R | S | A ROSS, SINCLAIRE & ASSOCIATES

P.O. Box 398
Frankfort, KY
40602

502/695-7353
fax: 502/695-2897
www.rsamuni.com

INVESTMENT BANKING

FINANCIAL ADVISORY

PUBLIC FINANCE

BROKERAGE SERVICES

700 Walnut Street
Suite 600
Cincinnati, OH
45202

513/381-3939
fax: 513/381-0124

1219 Assembly Street
Suite 202
Columbia, SC
29201

803/765-1004
fax: 803/765-1088

1900 Envoy Circle
Suite 1920
Louisville, KY
40299

502/491-3939
fax: 502/491-9979

5217 Maryland Way
Suite 302
Brentwood, TN
37027

615/370-6262
fax: 615/370-9669

SIPC

NASD MEMBER FIRM

September 30, 2005

Ms. Beth A. O'Donnell, Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
PO Box 615
Frankfort, Kentucky 40602-0615

2005-00291

RE: Boone County, Kentucky - Application for an Adjustment of Rate

Dear Ms. O'Donnell:

I am enclosing herewith one (1) original and 10 copies of an application, with accompanying exhibits, requesting that the Public Service Commission grant a Purchase Water Adjustment to the County of Boone, Kentucky as it relates to their plans to finance, construct, operate and maintain a public water distribution system to an unserved area in southern and western Boone County to be known as the Subdistrict B area. The Petition is in response to the informal conference between myself and members of the staff at the Public Service Commission as a result of the initial filing of a Petition on behalf of the County.

Thank you in advance for your assistance. Please feel free to contact me or Jim Parsons at the County should you have any questions concerning the project or the application.

Yours truly,

Vince Gabbert
Attorney-at-Law

Enclosures

cc: Distribution List

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF THE COUNTY OF BOONE,	)	
FOR AN ADJUSTMENT OF RATE	)	CASE NO. 2005-00291

PETITION

COMES NOW, the County of Boone ("County"), through counsel, and pursuant to KRS 278.180; 807 KAR 5:001, and all applicable law, respectfully petitions the Public Service Commission (the "Commission") for an order authorizing an adjustment in the existing water rates of Boone County, and in support thereof provides the following information in accordance with the Commission's regulations:

1. The County's address is P.O. Box 900, Burlington, KY 41005. The County is a political subdivision of the State of Kentucky. The County is governed by a fiscal court consisting of one publically elected county Judge/Executive and three publically elected commissioners. The current members of the County's fiscal court is shown herein under Exhibit A.

2. The County is applying for an adjustment in water rates pursuant to KRS 278.180; 807 KAR, Chapter 5, and all applicable law. Adjustment of the County's water rates is necessary to permit Boone County to recover additional revenue to meet the increases cost of purchased water when the County, by and through the Boone County Water District commences purchasing water from the Boone-Florence Water Commission. Boone County seeks to recover revenue necessary to cover the increased cost of purchased water.

3. Boone County's annual reports, including the annual report for the most recent fiscal year are on file with the Commission in accordance with 807 KAR 5:006, Section 3 (1).

4. Boone County's proposed rate structure is attached as Exhibit B.

5. Customer notice has been given in compliance with 807 KAR 5:001, Section 10 (3) & (4). Notice of the project and surcharge to customers is attached as Exhibit C. Notice will be published once per week for (3) consecutive weeks in a prominent manner in the Boone County Recorder, which is the newspaper of general circulation in Boone County's service area.

6. A complete description and quantified engineering reports of the proposed adjustment and project is attached as Exhibit D.

7. Summary of Boone County's determination of its revenue requirements based on return on net investment rate base, return on capitalization, interest coverage, debt service coverage, or operating ratio, is not applicable and/or a waiver is requested. Boone County has determined its revenue requirements by making the calculations which would be utilized for a purchased water adjustment. The County is requesting an increase in rates only to raise sufficient revenue to cover the increased cost of purchased water. Therefore, further analysis is not needed.

8. A reconciliation of the rate base and capital used to determine revenue requirements is not applicable. Increased revenue was not determined by rate base or capital used. See response 7.

9. Current chart of accounts if more detailed than the uniform system of accounts prescribed by the Commission is not applicable. Boone County utilizes the Commission's chart of accounts.

10. The independent auditor's annual opinion report, with any written communication from the independent auditor to the utility which indicates the existence of the material weakness in the utility's internal controls is attached as Exhibit E.

11. The County respectfully requests a waiver of the cost of service study, pursuant to 807 KAR 5:001, Section 10 (11).

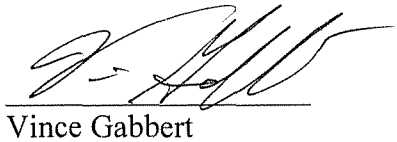
12. The County believes that it is in the public interest that this certificate be granted.

13. The County proposes that the customers of Subdistrict B pay the same rates as are being paid by the customers of the Boone County Water District, which rates and charges are shown herein under Exhibit F. It is also requested that at the same time there is an increase in the rate tariff charges by the BCWD to their customers that are approved by the PSC, that those rate tariffs be the same at all times as the Boone County Subdistrict B customers.

14. The most recent capital construction budget is not applicable because no pro forma adjustment has been proposed for plant additions.

15.The current and ongoing Operating and Maintenance Agreement by and between Boone County and the Boone County Water District is attached as Exhibit G.

Respectfully submitted,



Vince Gabbert
Attorney at Law
PO Box 398
Frankfort, KY 40602
502-695-7353

Copies:

Greg Stumbo
Attorney General

EXHIBIT A

CURRENT MEMBERS OF THE BOONE COUNTY FISCAL COURT

Members of the Boone County Fiscal Court

Gary Moore, County Judge/Executive
2950 Burlington Pike
PO Box 900
Burlington, KY 41005
859-334-2242

Cathy Hudson Flaig, Commissioner
4072 Limaburg Road
Hebron, KY 41048
859-689-4255

Terri Moore, Commissioner
10447 Jason's Bluff
Florence, KY 41042
859-283-9338

Charles Kenner, Commissioner
10673 Bridlepath Lane
Union, KY 41091
859-334-2281

EXHIBIT B

BOONE COUNTY'S PROPOSED RATE STRUCTURE

Tap In Fees:	3/4" meter	$625.00
	1" meter	$825.00
	2" meter	Actual Cost – $1,500.00

Deposit required. Customer will be refunded any difference in cost less than deposit and billed for any cost over deposit amount. All meters, over 2" will be installed by applicant with District supervision.

Reconnect Fee: Reconnect during normal business hours (8:00 am to 4:30 pm)
$25.00

Reconnect after normal business hours
$37.50

Return Check Charge: For any check returned to the District as uncollectible
$20.00

Wholesale/ Tank Sales: $3.60 per 1,000 gallons

Monthly Usage Rates

Schedule A: All customers except multiple occupancy buildings and mobile home parks.

First 3,000 gallons:	$15.45 minimum charge
Next 2,000 gallons:	$4.65 per 1,000 gallons
Next 5,000 gallons:	$4.40 per 1,000 gallons
All over 10,000 gallons:	$3.65 per 1,000 gallons

Schedule B: Multiple occupancy buildings and mobile home parks.

First 3,000 gallons:	$15.45 minimum charge
Next 2,000 gallons:	$5.15 per 1,000 gallons
Next 5,000 gallons:	$4.65 per 1,000 gallons
Next 140,000 gallons:	$4.40 per 1,000 gallons
Next 150,000 gallons:	$3.65 per 1,000 gallons

Monthly Minimum Charge by Meter Size

5/8" - 3/4" meter	3,000 gallons
1" meter	5,000 gallons
1½" meter	9,000 gallons
2" meter	11,000 gallons
3" meter	21,000 gallons
4" meter	29,000 gallons
6" meter	100,000 gallons
Over 6" meter	100,000 gallons

Meter Size	Schedule A	Schedule B
5/8" - 3/4"	$15.45	$15.45
1"	$24.75	$25.75
1½"	$42.35	$44.35
2"	$50.40	$53.40
3"	$86.90	$97.40
4"	$116.10	$132.60
6"	$375.23	$445.00
Over 6"	$375.23	$445.00

Monthly Surcharge

Each costumer of Subdistrict A will pay a surcharge of $25.00 for each 10,000 gallons or any portion thereof of water consumed each month.

EXHIBIT C

NOTICE OF THE PROJECT AND SURCHARGE TO CUSTOMERS

Exhibit N

BOONE COUNTY, KENTUCKY

NOTICE TO CUSTOMERS

PETITION TO ESTABLISH WATER RATES AND ISSUE BONDS
PUBLIC SERVICE COMMISSION

Pursuant to the Regulations of the Kentucky Public Service Commission (Commission), Boone County, Kentucky (the "County") hereby gives Notice that it has filed a Petition with the Commission for a certificate of convenience and necessity to construct and finance a public water system in certain unserved areas of the County (the Subdistrict B service area") and a rate tariff schedule that will apply to each customer of the Subdistrict A service area. The County has proposed the rates and charges listed below to be effective July 1, 2005. Further information may be obtained from the Commission or the County. The rates proposed in this Notice may be modified by the Commission. Such action by the Commission may result in the rates being higher or lower than those proposed by the County.

Any corporation, association, body politic or person may by timely motion, within 30 days of this Notice, request intervention in this case. Intervention beyond the 30 day period may be granted for good cause shown. The Motion must be submitted to the Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602 and should state the grounds for the request, including the interest and status of the party. Interveners may obtain copies of the Application and any testimony filed by contacting the County at the address below. A copy of the Application is available for public review at the office of the County and at the Public Service Commission, 211 Sower Boulevard, Frankfort, Kentucky 40601, (502) 564-3940.

Mr. James E. Parsons
County Administrator
P.O. Box 900
2950 Washington Square
Burlington, KY 41005
(859) 334-2240

Proposed Rates:

Tap In Fees:	3/4" meter	$625.00
	1" meter	$825.00
	2" meter	Actual Cost – $1,500.00

Deposit required. Customer will be refunded any difference in cost less than deposit and billed for any cost over deposit amount. All meters, over 2" will be installed by applicant with District supervision.

Reconnect Fee:	Reconnect during normal business hours (8:00 am to 4:30 pm) $25.00
	Reconnect after normal business hours $37.50
Return Check Charge:	For any check returned to the District as uncollectible $20.00
Wholesale/ Tank Sales:	$3.60 per 1,000 gallons

Monthly Usage Rates

Schedule A: All customers except multiple occupancy buildings and mobile home parks.

First 3,000 gallons:	$15.45 minimum charge
Next 2,000 gallons:	$4.65 per 1,000 gallons
Next 5,000 gallons:	$4.40 per 1,000 gallons
All over 10,000 gallons:	$3.65 per 1,000 gallons

Schedule B: Multiple occupancy buildings and mobile home parks.

First 3,000 gallons:	$15.45 minimum charge
Next 2,000 gallons:	$5.15 per 1,000 gallons
Next 5,000 gallons:	$4.65 per 1,000 gallons
Next 140,000 gallons:	$4.40 per 1,000 gallons
Next 150,000 gallons:	$3.65 per 1,000 gallons

Monthly Minimum Charge by Meter Size

5/8" - 3/4" meter	3,000 gallons
1" meter	5,000 gallons
1½" meter	9,000 gallons
2" meter	11,000 gallons
3" meter	21,000 gallons
4" meter	29,000 gallons
6" meter	100,000 gallons
Over 6" meter	100,000 gallons

Meter Size	Schedule A	Schedule B
5/8" - 3/4"	$15.45	$15.45
1"	$24.75	$25.75
1½"	$42.35	$44.35
2"	$50.40	$53.40
3"	$86.90	$97.40
4"	$116.10	$132.60
6"	$375.23	$445.00
Over 6"	$375.23	$445.00

Monthly Surcharge

Each costumer of Subdistrict A will pay a surcharge of $25.00 for each 10,000 gallons or any portion thereof of water consumed each month.

EXHIBIT D

PROJECT DESCRIPTION AND QUANTIFIED ENGINEERING REPORTS

TETRA TECH, INC.

May 5, 2005

Distribution Section, Drinking Water Branch, Division of Water
Department For Environmental Protection
Frankfort Office Park
14 Reilly Road
Frankfort, KY 40601

RE: 03247 – Boone County Rural Water – Phase II
Contract 2A – Big Bone Church Road – and Side Streets
Contract 2B – East Bend Road – KY 338
Contract 2C – Petersburg Road – KY 20 – and Side Streets
Contract 2D – Side Streets off East Bend Road
KDOW Permit – Hydraulic Analysis

Ladies and Gentlemen:

On behalf of the Boone County Fiscal Court, we have prepared the enclosed hydraulic analysis information for each water main Contract using Haestad Methods, Inc. WaterCAD. Please note that Contracts 2B and 2D cover one of three (3) project areas. The other project areas are 2A and 2C.

Project Location Map.
Hydraulic Analysis Node and Pipe Map.
Hydraulic Analysis of Peak Hour Demand
Hydraulic Analysis of Maximum Day Demand
Velocity Analysis of all proposed side streets

The hydraulic analysis for project area 2A begins at J-2007, which is an existing Boone County Water District elevated storage tank. The overflow elevation of this tank is 1045. The starting Hydraulic Grade Lines (HGL) are based on the operation of the entire Boone County water distribution system.

The velocity analysis was produced by reducing the pressure to 20 psi (or as near to 20 psi as possible without lowering pressure below 20 psi at other nodes) at nodes J-122, J-126, J-129 and J-130. The results are as follows:

Big B C Rd	8" pipe	Flow = 828 gpm	Velocity = 5.28 fps	HGL = 851.0.
Kirby Lane	8" pipe	Flow = 759 gpm	Velocity = 4.84 fps	HGL = 879.1.
Forest Vw Dr	8" pipe	Flow = 728 gpm	Velocity = 4.65 fps	HGL = 872.6.
Mich/Brian Ct	8" pipe	Flow = 806 gpm	Velocity = 5.14 fps	HGL = 898.1.

11156 Canal Road, Suite A, Cincinnati, OH 45241
Tel 513.772.4660 Fax 513.772.4790
www.tetratech.com

TETRA TECH

The hydraulic analysis for project areas 2B and 2D begins at J-2011, which is an existing Boone County Water District elevated storage tank. The overflow elevation of this tank is 1080. The starting Hydraulic Grade Lines (HGL) are based on the operation of the entire Boone County water distribution system.

The velocity analysis was produced by reducing the pressure to 20 psi at nodes J-43, J-88, J-94, and J-102. The results are as follows:

Emerald Dr	8" pipe	Flow = 1,082 gpm	Velocity = 6.91 fps	HGL = 876.5.
Kirby Drive	8" pipe	Flow = 829 gpm	Velocity = 5.29 fps	HGL = 870.2.
Wolfe Road	8" pipe	Flow = 902 gpm	Velocity = 5.76 fps	HGL = 906.2.
Locust Gr Rd	8" pipe	Flow = 780 gpm	Velocity = 4.98 fps	HGL = 896.1.

The hydraulic analysis for project area 2C begins at J-2011, which is an existing Boone County Water District elevated storage tank. The overflow elevation of this tank is 1080. The starting Hydraulic Grade Lines (HGL) are based on the operation of the entire Boone County water distribution system.

The velocity analysis was produced by reducing the pressure to 20 psi (or as near to 20 psi as possible without lowering pressure below 20 psi at other nodes) at nodes J-22, J-24, J-26, and J-131. The results are as follows:

Anson Lane	8" pipe	Flow = 1,513 gpm	Velocity = 9.66 fps	HGL = 814.0.
Brewer Lane	8" pipe	Flow = 1,393 gpm	Velocity = 8.89 fps	HGL = 866.2.
Caribou Dr	8" pipe	Flow = 1,214 gpm	Velocity = 7.75 fps	HGL = 816.4.
Petersburg Rd	8" pipe	Flow = 1,051 gpm	Velocity = 4.81 fps	HGL = 874.6.

Please review this information for approval and advise Tetra Tech, Inc. of any questions or comments you may have on this project.

Sincerely,

Paul G. Trepaney, P.E.
Senior Project Engineer

Cc Jim Parsons
Robin Curry
Phil Trzop
Dennis Huber

Attachments

Scenario: STD23 - Peak Hour Phases I, II, and III
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-103	0.00	773.00	98.74	227.75	1,000.75
J-108	0.00	756.00	106.08	244.70	1,000.70
J-109	0.00	774.00	98.28	226.71	1,000.71
J-122	3.00	804.00	85.27	196.70	1,000.70
J-126	3.00	829.00	74.43	171.70	1,000.70
J-127	0.00	828.00	74.87	172.70	1,000.70
J-128	0.00	848.00	66.20	152.70	1,000.70
J-129	6.00	800.00	87.00	200.69	1,000.69
J-130	6.00	852.00	64.47	148.71	1,000.71
J-2007	0.00	950.00	39.88	91.98	1,041.98
J-2008	0.00	950.00	39.73	91.64	1,041.64
J-2135	397.64	860.00	75.64	174.49	1,034.49
J-2136	533.75	900.00	48.22	111.22	1,011.22
J-2137	812.78	830.00	89.49	206.42	1,036.42
J-2138	288.75	920.00	50.41	116.28	1,036.28
J-2156	160.42	910.00	48.81	112.59	1,022.59
J-2157	81.67	920.00	44.59	102.86	1,022.86
J-2158	61.25	920.00	47.05	108.53	1,028.53
J-2160	43.75	900.00	50.85	117.29	1,017.29
J-2161	7.78	846.00	70.09	161.68	1,007.68
J-2162	43.75	900.00	47.25	108.98	1,008.98
J-2163	78.75	840.00	71.32	164.51	1,004.51
J-2190	7.78	780.00	94.88	218.85	998.85
J-2191	418.42	820.00	74.93	172.84	992.84

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Contract 2A

/

Scenario: STD38 - Max Day Pumps Off Phases I, II, and III
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-103	0.00	773.00	108.11	249.37	1,022.37
J-108	0.00	756.00	115.47	266.35	1,022.35
J-109	0.00	774.00	107.66	248.35	1,022.35
J-122	2.00	804.00	94.66	218.35	1,022.35
J-126	2.00	829.00	83.82	193.34	1,022.34
J-127	0.00	828.00	84.25	194.34	1,022.34
J-128	0.00	848.00	75.58	174.34	1,022.34
J-129	4.00	800.00	96.39	222.34	1,022.34
J-130	4.00	852.00	73.85	170.35	1,022.35
J-2007	0.00	950.00	39.88	92.00	1,042.00
J-2008	0.00	950.00	39.85	91.93	1,041.93
J-2135	284.03	860.00	78.32	180.65	1,040.65
J-2136	381.25	900.00	55.53	128.08	1,028.08
J-2137	580.56	830.00	92.25	212.80	1,042.80
J-2138	206.25	920.00	53.29	122.92	1,042.92
J-2156	114.58	910.00	53.84	124.19	1,034.19
J-2157	58.33	920.00	49.61	114.43	1,034.43
J-2158	43.75	920.00	51.13	117.95	1,037.95
J-2160	31.25	900.00	56.95	131.36	1,031.36
J-2161	5.56	846.00	78.09	180.12	1,026.12
J-2162	31.25	900.00	55.00	126.87	1,026.87
J-2163	56.25	840.00	79.96	184.45	1,024.45
J-2190	5.56	780.00	104.61	241.30	1,021.30
J-2191	298.87	820.00	85.85	198.03	1,018.03

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Scenario: MDD Phases I, II, and III with Flush @ J-122
Steady State Analysis
Junction Report

Big Bone Church Rd

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-103	0.00	773.00	85.90	198.14	971.14
J-108	0.00	756.00	59.89	138.14	894.14
J-109	0.00	774.00	62.58	144.36	918.36
J-122	828.00	804.00	20.66	47.65	851.65
J-126	2.00	829.00	28.24	65.14	894.14
J-127	0.00	828.00	28.67	66.14	894.14
J-128	0.00	848.00	20.00	46.14	894.14
J-129	4.00	800.00	40.81	94.14	894.14
J-130	4.00	852.00	28.77	66.36	918.36
J-2007	0.00	950.00	39.88	91.99	1,041.99
J-2008	0.00	950.00	39.83	91.88	1,041.88
J-2135	284.03	860.00	77.70	179.22	1,039.22
J-2136	381.25	900.00	53.72	123.91	1,023.91
J-2137	580.56	830.00	91.59	211.28	1,041.28
J-2138	206.25	920.00	52.72	121.61	1,041.61
J-2156	114.58	910.00	50.94	117.50	1,027.50
J-2157	58.33	920.00	46.60	107.48	1,027.48
J-2158	43.75	920.00	49.17	113.43	1,033.43
J-2160	31.25	900.00	55.23	127.39	1,027.39
J-2161	5.56	846.00	69.99	161.44	1,007.44
J-2162	31.25	900.00	53.12	122.54	1,022.54
J-2163	56.25	840.00	78.61	181.34	1,021.34
J-2190	5.56	780.00	90.43	208.60	988.60
J-2191	298.87	820.00	67.38	155.42	975.42

PRESSURE AT NODE 128 GETS REDUCED TO 20 PSI WHEN FLUSHING DEMAND IS APPLIED AT J-122

WT

Pressure Reduced to 20.66psi @ node J-122

Flow at J-122 = 828 gpm

Velocity in P-109 = 5.28 fps

8" pipe

Scenario: MDD Phases I, II, and III with Flush @ J-122
Steady State Analysis
Pipe Report

Big Bone Church Road

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-106	J-108	J-109	-834.00	5.32	1,600.00	8	59.89	62.58
P-107	J-109	J-103	-838.00	5.35	3,456.00	8	62.58	85.90
P-109	J-122	J-108	-828.00	5.28	2,845.00	8	20.66	59.89
P-114	J-108	J-127	6.00	0.04	1,331.00	8	59.89	28.67
P-119	J-127	J-126	2.00	0.01	1,197.00	8	28.67	28.24
P-124	J-127	J-128	4.00	0.03	634.00	8	28.67	20.00
P-133	J-128	J-129	4.00	0.03	1,989.00	8	20.00	40.81
P-134	J-109	J-130	4.00	0.03	1,774.00	8	62.58	28.77
P-775a	J-2008	T-12a	0.00	0.00	50.00	16	39.83	17.34
P-775b	J-2008	T-12b	0.00	0.00	50.00	16	39.83	17.34
P-776	SR-7	J-2007	1,679.10	1.71	10.00	20	0.00	39.88
P-2008	J-2008	J-2007	-1,679.10	2.68	50.00	16	39.83	39.88
P-2166	J-2008	J-2135	123.22	0.79	5,168.00	8	39.83	77.70
P-2167	J-2135	J-2160	312.28	1.99	4,820.00	8	77.70	55.23
P-2168	J-2135	J-2137	-110.09	0.70	4,127.00	8	77.70	91.59
P-2170	J-2137	J-2138	-38.32	0.24	4,640.00	8	91.59	52.72
P-2171	J-2138	J-2159	-244.57	1.56	3,290.00	8	52.72	64.51
P-2213	J-2156	J-2157	37.32	0.11	2,757.00	12	50.94	46.60
P-2214	J-2157	J-2158	-614.66	1.74	4,979.00	12	46.60	49.17
P-2215	J-2158	J-2137	-658.41	1.87	5,792.00	12	49.17	91.59
P-2218	J-2161	J-2160	-422.72	2.70	4,640.00	8	69.99	55.23
P-2219	J-2136	J-2160	-252.30	1.61	2,102.00	8	53.72	55.23
P-2220	J-2162	J-2136	-409.66	1.16	2,445.00	12	53.12	53.72
P-2221	J-2163	J-2136	-136.57	0.87	4,863.00	8	78.61	53.72
P-2251	J-2182	J-2137	2,771.95	2.83	5,814.00	20	108.67	91.59
P-2252	J-2184	J-2163	-80.32	0.23	4,378.00	12	95.90	78.61
P-2261	J-2190	J-2161	-417.16	2.66	4,489.00	8	90.43	69.99
P-2262	J-2191	J-2190	-411.60	2.63	3,220.00	8	67.38	90.43
P-2263a	J-2157	J-103	593.64	3.79	6,987.00	8	46.60	85.90
P-2263b	J-103	J-2191	-244.36	1.56	2,751.00	8	85.90	67.38
P-2286	J-2137	J-2135	1,461.23	1.49	4,177.00	20	91.59	77.70
P-2287	J-2135	J-2160	1,921.70	3.07	4,874.00	16	77.70	55.23
P-2288	J-2008	J-2135	823.48	1.31	5,270.00	16	39.83	77.70
P-2293	J-2160	J-2136	1,527.72	2.44	2,190.00	16	55.23	53.72
P-2294	J-2136	J-2162	852.54	1.36	2,555.00	16	53.72	53.12
P-2670a	J-7	J-2191	131.63	0.84	14,813.00	8	208.85	67.38

Scenario: MDD Phases I, II, and III with Flush @ J-126
Steady State Analysis
Junction Report

Kirby Lane

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-103	0.00	773.00	88.45	204.02	977.02
J-108	0.00	756.00	67.36	155.37	911.37
J-109	0.00	774.00	68.50	158.01	932.01
J-122	2.00	804.00	46.55	107.37	911.37
J-126	759.00	829.00	21.71	50.07	879.07
J-127	0.00	828.00	28.74	66.29	894.29
J-128	0.00	848.00	20.07	46.28	894.28
J-129	4.00	800.00	40.87	94.28	894.28
J-130	4.00	852.00	34.69	80.01	932.01
J-2007	0.00	950.00	39.88	91.99	1,041.99
J-2008	0.00	950.00	39.84	91.89	1,041.89
J-2135	284.03	860.00	77.77	179.38	1,039.38
J-2136	381.25	900.00	53.89	124.31	1,024.31
J-2137	580.56	830.00	91.67	211.46	1,041.46
J-2138	206.25	920.00	52.78	121.76	1,041.76
J-2156	114.58	910.00	51.27	118.26	1,028.26
J-2157	58.33	920.00	46.93	108.25	1,028.25
J-2158	43.75	920.00	49.39	113.93	1,033.93
J-2160	31.25	900.00	55.39	127.78	1,027.78
J-2161	5.56	846.00	70.86	163.46	1,009.46
J-2162	31.25	900.00	53.30	122.95	1,022.95
J-2163	56.25	840.00	78.74	181.63	1,021.63
J-2190	5.56	780.00	91.99	212.19	992.19
J-2191	298.87	820.00	69.42	160.12	980.12

PRESSURE AT J-128 APPROACHES 20 PSI AS FLUSHING DEMAND IS APPLIED AT J-126

WT

Pressure Reduced to 21.71 psi at node J-126

Flow at J-126 = 759 gpm

Velocity at P-119 = 4.84 fps

8" pipe

Scenario: MDD Phases I, II, and III with Flush @ J-126
Steady State Analysis
Pipe Report

Kirby Lane

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-106	J-108	J-109	-765.00	4.88	1,600.00	8	67.36	68.50
P-107	J-109	J-103	-769.00	4.91	3,456.00	8	68.50	88.45
P-109	J-122	J-108	-2.00	0.01	2,845.00	8	46.55	67.36
P-114	J-108	J-127	763.00	4.87	1,331.00	8	67.36	28.74
P-119	J-127	J-126	759.00	4.84	1,197.00	8	28.74	21.71
P-124	J-127	J-128	4.00	0.03	634.00	8	28.74	20.07
P-133	J-128	J-129	4.00	0.03	1,989.00	8	20.07	40.87
P-134	J-109	J-130	4.00	0.03	1,774.00	8	68.50	34.69
P-775a	J-2008	T-12a	0.00	0.00	50.00	16	39.84	17.34
P-775b	J-2008	T-12b	0.00	0.00	50.00	16	39.84	17.34
P-776	SR-7	J-2007	1,640.51	1.68	10.00	20	0.00	39.88
P-2008	J-2008	J-2007	-1,640.51	2.62	50.00	16	39.84	39.88
P-2166	J-2008	J-2135	119.28	0.76	5,168.00	8	39.84	77.77
P-2167	J-2135	J-2160	309.06	1.97	4,820.00	8	77.77	55.39
P-2168	J-2135	J-2137	-110.59	0.71	4,127.00	8	77.77	91.67
P-2170	J-2137	J-2138	-36.52	0.23	4,640.00	8	91.67	52.78
P-2171	J-2138	J-2159	-242.77	1.55	3,290.00	8	52.78	64.53
P-2213	J-2156	J-2157	22.37	0.06	2,757.00	12	51.27	46.93
P-2214	J-2157	J-2158	-599.84	1.70	4,979.00	12	46.93	49.39
P-2215	J-2158	J-2137	-643.59	1.83	5,792.00	12	49.39	91.67
P-2218	J-2161	J-2160	-403.61	2.58	4,640.00	8	70.86	55.39
P-2219	J-2136	J-2160	-251.74	1.61	2,102.00	8	53.89	55.39
P-2220	J-2162	J-2136	-407.44	1.16	2,445.00	12	53.30	53.89
P-2221	J-2163	J-2136	-139.49	0.89	4,863.00	8	78.74	53.89
P-2251	J-2182	J-2137	2,766.18	2.82	5,814.00	20	108.73	91.67
P-2261	J-2190	J-2161	-398.06	2.54	4,489.00	8	91.99	70.86
P-2262	J-2191	J-2190	-392.50	2.51	3,220.00	8	69.42	91.99
P-2263a	J-2157	J-103	563.87	3.60	6,987.00	8	46.93	88.45
P-2263b	J-103	J-2191	-205.13	1.31	2,751.00	8	88.45	69.42
P-2286	J-2137	J-2135	1,467.97	1.50	4,177.00	20	91.67	77.77
P-2287	J-2135	J-2160	1,901.88	3.03	4,874.00	16	77.77	55.39
P-2288	J-2008	J-2135	797.13	1.27	5,270.00	16	39.84	77.77
P-2293	J-2160	J-2136	1,524.34	2.43	2,190.00	16	55.39	53.89
P-2294	J-2136	J-2162	847.90	1.35	2,555.00	16	53.89	53.30
P-2670a	J-7	J-2191	111.50	0.71	14,813.00	8	210.16	69.42

Scenario: MDD Phases I, II, and III with Flush @ J-129
Steady State Analysis
Junction Report

Forest View Drive

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-103	0.00	773.00	89.61	206.71	979.71
J-108	0.00	756.00	70.74	163.19	919.19
J-109	0.00	774.00	71.19	164.21	938.21
J-122	2.00	804.00	49.94	115.19	919.19
J-126	2.00	829.00	32.27	74.44	903.44
J-127	0.00	828.00	32.71	75.44	903.44
J-128	0.00	848.00	20.80	47.98	895.98
J-129	728.00	800.00	31.46	72.58	872.58
J-130	4.00	852.00	37.37	86.21	938.21
J-2007	0.00	950.00	39.88	91.99	1,041.99
J-2008	0.00	950.00	39.84	91.89	1,041.89
J-2135	284.03	860.00	77.80	179.46	1,039.46
J-2136	381.25	900.00	53.96	124.48	1,024.48
J-2137	580.56	830.00	91.71	211.54	1,041.54
J-2138	206.25	920.00	52.82	121.83	1,041.83
J-2156	114.58	910.00	51.42	118.61	1,028.61
J-2157	58.33	920.00	47.08	108.61	1,028.61
J-2158	43.75	920.00	49.49	114.16	1,034.16
J-2160	31.25	900.00	55.46	127.94	1,027.94
J-2161	5.56	846.00	71.27	164.39	1,010.39
J-2162	31.25	900.00	53.38	123.13	1,023.13
J-2163	56.25	840.00	78.83	181.84	1,021.84
J-2190	5.56	780.00	92.71	213.85	993.85
J-2191	298.87	820.00	70.36	162.30	982.30

PRESSURE AT J-128 APPROACHES 20 PSI AS FLUSHING DEMAND IS APPLIED AT J-129

WT

Pressure Reduced to 31.46 psi at node J-129

Flow at J-129 = 728 gpm

Velocity at P-133 = 4.65 fps

8" pipe

Scenario: MDD Phases I, II, and III with Flush @ J-129
Steady State Analysis
Pipe Report

Forest View Drive

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-106	J-108	J-109	-732.00	4.67	1,600.00	8	70.74	71.19
P-107	J-109	J-103	-736.00	4.70	3,456.00	8	71.19	89.61
P-109	J-122	J-108	-2.00	0.01	2,845.00	8	49.94	70.74
P-114	J-108	J-127	730.00	4.66	1,331.00	8	70.74	32.71
P-119	J-127	J-126	2.00	0.01	1,197.00	8	32.71	32.27
P-124	J-127	J-128	728.00	4.65	634.00	8	32.71	20.80
P-133	J-128	J-129	728.00	4.65	1,989.00	8	20.80	31.46
P-134	J-109	J-130	4.00	0.03	1,774.00	8	71.19	37.37
P-775a	J-2008	T-12a	0.00	0.00	50.00	16	39.84	17.34
P-775b	J-2008	T-12b	0.00	0.00	50.00	16	39.84	17.34
P-776	SR-7	J-2007	1,622.72	1.66	10.00	20	0.00	39.88
P-2008	J-2008	J-2007	-1,622.72	2.59	50.00	16	39.84	39.88
P-2166	J-2008	J-2135	117.52	0.75	5,168.00	8	39.84	77.80
P-2167	J-2135	J-2160	307.86	1.96	4,820.00	8	77.80	55.46
P-2168	J-2135	J-2137	-111.13	0.71	4,127.00	8	77.80	91.71
P-2170	J-2137	J-2138	-35.81	0.23	4,640.00	8	91.71	52.82
P-2171	J-2138	J-2159	-242.06	1.55	3,290.00	8	52.82	64.55
P-2213	J-2156	J-2157	15.39	0.04	2,757.00	12	51.42	47.08
P-2214	J-2157	J-2158	-592.83	1.68	4,979.00	12	47.08	49.49
P-2215	J-2158	J-2137	-636.58	1.81	5,792.00	12	49.49	91.71
P-2218	J-2161	J-2160	-394.44	2.52	4,640.00	8	71.27	55.46
P-2219	J-2136	J-2160	-251.82	1.61	2,102.00	8	53.96	55.46
P-2220	J-2162	J-2136	-405.58	1.15	2,445.00	12	53.38	53.96
P-2221	J-2163	J-2136	-145.75	0.93	4,863.00	8	78.83	53.96
P-2251	J-2182	J-2137	2,763.16	2.82	5,814.00	20	108.75	91.71
P-2261	J-2190	J-2161	-388.88	2.48	4,489.00	8	92.71	71.27
P-2262	J-2191	J-2190	-383.33	2.45	3,220.00	8	70.36	92.71
P-2263a	J-2157	J-103	549.88	3.51	6,987.00	8	47.08	89.61
P-2263b	J-103	J-2191	-186.12	1.19	2,751.00	8	89.61	70.36
P-2286	J-2137	J-2135	1,470.70	1.50	4,177.00	20	91.71	77.80
P-2287	J-2135	J-2160	1,894.45	3.02	4,874.00	16	77.80	55.46
P-2288	J-2008	J-2135	786.98	1.26	5,270.00	16	39.84	77.80
P-2293	J-2160	J-2136	1,524.81	2.43	2,190.00	16	55.46	53.96
P-2294	J-2136	J-2162	844.04	1.35	2,555.00	16	53.96	53.38
P-2670a	J-7	J-2191	101.66	0.65	14,813.00	8	210.79	70.36

Scenario: MDD Phases I, II, and III with Flush @ J-130
Steady State Analysis
Junction Report

Michelle Dr / Brian Court

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-103	0.00	773.00	86.82	200.27	973.27
J-108	0.00	756.00	72.53	167.31	923.31
J-109	0.00	774.00	64.73	149.31	923.31
J-122	2.00	804.00	51.72	119.31	923.31
J-126	2.00	829.00	40.88	94.31	923.31
J-127	0.00	828.00	41.32	95.31	923.31
J-128	0.00	848.00	32.65	75.31	923.31
J-129	4.00	800.00	53.46	123.30	923.30
J-130	805.50	852.00	20.00	46.14	898.14
J-2007	0.00	950.00	39.88	91.99	1,041.99
J-2008	0.00	950.00	39.83	91.88	1,041.88
J-2135	284.03	860.00	77.72	179.28	1,039.28
J-2136	381.25	900.00	53.78	124.06	1,024.06
J-2137	580.56	830.00	91.62	211.34	1,041.34
J-2138	206.25	920.00	52.74	121.66	1,041.66
J-2156	114.58	910.00	51.06	117.78	1,027.78
J-2157	58.33	920.00	46.72	107.76	1,027.76
J-2158	43.75	920.00	49.25	113.61	1,033.61
J-2160	31.25	900.00	55.29	127.53	1,027.53
J-2161	5.56	846.00	70.30	162.17	1,008.17
J-2162	31.25	900.00	53.19	122.69	1,022.69
J-2163	56.25	840.00	78.66	181.44	1,021.44
J-2190	5.56	780.00	90.99	209.90	989.90
J-2191	298.87	820.00	68.11	157.12	977.12

WT

Pressure Reduced to 20.0 psi at node J-130

Flow J-130 = 805.50 gpm

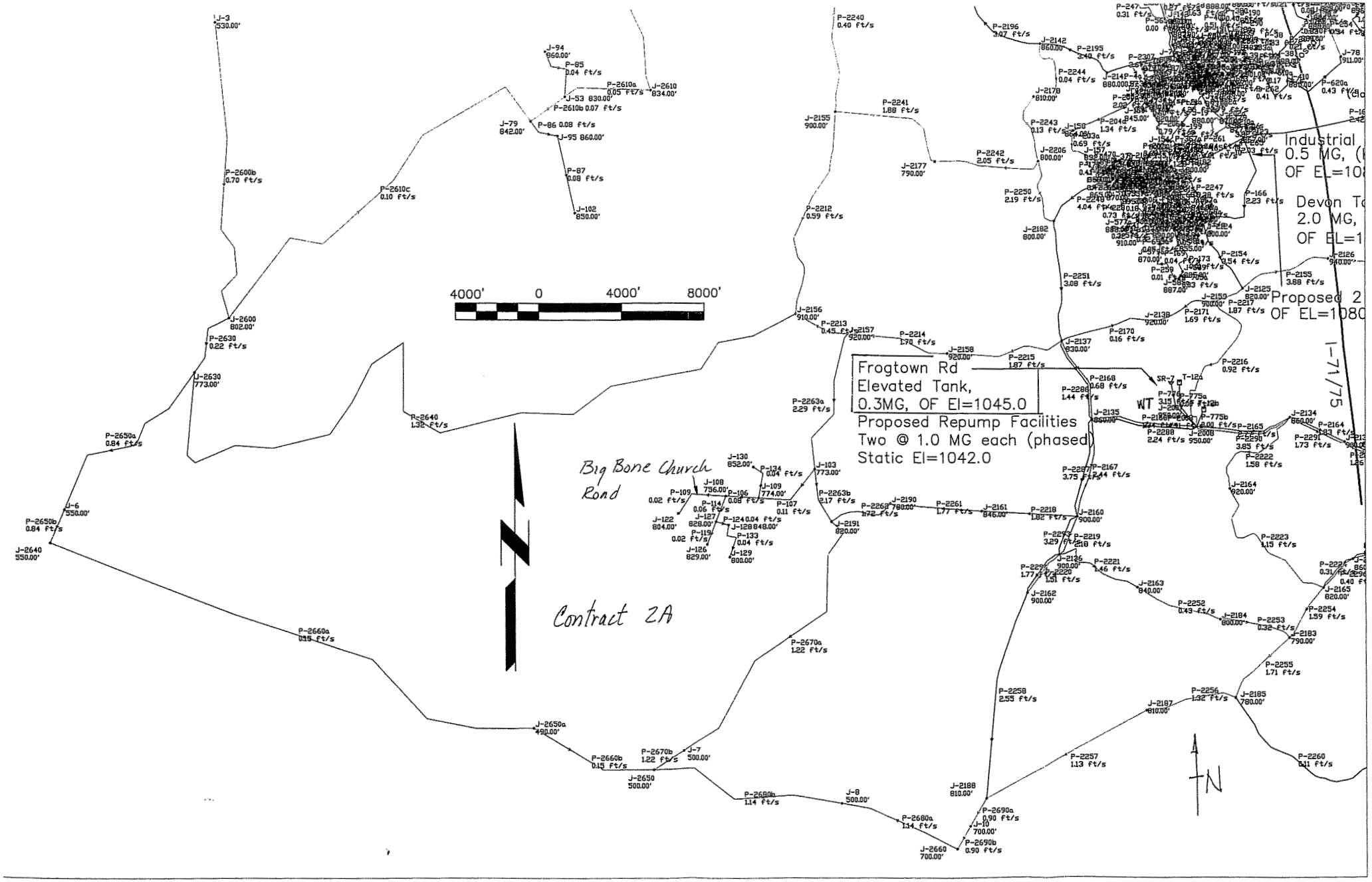
Velocity P-134 = 5.14 fps

8" pipe

Scenario: MDD Phases I, II, and III with Flush @ J-130
Steady State Analysis
Pipe Report

Michelle Dr / Brian Court

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-106	J-108	J-109	-8.00	0.05	1,600.00	8	72.53	64.73
P-107	J-109	J-103	-813.50	5.19	3,456.00	8	64.73	86.82
P-109	J-122	J-108	-2.00	0.01	2,845.00	8	51.72	72.53
P-114	J-108	J-127	6.00	0.04	1,331.00	8	72.53	41.32
P-119	J-127	J-126	2.00	0.01	1,197.00	8	41.32	40.88
P-124	J-127	J-128	4.00	0.03	634.00	8	41.32	32.65
P-133	J-128	J-129	4.00	0.03	1,989.00	8	32.65	53.46
P-134	J-109	J-130	805.50	5.14	1,774.00	8	64.73	20.00
P-775a	J-2008	T-12a	0.00	0.00	50.00	16	39.83	17.34
P-775b	J-2008	T-12b	0.00	0.00	50.00	16	39.83	17.34
P-776	SR-7	J-2007	1,665.38	1.70	10.00	20	0.00	39.88
P-2008	J-2008	J-2007	-1,665.38	2.66	50.00	16	39.83	39.88
P-2166	J-2008	J-2135	121.62	0.78	5,168.00	8	39.83	77.72
P-2167	J-2135	J-2160	311.14	1.99	4,820.00	8	77.72	55.29
P-2168	J-2135	J-2137	-110.27	0.70	4,127.00	8	77.72	91.62
P-2170	J-2137	J-2138	-37.67	0.24	4,640.00	8	91.62	52.74
P-2171	J-2138	J-2159	-243.92	1.56	3,290.00	8	52.74	64.52
P-2213	J-2156	J-2157	32.03	0.09	2,757.00	12	51.06	46.72
P-2214	J-2157	J-2158	-609.31	1.73	4,979.00	12	46.72	49.25
P-2215	J-2158	J-2137	-653.06	1.85	5,792.00	12	49.25	91.62
P-2218	J-2161	J-2160	-415.92	2.65	4,640.00	8	70.30	55.29
P-2219	J-2136	J-2160	-252.11	1.61	2,102.00	8	53.78	55.29
P-2220	J-2162	J-2136	-408.88	1.16	2,445.00	12	53.19	53.78
P-2221	J-2163	J-2136	-137.62	0.88	4,863.00	8	78.66	53.78
P-2251	J-2182	J-2137	2,769.87	2.83	5,814.00	20	108.69	91.62
P-2261	J-2190	J-2161	-410.36	2.62	4,489.00	8	90.99	70.30
P-2262	J-2191	J-2190	-404.81	2.58	3,220.00	8	68.11	90.99
P-2263a	J-2157	J-103	583.00	3.72	6,987.00	8	46.72	86.82
P-2263b	J-103	J-2191	-230.50	1.47	2,751.00	8	86.82	68.11
P-2286	J-2137	J-2135	1,463.66	1.49	4,177.00	20	91.62	77.72
P-2287	J-2135	J-2160	1,914.69	3.06	4,874.00	16	77.72	55.29
P-2288	J-2008	J-2135	814.11	1.30	5,270.00	16	39.83	77.72
P-2293	J-2160	J-2136	1,526.56	2.44	2,190.00	16	55.29	53.78
P-2294	J-2136	J-2162	850.91	1.36	2,555.00	16	53.78	53.19
P-2670a	J-7	J-2191	124.56	0.80	14,813.00	8	209.32	68.11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Frogtown Rd
Elevated Tank,
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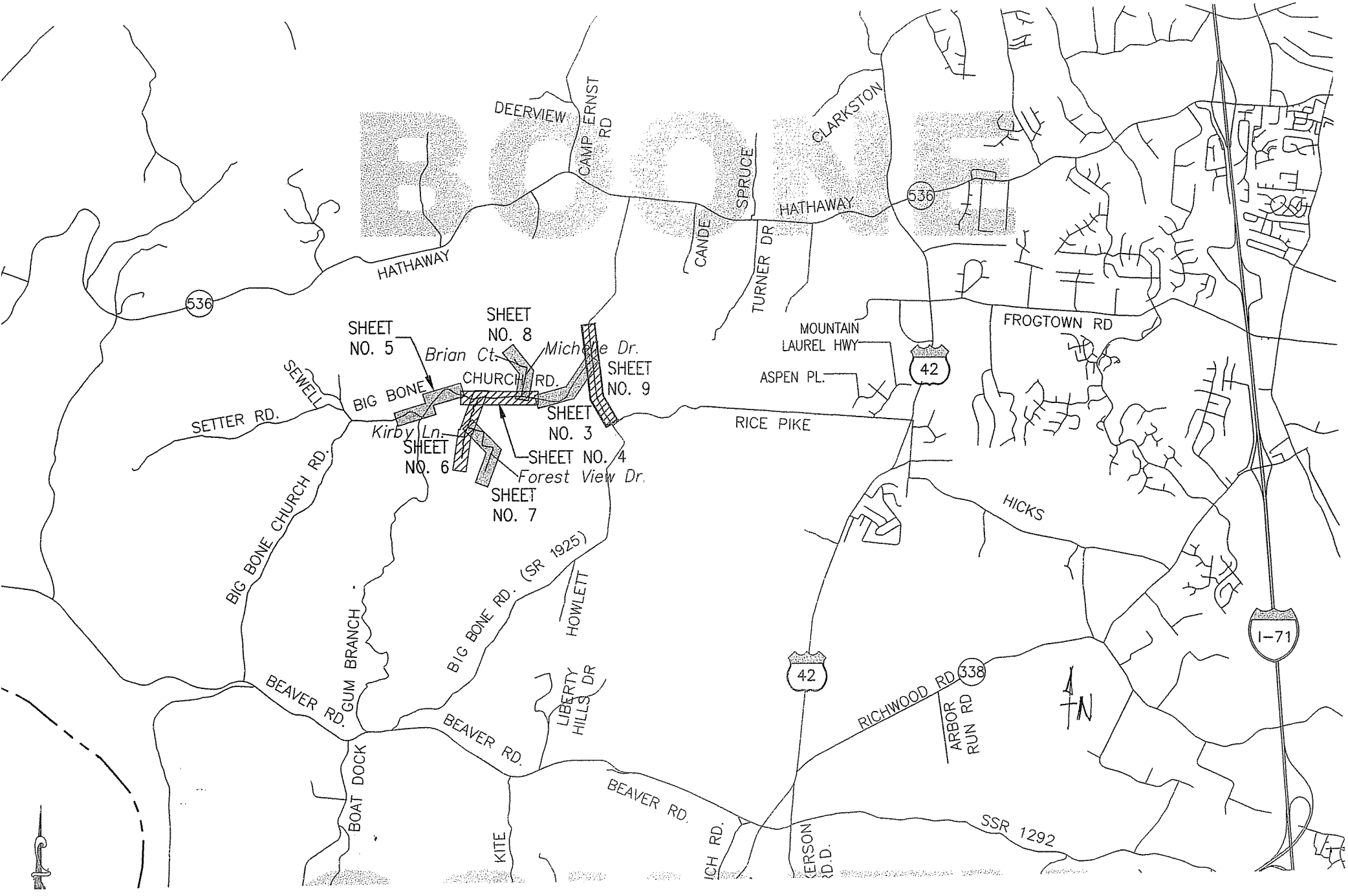
Proposed Repump Facilities
Two @ 1.0 MG each (phased)
Static El=1042.0
Big Bone Church Road
Contract 2A
Industrial
0.5 MG, (
OF EL=10
Devon To
2.0 MG,
OF EL=1
Proposed 2
OF EL=1080
I-71/75
N


BOONE
DEERVIEW
CAMP ERNST RD
CLARKSTON
SPRUCE
HATHAWAY
536
CANDE
TURNER DR
HATHAWAY
536
SHEET NO. 5
SHEET NO. 8
Brian Ct.
Michelle Dr.
SHEET NO. 9
CHURCH RD.
SEWELL
BIG BONE
SETTER RD.
Kirby Ln.
SHEET NO. 6
SHEET NO. 3
SHEET NO. 4
Forest View Dr.
SHEET NO. 7
MOUNTAIN LAUREL HWY
ASPEN PL.
42
FROGTOWN RD
RICE PIKE
HICKS
BIG BONE CHURCH RD.
BIG BONE RD. (SR 1925)
HOWLETT
GUM BRANCH
BEAVER RD.
LIBERTY HILLS DR
BEAVER RD.
BOAT DOCK
KITE
BEAVER RD.
42
RICHWOOD RD
338
ARBOR RUN RD
I-71
N
SSR 1292

Scenario: STD23 - Peak Hour Phases I, II, and III
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-5	0.00	745.00	111.42	257.02	1,002.02
J-27	0.00	860.00	54.39	125.47	985.47
J-43	6.00	830.00	67.40	155.46	985.46
J-44	0.00	870.00	49.87	115.03	985.03
J-53	0.00	830.00	66.88	154.28	984.28
J-79	0.00	842.00	61.68	142.28	984.28
J-85	0.00	832.00	66.33	153.01	985.01
J-88	12.00	824.00	69.80	161.00	985.00
J-94	6.00	860.00	53.88	124.27	984.27
J-95	0.00	860.00	53.88	124.27	984.27
J-102	12.00	850.00	58.20	134.25	984.25
J-2009	0.00	920.00	69.21	159.64	1,079.64
J-2011	0.00	920.00	69.21	159.65	1,079.65
J-2102	558.06	870.00	90.50	208.75	1,078.75
J-2103	75.83	840.00	95.08	219.31	1,059.31
J-2106	78.75	900.00	72.45	167.11	1,067.11
J-2107	90.42	890.00	72.54	167.33	1,057.33
J-2108	284.86	890.00	68.72	158.52	1,048.52
J-2110	117.64	880.00	72.27	166.71	1,046.71
J-2111	70.97	870.00	73.06	168.54	1,038.54
J-2112	1,428.19	850.00	66.90	154.32	1,004.32
J-2113	187.64	880.00	69.78	160.96	1,040.96
J-2114	188.61	850.00	72.65	167.59	1,017.59
J-2147	51.53	890.00	65.08	150.11	1,040.11
J-2148	0.00	884.00	67.11	154.80	1,038.80
J-2149	105.00	850.00	59.46	137.15	987.15
J-2150	35.97	871.00	61.88	142.74	1,013.74
J-2155	314.03	900.00	53.86	124.24	1,024.24
J-2174	69.03	740.00	112.86	260.33	1,000.33
J-2175	80.69	750.00	107.26	247.41	997.41
J-2176	105.00	850.00	58.73	135.47	985.47
J-2570	282.94	850.00	63.37	146.17	996.17
J-2610	177.94	834.00	65.15	150.27	984.27

WT

Contract 2B - Main Line

Contract 2D - Side Streets

1

Scenario: STD38 - Max Day Pumps Off Phases I, II, and III
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-5	0.00	745.00	119.63	275.95	1,020.95
J-13	0.00	845.00	74.94	172.86	1,017.86
J-27	0.00	860.00	66.14	152.57	1,012.57
J-43	4.00	830.00	79.15	182.57	1,012.57
J-44	0.00	870.00	61.72	142.36	1,012.36
J-53	0.00	830.00	78.90	182.01	1,012.01
J-79	0.00	842.00	73.70	170.01	1,012.01
J-85	0.00	832.00	78.18	180.35	1,012.35
J-88	8.00	824.00	81.65	188.35	1,012.35
J-94	4.00	860.00	65.90	152.01	1,012.01
J-95	0.00	860.00	65.90	152.01	1,012.01
J-102	8.00	850.00	70.23	162.00	1,012.00
J-2009	0.00	920.00	62.69	144.60	1,064.60
J-2011	0.00	920.00	62.93	145.16	1,065.16
J-2102	398.61	870.00	83.26	192.05	1,062.05
J-2103	54.17	840.00	91.59	211.27	1,051.27
J-2104	125.00	770.00	117.84	271.81	1,041.81
J-2106	56.25	900.00	67.34	155.32	1,055.32
J-2107	64.58	890.00	69.20	159.63	1,049.63
J-2108	203.47	890.00	66.96	154.46	1,044.46
J-2110	84.03	880.00	70.99	163.76	1,043.76
J-2111	50.69	870.00	73.69	169.98	1,039.98
J-2112	1,020.14	850.00	74.62	172.13	1,022.13
J-2113	134.03	880.00	69.66	160.69	1,040.69
J-2147	36.81	890.00	65.50	151.09	1,041.09
J-2148	0.00	884.00	67.70	156.17	1,040.17
J-2149	75.00	850.00	70.84	163.41	1,013.41
J-2155	224.31	900.00	58.44	134.80	1,034.80
J-2174	49.31	740.00	121.42	280.08	1,020.08
J-2175	57.64	750.00	116.44	268.58	1,018.58
J-2176	75.00	850.00	70.48	162.57	1,012.57
J-2570	202.10	850.00	72.77	167.85	1,017.85
J-2610	127.10	834.00	77.17	178.00	1,012.00

WT

2

Scenario: MDD Phases I, II, and III with Flush @ J-43 EMERALD DR
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-5	0.00	745.00	112.48	259.46	1,004.46
J-13	0.00	845.00	69.93	161.30	1,006.30
J-27	0.00	860.00	25.12	57.94	917.94
J-43	1,082.00	830.00	20.14	46.46	876.46
J-44	0.00	870.00	30.12	69.47	939.47
J-53	0.00	830.00	51.65	119.15	949.15
J-79	0.00	842.00	47.31	109.13	951.13
J-85	0.00	832.00	46.58	107.46	939.46
J-88	8.00	824.00	50.05	115.45	939.45
J-94	4.00	860.00	38.65	89.15	949.15
J-95	0.00	860.00	39.50	91.13	951.13
J-102	8.00	850.00	43.84	101.12	951.12
J-2009	0.00	920.00	63.61	146.73	1,066.73
J-2011	0.00	920.00	63.82	147.21	1,067.21
J-2102	398.61	870.00	84.19	194.21	1,064.21
J-2103	54.17	840.00	91.58	211.24	1,051.24
J-2104	125.00	770.00	117.13	270.17	1,040.17
J-2106	56.25	900.00	67.70	156.16	1,056.16
J-2107	64.58	890.00	69.04	159.26	1,049.26
J-2108	203.47	890.00	66.27	152.86	1,042.86
J-2110	84.03	880.00	70.14	161.79	1,041.79
J-2111	50.69	870.00	72.22	166.60	1,036.60
J-2112	1,020.14	850.00	68.19	157.29	1,007.29
J-2113	134.03	880.00	68.24	157.41	1,037.41
J-2114	134.72	850.00	73.73	170.08	1,020.08
J-2147	36.81	890.00	64.53	148.86	1,038.86
J-2148	0.00	884.00	66.32	152.98	1,036.98
J-2149	75.00	850.00	41.51	95.75	945.75
J-2150	25.69	871.00	63.03	145.40	1,016.40
J-2155	224.31	900.00	56.49	130.30	1,030.30
J-2174	49.31	740.00	113.75	262.38	1,002.38
J-2175	57.64	750.00	107.68	248.38	998.38
J-2176	75.00	850.00	37.63	86.79	936.79
J-2570	202.10	850.00	67.56	155.83	1,005.83
J-2610	127.10	834.00	48.13	111.01	945.01

Pressure Reduced to 20psi
Flow J-43 = 1,082 gpm
Velocity Pipe 63 = 6.91 fps
8" Pipe

WT

3

Scenario: MDD Phases I, II, and III with Flush @ J-43 EMERALD DR
Steady State Analysis
Pipe Report

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-26	J-13	J-15	8.00	0.05	12,555.00	8	69.93	195.20
P-57	J-2176	J-27	1,082.00	6.91	769.00	8	37.63	25.12
P-63	J-27	J-43	1,082.00	6.91	1,692.00	8	25.12	20.14
P-82	J-44	J-85	8.00	0.05	4,921.00	8	30.12	46.58
P-83	J-85	J-88	8.00	0.05	1,185.00	8	46.58	50.05
P-85	J-53	J-94	4.00	0.03	2,814.00	8	51.65	38.65
P-86	J-79	J-95	8.00	0.05	1,562.00	8	47.31	39.50
P-87	J-95	J-102	8.00	0.05	3,768.00	8	39.50	43.84
P-307	J-2113	J-2110	-527.09	1.50	6,483.00	12	68.24	70.14
P-308	J-2110	J-2103	-622.24	1.77	10,301.00	12	70.14	91.58
P-385	J-2011	T-16	-3,715.84	5.93	1,554.00	16	63.82	17.34
P-2009	J-2009	J-2011	-3,715.84	5.93	50.00	16	63.61	63.82
P-2130	J-2103	J-2102	-1,322.83	3.75	2,628.00	12	91.58	84.19
P-2131	J-2104	J-2103	-646.41	1.83	8,447.00	12	117.13	91.58
P-2132	J-2009	J-2105	213.62	1.36	5,858.00	8	63.61	69.19
P-2133	J-2102	J-2009	-2,389.51	2.44	1,464.00	20	84.19	63.61
P-2134	J-2102	J-2106	806.61	2.29	3,469.00	12	84.19	67.70
P-2135	J-2106	J-2107	750.36	2.13	3,401.00	12	67.70	69.04
P-2136	J-2107	J-2108	685.78	1.95	3,726.00	12	69.04	66.27
P-2137	J-2110	J-2108	-398.12	1.13	2,017.00	12	70.14	66.27
P-2138	J-2111	J-2110	-409.25	1.16	6,586.00	12	72.22	70.14
P-2141	J-2113	J-2112	431.14	2.75	6,753.00	8	68.24	68.19
P-2142	J-2114	J-2113	-181.43	2.06	4,756.00	6	73.73	68.24
P-2202	J-2104	J-2147	273.57	0.78	4,942.00	12	117.13	64.53
P-2204	J-2112	J-2149	772.92	4.93	4,681.00	8	68.19	41.51
P-2205	J-2150	J-2114	-103.12	1.17	2,871.00	6	63.03	73.73
P-2229	J-2147	J-2148	236.76	0.67	9,180.00	12	64.53	66.32
P-2230	J-2168	J-2104	558.33	1.58	3,484.00	12	83.95	117.13
P-2235a	J-2112	J-5	558.08	1.58	2,839.00	12	68.19	112.48
P-2235b	J-5	J-2174	558.08	1.58	2,086.00	12	112.48	113.75
P-2236	J-2174	J-2175	508.77	1.44	4,750.00	12	113.75	107.68
P-2237	J-2112	J-2150	-1,431.01	2.28	6,477.00	16	68.19	63.03
P-2238	J-2149	J-2176	697.92	1.98	5,930.00	12	41.51	37.63
P-2283	J-2111	J-2112	595.32	3.80	3,615.00	8	72.22	68.19
P-2284	J-2150	J-2114	-1,353.59	2.16	2,898.00	16	63.03	73.73
P-2301	J-2148	J-2111	236.76	0.67	2,184.00	12	66.32	72.22
P-2310	J-2102	J-2105	932.56	1.49	7,234.00	16	84.19	69.19
P-2570c	J-2570	J-13	-95.77	0.61	1,947.00	8	67.56	69.93
P-2580	J-2112	J-2570	106.33	0.68	5,070.00	8	68.19	67.56
P-2610a	J-53	J-2610	594.18	1.69	4,280.00	12	51.65	48.13
P-2610b	J-79	J-53	598.18	1.70	2,024.00	12	47.31	51.65
P-2620a	J-44	J-2176	459.08	1.30	4,464.00	12	30.12	37.63
P-2620b	J-2610	J-44	467.08	1.32	8,958.00	12	48.13	30.12

Scenario: MDD Phases I, II, and III with Flush @ J-88 KIRBY DRIVE

Steady State Analysis

Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-5	0.00	745.00	114.84	264.90	1,009.90
J-13	0.00	845.00	71.79	165.61	1,010.61
J-27	0.00	860.00	45.28	104.45	964.45
J-43	4.00	830.00	58.28	134.45	964.45
J-44	0.00	870.00	39.71	91.59	961.59
J-53	0.00	830.00	59.70	137.70	967.70
J-79	0.00	842.00	55.08	127.04	969.04
J-85	0.00	832.00	24.25	55.93	887.93
J-88	829.00	824.00	20.03	46.19	870.19
J-94	4.00	860.00	46.69	107.70	967.70
J-95	0.00	860.00	47.27	109.04	969.04
J-102	8.00	850.00	51.60	119.03	969.03
J-2009	0.00	920.00	63.78	147.11	1,067.11
J-2011	0.00	920.00	63.98	147.58	1,067.58
J-2102	398.61	870.00	84.40	194.67	1,064.67
J-2103	54.17	840.00	92.01	212.25	1,052.25
J-2104	125.00	770.00	117.72	271.54	1,041.54
J-2106	56.25	900.00	68.05	156.97	1,056.97
J-2107	64.58	890.00	69.53	160.38	1,050.38
J-2108	203.47	890.00	66.89	154.30	1,044.30
J-2110	84.03	880.00	70.80	163.32	1,043.32
J-2111	50.69	870.00	73.04	168.49	1,038.49
J-2112	1,020.14	850.00	70.38	162.35	1,012.35
J-2113	134.03	880.00	69.06	159.30	1,039.30
J-2114	134.72	850.00	75.20	173.47	1,023.47
J-2147	36.81	890.00	65.20	150.40	1,040.40
J-2148	0.00	884.00	67.12	154.82	1,038.82
J-2149	75.00	850.00	52.15	120.29	970.29
J-2150	25.69	871.00	64.71	149.27	1,020.27
J-2155	224.31	900.00	57.11	131.75	1,031.75
J-2174	49.31	740.00	116.23	268.10	1,008.10
J-2175	57.64	750.00	110.42	254.70	1,004.70
J-2176	75.00	850.00	49.62	114.45	964.45
J-2570	202.10	850.00	69.50	160.32	1,010.32
J-2610	127.10	834.00	56.75	130.91	964.91

← Pressure Reduced to 20 psi

Flow J-88 = 829 gpm

Velocity P-83 = 5.29 fps

8" pipe

← WT

5

Scenario: MDD Phases I, II, and III with Flush @ J-88
Steady State Analysis
Pipe Report

KIRBY DR.

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-57	J-2176	J-27	4.00	0.03	769.00	8	49.62	45.28
P-63	J-27	J-43	4.00	0.03	1,692.00	8	45.28	58.28
P-82	J-44	J-85	829.00	5.29	4,921.00	8	39.71	24.25
P-83	J-85	J-88	829.00	5.29	1,185.00	8	24.25	20.03
P-85	J-53	J-94	4.00	0.03	2,814.00	8	59.70	46.69
P-86	J-79	J-95	8.00	0.05	1,562.00	8	55.08	47.27
P-87	J-95	J-102	8.00	0.05	3,768.00	8	47.27	51.60
P-307	J-2113	J-2110	-503.82	1.43	6,483.00	12	69.06	70.80
P-308	J-2110	J-2103	-603.29	1.71	10,301.00	12	70.80	92.01
P-385	J-2011	T-16	-3,657.25	5.84	1,554.00	16	63.98	17.34
P-2009	J-2009	J-2011	-3,657.25	5.84	50.00	16	63.78	63.98
P-2130	J-2103	J-2102	-1,292.47	3.67	2,628.00	12	92.01	84.40
P-2131	J-2104	J-2103	-635.02	1.80	8,447.00	12	117.72	92.01
P-2132	J-2009	J-2105	210.42	1.34	5,858.00	8	63.78	69.45
P-2133	J-2102	J-2009	-2,348.75	2.40	1,464.00	20	84.40	63.78
P-2134	J-2102	J-2106	787.92	2.24	3,469.00	12	84.40	68.05
P-2135	J-2106	J-2107	731.67	2.08	3,401.00	12	68.05	69.53
P-2136	J-2107	J-2108	667.09	1.89	3,726.00	12	69.53	66.89
P-2137	J-2110	J-2108	-378.50	1.07	2,017.00	12	70.80	66.89
P-2138	J-2111	J-2110	-393.94	1.12	6,586.00	12	73.04	70.80
P-2141	J-2113	J-2112	406.02	2.59	6,753.00	8	69.06	70.38
P-2142	J-2114	J-2113	-172.75	1.96	4,756.00	6	75.20	69.06
P-2202	J-2104	J-2147	253.23	0.72	4,942.00	12	117.72	65.20
P-2204	J-2112	J-2149	629.31	4.02	4,681.00	8	70.38	52.15
P-2205	J-2150	J-2114	-95.74	1.09	2,871.00	6	64.71	75.20
P-2229	J-2147	J-2148	216.43	0.61	9,180.00	12	65.20	67.12
P-2230	J-2168	J-2104	536.02	1.52	3,484.00	12	84.44	117.72
P-2235a	J-2112	J-5	515.76	1.46	2,839.00	12	70.38	114.84
P-2235b	J-5	J-2174	515.76	1.46	2,086.00	12	114.84	116.23
P-2236	J-2174	J-2175	466.46	1.32	4,750.00	12	116.23	110.42
P-2237	J-2112	J-2150	-1,326.78	2.12	6,477.00	16	70.38	64.71
P-2238	J-2149	J-2176	554.31	1.57	5,930.00	12	52.15	49.62
P-2283	J-2111	J-2112	559.67	3.57	3,615.00	8	73.04	70.38
P-2284	J-2150	J-2114	-1,256.74	2.01	2,898.00	16	64.71	75.20
P-2301	J-2148	J-2111	216.43	0.61	2,184.00	12	67.12	73.04
P-2310	J-2102	J-2105	919.66	1.47	7,234.00	16	84.40	69.45
P-2510a	J-2104	J-1	792.80	2.25	1,539.00	12	117.72	110.12
P-2570c	J-2570	J-13	-74.84	0.48	1,947.00	8	69.50	71.79
P-2580	J-2112	J-2570	127.26	0.81	5,070.00	8	70.38	69.50
P-2610a	J-53	J-2610	480.79	1.36	4,280.00	12	59.70	56.75
P-2610b	J-79	J-53	484.79	1.38	2,024.00	12	55.08	59.70
P-2620a	J-44	J-2176	-475.31	1.35	4,464.00	12	39.71	49.62
P-2620b	J-2610	J-44	353.69	1.00	8,958.00	12	56.75	39.71

Scenario: MDD Phases I, II, and III with Flush @ J-94 WOLFE RD
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-1	0.00	785.00	109.95	253.63	1,038.63
J-5	0.00	745.00	114.25	263.55	1,008.55
J-13	0.00	845.00	71.41	164.72	1,009.72
J-27	0.00	860.00	45.47	104.88	964.88
J-43	4.00	830.00	58.47	134.88	964.88
J-44	0.00	870.00	39.94	92.14	962.14
J-53	0.00	830.00	54.37	125.41	955.41
J-79	0.00	842.00	49.96	115.23	957.23
J-85	0.00	832.00	56.41	130.13	962.13
J-88	8.00	824.00	59.88	138.12	962.12
J-94	902.00	860.00	20.01	46.16	906.16
J-95	0.00	860.00	42.15	97.23	957.23
J-102	8.00	850.00	46.48	107.22	957.22
J-2009	0.00	920.00	63.73	147.02	1,067.02
J-2011	0.00	920.00	63.94	147.49	1,067.49
J-2102	398.61	870.00	84.35	194.56	1,064.56
J-2103	54.17	840.00	91.91	212.01	1,052.01
J-2104	125.00	770.00	117.57	271.19	1,041.19
J-2106	56.25	900.00	67.97	156.79	1,056.79
J-2107	64.58	890.00	69.42	160.13	1,050.13
J-2108	203.47	890.00	66.76	153.99	1,043.99
J-2110	84.03	880.00	70.66	162.99	1,042.99
J-2111	50.69	870.00	72.86	168.07	1,038.07
J-2112	1,020.14	850.00	69.96	161.38	1,011.38
J-2113	134.03	880.00	68.89	158.90	1,038.90
J-2114	134.72	850.00	74.90	172.78	1,022.78
J-2147	36.81	890.00	65.04	150.03	1,040.03
J-2148	0.00	884.00	66.94	154.40	1,038.40
J-2149	75.00	850.00	52.25	120.54	970.54
J-2150	25.69	871.00	64.38	148.50	1,019.50
J-2155	224.31	900.00	56.89	131.22	1,031.22
J-2174	49.31	740.00	115.52	266.47	1,006.47
J-2175	57.64	750.00	109.46	252.49	1,002.49
J-2176	75.00	850.00	49.80	114.88	964.88
J-2570	202.10	850.00	69.11	159.41	1,009.41
J-2610	127.10	834.00	53.24	122.81	956.81

Pressure Reduced to 20psi
WT Flow J-94 = 902 gpm
Velocity P85 = 5.76 fps
8" pipe

7

Scenario: MDD Phases I, II, and III with Flush @ J-94
Steady State Analysis
Pipe Report

WOLFE RD.

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-57	J-2176	J-27	4.00	0.03	769.00	8	49.80	45.47
P-63	J-27	J-43	4.00	0.03	1,692.00	8	45.47	58.47
P-82	J-44	J-85	8.00	0.05	4,921.00	8	39.94	56.41
P-83	J-85	J-88	8.00	0.05	1,185.00	8	56.41	59.88
P-85	J-53	J-94	902.00	5.76	2,814.00	8	54.37	20.01
P-86	J-79	J-95	8.00	0.05	1,562.00	8	49.96	42.15
P-87	J-95	J-102	8.00	0.05	3,768.00	8	42.15	46.48
P-307	J-2113	J-2110	-508.09	1.44	6,483.00	12	68.89	70.66
P-308	J-2110	J-2103	-606.84	1.72	10,301.00	12	70.66	91.91
P-385	J-2011	T-16	-3,671.78	5.86	1,554.00	16	63.94	17.34
P-2009	J-2009	J-2011	-3,671.78	5.86	50.00	16	63.73	63.94
P-2130	J-2103	J-2102	-1,299.53	3.69	2,628.00	12	91.91	84.35
P-2131	J-2104	J-2103	-638.52	1.81	8,447.00	12	117.57	91.91
P-2132	J-2009	J-2105	211.30	1.35	5,858.00	8	63.73	69.38
P-2133	J-2102	J-2009	-2,358.33	2.41	1,464.00	20	84.35	63.73
P-2134	J-2102	J-2106	791.84	2.25	3,469.00	12	84.35	67.97
P-2135	J-2106	J-2107	735.59	2.09	3,401.00	12	67.97	69.42
P-2136	J-2107	J-2108	671.01	1.90	3,726.00	12	69.42	66.76
P-2137	J-2110	J-2108	-382.79	1.09	2,017.00	12	70.66	66.76
P-2138	J-2111	J-2110	-397.51	1.13	6,586.00	12	72.86	70.66
P-2141	J-2113	J-2112	410.65	2.62	6,753.00	8	68.89	69.96
P-2142	J-2114	J-2113	-174.43	1.98	4,756.00	6	74.90	68.89
P-2202	J-2104	J-2147	256.03	0.73	4,942.00	12	117.57	65.04
P-2204	J-2112	J-2149	619.41	3.95	4,681.00	8	69.96	52.25
P-2205	J-2150	J-2114	-97.04	1.10	2,871.00	6	64.38	74.90
P-2212	J-2155	J-2156	145.69	0.41	10,291.00	12	56.89	52.19
P-2229	J-2147	J-2148	219.23	0.62	9,180.00	12	65.04	66.94
P-2230	J-2168	J-2104	540.36	1.53	3,484.00	12	84.31	117.57
P-2235a	J-2112	J-5	557.43	1.58	2,839.00	12	69.96	114.25
P-2235b	J-5	J-2174	557.43	1.58	2,086.00	12	114.25	115.52
P-2236	J-2174	J-2175	508.12	1.44	4,750.00	12	115.52	109.46
P-2237	J-2112	J-2150	-1,345.15	2.15	6,477.00	16	69.96	64.38
P-2238	J-2149	J-2176	544.41	1.54	5,930.00	12	52.25	49.80
P-2283	J-2111	J-2112	566.04	3.61	3,615.00	8	72.86	69.96
P-2284	J-2150	J-2114	-1,273.81	2.03	2,898.00	16	64.38	74.90
P-2301	J-2148	J-2111	219.23	0.62	2,184.00	12	66.94	72.86
P-2310	J-2102	J-2105	923.59	1.47	7,234.00	16	84.35	69.38
P-2510a	J-2104	J-1	797.85	2.26	1,539.00	12	117.57	109.95
P-2570c	J-2570	J-13	-77.23	0.49	1,947.00	8	69.11	71.41
P-2580	J-2112	J-2570	124.87	0.80	5,070.00	8	69.96	69.11
P-2610a	J-53	J-2610	-330.31	0.94	4,280.00	12	54.37	53.24
P-2610b	J-79	J-53	571.69	1.62	2,024.00	12	49.96	54.37
P-2620a	J-44	J-2176	-465.41	1.32	4,464.00	12	39.94	49.80
P-2620b	J-2610	J-44	-457.41	1.30	8,958.00	12	53.24	39.94

8

Scenario: MDD Phases I, II, and III with Flush @ J-102
Steady State Analysis
Junction Report

LOCUST GROVE TRD

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-5	0.00	745.00	115.34	266.06	1,011.06
J-13	0.00	845.00	72.24	166.63	1,011.63
J-27	0.00	860.00	49.89	115.09	975.09
J-43	4.00	830.00	62.90	145.09	975.09
J-44	0.00	870.00	44.63	102.95	972.95
J-53	0.00	830.00	59.76	137.84	967.84
J-79	0.00	842.00	54.36	125.40	967.40
J-85	0.00	832.00	61.10	140.94	972.94
J-88	8.00	824.00	64.57	148.93	972.93
J-94	4.00	860.00	46.75	107.84	967.84
J-95	0.00	860.00	37.50	86.51	946.51
J-102	780.00	850.00	20.00	46.13	896.13
J-2009	0.00	920.00	63.81	147.20	1,067.20
J-2011	0.00	920.00	64.01	147.66	1,067.66
J-2102	398.61	870.00	84.44	194.78	1,064.78
J-2103	54.17	840.00	92.11	212.48	1,052.48
J-2104	125.00	770.00	117.85	271.84	1,041.84
J-2106	56.25	900.00	68.13	157.16	1,057.16
J-2107	64.58	890.00	69.64	160.65	1,050.65
J-2108	203.47	890.00	67.04	154.65	1,044.65
J-2110	84.03	880.00	70.96	163.69	1,043.69
J-2111	50.69	870.00	73.24	168.94	1,038.94
J-2112	1,020.14	850.00	70.94	163.64	1,013.64
J-2113	134.03	880.00	69.26	159.76	1,039.76
J-2114	134.72	850.00	75.56	174.29	1,024.29
J-2147	36.81	890.00	65.35	150.75	1,040.75
J-2148	0.00	884.00	67.30	155.24	1,039.24
J-2149	75.00	850.00	56.21	129.67	979.67
J-2150	25.69	871.00	65.12	150.22	1,021.22
J-2155	224.31	900.00	57.23	132.01	1,032.01
J-2174	49.31	740.00	116.69	269.17	1,009.17
J-2175	57.64	750.00	110.79	255.57	1,005.57
J-2176	75.00	850.00	54.23	125.09	975.09
J-2570	202.10	850.00	69.97	161.39	1,011.39
J-2610	127.10	834.00	58.44	134.81	968.81

Pressure Reduced to 20psi

WT Flow J-102 = 780 gpm

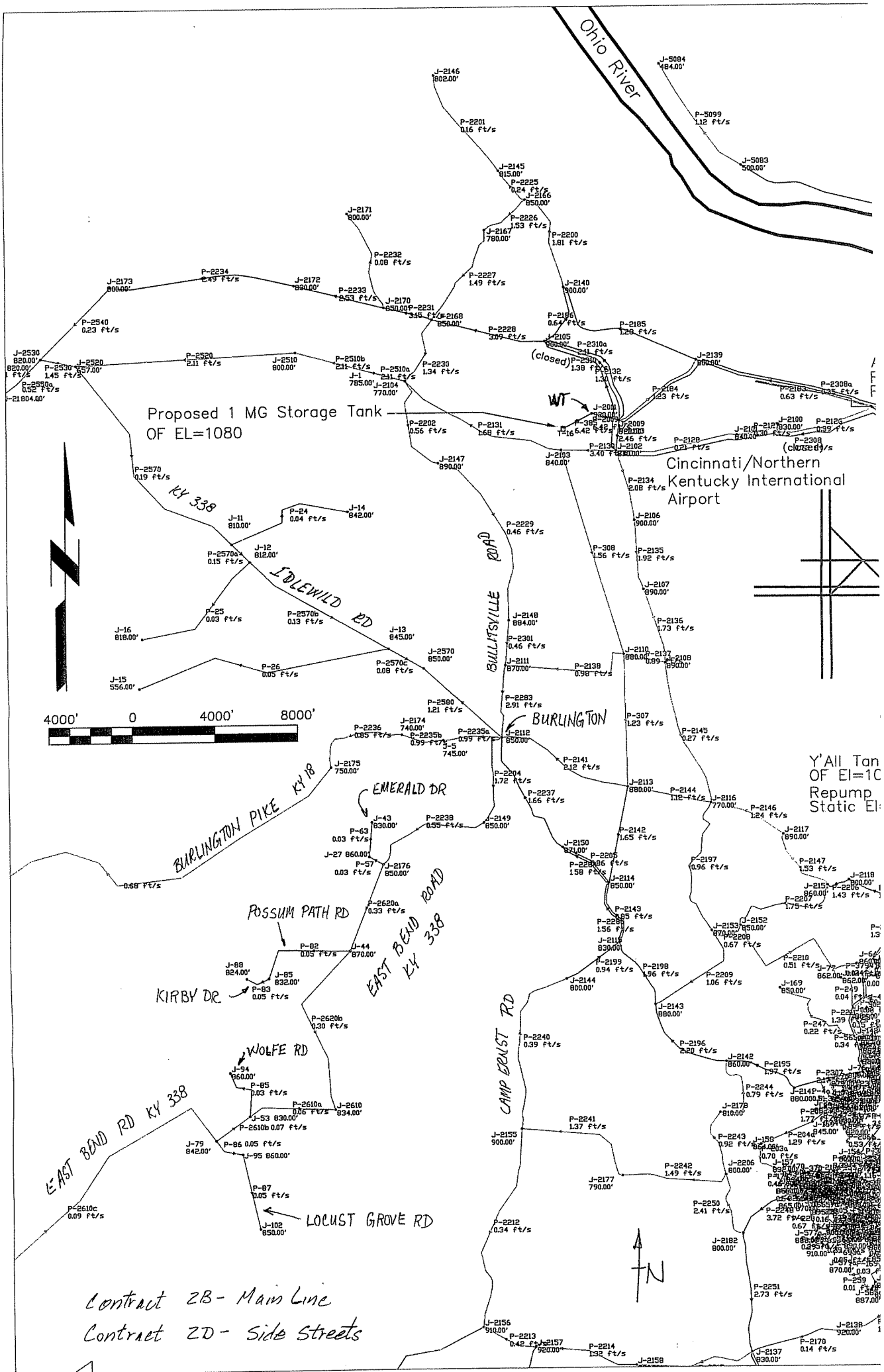
Velocity P-87 = 4.98 fps

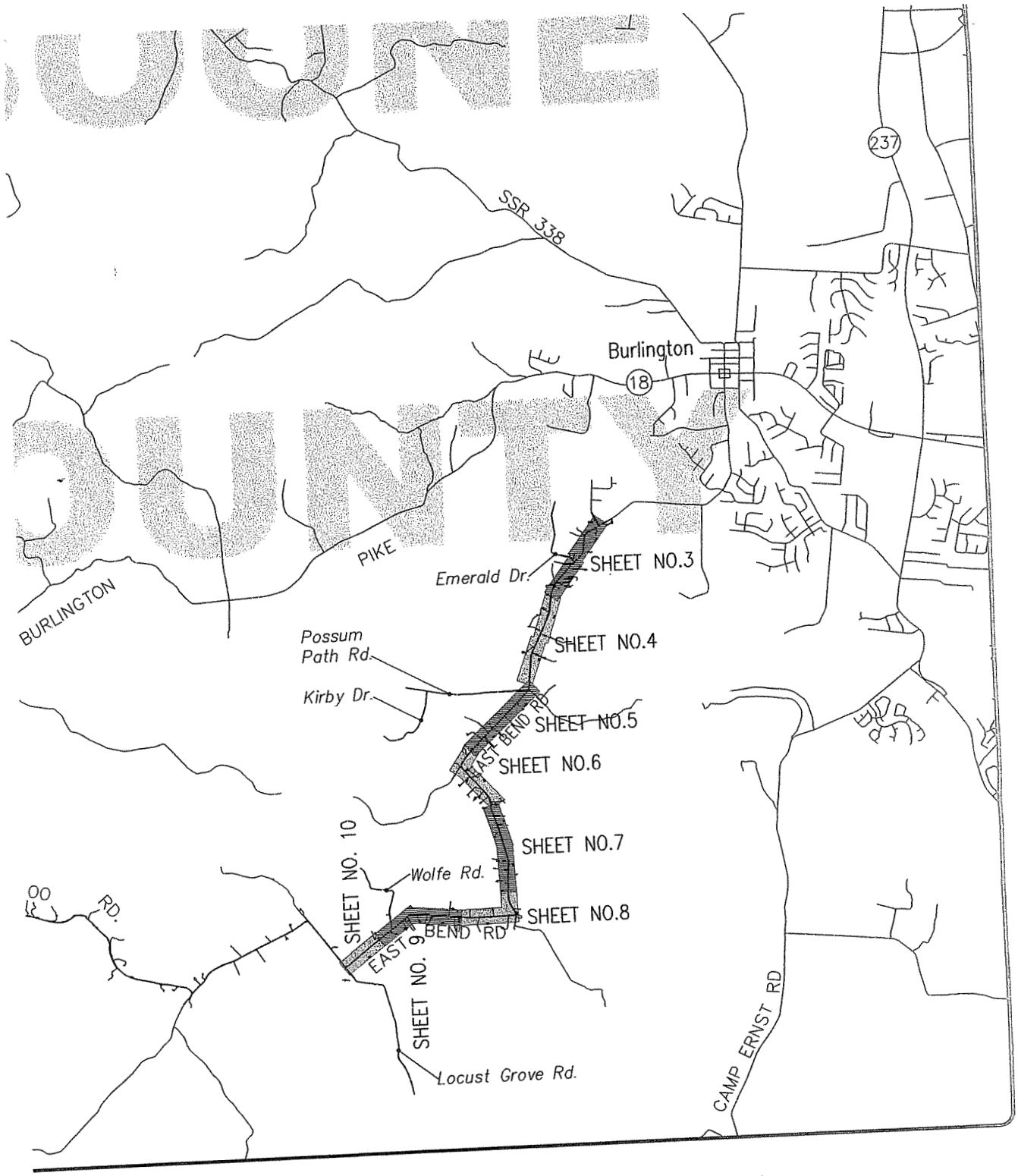
8" pipe

Scenario: MDD Phases I, II, and III with Flush @ J-102
Steady State Analysis
Pipe Report

LOCUST GROVE RD

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-57	J-2176	J-27	4.00	0.03	769.00	8	54.23	49.89
P-63	J-27	J-43	4.00	0.03	1,692.00	8	49.89	62.90
P-82	J-44	J-85	8.00	0.05	4,921.00	8	44.63	61.10
P-83	J-85	J-88	8.00	0.05	1,185.00	8	61.10	64.57
P-85	J-53	J-94	4.00	0.03	2,814.00	8	59.76	46.75
P-86	J-79	J-95	780.00	4.98	1,562.00	8	54.36	37.50
P-87	J-95	J-102	780.00	4.98	3,768.00	8	37.50	20.00
P-307	J-2113	J-2110	-497.59	1.41	6,483.00	12	69.26	70.96
P-308	J-2110	J-2103	-598.30	1.70	10,301.00	12	70.96	92.11
P-385	J-2011	T-16	-3,644.23	5.82	1,554.00	16	64.01	17.34
P-2009	J-2009	J-2011	-3,644.23	5.82	50.00	16	63.81	64.01
P-2130	J-2103	J-2102	-1,285.37	3.65	2,628.00	12	92.11	84.44
P-2131	J-2104	J-2103	-632.91	1.80	8,447.00	12	117.85	92.11
P-2132	J-2009	J-2105	209.77	1.34	5,858.00	8	63.81	69.50
P-2133	J-2102	J-2009	-2,339.32	2.39	1,464.00	20	84.44	63.81
P-2134	J-2102	J-2106	783.28	2.22	3,469.00	12	84.44	68.13
P-2135	J-2106	J-2107	727.03	2.06	3,401.00	12	68.13	69.64
P-2136	J-2107	J-2108	662.45	1.88	3,726.00	12	69.64	67.04
P-2137	J-2110	J-2108	-373.67	1.06	2,017.00	12	70.96	67.04
P-2138	J-2111	J-2110	-390.35	1.11	6,586.00	12	73.24	70.96
P-2141	J-2113	J-2112	399.20	2.55	6,753.00	8	69.26	70.94
P-2142	J-2114	J-2113	-170.56	1.94	4,756.00	6	75.56	69.26
P-2184	J-2139	J-2009	-411.76	1.17	4,811.00	12	114.65	63.81
P-2202	J-2104	J-2147	247.01	0.70	4,942.00	12	117.85	65.35
P-2204	J-2112	J-2149	560.78	3.58	4,681.00	8	70.94	56.21
P-2205	J-2150	J-2114	-93.59	1.06	2,871.00	6	65.12	75.56
P-2212	J-2155	J-2156	146.89	0.42	10,291.00	12	57.23	52.52
P-2229	J-2147	J-2148	210.20	0.60	9,180.00	12	65.35	67.30
P-2230	J-2168	J-2104	530.13	1.50	3,484.00	12	84.54	117.85
P-2235a	J-2112	J-5	530.27	1.50	2,839.00	12	70.94	115.34
P-2235b	J-5	J-2174	530.27	1.50	2,086.00	12	115.34	116.69
P-2236	J-2174	J-2175	480.96	1.36	4,750.00	12	116.69	110.79
P-2237	J-2112	J-2150	-1,296.43	2.07	6,477.00	16	70.94	65.12
P-2238	J-2149	J-2176	485.78	1.38	5,930.00	12	56.21	54.23
P-2283	J-2111	J-2112	549.86	3.51	3,615.00	8	73.24	70.94
P-2284	J-2150	J-2114	-1,228.54	1.96	2,898.00	16	65.12	75.56
P-2301	J-2148	J-2111	210.20	0.60	2,184.00	12	67.30	73.24
P-2310	J-2102	J-2105	917.27	1.46	7,234.00	16	84.44	69.50
P-2510a	J-2104	J-1	791.03	2.24	1,539.00	12	117.85	110.25
P-2570c	J-2570	J-13	-67.79	0.43	1,947.00	8	69.97	72.24
P-2580	J-2112	J-2570	134.31	0.86	5,070.00	8	70.94	69.97
P-2610a	J-53	J-2610	-271.68	0.77	4,280.00	12	59.76	58.44
P-2610b	J-79	J-53	-267.68	0.76	2,024.00	12	54.36	59.76
P-2620a	J-44	J-2176	-406.78	1.15	4,464.00	12	44.63	54.23
P-2620b	J-2610	J-44	-398.78	1.13	8,958.00	12	58.44	44.63


Ohio River
Proposed 1 MG Storage Tank
OF EL=1080
WT
Cincinnati/Northern
Kentucky International
Airport
KY 338
IDLEWILD RD
BULLITSVILLE ROAD
BURLINGTON
BURLINGTON PIKE KY 18
EMERALD DR
POSSUM PATH RD
EAST BEND ROAD
KY 338
KIRBY DR
WOLFE RD
EAST BEND RD KY 338
CAMP ERNST RD
LOCUST GROVE RD
4000' 0 4000' 8000'
N
Contract 2B - Main Line
Contract 2D - Side Streets



ECT LOCATION MAP

(NO SCALE)

PHASE 2B

Contract 2B

N

Scenario: STD23 - Peak Hour Phases I, II, and III
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-1	0.00	785.00	109.23	251.97	1,036.97
J-2	0.00	510.00	207.51	478.67	988.67
J-21	0.00	804.00	82.22	189.65	993.65
J-22	3.00	745.00	107.79	248.65	993.65
J-23	0.00	820.00	75.28	173.65	993.65
J-24	3.00	820.00	75.28	173.65	993.65
J-25	0.00	812.00	78.17	180.32	992.32
J-26	6.00	770.00	96.38	222.31	992.31
J-131	0.00	828.00	70.67	163.01	991.01
J-2009	0.00	920.00	69.21	159.64	1,079.64
J-2011	0.00	920.00	69.21	159.65	1,079.65
J-2102	558.06	870.00	90.50	208.75	1,078.75
J-2103	75.83	840.00	95.08	219.31	1,059.31
J-2104	175.00	770.00	117.57	271.20	1,041.20
J-2105	76.81	900.00	73.87	170.40	1,070.40
J-2140	791.39	900.00	73.75	170.12	1,070.12
J-2147	51.53	890.00	65.08	150.11	1,040.11
J-2168	20.42	850.00	84.73	195.45	1,045.45
J-2170	506.53	850.00	79.74	183.94	1,033.94
J-2172	38.89	830.00	82.30	189.83	1,019.83
J-2173	2,065.84	800.00	84.46	194.83	994.83
J-2510	0.00	800.00	98.07	226.22	1,026.22
J-2520	282.94	657.00	147.39	339.98	996.98
J-2530	714.56	820.00	75.70	174.62	994.62

WT

Contract 2C

1.

Scenario: STD38 - Max Day Pumps Off Phases I, II, and III
Steady State Analysis
Junction Report

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-1	0.00	785.00	110.36	254.57	1,039.57
J-2	0.00	510.00	218.56	504.14	1,014.14
J-21	0.00	804.00	92.17	212.60	1,016.60
J-22	2.00	745.00	117.74	271.60	1,016.60
J-23	0.00	820.00	85.23	196.60	1,016.60
J-24	2.00	820.00	85.23	196.60	1,016.60
J-25	0.00	812.00	88.41	203.94	1,015.94
J-26	4.00	770.00	106.62	245.94	1,015.94
J-131	0.00	828.00	81.20	187.30	1,015.30
J-2009	0.00	920.00	62.69	144.60	1,064.60
J-2011	0.00	920.00	62.93	145.16	1,065.16
J-2102	398.61	870.00	83.26	192.05	1,062.05
J-2103	54.17	840.00	91.59	211.27	1,051.27
J-2104	125.00	770.00	117.84	271.81	1,041.81
J-2105	54.86	900.00	68.52	158.05	1,058.05
J-2140	565.28	900.00	68.38	157.74	1,057.74
J-2147	36.81	890.00	65.50	151.09	1,041.09
J-2168	14.58	850.00	84.26	194.36	1,044.36
J-2170	361.81	850.00	81.58	188.18	1,038.18
J-2172	27.78	830.00	86.97	200.61	1,030.61
J-2173	1,475.60	800.00	94.16	217.19	1,017.19
J-2510	0.00	800.00	101.38	233.86	1,033.86
J-2520	202.10	657.00	156.64	361.32	1,018.32
J-2530	510.40	820.00	85.44	197.08	1,017.08

WT

2

Scenario: MDD Phases I, II, and III with Flush @ J-22

ANSON LANE

Steady State Analysis

Junction Report

FLOW J-22 = 1513 gpm

VELOCITY P-33 = 9.66 fps

8" pipe

Label	Demand (Calculated) (gpm)	Elevation (ft)	Pressure (psi)	Pressure Head (ft)	Calculated Hydraulic Grade (ft)
J-1	0.00	785.00	104.85	241.85	1,026.85
J-21	0.00	804.00	41.13	94.88	898.88
J-22	1,513.00	745.00	29.91	69.00	814.00
J-23	0.00	820.00	20.06	46.27	866.27
J-24	2.00	820.00	20.06	46.27	866.27
J-25	0.00	812.00	39.84	91.91	903.91
J-26	4.00	770.00	58.05	133.90	903.90
J-2009	0.00	920.00	62.83	144.94	1,064.94
J-2011	0.00	920.00	63.07	145.49	1,065.49
J-2102	398.61	870.00	83.31	192.17	1,062.17
J-2103	54.17	840.00	89.92	207.41	1,047.41
J-2104	125.00	770.00	113.40	261.57	1,031.57
J-2105	54.86	900.00	67.65	156.06	1,056.06
J-2140	565.28	900.00	67.54	155.79	1,055.79
J-2147	36.81	890.00	61.33	141.47	1,031.47
J-2168	14.58	850.00	80.02	184.58	1,034.58
J-2170	361.81	850.00	75.48	174.11	1,024.11
J-2172	27.78	830.00	77.94	179.79	1,009.79
J-2173	1,475.60	800.00	79.84	184.17	984.17
J-2510	0.00	800.00	93.14	214.85	1,014.85
J-2520	202.10	657.00	140.99	325.21	982.21
J-2530	510.40	820.00	68.23	157.38	977.38

PRESSURE AT NODES 23 & 24 GETS REDUCED TO ~20 PSI WHEN FLUSHING DEMAND IS APPLIED AT J-22

WT

WT

Scenario: MDD Phases I, II, and III with Flush @ J-22
Steady State Analysis
Pipe Report

ANSON LANE

Label	From Node	To Node	Discharge (gpm)	Velocity (ft/s)	Length (ft)	Diameter (in)	Upstream Calculated Pressure (psi)	Downstream Calculated Pressure (psi)
P-32	J-21	J-23	1,515.00	9.67	713.00	8	41.13	20.06
P-33	J-23	J-22	1,513.00	9.66	1,146.00	8	20.06	29.91
P-40	J-23	J-24	2.00	0.01	502.00	8	20.06	20.06
P-56	J-25	J-26	4.00	0.03	2,100.00	8	39.84	58.05
P-385	J-2011	T-16	-3,977.93	6.35	1,554.00	16	63.07	17.34
P-2009	J-2009	J-2011	-3,977.93	6.35	50.00	16	62.83	63.07
P-2130	J-2103	J-2102	-1,418.48	4.02	2,628.00	12	89.92	83.31
P-2131	J-2104	J-2103	-784.55	2.23	8,447.00	12	113.40	89.92
P-2132	J-2009	J-2105	240.77	1.54	5,858.00	8	62.83	67.65
P-2133	J-2102	J-2009	-2,516.20	2.57	1,464.00	20	83.31	62.83
P-2186	J-2140	J-2105	-366.72	0.59	3,110.00	16	67.54	67.65
P-2202	J-2104	J-2147	67.27	0.19	4,942.00	12	113.40	61.33
P-2227	J-2167	J-2168	689.31	1.96	5,171.00	12	113.67	80.02
P-2228	J-2105	J-2168	2,467.01	3.94	5,572.00	16	67.65	80.02
P-2230	J-2168	J-2104	516.08	1.46	3,484.00	12	80.02	113.40
P-2231	J-2168	J-2170	2,625.66	4.19	2,420.00	16	80.02	75.48
P-2233	J-2170	J-2172	2,236.08	3.57	4,456.00	16	75.48	77.94
P-2234	J-2172	J-2173	2,208.30	3.52	8,160.00	16	77.94	79.84
P-2310	J-2102	J-2105	1,087.29	1.73	7,234.00	16	83.31	67.65
P-2310a	J-2009	J-2105	1,560.52	2.49	6,241.00	16	62.83	67.65
P-2510a	J-2104	J-1	1,108.35	3.14	1,539.00	12	113.40	104.85
P-2510b	J-1	J-2510	1,108.35	3.14	3,914.00	12	104.85	93.14
P-2520	J-2510	J-2520	1,108.35	3.14	10,642.00	12	93.14	140.99
P-2530	J-2520	J-2530	1,059.92	3.01	1,713.00	12	140.99	68.23
P-2540	J-2530	J-2173	-732.70	2.08	4,766.00	12	68.23	79.84
P-2550a	J-21	J-2530	-1,282.22	8.18	2,712.00	8	41.13	68.23
P-2550c	J-25	J-21	232.78	1.49	4,095.00	8	39.84	41.13
P-2570	J-11	J-2520	153.66	0.98	12,131.00	8	77.65	140.99

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