

Ms. Rose Mary Saunders
Senior Consultant
Ranson Financial Consultants LLC
200 West Douglas, Suite 600
Wichita, KS 67202

Geohydrology Section
Kansas Geological Survey
1930 Constant Avenue
Lawrence, KS 66047
May 29, 2008

Dear Ms. Saunders:

I am replying to your letter concerning the City of Severy improvements to their wastewater treatment system. The only question I have concerns whether the new lagoon will be lined or not. The removal of the soils in a floodplain area may leave the underlying sediment susceptible to leakage. The soils in the area range from silty loam to silty clay loam and are fairly permeable. If a leak should ever occur in the lagoon contamination of the ground and surface water in the area could occur. I presume that KDHE requires a liner but if not I would strongly suggest it.

I think the project should occur if the above suggestion is given consideration.

The above comments are based on regional geologic conditions and limited information available to the KGS at the time of writing and cannot be used in substitute for a detailed site characterization. Other geologic conditions, not discussed here, or for which the KGS has no knowledge, may affect the viability or safe operation of this facility or property. Geotechnical engineering and design are outside the purview of the KGS. It is the responsibility of the applicant to produce any detailed site characterizations, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,

A handwritten signature in cursive script that reads 'Margaret A. Townsend'.

Margaret A. Townsend
Hydrogeologist

The following form may be used by the Review Agency/Commission for comments in response to the request for clearance from the Community Development Block Grant Program for the Proposed Wastewater Treatment Plant Improvements.

☐ Army Corps of Engineers
☐ Kansas Biological Survey
☐ State Conservation Commission
☐ Kansas Corporation Commission
☐ Division of Water Resources/Kansas Department of Agriculture
☒ Kansas Geological Survey
☐ Kansas State Historical Society/State Historic Preservation Office
☐ Kansas Water Office
☐ Kansas Department of Wildlife & Parks
☐ U.S. Dept. of Agriculture, Natural Resources Conservation Service
☐ Kansas Department of Health & Environment
☐ U.S. Department of the Interior, Fish & Wildlife Services
☐ Greenwood County Emergency Preparedness

Agency Review Comments: (to be completed by reviewing agency and returned to applicant contact person at name and address shown below)

Comments: _____

Recommended Action: (to be completed by reviewing agency and returned to applicant contact person at name and address shown below)

☐ Clearance of project should be granted
☐ Clearance of project should not be granted
☐ Clearance of project should be delayed until the issues or questions have been clarified
☒ Clearance of project should not be delayed, but the applicant (in the application) should Address or clarify the questions or concerns indicated above.

Margaret A. Townsend KGS 5-29-08
Reviewer's Name Division/Agency/Commission Date

Project Title: Wastewater Treatment Plant Improvements

Applicant: City of Severy, Kansas

Contact Person: Rose Mary Saunders, Ranson Financial Consultants, LLC.

Address: 200 W. Douglas Avenue, Suite 600

City, State: Wichita, KS 67202-3006

 Ranson
Financial Consultants, L.L.C.

May 12, 2008

Mr. William Harrison, Director
Kansas Geological Survey
University of Kansas
1930 Constant Avenue, Campus West
Lawrence, KS 66047

RE: City of Severy, Kansas
Wastewater System Improvements
CDBG Project No. 08-PF-830

Dear Mr. Harrison:

The City of Severy, Kansas has received funds from the Kansas Department of Commerce Small Cities Grant Program to use in conjunction with the KDHE Water Pollution Control Revolving Loan Fund for improvements to its wastewater treatment facility.

The proposed project will consist of excavating 10,500 cy of soil and using 8,500 cy of soil to construct the embankment. In addition, existing lagoon berms will be repairs and new intake, transfer (2), and discharge structures along with 1,170' of 8" piping will be installed. Additional items included in the project will be the mobilization/demobilization, pond sterilization, installing 785 of fencing, installed 2,600 ton of rip rap (erosion protection), 2 acres of seeding disturbed areas and the demolition of the existing structures. The estimated project cost is \$342,445.00.

The proposed project is adjacent to the existing two-cell lagoon facility located in the South Half, Southwest Quarter, Northwest Quarter, Section 17, Township 28 South, Range 11 East, Greenwood County, Kansas. The approximate latitude and longitude of the lagoon facility is 37°36'46.91"N and 96°13'53.85W. The attached maps show the existing lagoons and the proposed construction for your information.

No persons will need to be relocated due to the construction of this project. If there are any special permits or conditions that apply, please let us know. We would appreciate receiving your comments by June 12, 2008 regarding this project. A Project Review Form has been enclosed for your convenience.

Downtown Office

200 W. Douglas, Suite 600 • Wichita, KS 67202 • 316-264-3400 • Fax 316-265-5403

Eastside Office

151 South Whittier • Wichita, KS 67207 • 316-689-4295 • Fax 316-681-4499

Toll Free 866-436-1100 • www.ransonfinancial.com

Page Two
Kansas Geological Survey
May 12, 2008

If you have any questions regarding the construction, please contact Stuart Porter of Schwab-Eaton, PA at (785) 539-4678. If you have any questions regarding the City's CDBG application, please feel free to call me at (316) 264-3400 or email me at rsaunders@ransonfinancial.com.

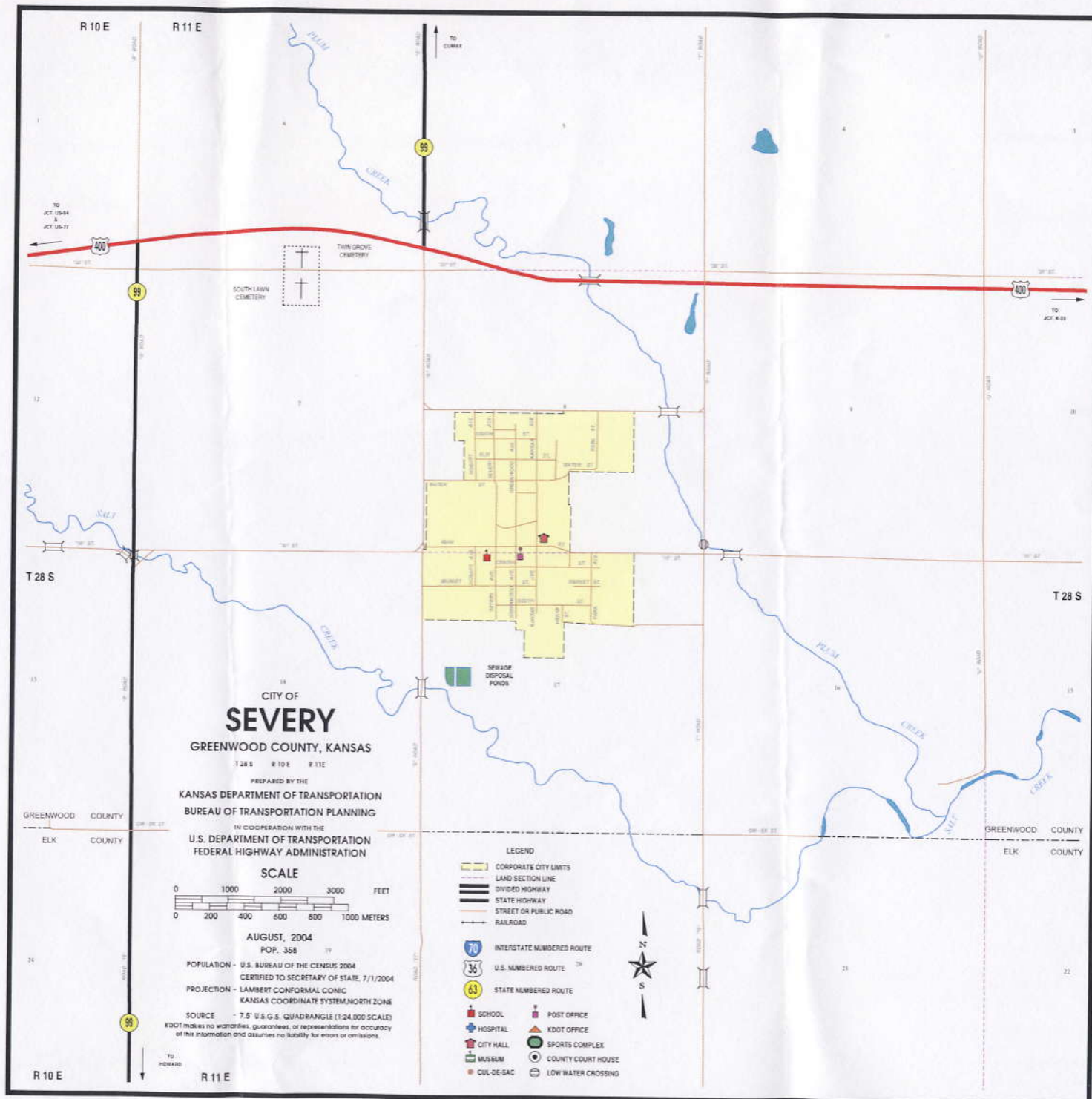
Sincerely,

Ranson Financial Consultants LLC.

A handwritten signature in dark ink, appearing to read "Rose Mary Sanders", is written over the printed name.

Rose Mary Sanders
Senior Consultant

Enc.



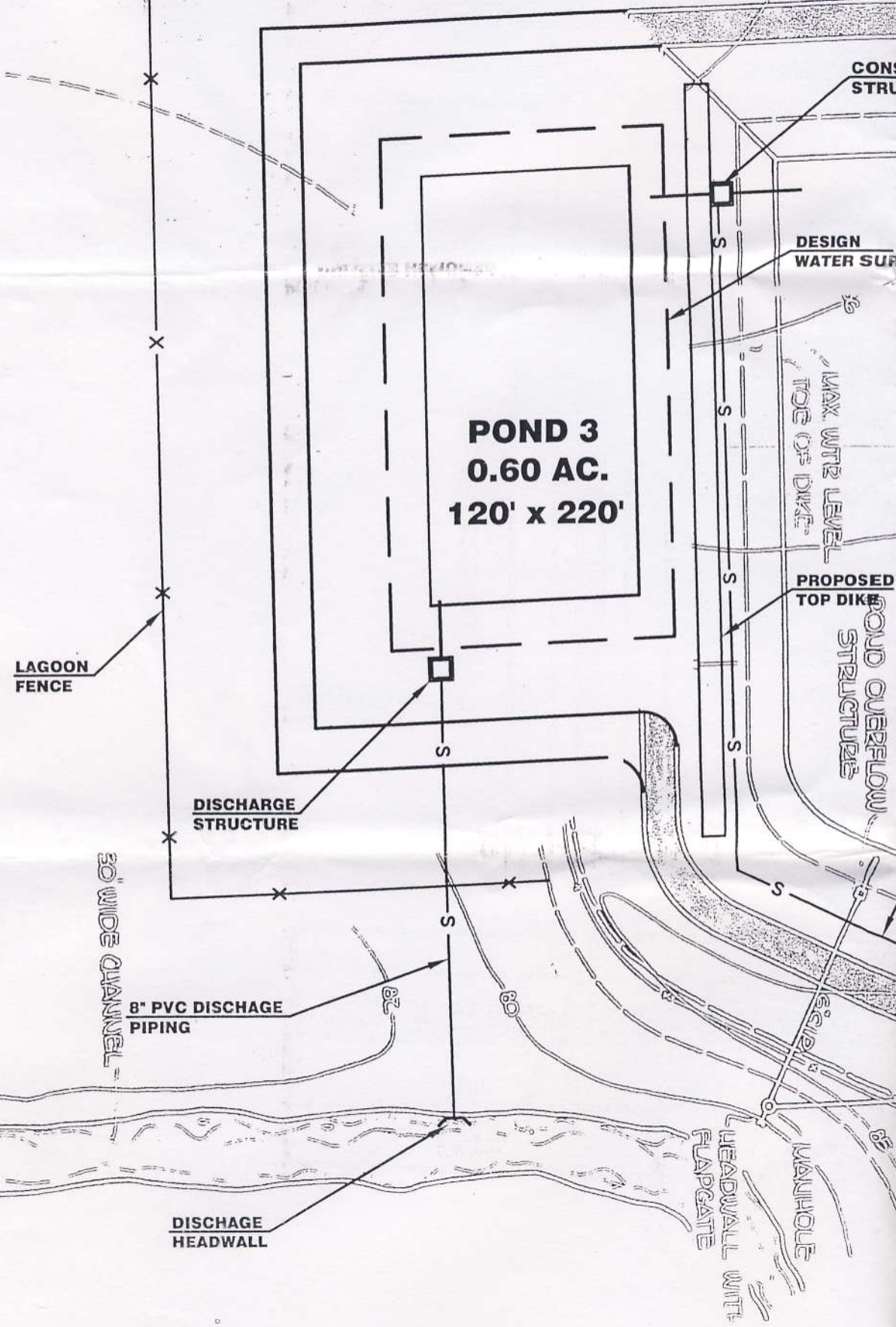
SEVERY #530

S/2, SW/4, NW/4
S17, T28S, R11E
GREEN WOOD County, Kansas



COUNTY

ROAD



EL. 72.8

STRUCT TRANSFER
TURE

POND 2
1.43 AC.
(EXISTING)

INTAKE STRUCTURE W/
8" DIP INTO PONDS 1 & 2

DEMOLISH EXISTING
STRUCTURE AND PIPING

POND 1
2.16 AC.
(EXISTING)

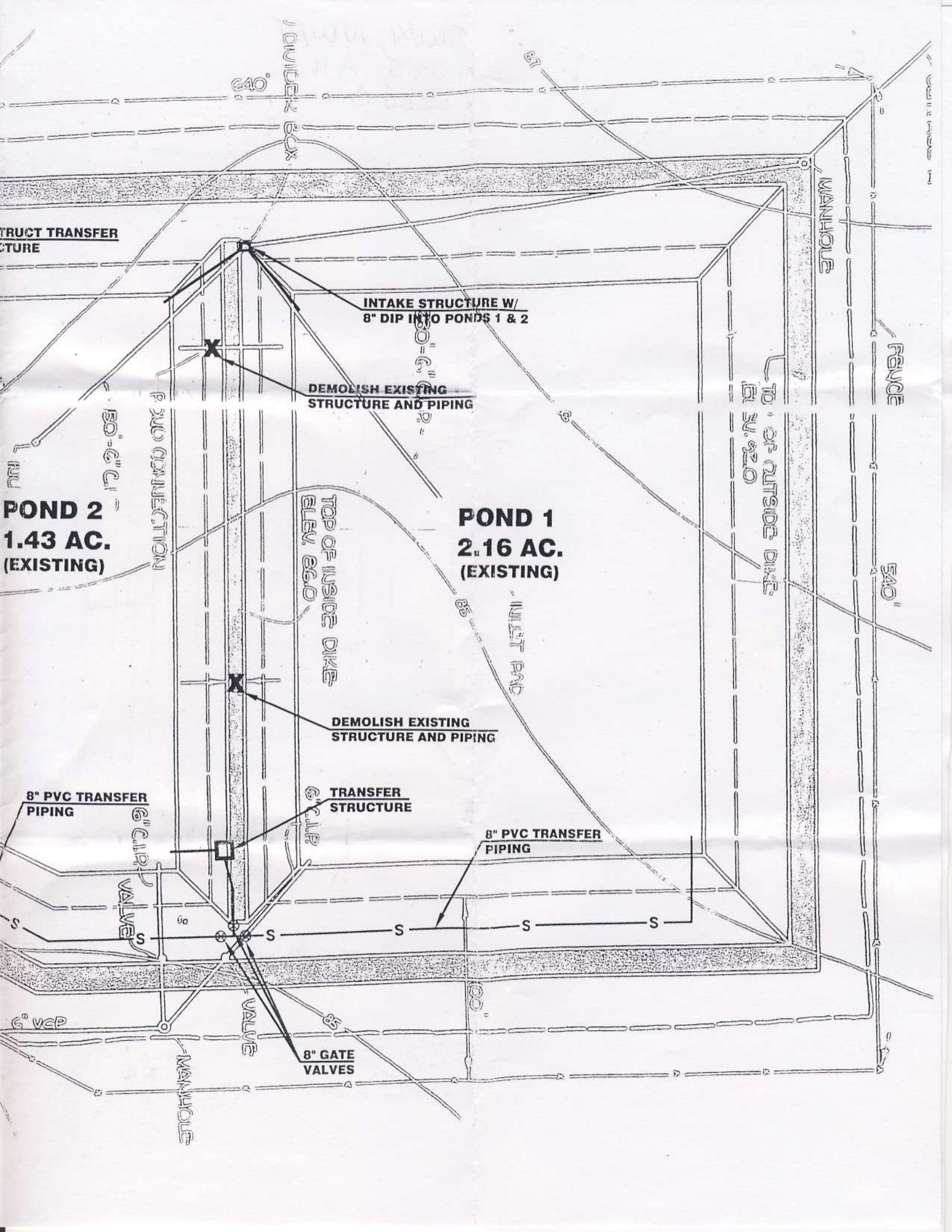
DEMOLISH EXISTING
STRUCTURE AND PIPING

8" PVC TRANSFER
PIPING

TRANSFER
STRUCTURE

8" PVC TRANSFER
PIPING

8" GATE
VALVES



This topographic map depicts the Severn area in Kansas, characterized by brown and tan terrain with blue contour lines indicating elevation. The map is framed by a coordinate grid with UTM coordinates (742400 to 747200 Easting, 4164800 to 4168800 Northing) and a scale bar at the bottom showing distances in meters (0 to 2,700) and feet (0 to 9,000). A north arrow is located in the bottom left corner.

Key features include:

- Water Features:** Salt Creek and Plum Creek are shown as blue lines. Several small ponds are visible, including one labeled "Severn" in green text.
- Roads:** Major roads include US 400, Highway 96, Highway 99, and various townships and county roads (e.g., Township Rd, Co Rd 22, Co Rd 8, Co Rd 22, Co Rd 136, Co Rd 176, Co Rd 178).
- Settlements:** The town of Severn is marked with a green dot and labeled. Other nearby locations include Park Ave, Main St, Water St, Market St, and W Main St.
- Elevation Contours:** Numerous contour lines are labeled with values such as 4020, 4051, 4052, 4059, 4100, 4170, 4200, 4250, 4300, 4350, 4400, 4450, 4500, 4550, 4600, 4650, 4700, 4740, 4775, 4800, 4850, 4900, 4950, 5000, 5050, 5100, 5150, 5200, 5250, 5300, 5350, 5400, 5450, 5500, 5550, 5600, 5650, 5700, 5750, 5800, 5850, 5900, 5950, 6000, 6050, 6100, 6150, 6200, 6250, 6300, 6350, 6400, 6450, 6500, 6550, 6600, 6650, 6700, 6750, 6800, 6850, 6900, 6950, 7000, 7050, 7100, 7150, 7200, 7250, 7300, 7350, 7400, 7450, 7500, 7550, 7600, 7650, 7700, 7750, 7800, 7850, 7900, 7950, 8000, 8050, 8100, 8150, 8200, 8250, 8300, 8350, 8400, 8450, 8500, 8550, 8600, 8650, 8700, 8750, 8800, 8850, 8900, 8950, 9000, 9050, 9100, 9150, 9200, 9250, 9300, 9350, 9400, 9450, 9500, 9550, 9600, 9650, 9700, 9750, 9800, 9850, 9900, 9950, 10000, 10050, 10100, 10150, 10200, 10250, 10300, 10350, 10400, 10450, 10500, 10550, 10600, 10650, 10700, 10750, 10800, 10850, 10900, 10950, 11000, 11050, 11100, 11150, 11200, 11250, 11300, 11350, 11400, 11450, 11500, 11550, 11600, 11650, 11700, 11750, 11800, 11850, 11900, 11950, 12000, 12050, 12100, 12150, 12200, 12250, 12300, 12350, 12400, 12450, 12500, 12550, 12600, 12650, 12700, 12750, 12800, 12850, 12900, 12950, 13000, 13050, 13100, 13150, 13200, 13250, 13300, 13350, 13400, 13450, 13500, 13550, 13600, 13650, 13700, 13750, 13800, 13850, 13900, 13950, 14000, 14050, 14100, 14150, 14200, 14250, 14300, 14350, 14400, 14450, 14500, 14550, 14600, 14650, 14700, 14750, 14800, 14850, 14900, 14950, 15000, 15050, 15100, 15150, 15200, 15250, 15300, 15350, 15400, 15450, 15500, 15550, 15600, 15650, 15700, 15750, 15800, 15850, 15900, 15950, 16000, 16050, 16100, 16150, 16200, 16250, 16300, 16350, 16400, 16450, 16500, 16550, 16600, 16650, 16700, 16750, 16800, 16850, 16900, 16950, 17000, 17050, 17100, 17150, 17200, 17250, 17300, 17350, 17400, 17450, 17500, 17550, 17600, 17650, 17700, 17750, 17800, 17850, 17900, 17950, 18000, 18050, 18100, 18150, 18200, 18250, 18300, 18350, 18400, 18450, 18500, 18550, 18600, 18650, 18700, 18750, 18800, 18850, 18900, 18950, 19000, 19050, 19100, 19150, 19200, 19250, 19300, 19350, 19400, 19450, 19500, 19550, 19600, 19650, 19700, 19750, 19800, 19850, 19900, 19950, 20000, 20050, 20100, 20150, 20200, 20250, 20300, 20350, 20400, 20450, 20500, 20550, 20600, 20650, 20700, 20750, 20800, 20850, 20900, 20950, 21000, 21050, 21100, 21150, 21200, 21250, 21300, 21350, 21400, 21450, 21500, 21550, 21600, 21650, 21700, 21750, 21800, 21850, 21900, 21950, 22000, 22050, 22100, 22150, 22200, 22250, 22300, 22350, 22400, 22450, 22500, 22550, 22600, 22650, 22700, 22750, 22800, 22850, 22900, 22950, 23000, 23050, 23100, 23150, 23200, 23250, 23300, 23350, 23400, 23450, 23500, 23550, 23600, 23650, 23700, 23750, 23800, 23850, 23900, 23950, 24000, 24050, 24100, 24150, 24200, 24250, 24300, 24350, 24400, 24450, 24500, 24550, 24600, 24650, 24700, 24750, 24800, 24850, 24900, 24950, 25000, 25050, 25100, 25150, 25200, 25250, 25300, 25350, 25400, 25450, 25500, 25550, 25600, 25650, 25700, 25750, 25800, 25850, 25900, 25950, 26000, 26050, 26100, 26150, 26200, 26250, 26300, 26350, 26400, 26450, 26500, 26550, 26600, 26650, 26700, 26750, 26800, 26850, 26900, 26950, 27000, 27050, 27100, 27150, 27200, 27250, 27300, 27350, 27400, 27450, 27500, 27550, 27600, 27650, 27700, 27750, 27800, 27850, 27900, 27950, 28000, 28050, 28100, 28150, 28200, 28250, 28300, 28350, 28400, 28450, 28500, 28550, 28600, 28650, 28700, 28750, 28800, 28850, 28900, 28950, 29000, 29050, 29100, 29150, 29200, 29250, 29300, 29350, 29400, 29450, 29500, 29550, 29600, 29650, 29700, 29750, 29800, 29850, 29900, 29950, 30000, 30050, 30100, 30150, 30200, 30250, 30300, 30350, 30400, 30450, 30500, 30550, 30600, 30650, 30700, 30750, 30800, 30850, 30900, 30950, 31000, 31050, 31100, 31150, 31200, 31250, 31300, 3

Soil Map—Elk County, Kansas, and Greenwood County, Kansas
(Severy Kansas)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

-  Very Stony Spot
-  Wet Spot
-  Other

Special Line Features

-  Gully
-  Short Steep Slope
-  Other

Political Features

Municipalities

-  Cities
-  Urban Areas

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
-  Roads
-  Interstate Highways
-  US Routes
-  State Highways
-  Local Roads
-  Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 14N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Elk County, Kansas
Survey Area Data: Version 5, Dec 21, 2007

Soil Survey Area: Greenwood County, Kansas
Survey Area Data: Version 5, Dec 26, 2007

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Date(s) aerial images were photographed: 10/2/1991; 3/12/1996; 3/26/1996

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Map Unit Legend

Elk County, Kansas (KS049)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4020	Chase silty clay loam, occasionally flooded	21.7	0.5%
4051	Ivan silt loam, channeled	3.4	0.1%
4052	Ivan silt loam, occasionally flooded	119.1	2.6%
4740	Labette silty clay loam, 1 to 3 percent slopes	4.7	0.1%
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	87.8	1.9%
7170	Reading silt loam, rarely flooded	103.5	2.2%
7301	Martin silty clay loam, 1 to 3 percent slopes	56.9	1.2%
7302	Martin silty clay loam, 3 to 7 percent slopes	27.3	0.6%
8501	Mason silt loam, rarely flooded	35.9	0.8%
8623	Bates loam, 3 to 7 percent slopes	54.9	1.2%
8643	Catoosa silt loam, 0 to 1 percent slopes	69.4	1.5%
8649	Catoosa-Sogn complex, 0 to 8 percent slopes	34.3	0.7%
8679	Dennis silt loam, 1 to 3 percent slopes	78.4	1.7%
8729	Eram silt loam, 1 to 3 percent slopes	44.9	1.0%
8733	Eram silty clay loam, 1 to 3 percent slopes	36.2	0.8%
8735	Eram silty clay loam, 3 to 7 percent slopes	100.7	2.2%
8737	Eram silty clay loam, 3 to 7 percent slopes, eroded	23.9	0.5%
8775	Kenoma silt loam, 1 to 3 percent slopes	190.9	4.1%
8961	Woodson silt loam, 0 to 1 percent slopes	36.8	0.8%

Greenwood County, Kansas (KS073)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4020	Chase silty clay loam, occasionally flooded	180.9	3.9%
4051	Ivan silt loam, channeled	17.8	0.4%
4052	Ivan silt loam, occasionally flooded	212.3	4.6%

Greenwood County, Kansas (KS073)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4590	Clime-Sogn complex, 3 to 20 percent slopes	29.7	0.6%
4600	Dwight silt loam, 0 to 1 percent slopes	16.8	0.4%
4740	Labette silty clay loam, 1 to 3 percent slopes	378.0	8.2%
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	161.0	3.5%
6972	Steedman stony loam, 5 to 20 percent slopes	0.8	0.0%
7170	Reading silt loam, rarely flooded	144.6	3.1%
7301	Martin silty clay loam, 1 to 3 percent slopes	154.2	3.3%
7302	Martin silty clay loam, 3 to 7 percent slopes	40.3	0.9%
8679	Dennis silt loam, 1 to 3 percent slopes	146.8	3.2%
8683	Dennis silt loam, 3 to 7 percent slopes	10.2	0.2%
8733	Eram silty clay loam, 1 to 3 percent slopes	213.1	4.6%
8735	Eram silty clay loam, 3 to 7 percent slopes	100.9	2.2%
8775	Kenoma silt loam, 1 to 3 percent slopes	878.5	19.1%
8961	Woodson silt loam, 0 to 1 percent slopes	766.4	16.7%
9986	Miscellaneous water	6.8	0.1%
9987	Oil waste land	13.2	0.3%
Totals for Area of Interest (AOI)		4,602.9	100.0%