ATTACHMENT A
SCOPE OF SERVICES

SEDALIA STORM DRAINAGE IMPROVEMENTS
Project Area 8

Task 1 – Topographic and Utility Survey

1.1 Property Research

Perform a field search to recover existing monumentation (existing front property corners and right-of-way markers). Review the subdivision plats and field research to develop the existing property lines and establish the existing right-of-way. This work task is not intended to be a property survey.

1.2 Horizontal and Vertical Control

Set three (3) control points at each project area. The control will be tied to Missouri State Plane – Central Zone (NAD 83) & NAVD 88 Vertical Datum.

1.3 Utility Survey

Locate marked utilities at each project area including, but not limited to, water, sewer, gas, power, telephone, cable TV, and fiber optics. Buried utility companies will be contacted through the Missouri One-Call system and as supplemented by the City for those utilities not associated with the One-Call system. Utilities will be horizontally field located according to the field marks made by the utility companies or the One-Call locator. The inflow/outflow elevations for storm and sanitary sewer structures will be located along with the size and type of structure and the size and type of the conduit entering and leaving the structure.

1.4 Topographic Survey

Perform field surveys to obtain sufficient detail for the project design. The field information shall include topographic information to clearly identify breaklines, slopes, and terrain issues including paving, sidewalks, entrances & utilities.

1.5 Documentation

Prepare a CADD drawing of the property lines, right-of-way, existing utilities, existing topographic features, and spot elevations that will be used to supplement the City GIS/Lidar data. This drawing will be used as the basemap for the design and plan preparation.

1.6 Easement Documents

Prepare easement documents as required for temporary construction, channel grading, and/or surface drainage in swales.

Task 2 – Plan Preparation

2.1 Preliminary Plan Preparation (60% Plans)

Based on the Wilson & Company Stormwater Master Plan – Priority Projects Memorandum dated April 12, 2018; plans will be prepared for the Project Area 8 – Alternative #1.

Plan sheets will be developed as required to convey sufficient detail for construction. The following sheets will be prepared for the Preliminary Plan submittal:

- Title Sheet
- General Layout Sheet
- Plan & Profile Sheets
- Erosion Control Sheets
- Traffic Control Sheets

The Preliminary Plans and Engineer's Opinion of Probable Construction Cost will be submitted to the City for review. City comments will be addressed and written responses will be prepared and submitted with Final Plans.

2.2 Final Plans and Project Manual Preparation (100% Plans)

Based on comments received during the Preliminary Plan review, Final Plans will be revised. A written list of comments from the Preliminary Plan review will be assembled into a single document and responses to each comment will be provided. A Project Manual will be developed using the City's standard front end documents and technical specifications.

The Final Plans, Project Manual and Engineer's Opinion of Probable Construction Cost will be submitted to the City for review. City comments will be addressed and written responses will be prepared prior to advertising the project for Bid.

2.3 Post Design Services

The following post design services will be provided:

- Submit Final Plans and Project Manual documents in PDF format for bidding the project by the City.
- Answer questions and issue addendums, if required, during the project advertisement period.
- Review shop drawings
- Address contractor RFIs during construction

Items Not Included in the Scope of Services

1. Any work requested by the City that is not included in the basic services will be classified as supplemental services. Supplementary services shall include, but are not limited to the following:
    a. Changes in the scope, extent, or character of the project.
    b. Revisions to the plans when inconsistent with previous approvals or instructions by the City.
    c. Updating plans to reflect development that has occurred after the Final Plans are complete.
2. Utility coordination except as specifically stated in Task 1.3.
3. Obtaining Ownership & Encumbrance or Title Reports for the adjacent properties.
4. Public Involvement or meetings with the adjacent property owners.
5. Design of sidewalks or handicap ramps.
6. Full property survey or setting of new property corners if they are missing is not required.
7. Environmental permitting.
8. Construction Phase Services:
    a. Construction inspection or testing.
    b. Substantial and Final completion inspections.
    c. Preparation of record drawings.

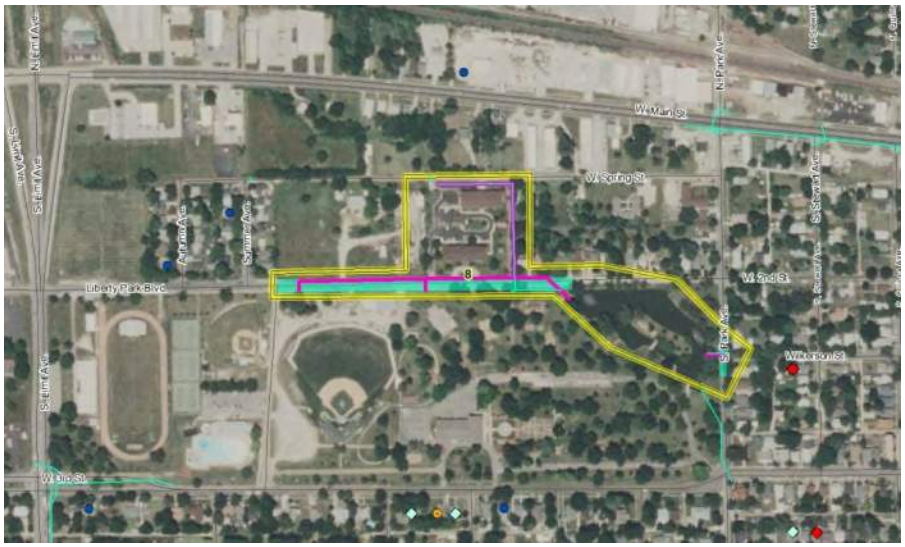
WILSON &COMPANY

EXHIBIT A
FEE ESTIMATE WORKSHEET

Proj.: Storm Drainage Improvements
By: GJLust
Date: October 28, 2021
Client: Sedalia, MO
Notes: Project Area 8

TASK I.D.	WORK TASK DESCRIPTION	ESTIMATED MANHOURS						TOTAL HOURS	LABOR EFFORT	EXPENSE EFFORT	TOTAL FEE
	TASK CODE	P5	P3	OD4	FS6	FS5	FS4				
	WCI CLASS										
	TITLE	Project Manager	Design Engineer	CADD Technician	Survey Manager	Chief Surveyor	Survey Tech				
TASK 1 - RIGHT-OF-WAY and UTILITY SURVEY											
1.1	Property Research			4	2			6.00	$ 624.00	$ -	$ 624.00
1.2	Horizontal & Vertical Control					8	8	16.00	$ 1,680.00	$ 1,260.50	$ 2,940.50
1.3	Utility Survey					16	16	32.00	$ 3,360.00	$ 672.00	$ 4,032.00
1.4	Topographic Survey					24	24	48.00	$ 5,040.00	$ 1,597.50	$ 6,637.50
1.5	Documentation			32	8			40.00	$ 3,776.00	$ -	$ 3,776.00
1.6	Easement Documents			8	4			12.00	$ 1,248.00	$ -	$ 1,248.00
	Subtotal	0	0	44	14	48	48	154.00	$ 15,728.00	$ 3,530.00	$ 19,258.00
TASK 2 - PLAN PREPARATION											
2.1	60% Plans	56	176	120				352.00	$ 39,192.00	$ 476.00	$ 39,668.00
2.2	Final Plans and Project Manual Preparation	24	88	64				176.00	$ 19,248.00	$ 110.00	$ 19,358.00
2.3	Post Design Services	4	8					12.00	$ 1,588.00	$ 128.00	$ 1,716.00
	Subtotal	84	272	184	0	0	0	540.00	$ 60,028.00	$ 714.00	$ 60,742.00
	TOTALS	**84**	**272**	**228**	**14**	**48**	**48**	**694.00**	**$ 75,756.00**	**$ 4,244.00**	**$ 80,000.00**

Improvement Area 8 – Liberty Park Boulevard and South Park Avenue



Location Map

Benefit Point Total	200
Project Cost	$495,525
Cost/Benefit Score	2478

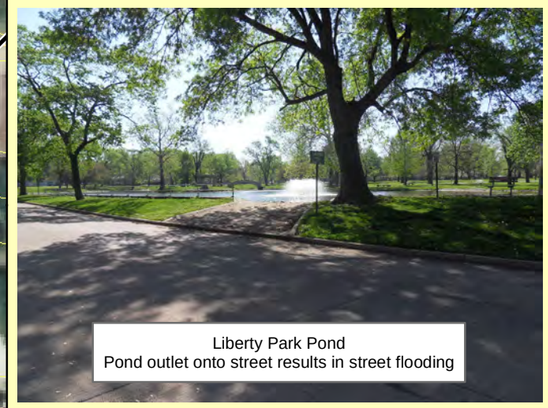
Project Problem and Solution Summary

The flooding problem in this area consists of street flooding in two locations. The first flooding location is at the intersection of South Park Avenue and Wilkerson Street. Stormwater flows from the east and south and collects at the intersection. Currently two curb inlets exist on the northeast and west corner of the intersection. These curb inlets and are undersized and as a result street flooding occurs at the intersection of South Park Avenue and Wilkerson Street. The second street flooding location occurs on Liberty Park Boulevard. The street flooding at this location is a result of the lake in Liberty Park outlet flowing onto Liberty Park Boulevard. The other cause of street flooding is the lack of curb inlets on Liberty Park Boulevard. Currently two curb inlets exist to capture street and lake runoff.

The solution to the flooding problem in this area involves the placement of stormwater pipes to capture runoff from the lake and street. The solution to the flooding problem at South Park Avenue and Wilkerson Street involves the placement of three curb inlets and new storm sewer to capture stormwater and not allow it to pond. The solution to the Liberty Park Boulevard flooding involves the placement of a new outlet structure in the existing pond to prevent the pond outflow from flowing onto Liberty Park Boulevard. New inlets and storm sewer will also be required to capture stormwater that collects on Liberty Park Boulevard. The new street stormwater system can also act as an emergency outlet for the pond if the new pond outlet were to become clogged. These improvements will prevent flooding on Liberty Park Boulevard. For final design survey information will be needed for home low openings, lake requirements, utility information and more detailed topographic data to provide more accurate alignment and pipe sizing.

Cost Estimate				
Item Description	***Quantity***	***Qty. Units***	***Unit Cost***	***Total Cost***
Pipe 21" and Smaller - Street	170	LF	$180	$30,600
Pipe 21" and Larger - Street	1742	LF	$210	$365,820
			Subtotal	$396,420
			Utilities and Misc. Contingency (25%)	$99,105
			Total	$495,525

Undersized storm water system
results in street flooding on Liberty Park Blvd.



Liberty Park Pond
Pond outlet onto street results in street flooding

W. Spring St.
Liberty Park Blvd.
8
W. 2nd St.
S. Quincy Ave.
Wilkerson St.
S. Park Ave.
S. Stewart Ave.
S. Quincy Ave.
W. 3rd St.

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Legend

- Proposed Pipes
- Street Flood
- Potential System Improvements
- Surface Water, Ground Water and Sanitary Sewer Backup
- Surface Flooding and Sanitary Sewer Backup
- Ground and Surface Water Flooding
- Surface Flooding
- Ground Water Flooding
- Ground Water Flooding and Sanitary Sewer Backup
- Sanitary Sewer Backup
- Returned Questionnaires with No Major Issues

City of Sedalia, MO
Potential System Improvements
Project ID #8

0 125 250 500 Feet

N

OLSSON ASSOCIATES

WILSON & COMPANY

Memorandum

Alaska
Arizona
California
Colorado
Kansas
Louisiana
Missouri
Nebraska
New Mexico
Oklahoma
Texas
Utah

To: City of Sedalia, Missouri

From: Wilson & Company, Inc., Engineers & Architects

CC:

Date: April 12, 2018 **File Number:** 14-100-509-00

Re: Stormwater Master Plan Improvement Areas – No. 08

From the field investigation, it appears that the primary issue with this location is that the pond in Liberty Park outlets onto Liberty Park Blvd., and the existing inlets in the area are inadequate to capture the runoff. There is a low point on Liberty Park Blvd. just west of the pond outlet with only one curb inlet, leading to runoff and the outflow from the pond to flood the area. The curb and gutter stops west of the curb inlet, leading to water ponding in the low-lying areas. The primary issue with the area of concern at the east end of the pond is a low point at the intersection of S Park Ave. and Wilkerson St. and the lack of an enclosed system/inability for the water to drain to the pond.

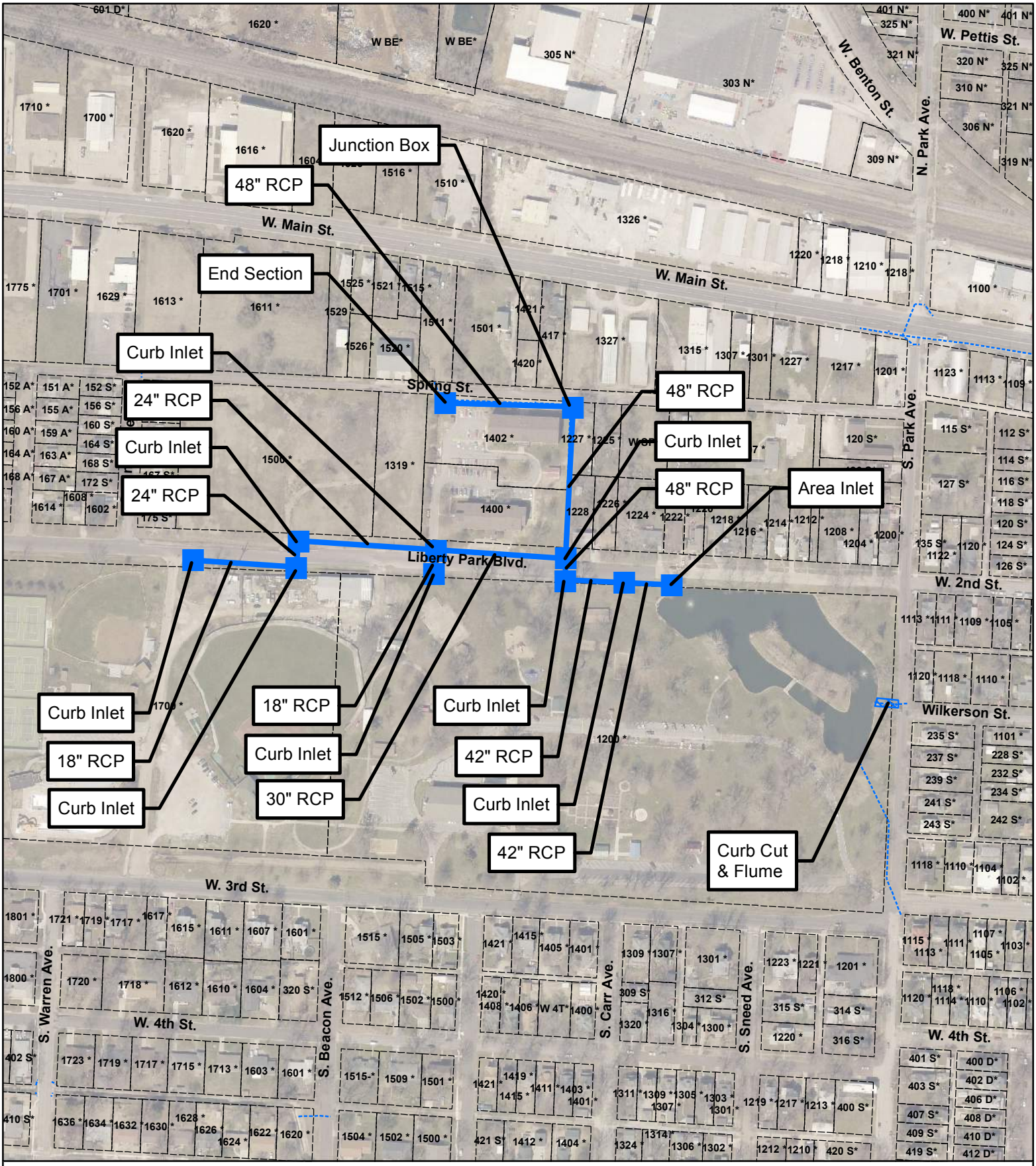
Based on 2013 aerial imagery and 2011 LiDAR contours, the area of concern has a drainage area of approximately 33 acres. Based on rational method and drainage area parameters, the 1% design storm will yield a peak discharge of approximately 169 cfs.

Alternative #1:

Alternative #1 includes adding an area inlet at the bottom of the overflow outlet structure of the pond and upgrading the existing enclosed system. Additional curb inlets and larger pipes would be placed along Liberty Park Blvd. The curb and gutter would be extended to the west along Liberty Park Blvd. A flume with a curb cut would be installed on the west side of the intersection of Park and Wilkerson to allow the water flow down into the pond. The alignment of the proposed system would follow the existing enclosed system alignment. An alternative alignment would be to run the enclosed system to the west of the parking lot at the Liberty Apartments, 1400 Liberty Park Blvd. Nine inlets, a junction box, 18” RCP, 24” RCP, 30” RCP, 42” RCP, and 48” RCP will make up the new enclosed system. The street and driveways will need to be patched. The new system will be partially located on private property, so a permanent drainage easement and temporary construction easement should be considered. However, there might be an existing easement in place for the existing enclosed system.

Alternative #1 Cost Estimate: *(On Next Page)*

Item	Quantity	Unit	Unit Price	Total
Clearing and Grubbing	1	LS	$ 10,000	$ 10,000
Grading	200	CY	$ 20	$ 4,000
Inlet	9	EA	$ 6,000	$ 54,000
Junction Box	1	EA	$ 6,000	$ 6,000
Storm Sewer (18")	350	LF	$ 100	$ 35,000
Storm Sewer (24")	350	LF	$ 120	$ 42,000
Storm Sewer (30")	300	LF	$ 150	$ 45,000
Storm Sewer (42")	250	LF	$ 200	$ 50,000
Storm Sewer (48")	750	LF	$ 250	$ 187,500
End Section	1	EA	$ 4,000	$ 4,000
Street Patch	500	SY	$ 120	$ 60,000
Driveway Patch	50	SY	$ 80	$ 4,000
			Sub-Total	$ 501,500
			Contingency (20%)	$ 100,300
			Total	**$ 601,800**



Legend

- Proposed Berm
- Proposed Channel
- Proposed Storm Sewer
- Proposed Storm Structure
- Existing Storm Sewer
- Corporate_limits
- Parcel

0 150 300 600 Feet

City of Sedalia, Missouri

Stormwater Master Plan Improvements

Improvement Area: 08

April 2018

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