

Agenda Item 7

Memo to the Programs, Projects and Operations Subcommittee

Subject: City of Bellevue – Gilmore Lake Road Stormwater Management

Date: December 2, 2009

From: Gerry Bowen and Amanda Grint

Last August, the writers met with the owner of the Bellevue VFW located approximately ½ mile east of 25<sup>th</sup> Street and Gilmore Lake Road in Bellevue. A memo summarizing the visit is attached for your reference.

A summary of the findings follow:

1. The Bellevue VFW was built adjacent to “Wolf Creek”.
2. Wolf Creek is an unimproved channel. The crossing at Gilmore Lake Road is a 36” CMP. (Subsequent to writing the memo, it was discovered that twin 6’x6’box culverts pass beneath Lola Drive, approximately ½ mile north or upstream of the VFW.)
3. Gilmore Lake Road is a gravel road connecting the VFW to 25<sup>th</sup> Street and is 1.5 lanes wide. There are no roadside ditches.
4. Runoff from storms travels down Gilmore Lake Road, Wolf Creek, and farmland to the east of the VFW and collects in the VFW and their parking lot. There have been several instances of runoff entering the structure.
5. The south half of Gilmore Lake Road is in the City of Bellevue, the remainder is in the Spring Creek SID, which is in financial difficulty. Sarpy County technically has jurisdiction, but has asked the SID to perform their share of the maintenance.
6. The memo suggests several potential solutions, but staff believes that a cooperative venture between the various partners is the best path to pursue (Recommendation #1 in the attached memo).

The City of Bellevue (see attached letter) has requested that the District cost-share on an engineering study to identify potential solutions to the stormwater problem. They have estimated that such a study would cost between \$15,000 and \$20,000. They have asked the District to equally share the cost.

- **It is recommended that the Subcommittee recommend to the Board that the District cost share with the City of Bellevue on an engineering study of the Gilmore Lake Road/Bellevue VFW area, in an amount not to exceed \$10,000.**



# City of Bellevue

Office of the Administrator

210 West Mission Avenue ♦ Bellevue, Nebraska 68005 ♦ (402) 293-3023

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December 3, 2009

Mr. John Winkler  
Papio-Missouri River NRD  
8901 South 154th Street  
Omaha, NE 68154

RE: Gilmore Lake Road

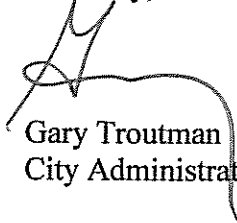
Dear John:

NRD staff and City staff met yesterday to examine the drainage situation(s) along and near Gilmore Lake Road. Stormwater which must pass under the road originates along the road, in the Spring Creek subdivision, in the waterway east of the subdivision and, possibly the field to the east. Most revealing is that drainage which goes through a new twin 6' x 6' culvert under Lola Street is directed downstream to a 36" CMP.

Given this situation, I am writing to request that NRD and the City of Bellevue partner on a 50/50 basis to conduct an engineering study of the water basin which is served by the culvert under Gilmore Lake Road. This would include sizing of the culvert plus any waterway restrictions which may exist a short distance below the culvert. Also the study would include drainage which may now be directed at, or to the east side of, the VFW parking lot and building. We estimate the cost of the study should be in the \$15,000 to \$20,000 range.

I appreciate your consideration of this request. Feel free to contact me if you need any additional information.

Sincerely,



Gary Troutman  
City Administrator

GT/ke

Memo to File:

Subject: Bellevue VFW – Gilmore Lake Road

Date: August 31, 2009

By: Amanda Grint and Gerry Bowen

On August 20, 2009, the writers met with Tom Arnott (Bellevue VFW), Director John Schwope, and Jeff Roberts (Bellevue City Engineer) concerning a flooding problem at the Bellevue VFW Hall located at 9501 S. 25<sup>th</sup> Street, Bellevue, Nebraska. The VFW is physically located east of 25<sup>th</sup> Street at the end of Gilmore Lake Road. A number of attached photos were provided by Mr. Arnott demonstrating the runoff and flooding problems in the area. District flood warning gages in the eastern Sarpy County area recorded an intense shower of approximately one inch of rainfall during a 45 minute period on the day of the photographs (August 19, 2009). The following items were observed and/or discovered at the site visit:

1. Gilmore Lake Road is a gravel roadway approximately 1.5 lanes wide, leading from 25<sup>th</sup> Street east to the VFW Hall. It does not have roadside ditches, allowing stormwater runoff to seek its own path (See Photo 1). Approximately 500 feet west of the VFW, runoff crosses Gilmore Lake Road to the north and continues downhill to "Wolf Creek".
2. 23<sup>rd</sup> Street drains a portion of the development to the south, but is not connected to Gilmore Lake Road.
3. The Bellevue VFW is located at the bottom of the hill adjacent to "Wolf Creek" (see Photos 3, 6 & 7). Also, the VFW appears to be located at the lowest point in the surrounding lands. Immediately south of the VFW hall is a private fishing lake for VFW members only.
4. Gilmore Lake Road forms the boundary between the zoning jurisdictions of the City of Bellevue (south side) and Sarpy County (north side). The right-of-way is 66 feet wide. The south half of the right-of-way is owned by the City of Bellevue. However, Sarpy County claims that a transfer of title from the SID has not taken place, leaving the ownership of the north half of the right-of-way unknown.
5. Other than the Gilmore Lake Road right-of-way, all other lands are in private ownership.
6. Roberts said that the Spring Creek Development (north of Gilmore Lake Road) has apparently gone bankrupt, with the ownership of "Wolf Creek" (the plat shows the creek in an outlot) in doubt. Further, he noted that there was an agreement with the Spring Creek developers and Sarpy County (?) that the developers would improve Gilmore Lake Road (paving, curb and gutter) eastward from 25<sup>th</sup> Street to the VFW. This construction/improvement has not been done.
7. "Wolf Creek" has very little capacity upstream of Gilmore Lake Road, allowing runoff to exit the creek into the VFW parking lot (see Photo 4). Downstream of the road there is some capacity, but capacity calculations in respect to design storms are not available. However, Roberts indicated that at least a 6'X 6' box culvert would be necessary under Gilmore Lake Road. Currently, there is a 36" CMP under the road.
8. Lands east of the VFW, including flows from a portion of the Kennedy Freeway, drain westerly and collect around the VFW, apparently entering "Wolf Creek" at a point downstream of the VFW and lake.

9. Runoff collects in the VFW parking lot, and has entered the building several times in recent years (see Photos 6 and 7).
10. The VFW is not currently in a mapped floodplain. However, an updated study on the Big Papillion Creek and its tributaries will provide a detailed flood study for this tributary and potentially the VFW will be placed in a Zone AE floodplain. This study is expected to be complete in 2012.

There are three possible actions identified by staff to address the problems being experienced, with the first being the preferred alternative.

- 1.) It is recommended that the City of Bellevue and Sarpy County cooperate to arrive at a comprehensive solution to the flooding problem. This solution needs to include increased channel capacity (Wolf Creek), roadway and roadside ditch improvements (Gilmore Lake Road), stormwater detention (Spring Creek development), and diversion of runoff from adjacent lands (farmland east of the VFW). Many of these measures may be eligible for NRD cost share assistance under either the Urban Drainageway or Urban Conservation Assistance Programs (guidelines to both programs attached). Although no engineering studies have been completed, the writers believe that an "order of magnitude" cost estimate would be in the range of \$500,000 to \$1,000,000.
- 2.) Another potential long term solution exists. It is likely that this property will be located in the floodway or floodway fringe based upon the flood mapping update being done by the Corps of Engineers. This property may be eligible for the NRD's Floodway Purchase Program, a voluntary buy-out program, however several considerations should be made at that time such as the potential liability of the pond and access issues. According to the Sarpy County Assessor, the property has an assessed value of \$59,300. Eligibility would occur when new maps become effective, probably by June 2013.
- 3.) An interim measure that could be investigated and implemented in a relatively short period of time (6-12 months) would be for the City of Bellevue and Sarpy County to clear trees and reestablish the Wolf Creek channel for a distance of a couple of hundred feet or so upstream of the 36 inch culvert road crossing just north of the VFW building. It appears that one of the most notable and frequent problems is that that Wolf Creek channel has silted in over time to the point that even frequent small storm events cause nuisance flooding problems. This is by no means a long term or all inclusive solution, but could provide some temporary relief for what is estimated to be under a \$100,000 investment in engineering and construction costs. The NRD's cost share programs noted in item 1 above are normally considered for more long term comprehensive solutions, but possibly the Board would consider an exception in this case due to the consistent flooding problems and ongoing maintenance that the VFW facility faces. This measure would possibly provide some time to study and implement the long term solution outlined in items 1 or 2 above.



Photo 1 – Looking east on Gilmore Lake Road. (8-19-09)



Photo 2 – Looking east on Gilmore Lake Road. Runoff flows from south side to north side of road. (8-19-09)



Photo 3 – Looking east next to VFW Hall and parking lot. (8-19-09)



Photo 4 – Looking west from VFW parking lot. Wolf Creek overflowing into parking lot. (8-19-09)



Photo 5 – Looking north from VFW. Parking lot flooding. (8-19-09)



Photo 6 – Looking west from VFW parking lot. (8-19-09)



Photo 7 – Looking south at VFW from Gilmore Lake Road. (8-19-09)



## 17.17 URBAN DRAINAGEWAY PROGRAM

The Urban Drainageway Program is an authorized program of the District to provide technical and financial assistance to municipalities to control erosion and/or flooding along major urban drainageways.

### A. Criteria for Assistance

- (1) An eligible project involves improvements made on any major drainageway (open channel) in a developed, urban area where erosion or flooding threatens public or private property.
- (2) Each project must be sponsored by a municipality or other unit of government (including S&IDs) with authority and capability to carry out the project.
- (3) Eligible measures include:
  - (a) channel stabilization measures (liners, gabions, weirs)
  - (b) stormwater management facilities (improved channels, detention structures)
  - (c) grade stabilization structures.
- (4) An enclosed storm sewer is not an eligible project.
- (5) Eligible projects shall be less than \$1.5 million in total cost.
- (6) Approved projects may be implemented over a period of consecutive years.
- (7) All measures must be technically feasible and environmentally acceptable.

### B. District Responsibilities

- (1) Administer the Urban Drainageway Program.
- (2) Review and prioritize all applications.
- (3) Provide 60% cost-sharing on all eligible costs of the project. Eligible costs shall include all costs associated with design, construction, and construction inspection. The following shall also apply:
  - (a) Sponsor's "in-house" design and construction inspection costs are eligible for cost-sharing provided that the work is performed or supervised by a licensed professional engineer.
  - (b) Construction must be performed by a qualified contractor. Reimbursement for use of Sponsor's equipment is not an eligible cost.
  - (c) Preliminary study costs (if necessary) are eligible for cost-sharing only if the project is installed.
- (4) The District may require construction of component parts in consecutive years.
- (5) The District reserves the right to approve or reject plans, specifications, and/or implementation schedules.
- (6) The District shall budget funds for the component parts of all approved projects. Previously approved projects have priority for funding.

### C. Sponsor Responsibilities

- (1) The sponsor shall submit an application on forms provided by the District (Urban Drainageway Program Application, Form 17.17, Manual of Standard Forms, Appendix E).
- (2) The sponsor shall submit preliminary plans with the application. The following items should be included:
  - (a) total estimated cost
  - (b) implementation schedule, including estimated costs for component parts.
  - (c) environmental acceptability statement.
  - (d) preliminary survey and design information.
  - (e) location maps.
- (3) The sponsor shall obtain all land rights for the project at no cost to the District.
- (4) The sponsor shall provide all future operation and maintenance on the project at no cost to the District.
- (5) The sponsor must comply with all local, state, and federal laws.
- (6) The sponsor must obtain all local, state, and federal permits necessary for the project.
- (7) The sponsor shall administer all contracts for design, construction and construction inspection.
- (8) The sponsor shall hold and save the District free from damages or claims due to the design, construction, or operation and maintenance of the project.
- (9) The sponsor shall execute an agreement with the District which will outline these guidelines.

#### D. Requesting Reimbursement

- (1) Upon completion of construction of each component, reimbursement may be requested by the sponsor by providing the following:
  - (a) Certificate of Completion, signed by a licensed, professional engineer.
  - (b) Copies of final pay estimates which shows total units, unit costs, and total component costs.
- (2) Progress payments on individual components will not be allowed.

(September 10, 1987)

## 17.0 URBAN CONSERVATION ASSISTANCE PROGRAM

The Urban Conservation Assistance Program is an authorized program of the District to provide technical and financial assistance to units of government (sponsors) and citizen groups to help prevent or control erosion, flooding, and related resource concerns in urbanized areas.

### Criteria For Assistance

1. Potential projects need to be on lands under control of the Sponsor through deed, lease, or easement.
2. Acceptable Practices:
  - a. permanent grade stabilization structures
  - b. channel stabilization measures
  - c. stormwater management facilities
  - d. diversions and terraces
  - e. permanent seeding, sodding, and mulching of critical areas
3. An enclosed storm sewer is not an eligible practice or project.

### District Responsibilities

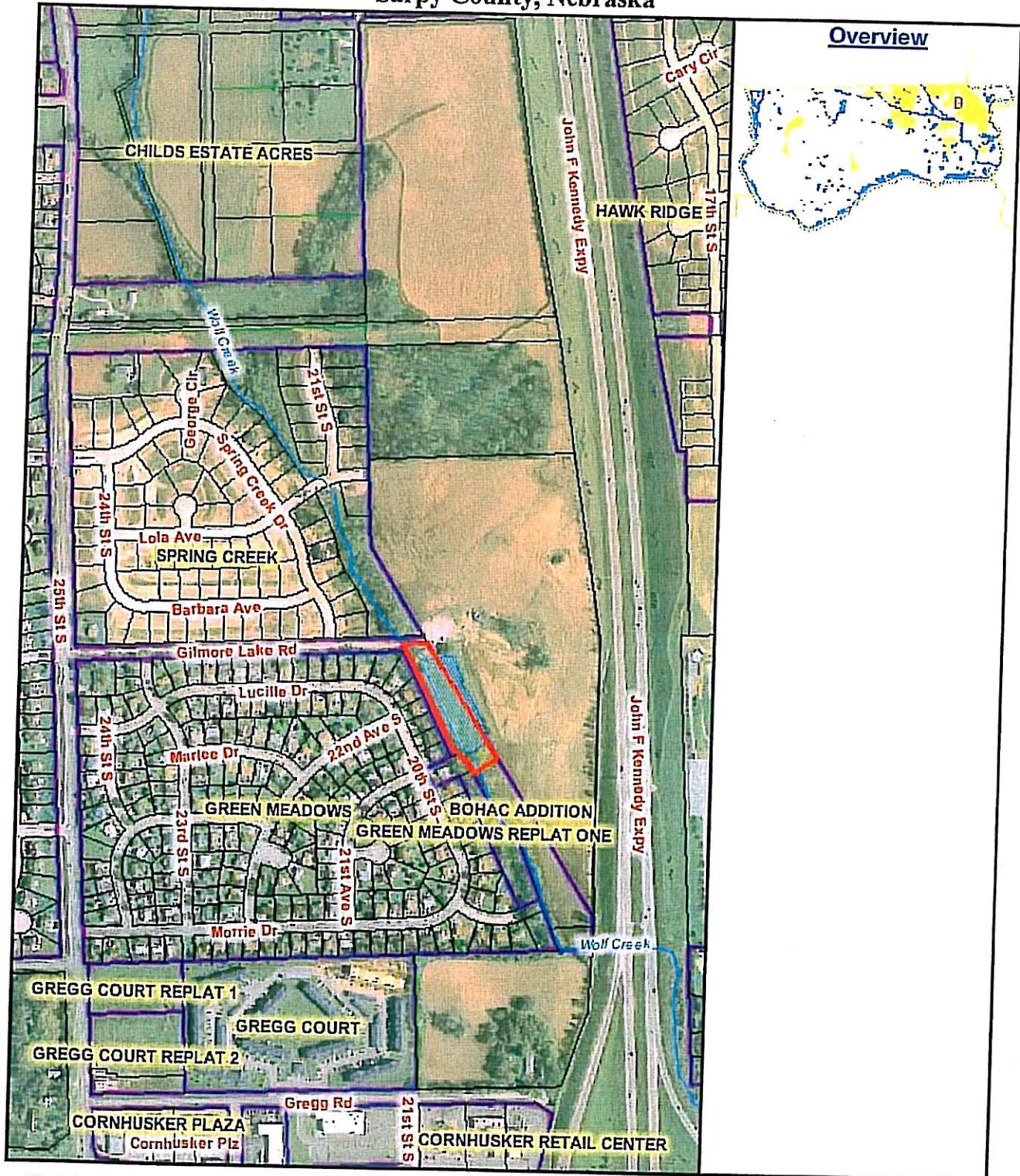
1. Administer the Urban Conservation Assistance Program.
2. Reimburse Sponsors 60% of the actual costs of the project, including engineering, up to a maximum District outlay of \$30,000 per project.
3. All projects shall be approved by Management.
4. Provide technical assistance on all projects.

### Sponsor Responsibilities

1. Complete District's UCAP Special Project Request, Form 17.0.B, Manual of Standard Forms (Appendix E)
2. Execute and fulfill the District's Special Project Operation and Maintenance Agreement, Form 17.0.C, Manual of Standard Forms (Appendix E)
3. Provide all necessary land rights.
4. Provide the local matching funds.
5. Contract for the construction of the approved project. Sponsor's personnel and equipment costs are not eligible for reimbursement.
6. Complete the project within one year of approval, unless prior written approval is obtained from the District.

(February 5, 1987; February 9, 1989; April 9, 2009)

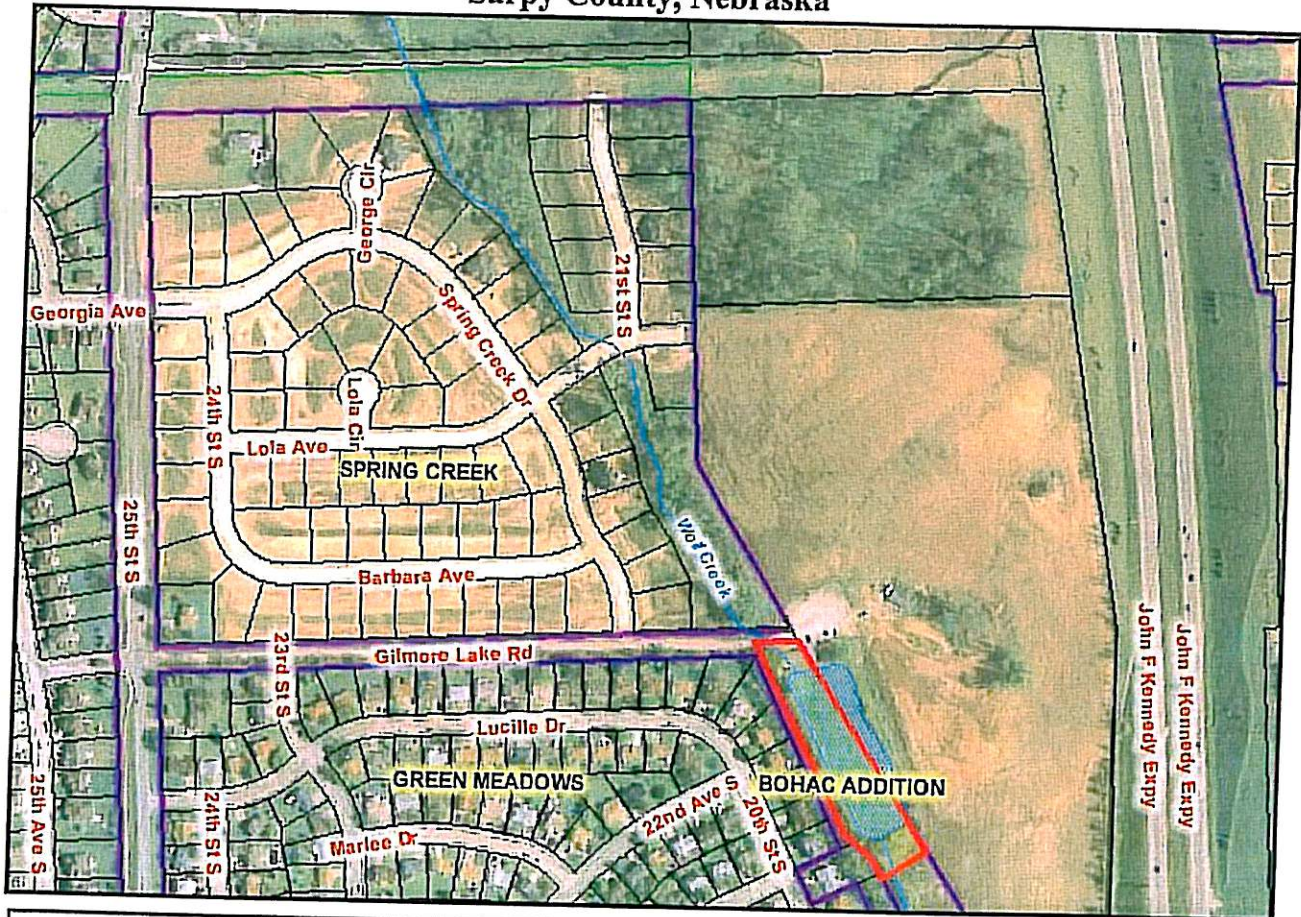
### Sarpy County, Nebraska



*Disclaimer:* This data is for informational purposes only, and should not be substituted for a true titles search, property appraisal, survey, or for zoning district verification. Sarpy County and the Sarpy County GIS Coalition assume no legal responsibility for the information contained in this data.

**Map Scale**  
1 inch = 605 feet

### Sarpy County, Nebraska

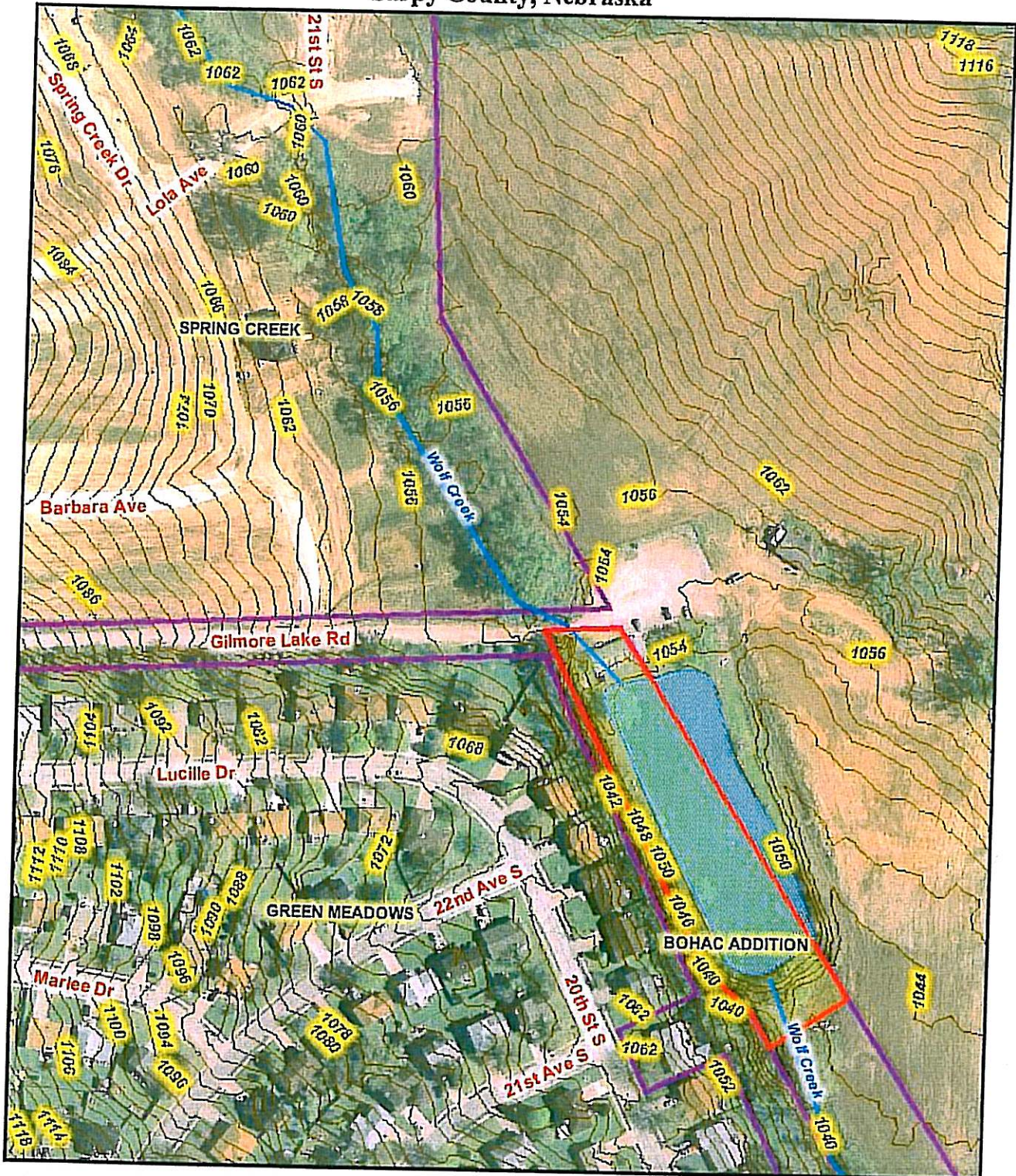


<b>Parcel ID Number</b>	011254637	<b>Neighborhood Code</b>	25
<b>Owner Name</b>	VFW POST 10727/BERNARD O'CONNOR	<b>Property Type</b>	COMM
<b>Mailing Address</b>	9501 S 25TH ST	<b>Improvements Value</b>	\$45,905
<b>City State</b>	OMAHA NE	<b>Land Value</b>	\$13,395
<b>Zip Code</b>	68147-0000	<b>Total Value</b>	\$59,300
<b>Property Address</b>	9501 S 25TH ST	<b>Tax District</b>	10011
<b>Legal Description</b>	LOT 1 BOHAC ADDITION		

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**Map Scale**  
1 inch = 430 feet

### Sarpy County, Nebraska



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**Map Scale**  
1 inch = 188 feet