direction of connecting storm water conduits
 - v. Grate size, manufacturer, and model, if applicable
3. Reservoir/Basin
- a. A field survey shall be made to confirm the location, size, and depth of any designed stormwater reservoir or basin. As a minimum, the as-built drawing shall include:
- i. As-built cross sections of the reservoir/basin plotted over the design cross sections.
 - ii. Spot elevations shown in plan view, defining the location and elevation of the reservoir basin berm and overflow spill way.
- b. The following shall be included and/or verified by the as-built survey for all structural or earthen weirs/spillways:
- i. Location
 - ii. Bottom width
 - iii. Side slope (in H:1 format)
 - iv. Height (from weir control elevation to top of berm)
 - v. Dimensions and invert elevations of any orifice associated with the weir or spill way.
4. Stormwater Channel
- a. The following shall be included in the as-built survey for all stormwater channels:
- i. As-built cross sections of the channel plotted over the design cross sections.

1. Location of surveyed cross sections shall be noted in plan view.
 - ii. Spot elevations shown in plan view, defining the location and elevation of the top of bank and bottom of bank.
 - b. The following shall be included in the as-built survey for all uniform trapezoidal stormwater channels.
 - i. Bottom width as measured from bottom of bank to bottom of bank
 - ii. Right and left side slope in the format H:1 (right and left refer to channel sides as if looking downstream)
 - iii. Channel bedding material (rip rap, grass, concrete, etc.)
 - iv. Depth of channel from the bottom of bank to the top of bank for both upstream and downstream ends.
 - v. Channel inverts, upstream and downstream
5. Stormwater Pump Stations:
- a. As-built survey shall include the following:
 - i. Physical location of the pump station
 - ii. Pump intake elevation
 - iii. Pump station outfall elevation
 - iv. Pipe invert elevation of the highest point in the discharge pipe
 - v. Discharge pipe end treatment (flap gate, duckbill gate, etc.)
 - vi. Location, bottom elevation and size of forebay
 - vii. Any detention basin, drainage structures, or conduits associated with a pump station shall be included in the as-built survey and shall adhere to the requirements of the section appropriate to the structure.
 - viii. Include manufacture's pump station performance curves and the associated pump on and off elevations.
6. As-Built Deliverables
- a. A PDF document showing all appropriate as-built data required by this policy. The as-built data must be electronically prepared and added to the construction plans to allow for comparison between the design and constructed features. The as-built plans must be signed and sealed by a Land Surveyor or Engineer registered in the State of Missouri.

APPROVED BY:



Director of Public Works/City Engineer

02/03/2022

Date

APPROVED BY:

City Administrator (*if applicable*)

Date

EXHIBIT C

CHESTERFIELD VALLEY STORM WATER EASEMENT

TO WHOM IT MAY CONCERN:

KNOW ALL MEN BY THESE PRESENTS, That _____, Grantor(s), for and in consideration of the sum of One Dollar (\$1.00) and other valuable considerations paid by the Monarch Chesterfield Levee District, Grantee, the receipt of which is hereby acknowledged, do(es) hereby give, grant, extend, and confer on the Monarch Chesterfield Levee District their successors and assigns as their interest may appear for the purpose of construction, maintaining and repair of the basins, reservoirs, channels, drainage facilities and sewer lines in conformance with the Chesterfield Valley Storm Water Master Plan, on the strip or strips of ground described as shown hachured on the attached "Easement Plat" marked Exhibit "A", and made a part hereof, with the right of temporary use of adjacent ground not occupied by improvements for the excavation and storage of materials during installation, repair or replacement of said basins, reservoirs, channels, drainage facilities and sewer lines.

The property owner(s) shall be responsible for maintaining the dry/wet basins, channels, drainage facilities and sewer lines in good working order and in good repair as appropriate to ensure property conveyance of storm water. In the event that the property owner(s) or its successors in title to said property shall fail to adequately maintain the basins, reservoirs, channels, drainage facilities and sewer lines in accordance with the approved Chesterfield Valley Storm Water Master Plan, the Monarch Chesterfield Levee District their successors and assigns shall be permitted to enter onto the property and make the repairs and corrections and perform such maintenance as it deems necessary and bill the property owners of said property for the services performed. It is further agreed that in the event that said bill or charge for services performed shall not be paid within a period of thirty (30) days said sum shall become a lien on the real property and shall accrue interest at a rate of eight percent (8%) until paid in full.

The Monarch Chesterfield Levee District may from time to time enter upon said premises to inspect, construct, reconstruct, or maintain the sewers or stormwater improvements aforesaid, and may extend and/or assign its rights in this easement to the City of Chesterfield, Missouri, State, County, or other political subdivisions of the State. The easement hereby granted is irrevocable and shall continue forever.

All stormwater easements as dedicated to the Monarch Chesterfield Levee District per the above, shall not be in the possession or control of the Levee District. Nor shall the Levee District be responsible for the maintenance, alteration, repair, operation, removal or relay on any stormwater drainage system unless it has been accepted by Levee District as a public system for maintenance.

IN WITNESS WHEREOF, the above named grantor(s) has(ve) executed these presents
this _____ day of _____, 20 _____.

(Corporation Name)

Attest: _____
Secretary

(SEAL)

Easement Plat / Exhibit A



PLANNING & PUBLIC WORKS PROCEDURE



PROCEDURE NO: PPW-1056

SUBJECT: Chesterfield Valley Stormwater
Water Master Plan System
Maintenance Enforcement

DATE ISSUED: 09/27/2022 **DATE REVISED:**

The City, in cooperation with the Monarch Chesterfield Levee District (MCLD), shall utilize the following procedure for enforcement of maintenance of the Chesterfield Valley Stormwater Master Plan (CVSWMP) System.

If the City identifies a CVSWMP maintenance issue or receives a concern regarding maintenance of the CVSWMP, the City shall provide written notification of the issue to the MCLD.

Upon receipt of a potential issue from the City or upon inspection and observation of an issue, MCLD will initiate enforcement action and attempt to work with the property owner(s) to correct the issue and bring the property into compliance. MCLD will send written correspondence to the property owner(s) that includes details on the required maintenance and a required timeframe when the issue must be corrected. If the necessary maintenance action is critical to function of the CVSWMP system, the written correspondence should include notice that if the required action is not taken, MCLD may perform the maintenance and assess the cost to the owner as provided for in the easement agreement. If the action is necessary but not critical, the written correspondence should include notice that if action is not taken the matter will be forwarded to the City of Chesterfield for additional investigation and potential citation for violation of the City's Nuisance Code.

If the property owner corrects the issue within the timeframe provided by MCLD, MCLD will send written notice of resolution to the property owner confirming that the issue has been resolved. If the issue is not corrected MCLD may, at their discretion, send a 2nd notice to the property owner and continue working on resolution, initiate critical maintenance activity and assess the cost to the owner (as provided in the easement document), or send a request to the City for additional investigation and enforcement.

Correspondence to the City from MCLD requesting additional investigation and enforcement should include the previous written correspondence sent by MCLD to the property owner, a map with a specific location of the issue, photos of the issue, and

any other supporting documentation detailing MCLD efforts to resolve the issue. Upon receipt of the request from MCLD City Engineering staff will review the issue and determine if the issue constitutes a violation of the City's Nuisance code. If the issue does constitute a Nuisance, the City will take enforcement action in accordance with City Code Section 408, Article 08, Enforcement and Penalties. Article 08 allows the City to utilize a Stop Work Order (SWO), written notice of violation (NOV), and/or a summons as appropriate enforcement action.

Each enforcement action will likely have different levels of effectiveness on a given issue. Issuance of a summons may be more effective in one instance whereas an SWO may be more effective in another. Enforcement action is primarily a tool to achieve compliance and/or abatement of a violation. However, enforcement actions should also serve as a deterrent for future violations and encouragement for the permittee and owner/developer (responsible party) to proactively monitor and address issues before they are violations. To that end, the City and MCLD should review the available enforcement actions on a case by case basis and determine the most effective and reasonable course of action for each violation.

First Offense

If the documented violation is a first offence for the responsible party, an NOV will typically be issued.

Subsequent Offences

If the violation has previously been documented, the City should issue an NOV and consider reducing the allowable time to correct the violation. However, issuance of an NOV is not required and consideration should be given for issuance of a summons alone or in addition to an NOV.

Notice of Violation

An NOV shall contain the items as required in Section 408.08.030 of City Code and will typically consist of a letter signed by AN Engineer that specifies the address of the property, the deficiencies, the ordinance number and/or code section being violated, what corrective action is necessary, and a specific timeframe in which the responsible party is required to achieve compliance. It is recommended that the NOV include the supporting documentation from MCLD that more specifically identifies the actual site violations, required remedial actions, and associated photographs documenting the site conditions.

The NOV shall be sent via Certified Mail through USPS. All NOV's shall also be distributed to the MCLD, Director of Public Works, and the Director of Planning via e-mail.

Stop Work Orders

Issuance of an SWO shall result in a suspension of activity on the site, except for work related to remediation of the violation, until the violation is resolved to the City's satisfaction. For instances of property maintenance violations, an SWO may not be an

effective tool. However, upon the issuance of an SWO, the Director of Public Works and the Director of Planning are authorized to suspend the issuance of building permits and occupancy permits for structures on any portion of the site, and to suspend all inspections and plan review related to any other work that is taking place on the site, until such time as the violation is resolved to the City's satisfaction.

The SWO shall be posted onsite and issued in writing as part of an NOV. The SWO posted on the site shall be placed in reasonable proximity to the location where the violation(s) exists. An SWO posted in this manner shall be considered validly delivered.

An SWO shall be removed after the permittee and/or owner has notified the City that the necessary remedial work has been completed and the City and MCLD have confirmed abatement of the violations during a re-inspection. Results of the re-inspection shall be documented by photos. Re-inspections shall be scheduled as soon as possible after they are requested and, in any case, must be conducted within two business days after receiving the notification from the permittee and/or owner that the issue has been abated.

Any person who continues work on the site after having been served with an SWO, except such work related to remediation of the violation, shall be subject to penalties as specified in Article 08 of the UDC.

Summons


If the property owner fails to comply with the NOV and/or SWO, a summons to court may be issued. A summons may be issued for each documented deficiency for each day the matter remains non-compliant. Each court summons shall generally be issued in conformance with Policy PPW-075. The summons to court shall contain all the information required by the Code. If the issue is recurring and an NOV and/or SWO has been issued in the past, the Department of Public Works and/or Department of Planning shall have the option of issuing a citation immediately upon discovery of a violation, in lieu of another NOV and/or SWO.

Resolution

Resolution of an NOV and/or SWO shall be documented in writing and sent to the property owner via Certified Mail through USPS. It is recommended that the resolution documentation include a letter and photographs that show previous violations were addressed. The resolution letter shall also be distributed to the MCLD, Director of Public Works, and the Director of Planning via e-mail.

Procedure No. PPW-1056
CVSWMP System Maintenance Enforcement

APPROVED BY:



9/28/2022

Director of Public Works/City Engineer

Date

Recommended Revisions to Stormwater Standards

Section 405.04.120 Stormwater Standards.

A. General.

1. The purpose of this Section is to provide standards and regulations governing land development in order to reduce or prevent flooding and at the same time minimize damage to real property.
2. During the construction phase of development, facilities shall be provided to prevent erosion and siltation in accordance
3. The City of Chesterfield hereby adopts by reference The Metropolitan St. Louis Sewer District (MSD) Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities, February 1, 2018. The City of Chesterfield, unless otherwise acted upon, shall adopt by reference any changes made by MSD to the standards effective as of February 1, 2018.
4. Ability To Waive Requirements. The Director of Public Works is empowered to grant exceptions to the stormwater standards on a case-by-case basis when specific requirements are onerous and inappropriate for a particular development.
5. In addition to the standards as promulgated by MSD, the City of Chesterfield hereby supplements those standards which will be added to and effective in the City of Chesterfield as of the new MSD standards and shall read as follows:

a. General.

- (1) Compacted granular backfill is required within trenches located in the right-of-way and adjacent areas. (This includes sidewalks that are installed on easements adjacent to the right-of-way.)
- (2) Siltation control measures are to be designed, constructed and maintained until adequate vegetation is established to prevent erosion.
- (3) The adequacy of any existing downstream storm sewer system is to be verified and upgraded, if necessary.

b. Design Criteria.

- (1) Pavement under drains are to be installed the full width of the pavement at all curb inlets.

c. Detention.

- (1) When developments are within sites served by local and regional detention facilities, the City may require an analysis of downstream effects and compliance with detention requirements at time of development for areas served by regional-type detention basins which were installed previously.

d. Stormwater in Chesterfield Valley

- (1) Stormwater in Chesterfield Valley is subject to review and approval by the City of Chesterfield

for compliance with the Chesterfield Valley Master Stormwater Plan.

- (2) The Director of Public Works shall maintain a copy of the Chesterfield Valley Master Stormwater Plan in his/her office and make it available at all times hereafter.
- (3) Stormwater in Chesterfield Valley is subject to review and approval by MSD and the Monarch Chesterfield Levee District in accordance with the Intergovernmental Cooperation Agreement between MSD and MCLD.
- (4) Construction of required storm water improvements per the Chesterfield Valley Master Storm Water Plan shall occur with development and developers shall coordinate with the owners of the properties affected by construction of the required improvements. In the event that the ultimate required improvements cannot be constructed concurrently with a development, the developer shall provide interim drainage facilities and establish sufficient escrows as guarantee of future construction of the required improvements, including removal of interim facilities. Interim facilities shall be sized to handle runoff from the 100-year, 24-hour storm event as produced by the Master Storm Water Plan model. The interim facilities shall provide positive drainage and may include a temporary pump station, if necessary, to achieve positive drainage. Interim facilities shall be removed promptly after the permanent storm water improvements are constructed.
- (5) Alternate geometry, size and/or type of storm water improvements that are functionally equivalent to the required improvements per the Chesterfield Valley Master Storm Water Plan may be proposed. Functional equivalence is said to be achieved when, as determined by the Director of Public Works, the alternate proposal provides the same hydraulic function, connectivity, and system-wide benefits without adversely affecting any of the following: water surface profiles at any location outside the development; future capital expenditures; maintenance obligations; equipment needs; frequency of maintenance; and probability of malfunction. The City will consider, but is not obligated to accept, alternate plans. If the Director of Public Works determines that a proposed alternative may be functionally equivalent to the Chesterfield Valley Master Storm Water Plan improvements, hydraulic routing calculations will be performed to make a final determination of functional equivalence. The Director will consider proposals for alternate improvements, but is not obligated to have the hydraulic analysis performed if any of the other criteria regarding functional equivalence will not be met. The hydraulic routing calculations regarding functional equivalence may be performed by a consultant retained by the City of Chesterfield. All costs related to consideration of an alternate proposal, which shall include any costs related to work performed by the City's consultant, shall be reimbursed to the City.
- (6) All necessary Chesterfield Valley Storm Water Easements shall be provided to accommodate future construction of the Chesterfield Valley Master Storm Water Plan improvements, and any and all Chesterfield Valley Master Storm Water Plan improvements shall be depicted on the Site Development Plan(s) and Improvement Plans.
- (7) Maintenance of the required storm water improvements shall be the responsibility of the property owner unless the improvement is accepted by another agency for maintenance.

- (8) All Chesterfield Valley Master Storm Water Plan improvements, as applicable, shall be operational prior to the paving of any driveways or parking areas unless otherwise approved.
- (9) As-built plans for Chesterfield Valley Master Stormwater Plan improvements shall be submitted to the City and the Monarch Chesterfield Levee District for review and approval.

e. Floodplain

- (1) All requirements of Article 5, Flood Damage Prevention are incorporated herein, as may be revised from time to time.

f. Easements

- (1) Easements for stormwater improvements shall be provided as required by MSD, MCLD, and the City of Chesterfield.