SMITHVILLE STORMWATER MASTER PLAN

City of Smithville, Missouri

GBA NO. 15326.00
Submitted: February 14, 2023

GBA
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BACKGROUND

The City of Smithville has identified the need to evaluate and develop potential solutions that address flooding and erosion issues occurring in the City. GBA was hired to conduct a discovery phase to initiate a stormwater master plan and identify areas of needed stormwater improvements to reduce frequency and severity of flooding. This report presents recommendations for the implementation of best practices and improvements to the stormwater system within the City of Smithville, Missouri. It is not intended to alleviate every stormwater or flooding issue within the City limits but aims to maximize improvements in a cost-efficient manner.

Public System

All recommendations in the study are related to the major drainage system elements typically owned, utilized, and maintained by the City.

Private System

Identified problems associated with condition, maintenance, and capacity of privately owned facilities are discussed in our summary of the public meetings but recommendations do not directly address private systems, although certain recommendations within this memorandum may benefit these facilities.

DATA COLLECTION & EVAULATION

GBA collected and evaluated pertinent and available data from the owner as well as other publicly accessible sources.

FEMA Data: This data, shown in Appendix A - Exhibit 1, includes the floodplains defined by the Flood Insurance Rate Maps (FIRMs) that were developed by the hydrologic and hydraulic modeling of the rivers in the area. The City has several streams with federally defined floodways: Little Platte River, Wilkerson Creek, Second Creek, Owens Branch, and Rocky Branch. Several areas of the City that were called out for flooding issues are located within FEMA Flood Zones. These areas will be subject to inundation.

NRCS Soil Classifications: This data, shown in Appendix A - Exhibit 2, includes hydrologic soil group classifications, which indicate infiltration potential and the amount of runoff produced by storms. The majority of the soils within the City Limits are C and D Type soils. These soils have a slow infiltration rate and high runoff potential. C type soils generally consist of a layer that impedes water movement downward, while D type soils are generally clays near the surface that limit the soils ability to infiltrate.

Land Cover: This data along with impervious data was obtained from the National Land Cover Database, shown in Appendix A - Exhibit 3. The majority of the land within the City is pasture/hay, cultivated crops, developed from high intensity to open space, and deciduous forest. With a large amount of the developed area near the bottom of the basin, where a lack of stream buffer is apparent. This likely leads to quick peaking flow rates in the lowland areas, which can lead to flash flooding.

Stormwater Inventory: This data was collected and provided by Survey and Mapping (SAM). While SAM provided ratings to the structures and pipes themselves, several areas identified as issues during staff interviews and community outreach appear to be in good condition. This can be explained by either the

inlet/pipe clogging after SAM completed their survey or by the issues being related to capacity of the system instead of the condition.

Development Plans and Related Stormwater Reports: The past 19 years of development plans were provided by the City. This allowed a review of the typical plans and reports provided by developers and consultants, as well as an understanding of not only what the City requires, but how the consultants provide the information and how they are meeting the City Policies. Many of the reports acknowledged the increase in runoff due to the increase in impervious area, and several incorporated detention basins in order to make sure the post development flow rate off the site was the same as the pre-development flow rates per American Public Works Association 5600 Criteria.

PUBLIC ENGAGEMENT PROCESS

GBA completed a public engagement process that touched City of Smithville residents, staff, and elected officials. The approach to the Community Engagement Plan was a collaborative effort with the City, engaging the City's social media connections and website to engage a broader audience. The areas of concern identified by residents as well as the areas identified by staff are shown in Appendix A - Exhibit 4.

Staff Interviews

City of Smithville Staff were interviewed to discuss flooding and erosion concerns within the city limits and discuss potential solutions to reduce the frequency and severity of flooding; to better protect properties, businesses, and infrastructure. Attendees included the Director of Public Works, the Street Superintendent, the Development Director, and Utilities Inspectors. They identified twenty-two areas of flooding or erosional concern, where a large amount of the areas identified were related to maintenance items (Appendix B)

Community Outreach

Two workshops were held to provide an overview of the stormwater master plan to residents, and identify and discuss flooding and erosion concerns within the Smithville City Limits based upon citizen input. Seven areas were identified in total and can be found in Appendix C. These workshops occurred on November 28, 2022 and December 6, 2022. The workshop dates and times were set two weeks apart to avoid any potential holiday conflicts and optimize attendance. The City announced these dates well in advance in order to maximize the number of attendees.

Questionnaire – A short survey was created and posted to the City's website, as another method to gather information from the public about issues experienced or observed with stormwater inside the City limits. The City collected and shared survey responses to GBA, as well as emails from concerned residents.

RECOMMENDATIONS

After reviewing with City Staff the Data Collection & Evaluation details, and the information gathered from the Public Engagement process, a series of recommendations were developed. The City should enact the following, listed by priority:

1) **Maintenance Projects:**

a. Field Assessments: An annual program to conduct field assessments during dry weather conditions that check for illicit discharges and any culverts or storm sewers that are clogged. The assessment documentation will note the size, type, and location, to be added to the preventative maintenance program, detailed below. The listing of currently identified maintenance projects is prioritized based on the size of impact:

   i. Areas identified as Rock Creek 1 and Rock Creek 2 flood due to each outflow being clogged. It's recommended that the City clean these out to eliminate the roadway flooding in the area.

   ii. Woods Court is an area where the waterway is overgrown and should be cleared of overgrowth.

   iii. NE 158th & Chestnut Street is located on a private property where a pond has silted in. The City does have drainage easements in the area and could evaluate dredging of the pond to improve the backyard flooding.

   iv. Holmes and 145th has a pond that has silted in, resulting in flooding over the driveway that was a former public road. This location could benefit from the pond being dredged to improve capacity and reduce the frequency of flooding over the driveway.

b. Preventative Maintenance Program
   i. Street Sweeping: Development of an enhanced street sweeping plan that rotates areas on a more frequent basis in order to eliminate storm sewers being clogged by leaves and debris.
   ii. Culvert & Storm Sewer Cleaning Program: a schedule of culverts, inlets and outlets to be cleaned utilizing a jetter. Coordination with the Utilities Department to develop a schedule to borrow their jetter is recommended, to optimize the current resources of the City, versus renting or purchasing a new jetter for use.

2) Individual Improvement Projects:

These were identified during Staff Interviews and feedback from citizens and include the following:

a. Forest Oaks, where flooding occurs on the roadway, has been noted to be a result of an undersized pipe. This location was noted by City Staff as well as residents. It's recommended that this system is evaluated for sizing and replacement.

b. Stonebridge is located near the school where during intense rains, approximately 2' of ponding occurs. City staff believe that the overflow pipe may have been set at the wrong elevation. This area was identified by City staff as well as residents and should be evaluated in order to reduce the flooding issues in the neighborhood. This location is off City owned property, however a potential co-funding solution is possible if the school district was willing to participate along with the City.

c. Cedar Lakes has flooding within the neighborhood. This area was identified by residents as well as City staff, who stated that the outflow needs to be cleaned out, but that flooding has also resulted in a 4-6' manhole popping off. This indicates that the system undergoes

pressure flow and is likely under capacity. This area should be evaluated and may result in the replacement of the storm sewer system.

d. Cliff Drive may have an undersized culvert in this location, resulting in flooding, which has been reported by residents. The City indicated that a sewer project will be upcoming in this area. During that project, the culvert should be evaluated to determine if changes could be made to the structure to help mitigate/eliminate flooding.

e. The North Main location identified a culvert that has been plugged with concrete, noting that this was likely due to someone using the storm drain for their concrete clean out. Staff noted that new ditches and culverts are needed to increase/improve capacity. This location should be evaluated for a culvert replacement

f. The culverts under 188th near North Main are potentially undersized and result in flooding across the roadway. These should be replaced and upsized so that the roadway is not inundated during the 10-year storm event.

g. The Newport and Harborview area have water ponding in backyards during large rain events, likely due to an undersized culvert. This area, noted by residents and City Staff, should be evaluated for culvert replacement. This area is on US Army Corps of Engineers (USACE) property, therefore USACE would need to evaluate and develop a solution for this location. GBA recommends engaging with USACE to make them aware of the concern and determine if any partnering is possible to address this ponding issue.

3) **Education Campaign**:
The City should engage in outreach and education to reduce grass clippings, yard waste, and illegal disposal of materials to stormwater conveyance systems. Providing updates on social media and an annual meeting to remind residents of best practices in order to reduce localized stormwater issues will assist with the preventative maintenance program.

4) Revised Ordinances:
The City should develop more stringent ordinances for developers. They should better define what will be required of developments in order to reduce the allowance of increases to the proposed conditions. Restrictions are needed to limit the change of flow rates downstream of the site when compared to existing by the use of detention or another best management practice that attenuates the flow rates so that proposed do not exceed existing. The encouragement of low impact development within subdivisions, along with site design and buffers around streams and waterways would aid in reducing privately owned issues as Smithville continues to grow. Examples include:

a) No land shall be developed without full compliance with this Chapter unless Development occurs as allowed by the following exceptions:

i. **Standard Exceptions**: Projects meeting any of the following criteria are exempt from the provisions of this Chapter:

1. Land Disturbances of less than one acre that are not part of a common plan for Development that will cumulatively disturb more than one acre.

2. Expansions and modifications to Previously Constructed Developments otherwise subject to this Chapter where the proposed increase in impervious surface is less than 5,000 square feet. This exception shall not apply to multiple applications in the approval process and/or under construction at the same time that cumulatively exceed 5,000 square feet of impervious surface.

3. Land Disturbances for utility construction.

4. Agricultural land uses.

5. Single lot residential Developments that are not part of a larger common plan for Development.

6. Repairs to any Stormwater management Facility or practice deemed necessary by the Director of Public Works.

7. Required Rezoning and Special Use Permits to allow a specific use with no physical changes proposed to the approved Preliminary Development Plan.

ii. **City Administered Street Construction:** Street and thoroughfare construction projects administered and constructed directly by the City shall comply with this Ordinance, except that compliance is not required for street and thoroughfare construction: (1) that would be exempt under the standard exceptions in Section XXX of this Chapter; and (2) that will maintain, enhance, or reconstruct existing roadways, including the intersection improvements, turn lane additions, safety improvements, or new entrances, but which will not add additional through lanes.

Unless subject to another agreement, Stormwater Treatment Facilities installed as part of City administered projects are owned and maintained by the City.

The City does not assert jurisdiction under this Ordinance over any construction work on State of Missouri right-of-way.

iii. **Previously Approved Development Plans**: Projects having a preliminary Development plan (including preliminary plans approved with an accompanying rezoning or special use permit), preliminary plat, or site plan (for conventional zoning districts only) that had a final approval by the Governing Body, the Planning Commission, or the Planning and Development Services Department prior to adoption of this Ordinance are exempt from the provisions of this Chapter. "Substantial or Significant Changes" to Development plans after Month Day, Year, must comply with this Ordinance in the same manner as a new Development.

"Substantial or Significant Changes" shall mean any of the following criteria:

1. Increases in the density or intensity of residential uses of more than five percent (5%) when the increase creates additional impervious surface (typically horizontal in nature).

2. Increases in the total floor area of all nonresidential buildings covered by the plan of more than ten percent (10%) when the increase creates additional impervious surface (typically horizontal in nature).

3. Increase in lot coverage of more than five percent (5%).

4. Changes in ownership patterns or stages of construction that will lead to a different Development concept.

5. Decreases of areas devoted to open space of more than five percent (5%) or the substantial relocation of such areas.

6. Decreases of any peripheral setback of more than five percent (5%).

7. Changes of traffic circulation patterns that will affect traffic outside of the project boundaries.

8. Modification or removal of conditions or stipulations to the preliminary Development plan approval.

9. For any Developments proposed in the RP-OE, RP-OS, or PRN zoning districts, any change in the specified use or maintenance of any designated open space lands.

10. For any Developments proposed in the PRN, any changes in the type of dwelling units or style of dwelling units proposed to be constructed in a particular area or block.

iv. **Infill and Redevelopment Projects:** Substantial or Significant Changes to approved Development plans after Month Day, Year, are subject to the provisions as required under Section XXX of this Chapter.

b. Engineered channels and/or relocating natural streams are not approved methods of conveyance for stormwater; however, the City Engineer may adopt standards for these methods of conveyance for use under the following conditions: A deviation, as specified in Section XXX, is granted.

i. A variance may be granted by the Governing Body when the Section XXX deviation process does not apply.

ii. In an RE District, if the watershed is less than 40 acres and the channel is outside of street right-of-way, an engineered channel is allowed. In addition to the setback

requirements established in XXX, no building shall take place within 60 feet of the centerline of any channel in the RE District.

iii. A "bioswale" or similar facility is designed as an integral part of a stormwater treatment facility. Limitations for usage, locations and building setbacks for such facilities are provided in the Stormwater Treatment Standards.

5) **Community Rating System:**
It's recommended that the City become a part of the Community Rating System (CRS) voluntary incentive program and put more stringent requirements in place that exceed the minimum requirements of the National Flood Insurance Program (NFIP). CRS communities receive discounted flood insurance premium rates that reflect the reduced flood risk resulting from the community's efforts to address:

a. Reduce and avoid flood damage to insurable property

b. Strengthen and support insurance aspects of the NFIP

c. Foster comprehensive floodplain management

The City would need to go through an application and verification process, but could receive credit points through various updated requirements including but not limited to: limiting new buildings and/or fill in the floodplain, requiring freeboard, requiring compensatory storage, keeping flood and property data on computer records, conducting annual inspections of all channels and detention basins – removing debris as needed, and regulating new development throughout the watershed to ensure that post-development runoff is no greater than pre-development runoff. These credit points would allow for a greater discount to flood insurance premium rates.

SUMMARY

GBA has completed data evaluation within the City Limits and discussed areas of concern with residents and staff. The data compiled was indicative that Smithville, Missouri does not have significant issues with their stormwater system, but pointed towards improvements that could be completed that would further reduce flooding concerns, mitigate maintenance issues, and implement items that would aid in the future development of the City.

This concludes the evaluation performed by GBA, and we appreciate the opportunity to help identify and recommend improvements to address the stormwater issues that residents and the City of Smithville are experiencing.

Appendix A – Exhibits

US 169

MO 92

US 169

ARROWHEAD TRFY

ARROWHEAD TRFY

Legend

Smithville City Limits

FEMA Flood Zone

FLOODPLAIN

0.2 PCT ANNUAL CHANCE FLOOD HAZARD

AREA WITH REDUCED FLOOD RISK DUE TO LEVEE

FLOODWAY

N

0 2,000 4,000 8,000 Feet

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GBA

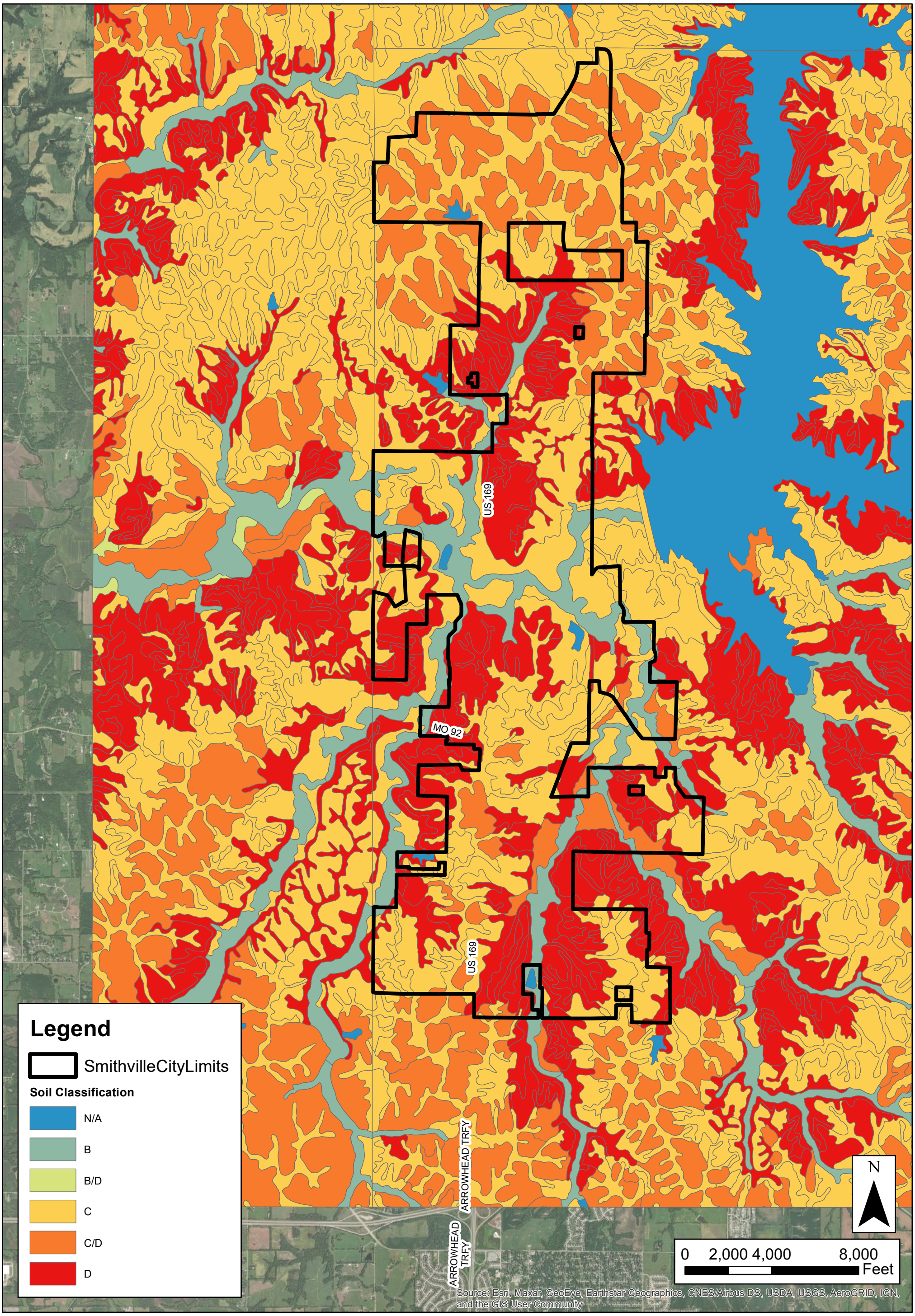
Stormwater Master Plan Smithville, Missouri

DATE: Feb 2023

JOB NO: 15326

DRAWN BY: KHS

EXHIBIT 1 FEMA DATA MAP



GBA

Stormwater Master Plan Smithville, Missouri

DATE: Feb 2023

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DRAWN BY: KHS

EXHIBIT 2 SOILS DATA MAP

Legend

SmithvilleCityLimits

Land Cover Classification

- 0 Unclassified
- 11 Open Water
- 12 Perennial Ice/Snow
- 21 Developed, Open Space
- 22 Developed, Low Intensity
- 23 Developed, Medium Intensity
- 24 Developed High Intensity
- 31 Barren Land (Rock/Sand/Clay)
- 41 Deciduous Forest
- 42 Evergreen Forest
- 43 Mixed Forest
- 51 Dwarf Scrub
- 52 Shrub/Scrub
- 71 Grassland/Herbaceous
- 72 Sedge/Herbaceous
- 73 Lichens
- 74 Moss
- 81 Pasture/Hay
- 82 Cultivated Crops
- 90 Woody Wetlands
- 95 Emergent Herbaceous Wetlands

US 169

MO 92

US 169

ARROWHEAD TRFY

ARROWHEAD TRFY

N

0 2,000 4,000 8,000 Feet

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GBA

Stormwater Master Plan
Smithville, Missouri

DATE: Feb 2023

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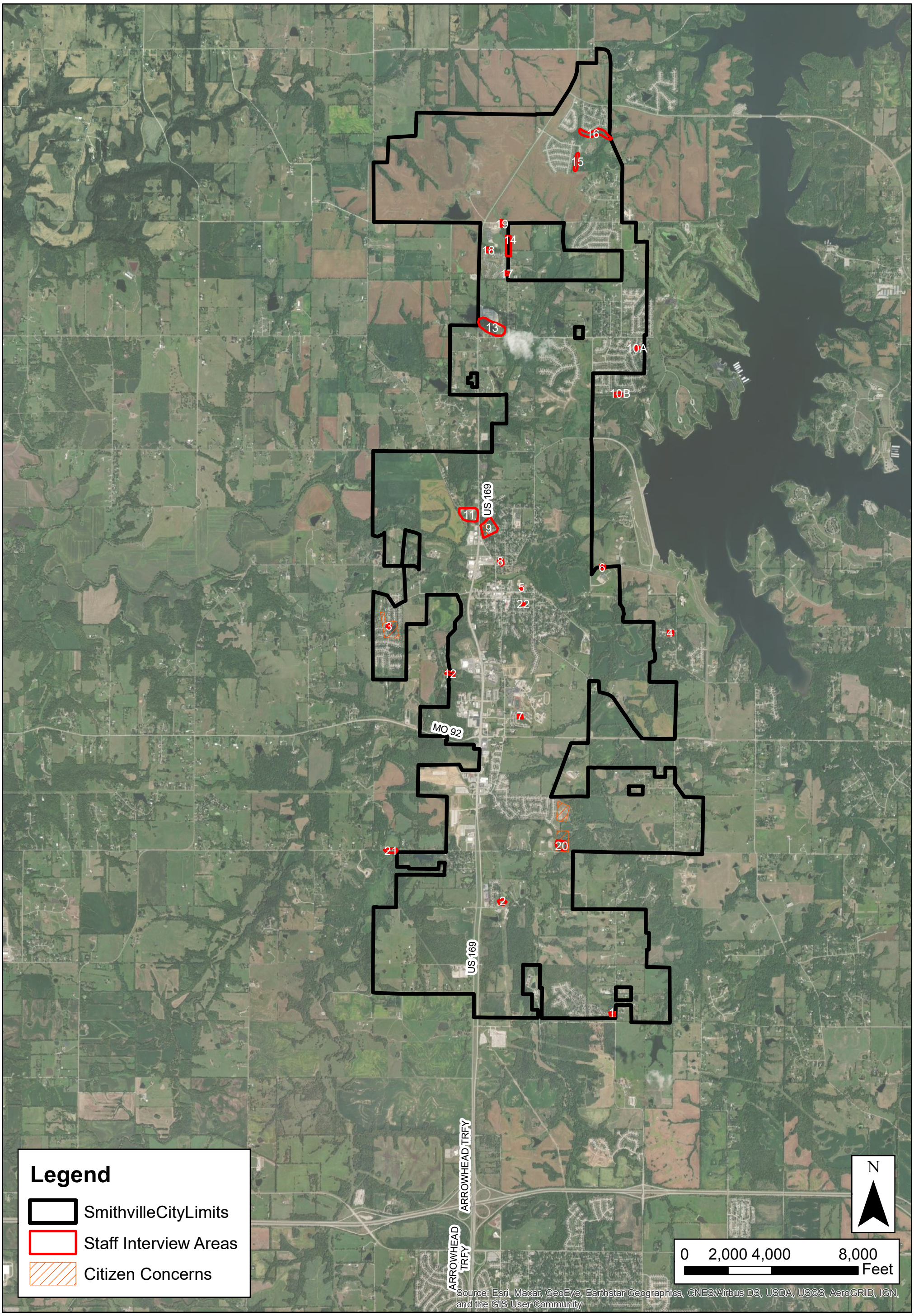
DRAWN BY: KHS

EXHIBIT 3
LAND USE DATA MAP



GBA

Stormwater Master Plan Smithville, Missouri

DATE: Feb 2023
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DRAWN BY: KHS

EXHIBIT 4 AREAS OF CONCERN MAP

Appendix B – Staff Interview Notes

9801 Renner Boulevard
Lenexa, KS 66219

MEMORANDUM

To: Project Record

From: Katie Stucky

Date: 10/19/2022

Subject: Smithville, MO Stormwater Master Plan – Staff Interviews

The Stormwater Master Plan – Staff Interviews were held on Wednesday, October 19, 2022, at the Smithville City Hall. Smithville staff in attendance included Chuck Soules, Public Works Director, and Gina Pate, Assistant to the Public Works Director. GBA staff in attendance included Aaron Frits and Katie Stucky. City Staff interviewed included Allan, Tony, Norm, Dennis, and Jack.

Objective
The purpose of the interviews was to discuss flooding and erosion concerns within Smithville city limits and discuss potential solutions to reduce the frequency and severity of flooding; and better protect properties, businesses, and infrastructure.

Format
Staff/consultants provided information about the project and what information they were needing to develop the Master Plan. Attendees were asked to identify flooding and erosion concerns within Smithville city limits and potential solutions by making notations on table maps depicting where flooding issues were occurring.

Interview Results
Attendees identified twenty-two areas of flooding and erosion concern detailed below.

(1) Forest Oaks
Development went in in 1994 or 1995. Flooding occurs near the 2nd and 3rd houses on the roadway. City generally has gotten 2-3 calls with the latest being 5/31/22. Flooding disperses quickly but pipe under roadway was a 24” galvanized, then had an 18” added on (ABS – video’ed). Brush and trees impede flow and add to the flooding issue.

(2) Woods Court
There have been numerous complaints of water backing up to the back slab caused by the waterway getting overgrown.

(3) Cedar Lakes
Flooding on the roadway occurs here because the outflow of the corrugated metal pipe needs to be cleaned out. 4-6’ manhole lid popped off and area has become a swamp

and erosion has occurred around the lift station at this location. There's a single owner for the property/pond.

(4) NE 158th & Chestnut St

Located on private property where a pond dam broke and pond has silted in. City does have drainage easements and the drainage flows to the northwest.

(5) Heritage Park Parking Area

Backwater from the river floods this area every 3-5 years. Likely no check valves on this system.

(6) Smithville Lake Dam

The dam leaks causing the ditch to silt and always have water in it.

(7) Stonebridge

This location is adjacent to the school (south). Dam collapsed which resulted in an emergency project was completed where the outfall was upsized to 3-30" pipes but the water will still overtop the emergency spillway. This has the largest number of complaints but is not necessarily a sizing issue. Occurs during short duration, high intensity rainfall events (7"/24 hrs, 2.5"/30 min) and leads to approximately 2' of water ponding. Overflow pipe may have been set too low because the overflow basin is not functioning properly.

(8) 1st & Bridge

Hawthorne (Swamp Park) water comes out of the inlet frequently from backwater. This location is going to have a project completed here where it will be converted to a roundabout with a bioswale.

(9) Carver & Owens Street

Backwater from the river floods the backyards because the area has been built up with an undersized culvert, resulting in a narrowing of the floodway.

(10) Newport & Harborview

Outflow issue at this location due to water not dissipating quickly, leading to water in the backyards

(11) US 169/County Road KK

The floodplain at this location is narrow due to the US-169 Culvert being undersized as well as the culvert located under the parking lot.

(12) Cliff Drive

Culvert under the roadway that drains the marketplace (where Price Chopper is located) is undersized. A sewer project will be upcoming in this area.

(13) N Main & 180th

New Homes were built around an existing pond. The water flows from northwest to southwest and the culvert is a concern at Main Street. Water currently overtops the pond dam and floods the roadway.

(14) North Main

Flooding occurs in this location. Concrete fills approximately ¾ of this culvert, likely from someone illegally dumping. New ditches and a culvert are needed as well as a review of the culverts to the south (rectangular box).

(15) Switchgrass

Three outfalls in this location result in flooding and water ponding in the area. A low spot occurs in the middle, then drainage goes between houses and ponds near the homes. Water has always ponded in this location. This is located on a walking trail from Diamond Crest that is part of an old RR easement.

(16) Woods Court

Junk from the houses in the area off NE 194th Terrace are being thrown into the creek at this location.

(17) Rock Creek 1

Flooding occurs in this location due to the outflow being clogged and needing to be cleaned out along Main Street.

(18) Rock Creek 2

Flooding occurs in this location due to the outflow being clogged and needing to be cleaned out.

(19) 188th and N Main

188th overtops during large rain events (2016, 2019) and lasts sometimes days before receeding.

(20) Holmes and 145th

Floods over the driveway that used to be a public road. This area would likely benefit from dredging their pond.

(21) 1st Creek

This location is outside the City Limits, but the city maintains the road. The road and the bridge at this location overtop several times a year. Bridge appears to be undersized and erosion has been occurring in this location.

(22) 506 Brasfield

A swale drains across the western edge of the property at this location and the resident has sent an email about it.

Appendix A: Staff Interviewed

Name	Title	Email
Chuck Soules	Public Works Director	csoules@smithvillemo.org
Gina Pate	Assistant City Administrator	gpate@smithvillemo.org
Allan Jensen	Street Superintendent	ajensen@smithvillemo.org
Tony Turner	Streets Crew Leader	tturner@smithvillemo.org
Jack Hendrix	Development Director	jhendrix@smithvillemo.org
Dennis Witt	Utilities Inspector	dwitt@smithvillemo.org
Norm Wells	Utilities Inspector	nwells@smithvillemo.org

Appendix C – Workshop Notes

9801 Renner Boulevard
Lenexa, KS 66219

MEMORANDUM

To: Katie Stucky

From: Sarah Doherty

Date: 12/1/2022

Subject: Smithville, MO Stormwater Master Plan - Community Outreach Workshop No. 1

The first Stormwater Master Plan - Community Outreach Workshop No. 1 was held on Monday, November 28, 2022, at the Smithville Senior Center. Smithville staff in attendance included Chuck Soules, Public Works Director, and Mayra Toothman, Assistant to the Public Works Director. GBA staff in attendance included Sarah Doherty. 10 participants attended.

Objective
The purpose of the workshop was to provide attendees with an overview of the stormwater master plan project, an opportunity to discuss flooding and erosion concerns within Smithville city limits, and participate in the development of potential solutions to reduce the frequency and severity of flooding; and better protect properties, businesses, and infrastructure.

Format
Attendees were asked to complete the sign-in sheet (Appendix A). Staff/consultants provided information about the project, planning process, and format of the workshop. Attendees were asked to identify flooding and erosion concerns within Smithville city limits and potential solutions by making notations on table maps depicting where flooding issues were occurring.

Workshop Results
Attendees identified three primary areas of flooding and erosion concern: Stonebridge subdivision, Forrest Oaks subdivision, and a privately owned property northeast of the Hills of Shannon subdivision.

Stonebridge
Established in 1994, the Stonebridge subdivision includes 12 single-family residential units surrounding a retention pond owned by the subdivision. In early 2002, (?) construction began on the “new” Smithville high school on a 100-acre previously undeveloped acre site located directly north of Stonebridge.

In August 2017, significant rainfall resulted in severe flooding of the 12 single-family residential units resulting in property and vehicle damage. Participants noted that some homes had up to 3’ of standing water in their garages.

In 2019, construction began on the high school athletic complex, located south of the high school and north of Stonebridge. Commercial development to the north and west of the subdivision has also increased drainage to Stonebridge and the retention pond (Figure 1).

Figure 1: Table Maps depict water glow (green) and reoccurring incidents of flooding (red).

To address reoccurring flooding issues at the high school football field, the Smithville school district constructed a culvert at the northeast end of the football field to take water away from the field and redirect it to the Stonebridge retention pond. Photos provided by one of the participants capture stormwater flow post-culvert construction (Figures 2 & 3):

Figure 2: Stormwater flow post-culvert construction.

Figure 3: Stormwater flow post-culvert construction.

Participants noted that during the construction, the contractor lowered the previously installed drainable pipe from the culvert to the retention pond causing the pond to overflow and erosion to the dam.

Forrest Hills
Established in xx, the Forrest Hills subdivision includes xx single-family residential units with a single ingress/egress (Figure 4).

Figure 4: Table Maps depict reoccurring incidents of flooding (blue).

In the Spring of 2022, significant rainfall resulted in residents not being able to enter/exit the subdivision until flood waters receded. Post-flooding damage included sinking streets and sidewalks.

Hills of Shannon
A privately owned property northeast of the Hills of Shannon subdivision with a single ingress/egress.

Participants noted that is not uncommon for rainfall to flood the culvert located to the north of NE 144th Street (~39.356532, -94.569970) and the street. The property owner is interested in discussing constructing a retention pond on the property.

Appendix A: Workshop No. 1 Sign-in

Name	Address	Phone number	Email
J. Holloway	158 Stonebridge	573-578-8821	jerregolf@gmail.com
Kyle & Shirl Minear	1700 Sophie Dr (Live at) Own: 136, 143, 165 Stonebridge Ln	816-858-5450	kyleinspector@aol.com
Susan Lambrecht	218 Stonebridge Ln	816-916-1032	millisbeach@yahoo.com
Sherry Kelley	138 Stonebridge	816-914-7110	
Robert & Paula Doleshal	161 Stonebridge Ln	417-229-2056	Pad.59@hotmail.com
Glen & Beth Jones	907 Aspen Dr	816-539-2542	glenandbethjones@gmail.com
Doug Orton	1000 NE 145 Terr	816-239-3354	dougorton@yahoo.com

9801 Renner Boulevard
Lenexa, KS 66219

MEMORANDUM

To: Katie Stucky

From: Sarah Doherty

Date: 12/19/2022

Subject: Smithville, MO Stormwater Master Plan - Community Outreach Workshop No. 2

The second Stormwater Master Plan - Community Outreach Workshop No. 2 was held on Tuesday, December 6, 2022, at the Smithville Senior Center. Smithville Board of Aldermen in attendance included John Chevalier, Jr., Ward 2, Ronald Russell, Ward 2, Leeah Shipley, Ward 3, and Marvin Atkins, Ward 3. Smithville staff in attendance included Mayra Toothman, Assistant to the Public Works Director. GBA staff in attendance included Sarah Doherty and Nick Janke. 10 participants attended.

Objective
The purpose of the workshop was to provide attendees with an overview of the stormwater master plan project, an opportunity to discuss flooding and erosion concerns within Smithville city limits, and participate in the development of potential solutions to reduce the frequency and severity of flooding; and better protect properties, businesses, and infrastructure.

Format
Attendees were asked to complete the sign-in sheet (Appendix A). Staff/consultants provided information about the project, planning process, and format of the workshop. Attendees were asked to identify flooding and erosion concerns within Smithville city limits and potential solutions by making notations on table maps depicting where flooding issues were occurring.

Workshop Results
Attendees identified four primary areas of flooding and erosion concern: Cedar Lakes subdivision, Harbor View subdivision, Owens Branch Creek subdivision, and a privately owned property east of the Hills of Shannon subdivision.

Cedar Lakes
During significant rainfall, water flows from 2nd Creek Road, Wright Valley Road, and Jasmine Circle flow to the retention pond located behind the four residential properties on Asher Bay Street (Figure 1). The bulk of the flow runs across 113 Asher Bay Street, located at the southwest corner of Wright Valley Road and Asher Bay Street, causing flooding and erosion issues for the property owner.

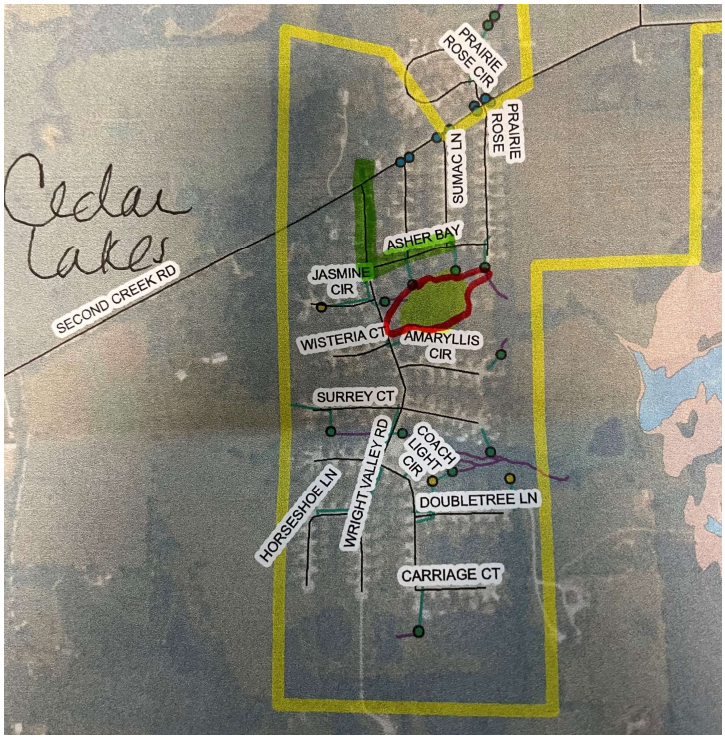

Figure 1: Table Maps depict water flow (green) and reoccurring incidents of flooding (red).

Harbor View

Located in the Harbor View subdivision, 213 Lakeview Drive is located north of property owned by the US Army Corps of Engineers. During significant rainfall, water flows from the greenspace located to the north of Lakeview drive flow to the property causing significant flooding (Figure 2).

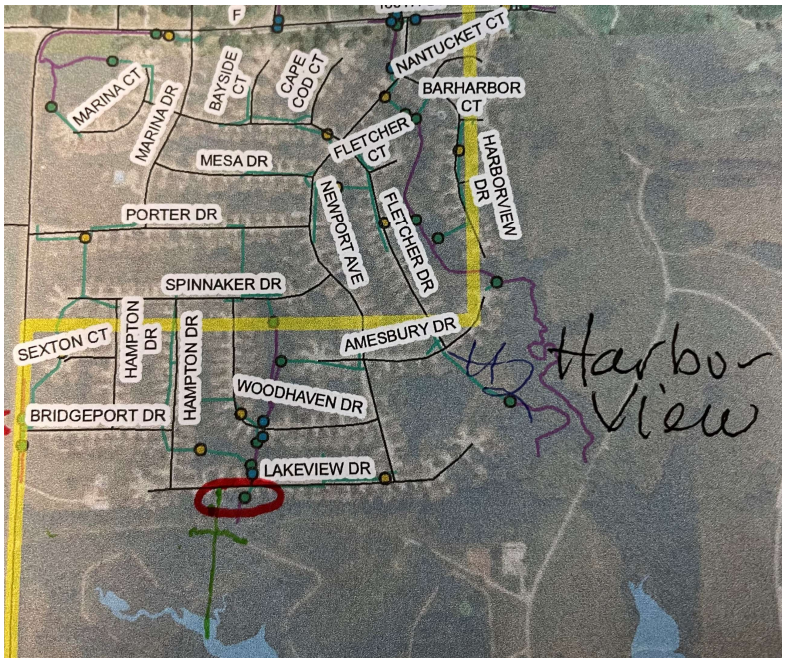

Figure 2: Table Maps depict reoccurring incidents of flooding (red).

The property owner noted that a 4” culvert located south of Lakeview Drive directs water flow south through a drainage ditch located east of the property to a 2.5” culvert located north of the Army Corps Road and south of the owner’s property (Figure 3).

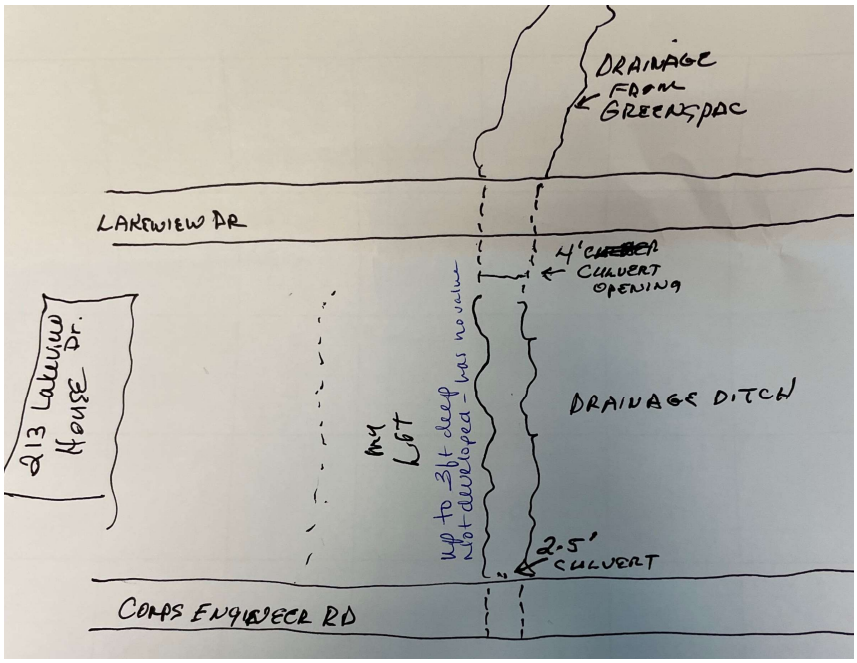

Figure 3: The drawing depicts water flow drainage.

During significant rainfall, the 2.5” culvert, which is owned by the Army Corps, is unable to handle the water flow causing significant flooding and erosion of the property (Figure 4).

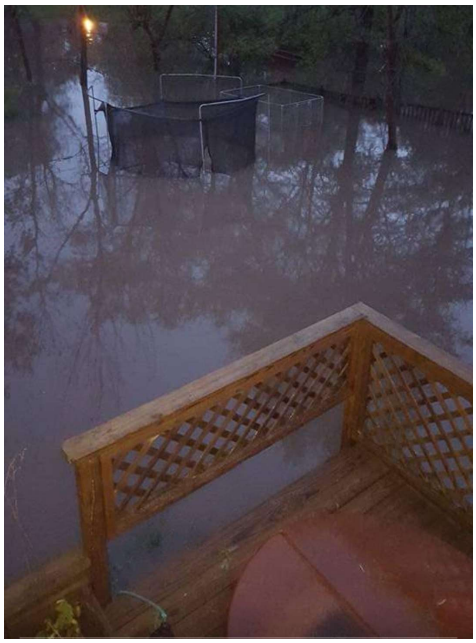

Figure 4: Recent flooding of property.

The property owner has contacted the Army Corps on multiple occasions to address the size of the culvert to alleviate flooding issues. Because the Corps does not consider the flooding issues a “drowning hazard”, there are no plans for them to address the size of the culvert.

Owens Branch Creek

Two to three times a year, several properties located in the Owens Branch Creek subdivision must deal with flooding and erosion issues. The Little Platte River, located to the west of the subdivision, feeds into the Owens Branch Creek which backs up to multiple properties on the north side of Owens Ave. The property owners of two properties (100 and 106 Owens Ave) noted that it is not uncommon for water flows to breach the Owens Branch Creek resulting in flooded backyards and in some instances basements (Figures 5 and 6).

Figure 5: 100 Owens Ave.

Figure 6: 106 Owens Ave.

Both property owners are of the belief that the culvert under the parking lot of the Smithville Marine, located to the west of the subdivision, is not functioning as intended.

Hills of Shannon
The property located at 520 Sunny Court is a privately owned property east of the Hills of Shannon subdivision (Figure 7).

Figure 7: Table Maps depict water flow (green).

Participants noted that the subdivision has inlets and storm sewers however, it is not uncommon for water flows from the subdivision to leave large ruts on the property.

Highland Drive
The property located at 105 Highland Drive reported a drainage problem where stormwater flows down the cul-de-sac and then goes across the backyard where it has flooded and developed a “valley” due to erosion. Resident reported that there is a drainage inlet near the bottom of the cul-de-sac but that water doesn’t flow that direction most of the time and it is usually clogged with leaves.

Appendix A: Workshop No. 2 Sign-in

Name	Address	Phone number	Email
Aaron & Melanie Shockley (Requested to be contacted by PW)	520 Sunny Ct. Smithville, MO 64089	816-986-9945	aaronkshock@gmail.com
Gary & Judy Warren (Requested to be contacted by PW)	106 Owens Ave	573-406-3962	juwarren@yahoo.com
Michael Belden	100 Owens Ave	816-810-6114	Mikebelden@hotmail.com
Bill Morris	213 Lakeview Dr. Smithville	816-500-5205	Oneoverpar_kc@hotmail.com
Marvin Atkins	113 Asher Bay	816-898-45990	Platkins@kc.rr.com
Also attended: John Chevalier Ron Russel Leah Shipley			