

7.01 Current Flows and Waste Loads - Paintsville Wastewater Treatment Plant:

As discussed in prior chapters of this report, the Paintsville WWTP located within the Paintsville City Limits currently receives and treats all of the wastewater from the City of Paintsville and some areas just outside the city limits. The plant's **design capacity is 0.99 MGD** (million gallons per day). From data recorded on the plants 2010 Discharge Monitoring Reports (DMR), the following is the average flows observed at this facility:

Average Daily Flow – 2010: 0.92 MGD

From data recorded on the plants 2015 DMR's, the following is the average flows observed at the facility for the first 11 months:

Average Daily Flow – 2015: 0.99 MGD

The excessive daily flow recorded is mostly due to excessive infiltration and inflow in the downtown collection system. In addition due to the layout of the plant, some plant recirculation flow (RAS from polishing clarifier and supernatant flow from sludge thickener) is measured as influent flow. As shown in Table 7.01, the maximum recorded daily flows are a result of infiltration and inflow and can exceed one million gallons per day during rainfall events. As of the writing of this facility plan, Paintsville Utilities has a project ready to bid to reduce infiltration and inflow in the downtown area by eliminating several known cross connections with the storm water collection system. Upon the completion of this project, the wet weather flow to the plant from I & I should be greatly reduced.

The table below is a summary of the average influent loading on the Paintsville WWTP during the 2015 calendar year:

TABLE 7.01

Paintsville WWTP - 2015 Plant Influent Data

Date	Average Flow	Daily Max Flow	TSS mg/l	TSS lbs/day	BOD mg/l	BOD lbs/day
January	0.95	1.8	118	935	208	1648
February	1.28	2.83	135	1441	120	1281
March	1.13	2.73	65	612	179	1687
April	1.51	3.44	66	831	224	2820
May	1.67	3.82	106	1476	148	2061
June	0.70	0.90	112	654	216	1261
July	0.79	1.98	124	817	254	1674
August	0.75	1.78	80	500	118	738
Sept.	0.62	1.08	103	532	165	853
October	0.69	1.13	130	748	175	1007
November	0.84	1.29	193	1352	149	1044
Average	0.99 MGD	2.07 MGD	112 mg/l	900 lbs	178 mg/l	1461 lbs

The Paintsville WWTP was designed to treat a daily flow of .99 MGD and a peak flow of 2.27 MGD at the following loadings:

Biochemical Oxygen Demand (BOD) 1621 lbs/day
 Suspended Solids 1907 lbs/day

Although the plant is basically operating at design capacity based on flow, the plant has been meeting discharge limits due to the diluted concentrations from the excessive infiltration and inflow.

7.02 Current Flows and Waste Loads - Honey Branch Wastewater Treatment Plant:

The Honey Branch Wastewater Treatment Plant has a design capacity of 1.0 million gallons per day.

The Honey Branch Wastewater Treatment Plant currently receives and treats wastewater from communities in the planning area that include a Federal Bureau of Prisons facility, United States Penitentiary (USP) Big Sandy that houses approximately 1,000 high-security inmates. Communities currently being served by the Honey Branch WWTP include the unincorporated yet developed areas of West Van Lear, Auxier in Floyd County, Richmond Hills, and Paradise Valley. Also being currently served by the Honey Branch WWTP are American Standard Manufacturing Plant, Porter Elem. School, Honey Branch Industrial Park, Thunder Ridge Race Tract and the Dewey Dam Recreational Area.

The average daily flows to the Honey Branch Wastewater Treatment Plant as forecasted in the Regional Wastewater Facilities Plan prepared in 1998 for the Honey Branch Planning area are as follows:

<u>Year</u>	<u>Average Daily Flow</u>
2000	376,000 gallons per day
2005	629,300 gallons per day
2010	889,100 gallons per day
2015	939,100 gallons per day
2020	989,100 gallons per day

Actual recorded average daily flows recorded from July 2010 to July 2011 was **368,000 gallons per day**. The actual average daily flow to the plant is approximately 41 percent of the flow projected in 2010 by the Regional Wastewater Facilities Plan.

Some of the reasons that the actual flow to the plant is considerably less than projected may include:

1. Water use in rural homes is actually much less than design standards requirements.
2. Development and growth in the area is less than projected due to poor economics in area.

3. Recorded water usage at the Federal Prison is approximately 100,000 gallons per day less than predicted in the Regional Facilities Plan.

The table below is a summary of the average influent loading on the Honey Branch WWTP during the 2015 calendar year:

TABLE 7.02

Honey Branch WWTP – 2014 - 2015 Plant Influent Data

Date	Average Flow	Daily Max Flow	TSS mg/l	TSS lbs/day	BOD mg/l	BOD lbs/day
January	0.33	0.50	236	650	227	625
Feb.	0.33	0.45	138	380	214	589
March	0.38	0.80	695	2203	275	872
April	0.41	1.24	295	1008	253	865
May	0.37	1.21	297	916	284	876
June	0.24	0.37	337	675	271	542
July	0.27	0.56	229	516	330	743
August	0.34	0.49	664	1883	189	536
Sept	0.33	0.50	317	872	265	729
Oct.	0.34	0.57	465	1319	279	791
November	0.35	0.50	202	590	276	805
December						
Average	0.34 mgd	0.65 mgd	352 mg/l	1,1001 lbs	260 mg/l	725 lbs

7.03 Projected Wastewater Flows

In order to plan for adequate capacity of the wastewater collection and treatment facilities, a rate of population growth and associated sewer system flows were assumed for planning future system needs. Resources used to estimate population and potential

growth rates in the planning area include publications from the University of Louisville, KSDC, the U.S. Department of Commerce Bureau of the Census, and Johnson County representatives. These are detailed in Section 4 of this document.

Although the population of Johnson County is expected to **decrease** by approximately 1,800 within the planning period, the number of sewer customers served by Paintsville Utilities is expected to increase due to planned expansion of sewer service into areas that currently are served by septic tanks or package treatment plants. Paintsville Utilities have identified and areas to be provided sewer service by future projects. These areas and their projected sewer flow are as follows:

<u>Area</u>	<u>Projected Customers</u>	<u>Projected Flow</u>
Powell’s Addition	100 homes	21,200 gpd
Van Lear Area	365 homes	77,380 gpd
US 23 corridor	57 homes	12,100 gpd
KY Route 321 to Floyd Co.	120 homes	25,440 gpd
Pack Hill Drive	6 homes	1,270 gpd
Hagar Hill Area	30 homes	6,369 gpd
American Standard Area	40 homes	8,480 gpd
Thealka Area	210 homes	44,520 gpd
Davis Branch Area	50 homes	10,600 gpd
Southside Area	30 homes	6,360 gpd
Staffordsville Area	180 homes	38,160 gpd
Thelma	85 homes	<u>18,020 gpd</u>
Total Projected Sewage Flow		269,890 gpd

Flow projections were based on 2.12 persons/house and 100 gpd.

Currently Paintsville Utilities serves approximately 2600 sewer customers. This total includes approximately 350 commercial users. Over the past 3 years the number of sewer customers has increased by approximately 126 customers. This increase was mostly due to the completion of a project that eliminated package treatment plants in the communities of Preston Estates, Paradise Village, Richmond Hills, Burkshire, and Woodland Estates.

are used as the basis for projections and are shown in the tables in Section 7.01 and Section 7.02.

The Paintsville WWTP had the following maximum 30-day averages: BOD- 254 mg/l and TSS – 193 mg/l. The Honey Branch WWTP had the following maximum 30-day averages: BOD – 330 mg/l and TSS – 695 mg/l. The higher concentrations for the Honey Branch WWTP are likely a result of discharge at the federal prison. It is well documented that wastewater from prisons are generally of higher strength in terms of BOD and TSS than typical domestic wastewater. A higher concentration will be used for the projected flows from the prison in the load calculations for the proposed upgrade.

The future influent wasteload projections were calculated by multiplying 0.22 pounds per capita day (ppcd) by population for BOD and 0.25 ppcd by the population for TSS.

Average annual and peak monthly BOD wasteload projections with a peak monthly multiplier of 1.4 are presented through 2040 in the following table:

TABLE 7.04-1

**Paintsville WWTP -Total Average Annual Influent
 Wastewater Load Projections**

Influent Wastewater BOD	2015		2020 (Projected)		2030 (Projected)		2040 (Projected)	
	AAL	PML	AAL	PML	AAL	PML	AAL	PML
Paintsville WWTP	1461	3073	1461	3073	1461	3073	1461	3073
Pack Hill Drive	0	0	3	4	3	4	3	4
Thealka Area	0	0	0	0	98	137	98	137
Davis Branch Area	0	0	0	0	23	33	23	33
Southside Area	0	0	0	0	0	0	14	20
Thelma Area	0	0	0	0	0	0	40	55
Total	1461	3073	1464	3077	1585	3247	1639	3322

AAL - Average Annual Load

PML - Peak Monthly Load

Table 7.04-2

**Honey Branch WWTP - Total Average Annual Influent
 Wastewater Load Projections**

Influent Wastewater BOD	2015		2020 (Projected)		2030 (Projected)		2040 (Projected)	
	AAL	PML	AAL	PML	AAL	PML	AAL	PML
Honey Branch WWTP	725	1409	725	1409	725	1409	725	1409
Powell's Addition Project	0	0	46	64	45	64	46	64
Van Lear Project	0	0	170	238	170	238	170	238
KY Route 321 Area	0	0	56	78	56	78	56	78
Hagar Hill Area	0	0	14	20	14	2	14	20
American Std. Area	0	0	0	0	19	26	19	26
US 23 Corridor	0	0	27	37	27	37	27	37
	0	0	0	0				33
	0	0	0	0	0	0		
Staffordsville Area	0	0	0	0	0	0	84	117
	0	0	0	0	0	0	40	55
Total	725	1409	1038	1846	1038	1846	1078	1901

AAL - Average Annual Load

PML - Peak Monthly Load

Average annual and peak monthly TSS wasteload projections with a peak monthly multiplier of 1.5 are presented through 2040 in the following table:

TABLE 7.04 - 3

**Paintsville WWTP - Total Average Annual Influent
 Wastewater Load Projections**

Influent Wastewater TSS	2011		2020 (Projected)		2030 (Projected)		2040 (Projected)	
	AAL	PML	AAL	PML	AAL	PML	AAL	PML
Paintsville WWTP	900	1933	900	1933	900	1933	900	1933
Pack Hill Drive			4	5	4	5	4	5
Thealka Area	0	0	0	0	111	156	111	156
Davis Branch Area	0	0	0	0	26	37	26	37
Southside Area	0	0	0	0	0	0	16	22
Thelma Area	0	0	0	0	0	0	45	63
Total	900	1933	904	1938	1041	2131	1102	2216

AAL - Average Annual Load

PML - Peak Monthly Load

Table 7.04-4

**Honey Branch WWTP - Total Average Annual Influent
 Wastewater Load Projections**

Influent Wastewater TSS	2015		2020 (Projected)		2030 (Projected)		2040 (Projected)	
	AAL	PML	AAL	PML	AAL	PML	AAL	PML
Honey Branch WWTP	1001	1908	1001	1908	1001	1908	1001	1908
Powell's Addition Project	0	0	53	74	53	74	53	74
Van Lear Project	0	0	193	271	193	271	193	271
KY Route 321 Area	0	0	64	89	64	89	64	89
Hagar Hill Area	0	0	16	22	16	22	16	22
American Std. Area	0	0	0	0	21	30	21	30
US 23 Corridor			30	42	30	42	30	42
Staffordsville							95	133
Total	1001	1908	1357	2406	1378	2436	1473	2569

AAL - Average Annual Load

PML - Peak Monthly Load

7.05 Projected Permit Limits and Wasteload Allocation

The Kentucky Division of Water was contacted in a letter dated March 6, 2013 regarding a future discharge from the Honey Branch WWTP at mile point 1.7 into John's Creek for a treatment plant having a design capacity of 2.0 mgd. A response from KDOW was received on Feb. 18, 2014. A copy of these letters is included in this section of this document.



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY
RECEIVED

FEB 21 2014

February 18, 2014

Cann-Tech, LLC

Don Sexton, P.E.
Senior Project Manager
Cann-Tech, LLC
1100 Glensboro Road, Suite 9
Park View Center
Lawrenceburg, Kentucky 40342

Re: Waste Load Allocation Request
Honey Branch WWTP
KPDES No.: KY0103578
Johnson County, Kentucky

Dear Mr. Sexton:

This is in response to your March 6, 2013 letter (attached), requesting an waste load allocation (WLA) for expansion of the subject wastewater treatment plant (WWTP) from 1.0 MGD to 2.0 MGD utilizing sequencing batch reactors. Discharge is to remain at Longitude 82°45'21" W and Latitude 37°45'06" N, approximately National Hydrography Database (NHD) mile point (mp) 1.6 of John's Creek, segment 01017. Per your correspondence, the existing Paintsville WWTP (KPDES No. KY0020630) is to be eliminated and waste water flow routed to the expanded Honey Branch WWTP. The requested WLA information will be utilized in drafting a Regional Wastewater Facilities Plan update.

The division notes that John's Creek (mp 0.0 to 5.8) is included on the 2010 303(d) List of impaired waters. The impaired use listed is warm water aquatic habitat (partial support). The pollutants of concern are: sedimentation/siltation, specific conductance, and total dissolved solids (TDS). The suspected sources are: impacts from hydrostructure flow regulation/modification, sand/gravel/rock mining or quarries, surface mining, and upstream impoundments (e.g., P1-566 NRCS structures). State and Federal regulations allow new or expanded discharges into impaired waters only if the discharge will improve, or at least not contribute, to existing impairments. Discharge from an expanded WWTP, in compliance with applicable Kentucky Pollutant Discharge Elimination System (KPDES) permit limitations and requirements, would not be considered a contributor to the existing impairments, and could thus be approved.

Mr. Don Sexton
Waste Load Allocation Request
Page Two

Considering the above-mentioned information, applicable effluent limitations are provided below.

Design Capacity = 2.0 MGD / Discharge near NHD mp 1.6 of John's Creek

<u>Parameter</u>	<u>May 1 - October 31</u>	<u>November 1 - April 30</u>
CBOD ₅	25 mg/l	25 mg/l
Total Suspended Solids	30 mg/l	30 mg/l
Ammonia Nitrogen	10 mg/l	10 mg/l
Dissolved Oxygen	7 mg/l	7 mg/l
Total Phosphorus	Monitor, mg/l	Monitor, mg/l
Total Nitrogen	Monitor, mg/l	Monitor, mg/l
Total Residual Chlorine	0.011 mg/l	0.019 mg/l

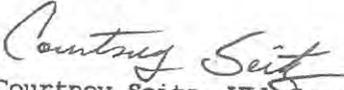
Reliability Classification = Grade C

In addition to the above requirements, the monthly average and weekly maximum values of E. coli shall be at or below 130 colonies per 100 milliliters or 240 colonies per 100 milliliters, respectively, the year around. If a form of chlorine is proposed to disinfect the wastewater, then de-chlorination will likely be needed to achieve the chlorine residual effluent limitation. Additional effluent limitations and water quality standards are contained in 401 KAR Chapter 5 and 401 KAR Chapter 10.

These preliminary design effluent limitations are valid for one (1) year from the date of this letter, and are subject to change as a result of additional information which may be presented during the public notice phase of the KPDES permitting process. As such, this letter does not convey any authorization or approval to proceed with the construction or operation of the proposed WWTP. Construction and KPDES permit applications must be submitted to request such authorization or approval. Nor does this letter ensure issuance of either permit. During the review processes of these permits the Division of Water will further evaluate the viability of the project.

Should you have any questions regarding this letter, please contact me at (502) 564-3410, extension 4914 or E-mail at Courtney.Seitz@ky.gov.

Sincerely,


Courtney Seitz, WLA Coordinator
Wet Weather Section
Surface Water Permits Branch
Division of Water

CS:cs

c: Cindy McDonald, Water Infrastructure Branch
Compliance and Technical Assistance
Branch, Hazard Section
TEMPO

Cann-Tech, L.L.C.



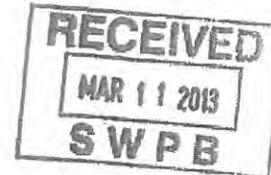
Engineers

Planners

Managers

March 6, 2013

Mr. Courtney Seitz, Coordinator
Wet Weather Section
Surface Water Permits Branch
Division of Water
200 Fair Oaks Lane, 4th Floor
Frankfort, KY 40601



RE: Honey Branch WWTP Revised Wasteload Allocation Letter
Paintsville Utilities

Dear Mr. Seitz:

As discussed during our Facilities Plan Pre-Planning Meeting on Feb. 13, 2013, we are requesting updated Wasteload Allocation (WLA) Limits for the Honey Branch Wastewater Treatment Plant. Paintsville Utilities is planning on eliminating the existing aged Paintsville WWTP and pumping the sewage currently being treated there to the Honey Branch WWTP for treatment. We are proposing to increase the design capacity of the Honey Branch WWTP from 1.0 MGD to 2.0 MGD by utilizing sequencing batch reactors. The existing deep cell lagoons at the facility will be utilized for waste sludge disposal/digestion and as equalization basins.

The average daily flow during 2011 at the Paintsville WWTP was 1.04 MGD and at the Honey Branch WWTP was 0.43 MGD. 2011 was one of the wettest years on record for the state of Kentucky. Paintsville Utilities have identified ten communities that they would like to extend sewer service to by the year 2040. These communities and their projected flows are as follows:

<u>Area</u>	<u>Projected Customers</u>	<u>Projected Flow</u>
Powell's Addition	100 homes	40,000 gpd
Van Lear Area	365 homes	150,000 gpd
KY Route 321 to Floyd Co.	120 homes	48,000 gpd
Hager Hill Area	30 homes	12,000 gpd
American Standard Area	40 homes	16,000 gpd
Thealka Area	210 homes	84,000 gpd
Davis Branch Area	50 homes	20,000 gpd
Southside Area	30 homes	12,000 gpd
Staffordville Area	180 homes	70,000 gpd
Thelma	85 homes	40,000 gpd
Total Projected Sewage Flow		492,000 gpd

1100 Glensboro Rd., Suite 9
Park View Center
Lawrenceburg, KY 40342
Phone: (502) 859-0907 • Fax: (502) 859-0668
Email: waterboy@kth.net

Courtney Seitz
Page Two
March 6, 2013

Included herewith is a USGS 7.5 minute topographic map showing the combined service areas, the location of the Honey Branch WWTP and the coordinates of the outfall location.

Paintsville currently operates the Honey Branch WWTP as a 1.0 MGD plant discharging to John's Creek at mile point 1.7 as authorized by KPDES permit KY0103578.

Please provide potential effluent limits for discharge to John's Creek for the proposed upgraded Honey Branch WWTP. Please be aware that Paintsville Utilities is in the process of completing a regional water treatment plant located at Paintsville Lake and their drinking water intake will no longer be located downstream of the discharge of the Honey Branch WWTP. The new drinking water plant will be operational in 2013.

Please let me know if you need additional information.

Sincerely,
CANN-TECH, LLC



Don Sexton, P.E.
Senior Project Manager
Cann-Tech, LLC

cc: Eric Ratliff, Paintsville Utilities
Dewey Bocoock
Larry Cann
Derek Motsch

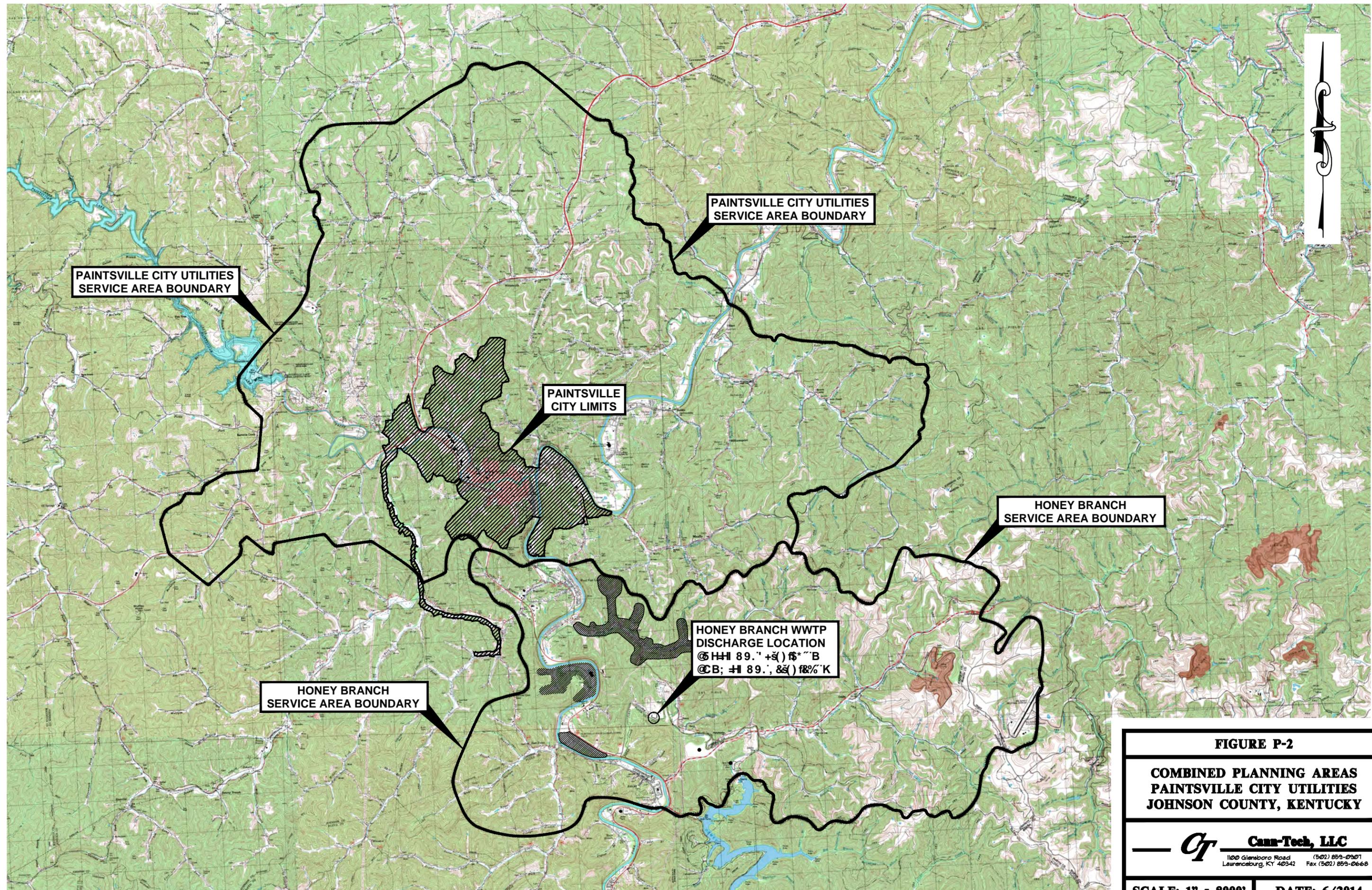


FIGURE P-2
COMBINED PLANNING AREAS
PAINTSVILLE CITY UTILITIES
JOHNSON COUNTY, KENTUCKY

CT **Cann-Tech, LLC**
1100 Glenboro Road (502) 853-0507
Laurensburg, KY 40342 Fax (502) 853-0668

SCALE: 1" = 8000' **DATE: 6/2014**

Honey Branch Waste Water Treatment Plant



8.0 General

The primary purpose of this Facilities Plan is to determine the most cost-effective and environmentally sound means of meeting the wastewater needs for the City of Paintsville. The first step in this evaluation is to consider all applicable alternatives for Paintsville with its two wastewater treatment plants. The first consideration would be whether to remain a decentralized system or to combine into a regional facility. Options for these will be evaluated including doing nothing.

8.10 No Action Alternative

Due to Agreed Order set by the KDOW and EPA and the fact that the Paintsville WWTP is operating near or at its rated capacity, the “No-Action” alternative will not be considered as a part of this planning document.

COLLECTION SYSTEM:

8.202 Collection System Improvements

As discussed in Section 6 of this facilities plan, the downtown gravity collection system currently has excessive inflow and infiltration that has resulted in excessive flows to the Paintsville WWTP. Prior studies and smoke testing has identified 17 locations where there are cross connections or know issues with the existing storm water collection system and the existing sanitary sewer collection system. During heavy rains, these cross connections cause much of the excessive flow to the wastewater outfall system and to the existing waste water treatment plant. This excessive inflow results in sanitary sewage overflows along the outfall sewer and causes operation issues at the wastewater treatment plant. The locations of these cross connections are shown on **Figure 8.02-1 through 8.02-3**. **Figure 8.02-6** is a key map showing general locations of proposed improvements to the collection system. In order to correct these cross connections it will be necessary to basically re-construct the sanitary and storm systems at these intersections. A detailed cost estimate for each location is included in the Appendix of this report.

Paintsville Utilities have also determined that they are receiving excessive infiltration and inflow from newly acquired collection sewers in the areas of Preston Estates and Concord Development. Included in phase 1 improvements is replacement of the collection systems for these areas. These areas are shown on **Figure 8.02-4**.

The other issue that needs to be addressed with the collection system is to replace the existing outfall sewer with a larger diameter sewer with more capacity. The proposed new manholes on this outfall sewer system will include locked lids to limit sanitary sewer overflows. The section of outfall sewer to be replaced is shown on **Figure 8.02-1** and **8.02-2**.

Because of the known issues and limited construction options, only one alternative was considered in the corrections to the Paintsville Collection System issues. The following

Is a summary of the projected project costs for Phase 1 correcting I & I issues and replacing the outfall sewer:

Combined Regional Wastewater Facilities Plan

TABLE 8.02-1		
I & I Cost		
Cost Summary - Phase I - Contract #1		
	Description	Cost
Location #1	Intersection of 3rd and Church Street	\$46,745
Location #2	Intersection of 2nd and Church Street	\$65,750
Location #3	Intersection of 2nd and Court Street	\$74,370
Location #4	Intersection of 3rd and College Street	\$48,180
Location #5	Intersection of 4th and College Street	\$57,100
Location #6	Intersection of 5th and College Street	\$54,390
Location #7	Intersection of 5th and Elm Street	\$93,790
Location #8	Intersection of Elm and Ally before 5th Street	\$63,160
Location #9	Intersection of 4th and Elm Street	\$41,850
Location #10	intersection of 3rd and Elm Street	\$37,120
Location #11	Intersection of 3rd and Margaret Heights	\$127,870
Location #12	Intersection of Euclid and Main Street	\$35,055
Location #13	Intersection of Preston Street and Salt well Street	\$48,890
Location #14	Between maple Street and Boyd Street on Depo Rd	\$32,435
Location #15	Intersection of 3rd and Court Street	\$50,180
Location #16	Auxier Ave	\$35,450
Location #17	Mill Street	\$109,750
Location #18	Woodland #1	\$235,000
Location #19	Preston Estates	\$291,000
Location #20	Woodland #2	\$86,250
	Project Budget Construction Cost	\$1,634,335
TABLE 8.02-2		
Projected Budget Project Cost Phase I- Contract #1		
Projected Budget Construction Cost		\$1,634,335
Contingency		\$320,000
Engineering		\$150,000
Inspection		\$75,000
Processing Fees		\$15,000
Legal		\$15,000
Land and R/W		\$20,000
Planning		\$20,000
	Total Estimated Project Cost - Contract #1	\$2,249,335

Combined Regional Wastewater Facilities Plan

TABLE 8.02-3				
Cost Phase I- Contract #2				
City of Paintsville				
I & I Cost				
Outfall Sewer line Replacement				
Description	Quantity	Units	Unit Cost	Total Cost
Curb Inlets		each	\$400	\$0
Pipe for Curb Inlets (18")		L.F.	\$125	\$0
4' Dia Manhole (new)		each	\$3,000	\$0
4' Dia Manhole (New Sealed)	10	each	\$6,000	\$60,000
6' Dia Manhole (New)		each	\$4,000	\$0
6' Dia Manhole (New Sealed)	10	each	\$8,000	\$80,000
Extra Manhole Depth	200	V.F.	\$250	\$50,000
Tie to existing Sanitary Sewer	2	each	\$2,700	\$5,400
Tie to existing Storm Sewer		each	\$2,500	\$0
Replace existing Sanitary Sewer				\$0
20" Dia Sanitary Gravity	5000	L.F.	\$325	\$1,625,000
10" Dia Sanitary Gravity		L.F.	\$100	\$0
12" Dia Sanitary Gravity	400	L.F.	\$105	\$42,000
New Storm Drain				\$0
12" Dia RCP		L.F.	\$100	\$0
15" Dia RCP		L.F.	\$115	\$0
18" Dia RCP		L.F.	\$125	\$0
24" Dia RCP		L.F.	\$175	\$0
Waterline				\$0
10" Dia		L.F.	\$13	\$0
12" Dia		L.F.	\$15	\$0
Gasoline				\$0
2" Dia		L.F.	\$3	\$0
4" Dia		L.F.	\$5	\$0
6" Dia		L.F.	\$7	\$0
Creek Crossing	800	L.F.	\$275	\$220,000
Handicap Ramp		each	\$450	\$0
Sidewalk		L.F.	\$40	\$0
Curb/Gutter		L.F.	\$27	\$0
Pavement (Full Width)		L.F.	\$95	\$0
Downspout Cross Connections	50	each	\$200	\$10,000
Renovate Sanitary Manhole (Minor)		each	\$200	\$0
Renovate Sanitary Manhole (Major)		each	\$300	\$0
8 " Dia Water		L.F.	\$10	\$0
Total for Outfall Sewer line Replacement				\$2,092,400

TABLE 8.02-4			
I & I Cost			
Cost Summary - Phase I- Contract #2			
Outfall Sewer line Replacement Cost			
			Cost
Outfall Sewer line Replacement Cost			\$2,092,400
TABLE 8.02-5			
Projected Budget Project Cost Contract #2			
Projected Budget Construction Cost			\$2,092,400
Contingency			\$210,000
Engineering			\$200,000
Inspection			\$100,000
Processing Fees			\$15,000
Legal			\$15,000
Land and R/W			\$30,000
Planning			\$25,000
Total Estimated Project Cost - Contract #2			\$2,687,400
TABLE 8.02-6			
I & I Cost			
Total Estimated Project Cost			
			Total
Phase I- Contract #1			\$2,249,335
Phase I- Contract #2			\$2,687,400
Total Project Cost Phase I			\$4,936,735



MATCHLINE SHEET CCR-2, SHT. 2 OF 6

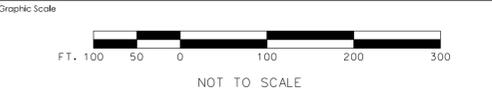
MATCHLINE SHEET CCR-2, SHT. 2 OF 6

OUTFALL SEWER LINE TO BE REPLACED

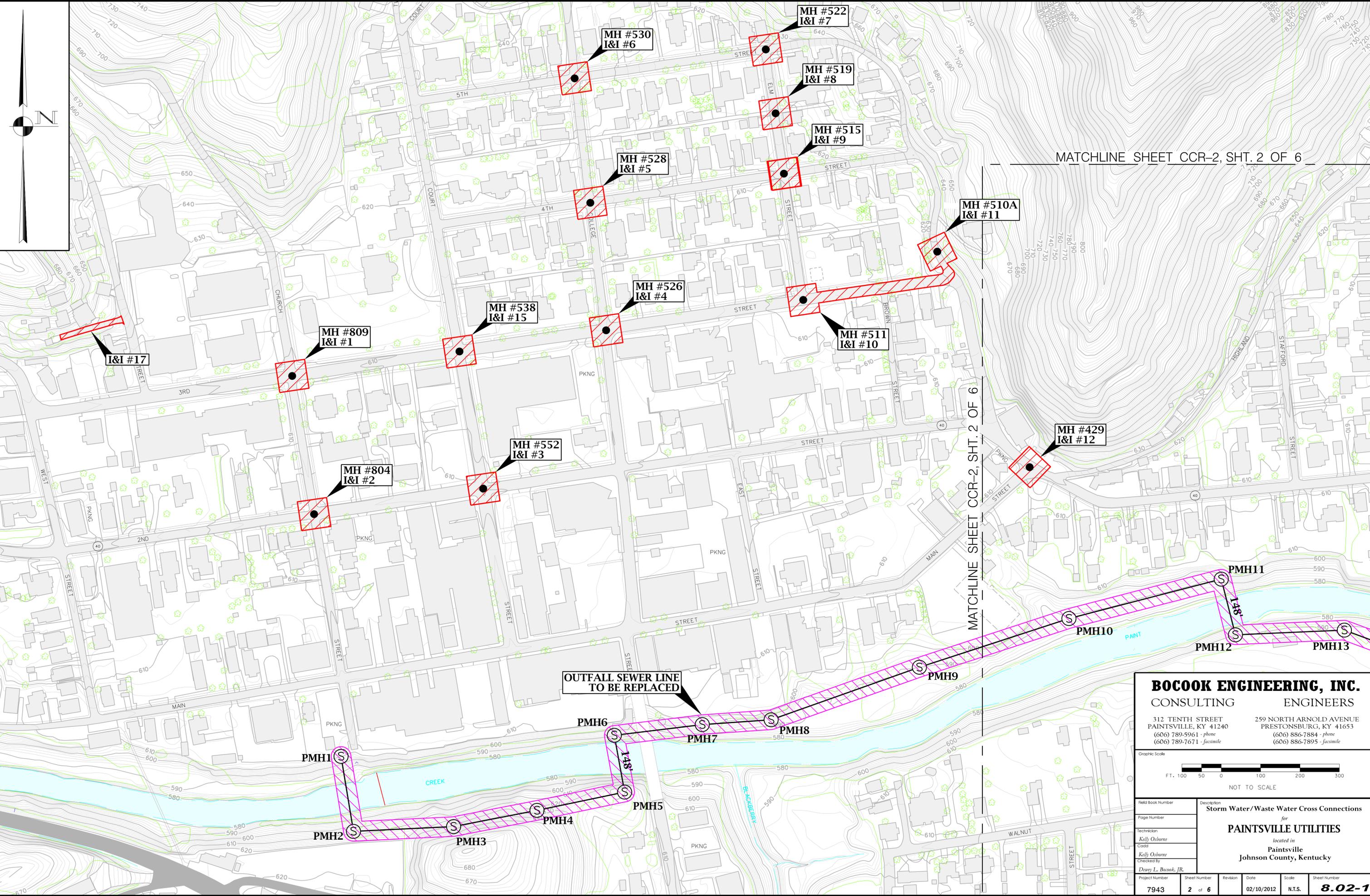
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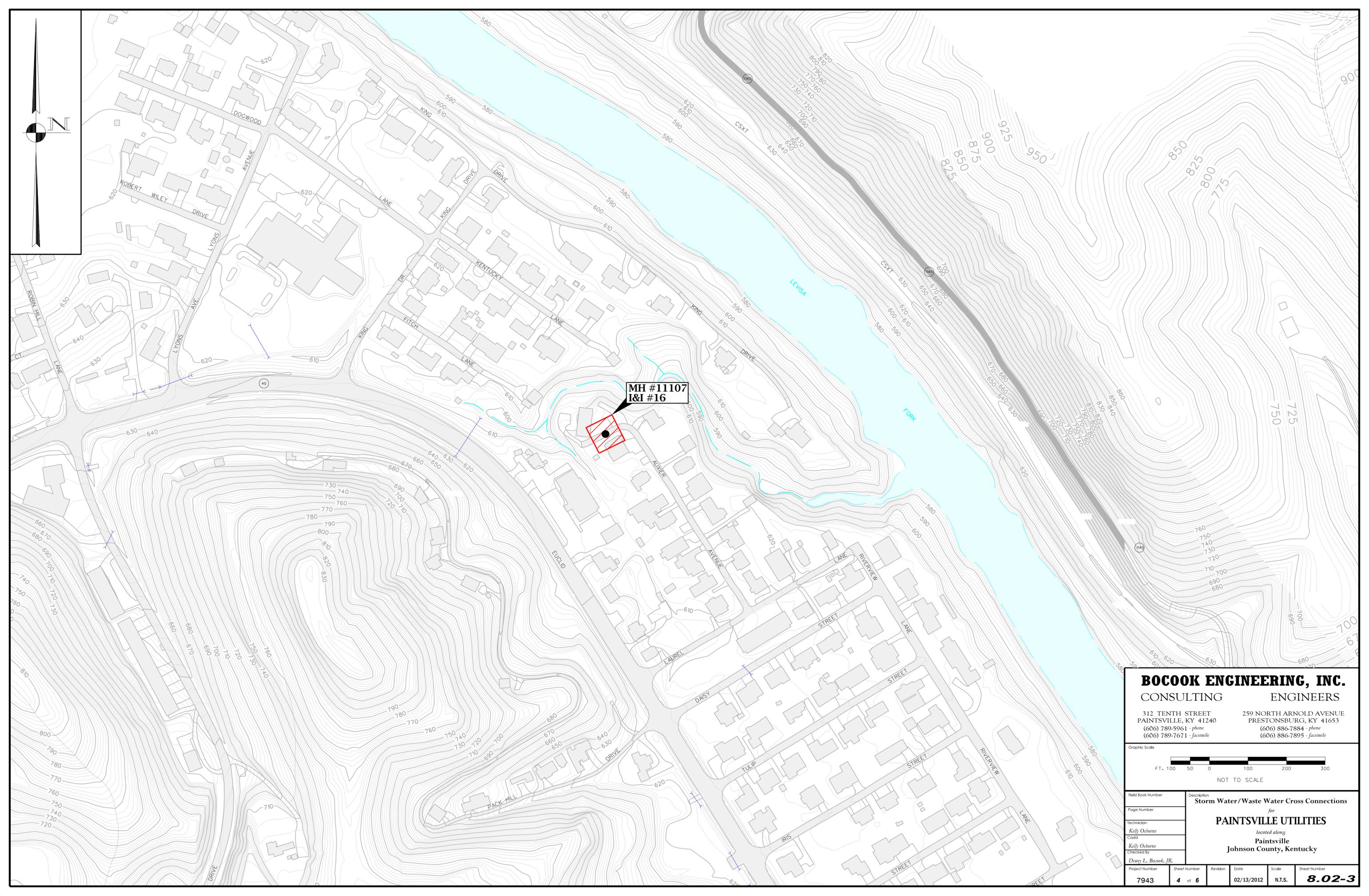
312 TENTH STREET
 PAINTSVILLE, KY 41240
 (606) 789-5961 - phone
 (606) 789-7671 - facsimile

259 NORTH ARNOLD AVENUE
 PRESTONSBURG, KY 41653
 (606) 886-7884 - phone
 (606) 886-7895 - facsimile



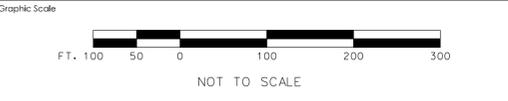
Field Book Number	Description
Page Number	Storm Water/Waste Water Cross Connections for PAINTSVILLE UTILITIES
Technician	located in Paintsville, Kentucky
Checked By	Johnson County, Kentucky
Project Number	7943
Sheet Number	2 of 6
Revision	
Date	02/10/2012
Scale	N.T.S.
Sheet Number	8.02-1





MH #11107
I&I #16

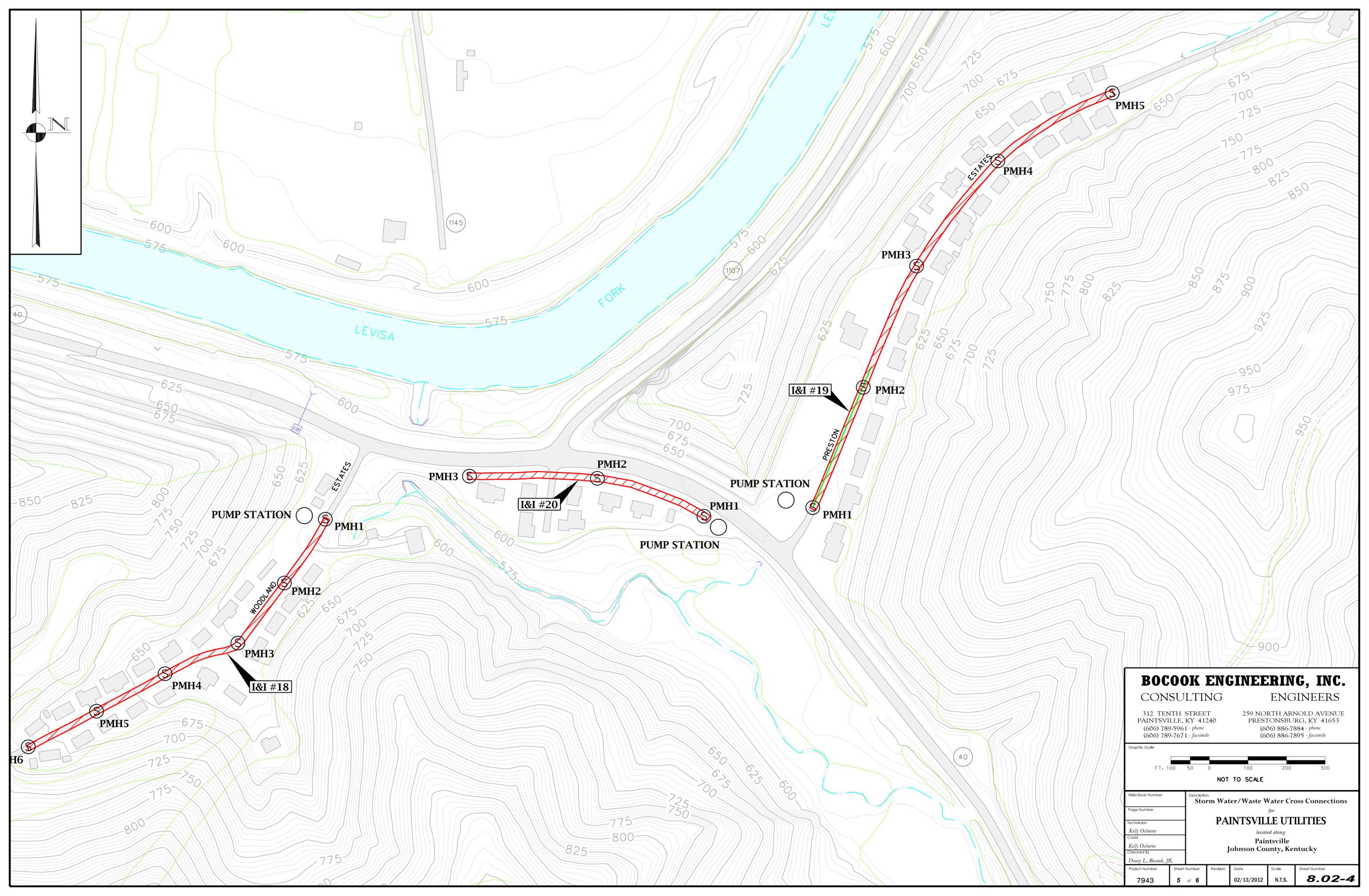
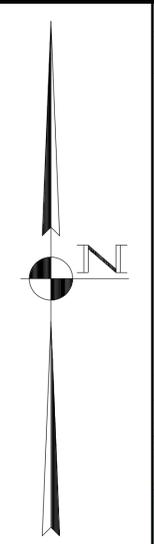
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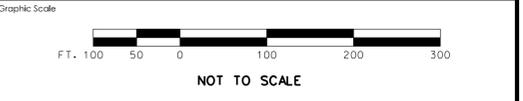
Field Book Number _____
Page Number _____
Technician
Kelly Osborne
Cadd
Kelly Osborne
Checked By
Drew L. Bocoek, JR.

Description
Storm Water/Waste Water Cross Connections
for
PAINTSVILLE UTILITIES
located along
Paintsville
Johnson County, Kentucky

Project Number 7943	Sheet Number 4 of 6	Revision	Date 02/13/2012	Scale N.T.S.	Sheet Number 8.02-3
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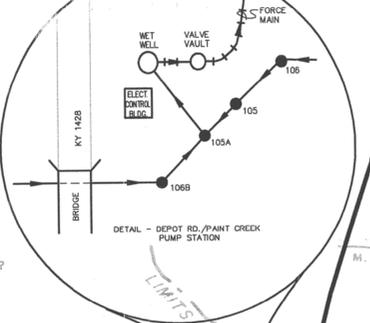
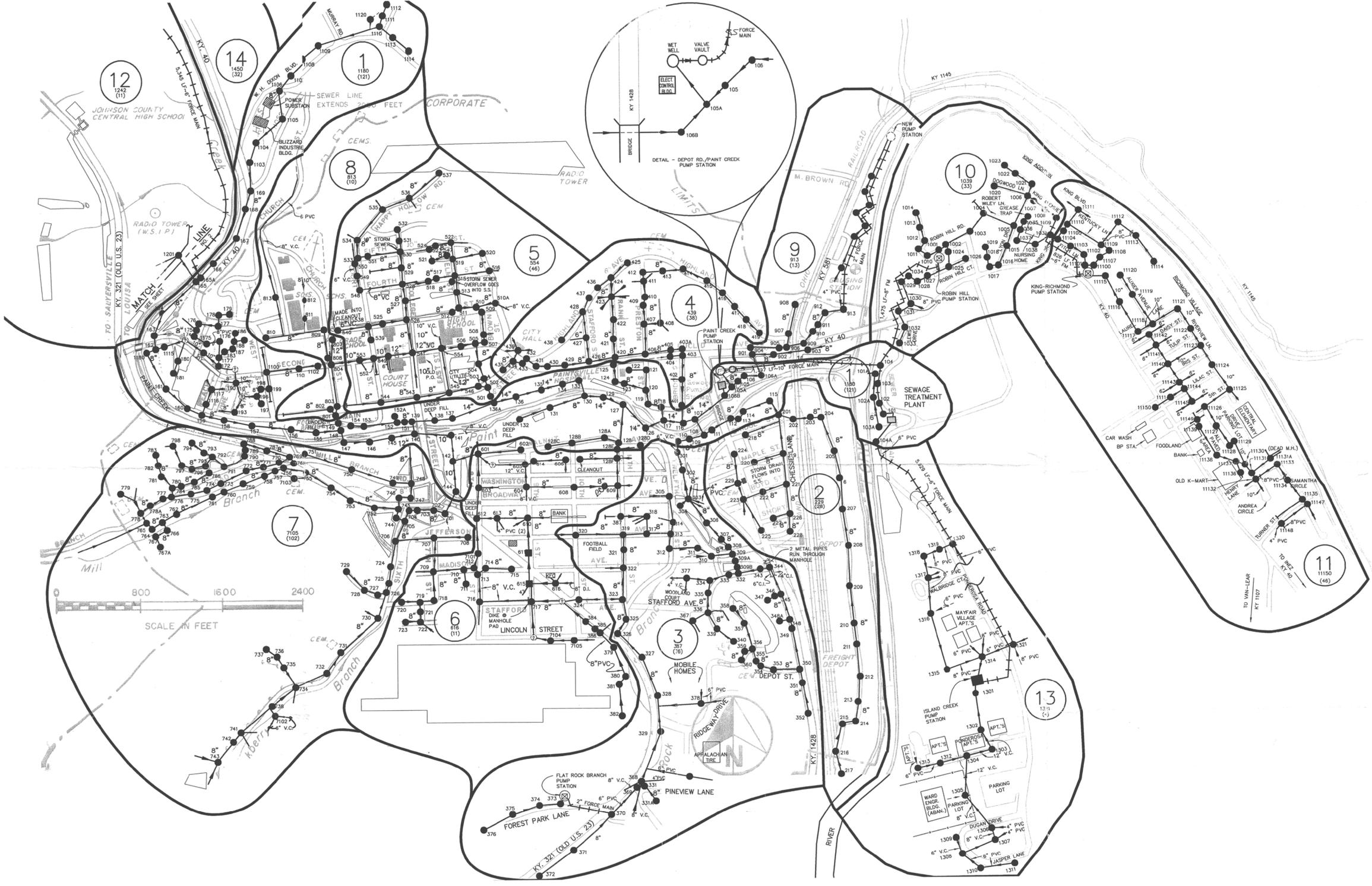


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Field Book Number	Description
Page Number	Storm Water/Waste Water Cross Connections
Technician	for
<i>Kelly Osborne</i>	PAINTSVILLE UTILITIES
Code	located along
<i>Kelly Osborne</i>	Paintsville
Checked By	Johnson County, Kentucky
<i>Drew L. Bocoek, JR.</i>	

Project Number	Sheet Number	Revision	Date	Scale	Sheet Number
7943	5 of 6		02/13/2012	N.T.S.	8.02-4

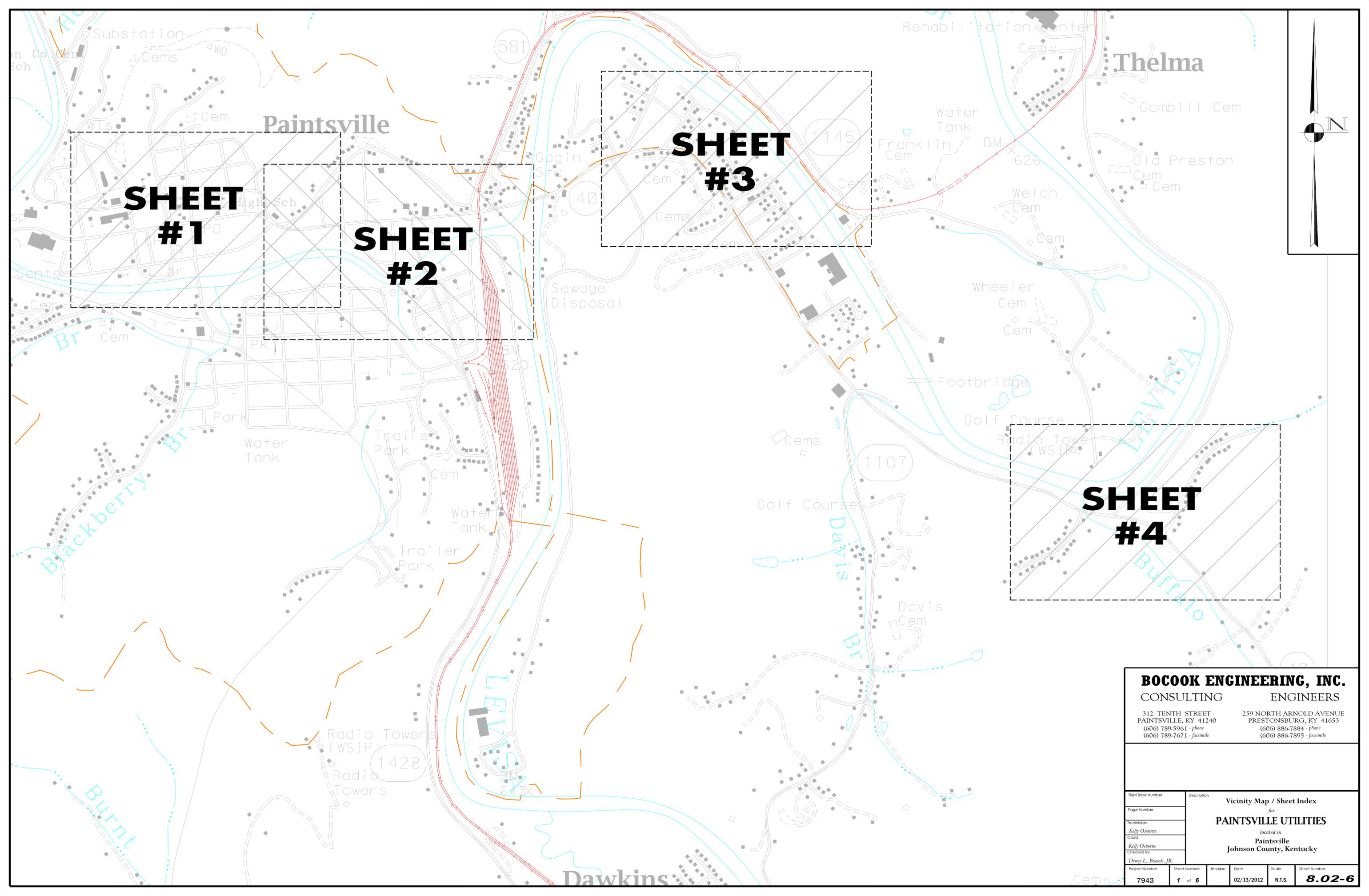


NOTES:
 BASE MAP TAKEN FROM HOWARD K. BELL ENGINEERING
 DRAWING "SEWER SYSTEM EVALUATION SURVEY
 WASTEWATER TRANSPORTATION FACILITIES",
 DATED DEC. 1999.

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Field Book Number	Description				
Page Number	Utility Map for PAINTSVILLE UTILITIES located along Paintsville Johnson County, Kentucky				
Technician					
Cost					
Checked By					
Project Number	Sheet Number	Revision	Date	Scale	Sheet Number
7943	6 of 6		02/13/2012	N.T.S.	8.02-5



Thelma

Paintsville

Gambill Cem

Old Preston Cem

Welch Cem

Cem

Wheeler Cem

Cem

Footbridge

Golf Course

Radio Tower (WSIP)

Buffalo

SHEET #4

Davis Cem

Davis Br

Trailor Park

Water Tank

Trailor Park

Water Tank

Radio Towers (WSIP)

Radio Towers

643X

Dawkins

SHEET #1

SHEET #2

SHEET #3

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(606) 886-7895 - facsimile

Field Book Number	Description				
Page Number	Vicinity Map / Sheet Index for PAINTSVILLE UTILITIES located in Paintsville Johnson County, Kentucky				
Technician					
Cost					
Checked By					
Drawn	Drawn: L. Bocoook, JR.				

Project Number	Sheet Number	Revision	Date	Scale	Sheet Number
7943	1 of 6		02/13/2012	N.T.S.	8.02-6