



Steven L. Beshear
Governor

Leonard K. Peters
Secretary
Energy and Environment Cabinet

Commonwealth of Kentucky
Public Service Commission
211 Sower Blvd.
P.O. Box 615
Frankfort, Kentucky 40602-0615
Telephone: (502) 564-3940
Fax: (502) 564-3460
psc.ky.gov

David L. Armstrong
Chairman

James W. Gardner
Vice Chairman

April 9, 2012

Mr. Jack Bragg
Mr. Ron Lovan
Northern Kentucky Water District
P. O. Box 18640
Erlanger, Kentucky 41018-0640

John N Hughes, Esq.
124 West Todd Street
Frankfort, Kentucky 40601

Re: Case No. 2012-00059
Northern Kentucky Water District

Gentlemen:

The enclosed documents have been filed in the record of the above-referenced case. Any objections to this action should be submitted to the Commission within five days of receipt of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Derouen".

Jeff Derouen
Executive Director

gw
Enclosure

DOCUMENT FILING DATED 9 APRIL 2012

Doc No	Document Description	Pages
1	E-Mail Message from Gerald Wuetcher to DOW Open Records Section (16 March 2012 1234)	000001-000002
2	E-Mail Message from DOW Open Records Section to Gerald Wuetcher (16 March 2012 1229)	000003-000004
3	E-Mail Message from Gerald Wuetcher to DOW Open Records Section (14 March 2012 1603)	000005
4	Letter from Mark Rashe, DOW Water Infrastructure Branch, Brandon L. Kuper, Northern Kentucky Water District (16 December 2011) – Approval Letter	000006
5	Project Summary	000007
6	Construction Application for Drinking Water Distribution	000008-000011
7	Letter from Brandon L. Kuper, Northern Kentucky Water District, to Kentucky DOW (14 November 2011)	000012
8	Fire Flow Certification	000013
9	Hydraulic and Flushing Velocity Certification	000014-000020
10	Project Drawings	000021-000040

From: [Wuetcher, Jerry \(PSC\)](#)
To: [DOWOpenRecords \(EEC\)](#)
Cc: [Ashley, Stella G \(PSC\)](#); [Roney, Julie \(EEC\)](#)
Subject: RE: Request for Records
Date: Friday, March 16, 2012 12:34:10 PM

Please send the CD. If payment for the CD is required, please contact Stella Ashley at 564-3940 x267 regarding the inter-accounting of any costs. (I am assuming that the CD can be sent by messenger mail to avoid any shipping costs.) Please also check with Julie Roney of the DOW Director's Office as to whether this request would fall under PSC-DOW's arrangement for PSC access to DOW documents and can be provided to PSC at no cost.

From: Elliston, Morgan (EEC) **On Behalf Of** DOWOpenRecords (EEC)
Sent: Friday, March 16, 2012 12:29 PM
To: Wuetcher, Jerry (PSC)
Subject: FW: Request for Records

Mr. Wuetcher,

The documents consist of more than I am capable of sending to you electronically. I can put these on a CD (\$3.00 + shipping) if you like. Please let me know how you would like to proceed.

Thank you,

Morgan P. Elliston

KY Division of Water
200 Fair Oaks Lane
Frankfort, KY 40601
Phone: 502-564-3410 ext. 4820
Fax: 502-564-0111

From: Wuetcher, Jerry (PSC)
Sent: Wednesday, March 14, 2012 4:03 PM
To: DOWOpenRecords (EEC)
Cc: Roney, Julie (EEC)
Subject: Request for Records

TO WHOM IT MAY CONCERN:

The Public Service Commission is reviewing the application of Northern Kentucky Water District for a Certificate of Public Convenience and Necessity for a water main replacement. Division of Water has previously reviewed and approved this project. I respectfully request that DOW provide a copy of the records related to Northern Kentucky Water District's application to DOW for this project's approval. Attached is a copy of the DOW approval letter.

To assist in locating the appropriate records, I provide the following information regarding the water district's application to DOW:

AI#2485
APE20110011
PWSID # 059022-11-011

To the extent possible, please provide the records in electronic format. E-mail delivery of the documents is acceptable.

If you have any questions, please contact me.

Sincerely,

Gerald E. Wuetcher
Executive Advisor/Attorney
Public Service Commission of Kentucky
gerald.wuetcher@ky.gov
Office: (502) 564-3940 x259
Cell: (502) 229-6500

From: [Elliston, Morgan \(EEC\)](#) on behalf of [DOWOpenRecords \(EEC\)](#)
To: [Wuetcher, Jerry \(PSC\)](#)
Subject: FW: Request for Records
Date: Friday, March 16, 2012 12:28:54 PM
Attachments: [Pages from NKWD Petition 2012-00059_03052012.pdf](#)

Mr. Wuetcher,

The documents consist of more than I am capable of sending to you electronically. I can put these on a CD (\$3.00 + shipping) if you like. Please let me know how you would like to proceed.

Thank you,

Morgan P. Elliston

KY Division of Water
200 Fair Oaks Lane
Frankfort, KY 40601
Phone: 502-564-3410 ext. 4820
Fax: 502-564-0111

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Sent: Wednesday, March 14, 2012 4:03 PM
To: DOWOpenRecords (EEC)
Cc: Roney, Julie (EEC)
Subject: Request for Records

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Executive Advisor/Attorney
Public Service Commission of Kentucky
gerald.wuetcher@ky.gov
Office: (502) 564-3940 x259
Cell: (502) 229-6500

From: [Wuetcher, Jerry \(PSC\)](#)
To: [DOWOpenRecords \(EEC\)](#)
Cc: [Roney, Julie \(EEC\)](#)
Subject: Request for Records
Date: Wednesday, March 14, 2012 4:02:33 PM
Attachments: [Pages from NKWD Petition 2012-00059_03052012.pdf](#)

TO WHOM IT MAY CONCERN:

The Public Service Commission is reviewing the application of Northern Kentucky Water District for a Certificate of Public Convenience and Necessity for a water main replacement. Division of Water has previously reviewed and approved this project. I respectfully request that DOW provide a copy of the records related to Northern Kentucky Water District's application to DOW for this project's approval. Attached is a copy of the DOW approval letter.

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AI#2485
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PWSID # 059022-11-011

To the extent possible, please provide the records in electronic format. E-mail delivery of the documents is acceptable.

If you have any questions, please contact me.

Sincerely,

Gerald E. Wuetcher
Executive Advisor/Attorney
Public Service Commission of Kentucky
gerald.wuetcher@ky.gov
Office: (502) 564-3940 x259
Cell: (502) 229-6500



STEVEN L. BESHEAR
GOVERNOR

LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENT CABINET

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

DIVISION OF WATER

200 FAIR OAKS LANE, 4TH FLOOR

FRANKFORT, KENTUCKY 40601

www.kentucky.gov

December 16, 2011

Mr. Brandon L Kuper
Northern KY Water Service
2835 Crescent Springs Rd
Erlanger, KY 41018

RE: Northern KY Water Service
AI # 2485, APE20110011
PWSID # 0590220-11-011
Park Av, Harrison Av, 18th St, 19th St,
Summerhill Av WM Replace
Campbell County, KY

Dear Mr. Kuper:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 1180 LF of 12- inch DI, 120 LF of 6- inch DI, 550 LF of 4- inch DI, 353 LF 2- inch HDPE and 3310 LF of 8- inch DI Water main. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

If you have any questions concerning this project, please contact Mr. Mohammed Mohiuddin at 502-564-8158 x4827.

Sincerely,

E-Signed by Mark Rasche
VERIFY authenticity with ApproveIt

Mark Rasche, P. E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

MR: MM
Enclosures

C: CDP Engineers
Campbell County Health Department
Division of Plumbing

County Campbell
Type WM Replace
Name of Proj Parkview Av, Harrison Av, 18th St
19th St, Summer Hill Av WM
Replacement
Utility name Northern Kentucky Water Dist
2835 Crescent Spring Road
Erlanger, KY 41018
System
Engineer CDP Engineers
3250 Blazer Pkwy
Lexington, KY 40509
Eng Phone 859-264-7500
Fax 859-264-7501
e-mail N/A
Reviewed by MM

Project No 0590220-11-011
Agency Interest ID 2485APE20110011
Fee Amt \$0.00 **Code** 1-H
Submission Date
Admin NOD Is'ued NA **Rec'vd** NA
Tech NOD Issued NA **Rec'vd** NA
Response Code A
 A-approved,B-accepted
 as-built,D-denied,N-no action
 W-withdrawn,X-dead
Date at desk
Response Date
Approval
EPA info.
Attention to:

Miles or Ft of Line	1180 LF of 12-inch DI, 120 LF of 6-inch DI, 550 LF of 4- inch DI, 353 LF of 2- inch HDPE, and 3310 LF of 8- inch DI Water main to replace the existing aging infrastructure.
Projected Cost (\$)	\$944,304
Project Demand (GPD):	no new demand

Date mailed:
 (C-facilities, M-mailed, P-Plumbing, F-filed)
Source:
Letter Code TEMPO
Certification:
Remarks

Proposed Customers:
 no new customers

Project Latitude/Longitude: X: 84 28 57 W
 Y: 39 04 50.N

HUC11# 05090203010
 Ohio River near Fort Thomas

Connection between new line and existent line:
 Tapping Sleeve and Valve

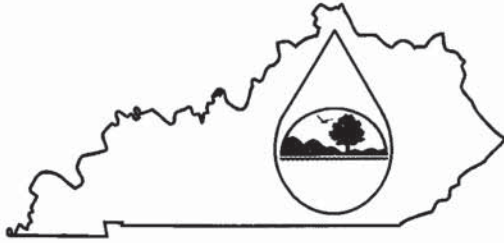
Type of valve at end of proposed line:
 Fire Hydrant Assembly and Blow off
 Asseby

Hydraulic Analysis:
Peak demand
 minimum pressure > 30 psi

Flushing Test
 flushing velocity 2.5 ft/sec
 Min Pressure > 20 psi

C: Engineer Morey Lampson P.E
Campbell County H.D.
 Public Service Commission

Form DW-1



Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

**Construction Application
For Drinking Water Distribution**

See the instructions for more information about selected portions of this checklist.

Questions on completing this checklist? Contact the Water Infrastructure Branch at 502/564-3410 or visit our website at <http://www.water.ky.gov/dw> for more information.

I. Construction Project Information

Project Name: Parkview Avenue, Harrison Avenue, 18th Street, 19th Avenue, Summer Hill Avenue

Project County: Campbell Estimated Project Cost: \$ 944,304.00

Project Latitude/Longitude (DMS): 39 04'50.83"N/84 28' 57.60"W

11 Digit Hydrologic Unit Code (HUC): 00

Is this a federally funded project:

DWSRF

SPAP

Other: No

If yes, has an Environmental Information Document been reviewed and approved? N/A

If the project has been submitted to the State Clearinghouse for review, provide the SAI number: N/A

Identify all other funding sources: NKWD

Does the project contain any of the following:

Booster Pump Stations

Water Storage Tanks

Waterlines

Waterline Material	Waterline Size	Linear Feet
DI	12"	1180
DI	8"	3310
DI	6"	120
DI	4"	550

Provide a brief description of the work to be performed for waterlines less than 10,000 linear feet. All other distribution projects should be accompanied by a DETAILED project description. This project will include the design and installation of:

Approximately 3310 feet of 8", 1180 feet of 12", 120 feet of 6", 550 feet of 4", and 247 feet of HDPE water main to replace the existing aging infrastructure.

Design Capacities

Identify the number of new connections and the projected average daily demand: No new connections

Identify the number of existing residents, and their projected water demand, that may be served as a result of this project:
156 existing Customers/ 234 GPM

Identify the number of connections in the service area: 81,000

Other Information to be Submitted with the Project

- 1. Provide a copy of the U.S.G.S. 7 ½ minute topographic map with the location(s) of the proposed project.
- 2. If the project includes a new or upgraded pump station(s), provide the pump sizing calculations and the proposed pump's characteristics curve along with the efficiency, horsepower and NPSHR data. Also, identify each pump station's locations coordinates (DMS).
- 3. If the project proposes the addition of storage tanks, provide engineering calculations which demonstrates a complete fill and drain cycle every 72 hours. Also, identify each storage tank's location coordinates (DMS).
- 4. Provide engineering calculations or an electronic model demonstrating the availability of 30 psig in the waterline under peak demand conditions.
- 5. Provide engineering calculations or an electronic model that demonstrates if the proposed waterlines are capable of a 2.5 ft/sec flow velocity and show associated residual system pressures.
- 6. Provide a signed letter of acceptance from the utility, which states that the utility has reviewed and approved the plans and specifications and agrees to serve the proposed project upon completion. If another utility will own, operate and maintain any portion of this project provide an acceptance letter from that utility as well.
- 7. If the utility is a purchaser and the project demand is over 10,000 gallons per day or the utility has exceeded 85% of its purchase contract, provide a valid acceptance letter from the seller.
- 8. If the project will provide water service to existing residences, provide the names and addresses of all existing residences to be served by the project, if known.
- 9. If the project is funded by a State Revolving Fund Loan (SRF) provide a completed SRF Plans and Specifications Checklist along with 1 complete printed copy of the project specifications.

IV. Environmental Benefits

Identify the environmental benefit(s) of the project by checking all that apply.

- Construction of new waterlines serving existing residences previously without public water.
- Modifies/upgrades existing waterlines:
 - Inadequately sized waterlines.
 - Leaks, breaks, restrictive flow.
 - Replaces lead, copper or asbestos cement waterlines.
 - Other: _____
- Provides fire protection.
- Replaces tanks/pumps due to age/condition.
- Installation of high efficiency/energy saving pumps.
- Other. Provide a brief description in the space below. _____

V. Fees

Check or money order must be made payable to "Kentucky State Treasurer" for the total amount. Fees do not apply to projects FUNDED by a municipality, water district, or other publicly owned utility.

Project Category: _____ Total Amount: \$ _____

Northern Kentucky Water District

November 14, 2011

Division of Water
Drinking Water Branch
200 Fair Oaks Lane
Fourth Floor
Frankfort, KY 40601

Re: Parkview Avenue, Harrison Avenue, 18th Street, 19th Avenue, Summer Hill Avenue, Water Main Replacement Project, Newport, Campbell County, Kentucky

To Whom It May Concern:

This is to indicate that the above referenced project:

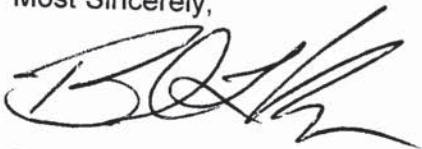
 X (A) was initiated by the Northern Kentucky Water District. The project has been reviewed by the District and the necessary water for domestic use is available and will be supplied under normal conditions, and the District shall accept maintenance of this project.

 (B) has been reviewed, the necessary water for domestic use (30 psi minimum, at meter) can and will be supplied under normal conditions by the District, and the plans as submitted are approved for construction. Also included is the submittal fee of \$150.00.

 (C) is a privately owned and privately maintained system, the necessary water for domestic use (30 psi minimum, at meter) can be and will be supplied under normal conditions by the District under the current rules and regulations. The District will inspect installation of the service connection (from the main to the customer's property line).

If there are questions, please do not hesitate to contact me at 859-578-4893.

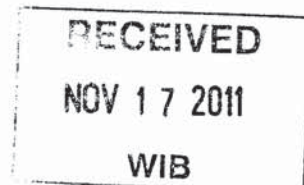
Most Sincerely,



Brandon L. Kuper
Engineering Technician

cc: file

0590220-11-011



2485APE20(1001)

000012



FIRE FLOW CERTIFICATION

Parkview Ave., Harrison Ave., 18th St.,
19th Ave., Summer Hill Ave., & Hulbert Alley
Water Main Replacement
City of Newport
Campbell County, KY
November 3, 2011

I certify that the proposed improvements meet the 807 KAR 5:066, Section 10b regulation for fire flow protection relating to KRS Chapter 278. With regard to mains 6 inches or larger, I am certifying that "the system can provide a minimum fire flow of 250 gallons per minute; and the water system supporting this flow has the capability of providing this flow for a period of not less than two (2) hours plus consumption at the maximum daily rate". This certification is based on the information available and is not a guarantee of any precise results.

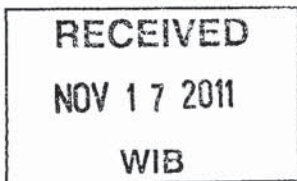
This certification is based on hydraulic modeling performed using InfoWater, the program available from MWHSoft. Supporting documentation and operating conditions are attached and are the basis for this certification.

It should be noted that input data used for modeling is based on available data. Results can change and are dependent on the demand conditions, which can vary at any given time. These values will impact the final results when adjusted. The certification is based on estimated conditions and contains many assumptions based on historical data.

With this certification, the Northern Kentucky Water District will permit the construction of fire hydrants on mains 6 inches or larger within this development.

Fire flow analyses were made using a hydrant within the subdivision that would provide a representative result that should simulate the results at other hydrants within the system. Minor variations at different hydrants would still provide a flow rate that meets the minimum standard.

0590220-11-011



2485APE20110011





HYDRAULIC AND FLUSHING VELOCITY CERTIFICATION

**Parkview Ave., Harrison Ave., 18th St.,
19th Ave., Summer Hill Ave., & Hulbert Alley
Water Main Replacement
City of Newport
Campbell County, KY
November 3, 2011**

I certify that the proposed improvements will meet the American Water Works Association Standard C651 standard for flushing velocity in the main meeting 2.5 feet per second while maintaining at least 20 psi pressure in accordance with 401 KAR 8:100.

The maximum flow rate that can reliably be supplied to the main and meet 20 psi in the system under maximum hour conditions is:

- 1,030 gpm on Parkview Avenue / Harrison Avenue
- 237 gpm on Hulbert Alley
- 1,500 gpm on 18th Street
- 1,500 gpm on 19th Street / Summer Hill Avenue

At least 30 psi can be maintained under the peak domestic demand for the 156 customers affected. The peak domestic demand using the D.R. Taylor formula is:

- 69 gpm on Parkview Avenue / Harrison Avenue (47 customers)
- 24 gpm on Hulbert Alley (6 customers)
- 56 gpm on 18th Street (31 customers)
- 85 gpm on 19th Street / Summer Hill Avenue (72 customers)

This certification is based on the information available and is not a guarantee of any precise results. Results are based on hydraulic modeling performed using InfoWater, the program available from MWHSoft. Supporting documentation and operating conditions are attached and are the basis for this certification.

It should be noted that input data used for modeling is based on available data. Results can change and are dependent on the demand conditions, which can vary at any given time. These values will impact the final results when adjusted. The certification is based on estimated conditions for maximum hour demand conditions and contains many assumptions based on historical data.

With this certification, the Northern Kentucky Water District will permit the construction of the proposed development.

The assumed Hazen-Williams roughness coefficient for all new pipe was 120, which is suitable for ductile iron or HDPE. The water level in the South Newport Tank was one-half full.



Parkview Ave., Harrison Ave., 18th St., 19th Ave.,
 Summer Hill Ave., and Hulbert Alley
 Water Main Replacement
 Newport
 Campbell County, Kentucky
 Output from InfoWater model - copied to Excel
 November 3, 2011



Maximum Hour Run for Potential Customers

Maximum Hour Run, 156 affected Customers = 234 GPM				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	964.5	164.4
J208	11.5	598	963.9	158.6
15345	11.5	649	963.7	136.3
15346	11.5	646	963.8	137.7
15355	11.5	615	964.2	151.3
15356	11.5	637	964.0	141.7
J212	8.0	572	963.3	169.6
J214	8.0	592	962.7	160.6
J216	8.0	586	963.3	163.5
J210	18.7	542	961.3	181.7
15347	18.7	580	961.3	165.2
15368	18.7	636	961.3	140.9
15169	14.2	649	960.3	134.9
15171	14.2	580	960.3	164.8
15173	14.2	548	960.4	178.7
15394	14.2	622	960.4	146.6
15396	14.2	670	960.4	125.8
15397	14.2	554	960.4	176.1

Flushing Velocities Under Maximum Hour

*side street mains closed to get 2.5 fps

Parkview Avenue

Flushing velocity 2.5 fps for new 8" pipe (under max hour)				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	958	162
J208	11.5	598	955	155
15345	392.0	649	952	131
15346	11.5	646	953	133
15355	11.5	615	956	148
15356	11.5	637	955	138
J212	8.0	572	957	167
J214	8.0	592	956	158
J216	8.0	586	957	161
J210	18.7	542	955	179
15347	18.7	580	955	163
15368	18.7	636	955	138
15169	14.2	649	955	132
15171	14.2	580	955	162
15173	14.2	548	955	176
15394	14.2	622	955	144
15396	14.2	670	955	123
15397	14.2	554	955	174

Pipe Information for flushing velocity at 2.5 fps for new 8" pipe					
Pipe ID	Length, ft	Diam, inch	Flow, gpm	Velocity, fps	Roughness
15360	263	8	426	2.7	120
15374	265	8	392	2.5	120
15388	477	8	403	2.6	120
15389	379	8	438	2.8	120

Flushing Velocities Under Maximum Hour (Continued)

*side street mains closed to get 2.5 fps

Harrison Avenue

Flushing velocity 2.5 fps for new 4" pipe (under max hour)				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	963	164
J208	98.0	598	958	156
15345	11.5	649	962	135
15346	11.5	646	962	137
15355	11.5	615	962	150
15356	11.5	637	962	141
J212	8.0	572	962	169
J214	8.0	592	961	160
J216	8.0	586	962	163
J210	18.7	542	960	181
15347	18.7	580	960	165
15368	18.7	636	960	140
15169	14.2	649	959	134
15171	14.2	580	959	164
15173	14.2	548	959	178
15394	14.2	622	959	146
15396	14.2	670	959	125
15397	14.2	554	959	175

Pipe Information for flushing velocity at 2.5 fps for new 4" pipe					
Pipe ID	Length, ft	Diam, inch	Flow, gpm	Velocity, fps	Roughness
15391	451	4	98	2.5	120

18th Street

Flushing velocity 2.5 fps for new 8" pipe (under max hour)				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	959	162
J208	11.5	598	959	156
15345	11.5	649	959	134
15346	11.5	646	959	136
15355	11.5	615	959	149
15356	11.5	637	959	140
J212	8.0	572	957	167
J214	8.0	592	957	158
J216	8.0	586	957	161
J210	18.7	542	954	179
15347	18.7	580	951	161
15368	392.0	636	948	135
15169	14.2	649	954	132
15171	14.2	580	954	162
15173	14.2	548	954	176
15394	14.2	622	954	144
15396	14.2	670	954	123
15397	14.2	554	954	173

Pipe Information for flushing velocity at 2.5 fps for new 8" pipe					
Pipe ID	Length, ft	Diam, inch	Flow, gpm	Velocity, fps	Roughness
15378	692	8	392	2.5	120
15381	828	8	411	2.6	120

Flushing Velocities Under Maximum Hour (Continued)

*side street mains closed to get 2.5 fps

19th Avenue

Flushing velocity 2.5 fps for new 12" pipe (under max hour)				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	955	160
J208	11.5	598	954	154
15345	11.5	649	954	132
15346	11.5	646	954	133
15355	11.5	615	955	147
15356	11.5	637	954	138
J212	8.0	572	953	165
J214	8.0	592	952	156
J216	8.0	586	953	159
J210	18.7	542	950	177
15347	18.7	580	950	160
15368	18.7	636	950	136
15169	881.0	649	944	128
15171	14.2	580	946	158
15173	14.2	548	948	173
15394	14.2	622	948	141
15396	14.2	670	948	120
15397	14.2	554	948	171

Pipe Information for flushing velocity at 2.5 fps for new 12" pipe					
Pipe ID	Length, ft	Diam, inch	Flow, gpm	Velocity, fps	Roughness
15176	599	12	881	2.5	120
15177	796	12	895	2.5	120
P363	171	12	938	2.7	120

Summer Hill Avenue

Flushing velocity 2.5 fps for new 8" pipe (under max hour)				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	959	162
J208	11.5	598	958	156
15345	11.5	649	958	134
15346	11.5	646	958	135
15355	11.5	615	959	149
15356	11.5	637	959	139
J212	8.0	572	958	167
J214	8.0	592	957	158
J216	8.0	586	958	161
J210	18.7	542	955	179
15347	18.7	580	955	162
15368	18.7	636	955	138
15169	14.2	649	954	132
15171	14.2	580	954	162
15173	14.2	548	954	176
15394	14.2	622	951	143
15396	392.0	670	948	121
15397	14.2	554	954	173

Pipe Information for flushing velocity at 2.5 fps for new 8" pipe					
Pipe ID	Length, ft	Diam, inch	Flow, gpm	Velocity, fps	Roughness
15433	665	8	392	2.5	120
15435	694	8	406	2.6	120

Flushing Velocities Under Maximum Hour (Continued)

*side street mains closed to get 2.5 fps

Hulbert Alley

Flushing velocity 2.5 fps for new 2" & 4" pipe (under max hour)				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	963	164
J208	11.5	598	962	158
15345	11.5	649	962	136
15346	11.5	646	962	137
15355	11.5	615	963	151
15356	11.5	637	962	141
J212	8.0	572	962	169
J214	90.0	592	908	137
J216	8.0	586	961	162
J210	18.7	542	960	181
15347	18.7	580	960	165
15368	18.7	636	960	140
15169	14.2	649	959	134
15171	14.2	580	959	164
15173	14.2	548	959	178
15394	14.2	622	959	146
15396	14.2	670	959	125
15397	14.2	554	959	175

Pipe Information for flushing velocity at 2.5 fps for new 2" & 4" pipe					
Pipe ID	Length, ft	Diam, inch	Flow, gpm	Velocity, fps	Roughness
P367	76	4	98	2.5	120
P371	250	2	90	9.2	120

Maximum Available Flow Under Maximum Hour

Parkview Avenue / Harrison Avenue

Maximum Hour Run, Maximum Available Flow				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	951.5	158.8
J208	1030.0	598	645.8	20.7
15345	11.5	649	941.8	126.9
15346	11.5	646	941.6	128.1
15355	11.5	615	945.3	143.1
15356	11.5	637	941.1	131.8
J212	8.0	572	950.8	164.1
J214	8.0	592	950.2	155.2
J216	8.0	586	950.8	158.1
J210	18.7	542	949.6	176.6
15347	18.7	580	948.8	159.8
15368	18.7	636	948.3	135.3
15169	14.2	649	949.3	130.1
15171	14.2	580	949.3	160.0
15173	14.2	548	949.4	173.9
15394	14.2	622	949.3	141.8
15396	14.2	670	949.3	121.0
15397	14.2	554	949.4	171.3

Maximum Available Flow Under Maximum Hour (Continued)

Hulbert Alley

Maximum Hour Run, Maximum Available Flow				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	960.4	162.7
J208	11.5	598	959.9	156.8
15345	11.5	649	959.6	134.6
15346	11.5	646	959.7	135.9
15355	11.5	615	960.1	149.5
15356	11.5	637	960.0	139.9
J212	8.0	572	958.9	167.6
J214	237.0	592	639.7	20.7
J216	8.0	586	955.4	160.1
J210	18.7	542	957.3	180.0
15347	18.7	580	957.3	163.5
15368	18.7	636	957.3	139.2
15169	14.2	649	956.5	133.3
15171	14.2	580	956.6	163.2
15173	14.2	548	956.6	177.1
15394	14.2	622	956.6	145.0
15396	14.2	670	956.6	124.2
15397	14.2	554	956.6	174.5

18th Street

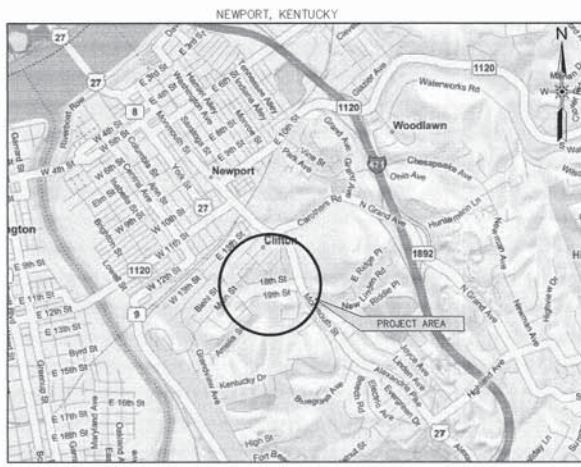
Maximum Hour Run, Maximum Available Flow				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	949.8	158.1
J208	11.5	598	947.1	151.3
15345	11.5	649	944.6	128.1
15346	11.5	646	945.5	129.8
15355	11.5	615	948.2	144.4
15356	11.5	637	947.2	134.4
J212	8.0	572	947.6	162.8
J214	8.0	592	947.0	153.8
J216	8.0	586	947.6	156.7
J210	18.7	542	943.7	174.1
15347	18.7	580	930.4	151.8
15368	1500.0	636	919.7	122.9
15169	14.2	649	943.5	127.6
15171	14.2	580	943.5	157.5
15173	14.2	548	943.7	171.4
15394	14.2	622	943.6	139.4
15396	14.2	670	943.6	118.6
15397	14.2	554	943.6	168.8

19th Avenue / Summer Hill Avenue

Maximum Hour Run, Maximum Available Flow				
ID	Demand, gpm	Elevation, ft	Grade, ft	Pressure, psi
15064	11.5	585	950.5	158.4
J208	11.5	598	949.6	152.3
15345	11.5	649	949.0	130.0
15346	11.5	646	949.2	131.4
15355	11.5	615	950.0	145.1
15356	11.5	637	949.6	135.5
J212	8.0	572	947.8	162.8
J214	8.0	592	947.2	153.9
J216	8.0	586	947.8	156.8
J210	18.7	542	943.1	173.8
15347	18.7	580	943.2	157.4
15368	18.7	636	943.3	133.2
15169	14.2	649	940.1	126.1
15171	14.2	580	940.0	156.0
15173	14.2	548	940.9	170.2
15394	14.2	622	908.3	124.0
15396	1500.0	670	878.4	90.3
15397	14.2	554	940.0	167.2

<u>Pipe ID</u>	<u>From Node</u>	<u>To Node</u>
15176	15169	15171
15177	15171	15397
15360	15356	15355
15374	15345	15346
15378	15368	15347
15381	J210	15347
15388	15356	15346
15389	15355	15064
15391	15356	J208
P363	15397	15173
P367	J212	J216
15433	15394	15396
15435	15397	15394
P371	J216	J214

Parkview Ave., Harrison Ave., 18th St., 19th St., Summer Hill Ave., and Hulbert Alley WATER MAIN REPLACEMENT PROJECT FOR NORTHERN KENTUCKY WATER DISTRICT



LOCATION MAP
NOT TO SCALE

INDEX OF DRAWINGS

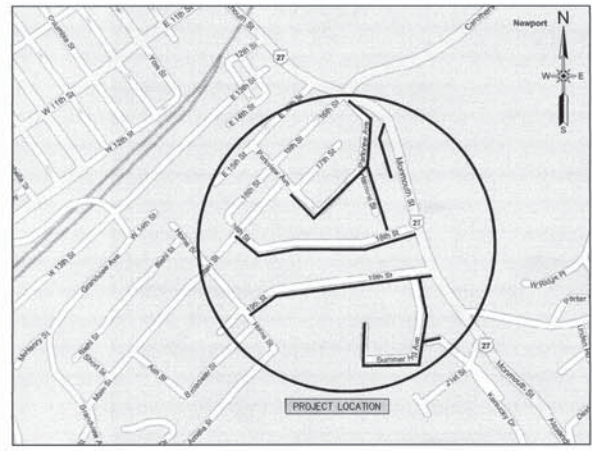
NO.	TITLE
1	COVER SHEET - VICINITY MAP
2	GENERAL NOTES, LEGEND AND SHEET LAYOUT
3 - 5	PARKVIEW AVENUE - PLAN & PROFILE
6	HARRISON AVENUE - PLAN & PROFILE
7 - 9	18TH STREET - PLAN & PROFILE
10 - 12	19TH STREET - PLAN & PROFILE
13 - 15	SUMMER HILL AVENUE - PLAN & PROFILE
16	20TH STREET - PLAN
17	HULBERT ALLEY - PLAN & PROFILE
18	INDIVIDUAL WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULES
19 - 20	NKWD STANDARD DETAILS

SEPTEMBER 2011

Prepared By:



3250 Blazer Pkwy Lexington KY 40509 | 859.264.7500 | 859.264.7501



VICINITY MAP
NOT TO SCALE





SHEET LAYOUT
NOT TO SCALE

GENERAL NOTES

- EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY COMPANIES AND VERIFY EACH UTILITY'S LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO THE EXISTING UTILITIES THAT MAY OCCUR DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES BY CALLING KENTUCKY UNDERGROUND (BUD); 800-752-6007 OR THE UTILITY OWNER IF THE UTILITY OWNER IS NOT A MEMBER OF ANY "BEFORE YOU DIG" SERVICE.
- ACTUAL DEPTHS OF EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO LAYING PIPE. ADJUSTMENTS TO PROPOSED PIPE GRADES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT EXISTING UTILITIES TO THE MAXIMUM EXTENT PRACTICAL. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OWNER TO MINIMIZE DISRUPTION OF EXISTING SERVICES. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER 2 DAYS IN ADVANCE OF ANY WORK WHICH REQUIRES EXISTING UTILITIES TO BE TAKEN OUT OF SERVICE.
- THE WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE AS INDICATED IN NKWD SPECIFICATIONS OR AS INDICATED ON THE PLANS.
- NEW WATER MAINS WILL NOT BE ACCEPTED UNTIL TESTED IN ACCORDANCE WITH THE ENGINEER'S SPECIFICATIONS AND NKWD STANDARDS.
- ANY UNSUITABLE SUBGRADE MATERIAL ENCOUNTERED IN THE TRENCH EXCAVATION SHALL BE REMOVED AND REPLACED WITH PROPERLY COMPACTED ENGINEER FILL OR WITH #9 CRUSHED STONE AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- EXISTING FENCES, WALLS, TREES OR OTHER VEGETATION AND IMPROVEMENTS SHALL BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT POSSIBLE. TREES WHICH ARE ANTICIPATED TO BE DAMAGED SHALL BE FLAGGED AND REVIEWED WITH THE ENGINEER PRIOR TO PROCEEDING WITH ADJACENT WORK. THE CONTRACTOR SHALL RESTORE EXISTING IMPROVEMENTS TO CONDITIONS EQUAL TO PRE-CONSTRUCTION CONDITIONS. DAMAGED TREES NOT APPROVED FOR REMOVAL SHALL BE REPLACED BY THE CONTRACTOR. FENCES REMOVED SHALL BE RESET AFTER ADJACENT WATER MAIN INSTALLATION IS COMPLETE. TEMPORARY FENCES SHALL BE ERRECTED AND MAINTAINED ON A DAILY BASIS UNTIL PERMANENT FENCE REPLACEMENT IS COMPLETE.
- AIR RELEASE VALVE MANHOLES / PIT COVERS WILL BE SET TO FINISHED GRADE AS INDICATED ON THE PLANS.
- ALL NON-PAVED DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH THE SPECIFICATIONS AFTER WORK IN THE IMMEDIATE VICINITY HAS BEEN COMPLETED. THE DURATION BETWEEN THE COMPLETION OF ADJACENT OPERATIONS AND THE REVEGETATION OF DISTURBED SHALL NOT EXCEED (2) WEEKS UNLESS THE CONDITIONS IN THE PROJECT AREA ARE NOT CONDUCTIVE TO GROWTH.
- EXCAVATION IS UNCLASSIFIED; NO SEPARATE PAYMENT SHALL BE MADE FOR ROCK REMOVAL.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MAINTAIN CONTINUOUS ACCESS TO ALL RESIDENTIAL DWELLINGS.
- FOR EROSION CONTROL PURPOSES, THE CONTRACTOR SHALL STOCKPILE EXCAVATED TRENCH MATERIAL ON THE UPHILL SIDE (OPPOSITE OF STREAM) OF EXPOSED TRENCH.
- THE CONTRACTOR SHALL REMOVE AND REPLACE ALL HIGHWAY SIGNS ALONG THE ROUTE OF THE WATER MAIN CONSTRUCTION THAT MAY INTERFERE WITH THE WORK. ALL SIGNS SHALL BE REPLACED IN THEIR ORIGINAL LOCATION AND SHALL BE RESET TO THE PROPER KYTC REQUIREMENTS. THE COSTS INVOLVED WITH REMOVING AND REPLACING ALL SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PIPE FITTINGS AND APPURTENANCES, INCLUDING VERTICAL BENDS, REGARDLESS OF WHETHER THE BENDS OR APPURTENANCES ARE SHOWN ON THE DRAWINGS.

UTILITY OWNERS

SANITARY SEWER
SANTATION DISTRICT NO. 1 OF
NORTHERN KENTUCKY
1045 EATON DRIVE
FORT WRIGHT, KENTUCKY 41017
ATTN: MR. BARRETT GROH
859-578-7450

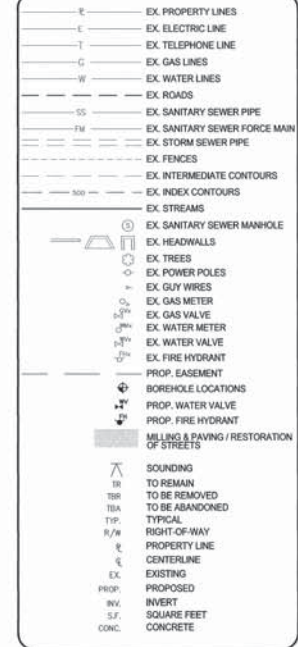
CABLE TV
INSIGHT COMMUNICATIONS
7906 DIXIE HIGHWAY
FLORENCE, KENTUCKY 41042
ATTN: MR. ERIC SHANK
859-283-4285

TELEPHONE
CINCINNATI BELL TELEPHONE
221 EAST FOURTH STREET
BUILDING 343
P.O. BOX 2301
CINCINNATI, OHIO 45201-2301
ATTN: MR. MARK CONNER
513-565-7043

NATURAL GAS and ELECTRIC
DUKE ENERGY
1262 COX ROAD
ERLANGER, KENTUCKY 41018
ATTN: MR. ADAM RAUCH
PROJECT COORDINATOR
859-634-4378

"KY DIG SAFETY"
1-800-752-6007 (OR DIAL 811)
HTTP://WWW.KYDIGSAFELY.ORG/ AND
HTTP://WWW.KENTUCKY811.ORG/

LEGEND



NORTHERN KENTUCKY WATER
DISTRICT STANDARD DRAWINGS

STD. DWG.	TITLE
100	SPECIFICATIONS
100A - 100G	SPECIFICATIONS
101	WATER MAIN TERMINATIONS
102	WATER MAIN TERMINATIONS
103	TYPICAL PIPELINE TRENCH DETAILS
103A	TYPICAL PIPELINE TRENCH DETAILS
104	CONCRETE THRUST BLOCK DETAIL
104A	CONCRETE THRUST BLOCKING FOR VERTICAL BENDS
105	VALVE BOX AND VALVE PAD DETAIL
106	N.K.Y. WATER DISTRICT AIR RELEASE VALVE
106A	TYPICAL MANUAL AIR RELEASE VALVE INSTALLATION
107	58" & 1" METER SETTING
108	1 1/2" & 2" METER SETTING
109	HYDRANT ASSEMBLY
111	TRACING WIRE INSTALLATION DETAIL
113	TYPICAL FLUSHING DEVICE INSTALLATION

LATEST NORTHERN KENTUCKY WATER DISTRICT STANDARD DRAWINGS CAN BE OBTAINED FROM www.nkywater.org



SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	REVISION	BY	DATE

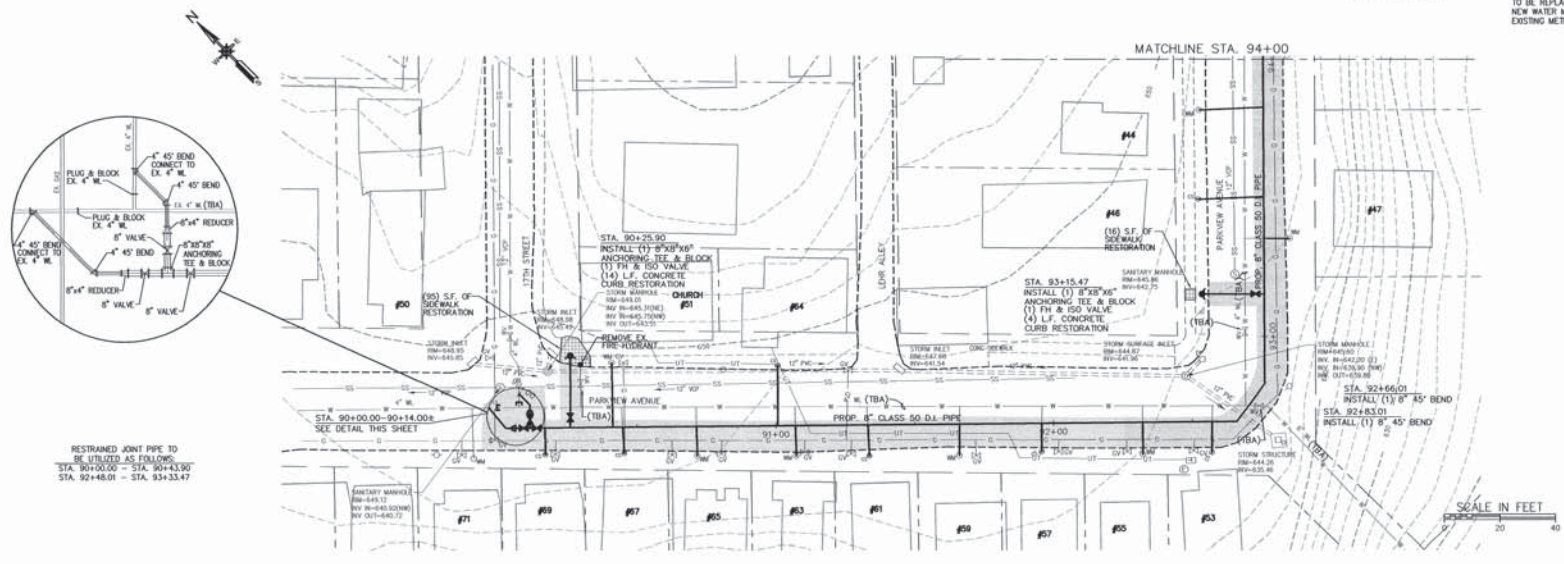
NORTHERN KENTUCKY
WATER DISTRICT
2433 CRESCENT SPRING ROAD
ERLANGER, KENTUCKY 41018

GENERAL NOTE, LEGEND,
AND SHEET LAYOUT
Parkview Ave., Harrison Ave., 18th St., 19th St., &
Summer Hill Ave Water Main Replacement Project

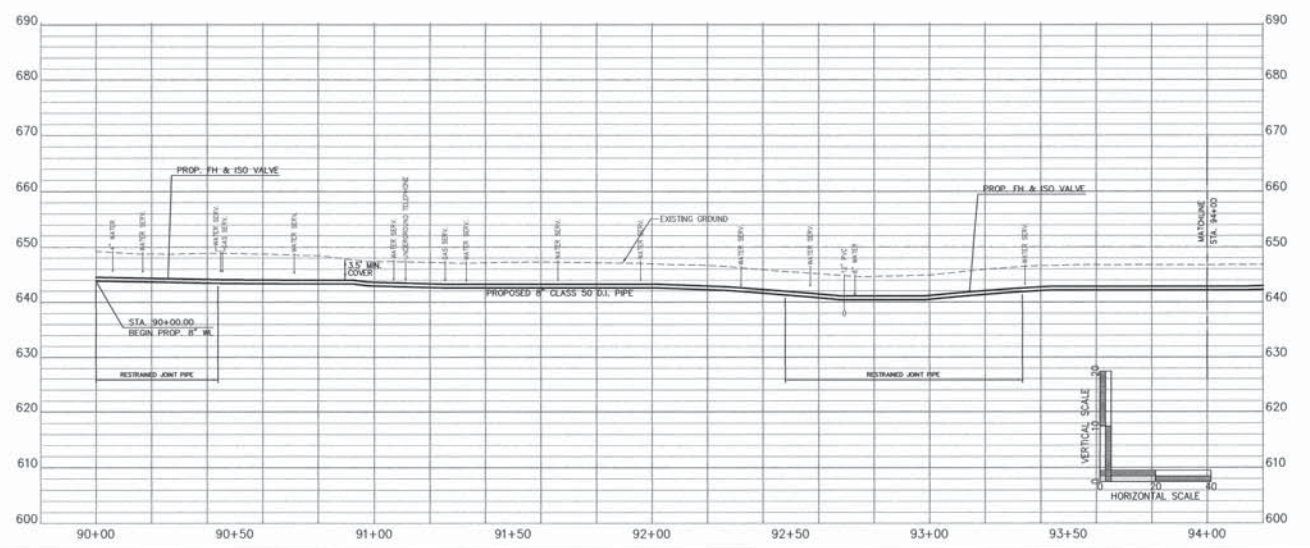
SHEET NUMBER
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 MILLING AND PAVING / RESTORATION OF STREETS
 SIDEWALK RESTORATION

NOTE:
 SEE SHEET 18 FOR "INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEMS.
 NOTE:
 ALL EXISTING SERVICES ARE TO BE REPLACED FROM THE NEW WATER MAIN TO THE EXISTING METER CROCK.



RESTRAINED JOINT PIPE TO BE UTILIZED AS FOLLOWS:
 STA. 90+00.00 - STA. 90+43.90
 STA. 92+48.01 - STA. 93+33.47






 2020 Summit Pointe Lexington, KY 40508 | 606.254.1200 | 606.254.1201

SCALE	AS SHOWN	DATE
DESIGNED BY	DOM JAKS	
DRAWN BY	DOM JAKS	
PROJECT NO.	2020-0039	
DATE	SEPTEMBER 2021	
CADD FILE	0039_PARKVIEW	

NORTHERN KENTUCKY
 WATER DISTRICT
 2835 CRESCENT SPRINGS ROAD
 DUBLANDER, KENTUCKY 41018

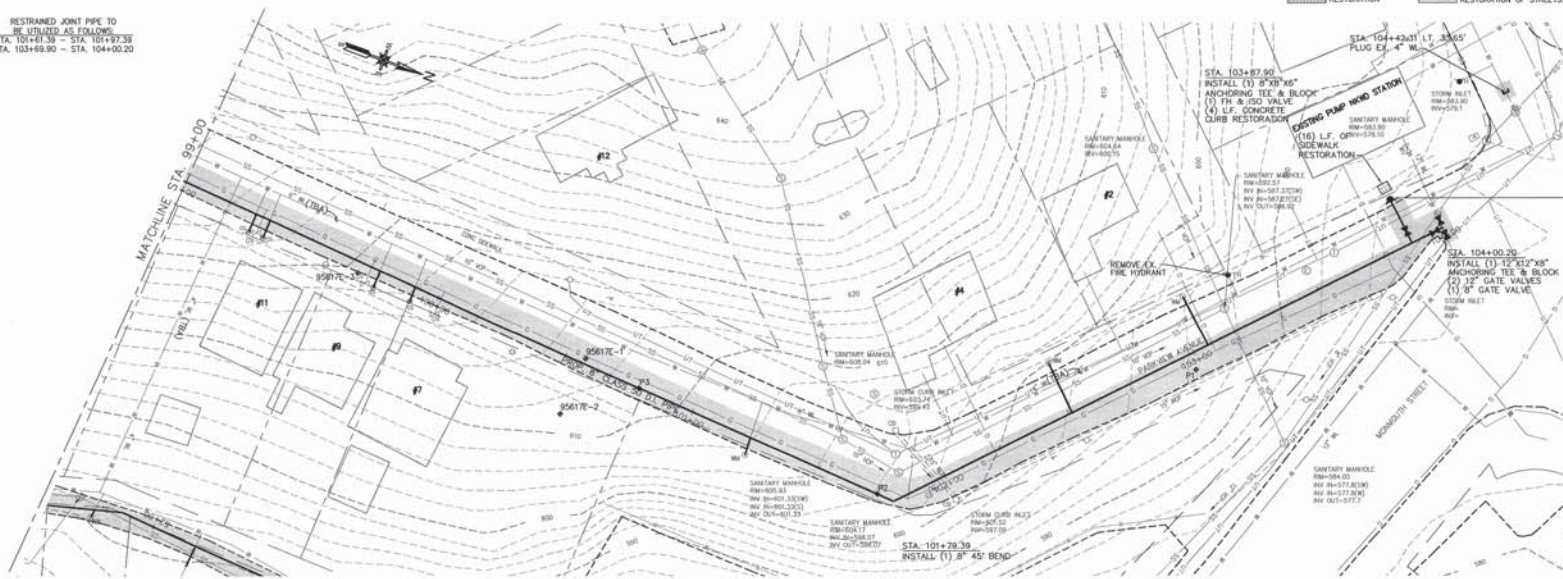
PARKVIEW AVENUE - PLAN & PROFILE
STA. 90+00 - STA. 94+00
 Parkview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project.

SHEET NUMBER
C-1

RESTRAINED JOINT PIPE TO BE UTILIZED AS FOLLOWS:
 STA. 101+41.39 - STA. 101+67.38
 STA. 103+69.90 - STA. 104+00.20

SIDEWALK RESTORATION
 MILLING AND PAVING / RESTORATION OF STREETS

NOTE:
 SEE SHEET 18 FOR "INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEMS.
 NOTE:
 ALL EXISTING SERVICES ARE TO BE REPLACED FROM THE NEW WATER MAIN TO THE EXISTING METER CROCK.



SCALE IN FEET
 0 20 40

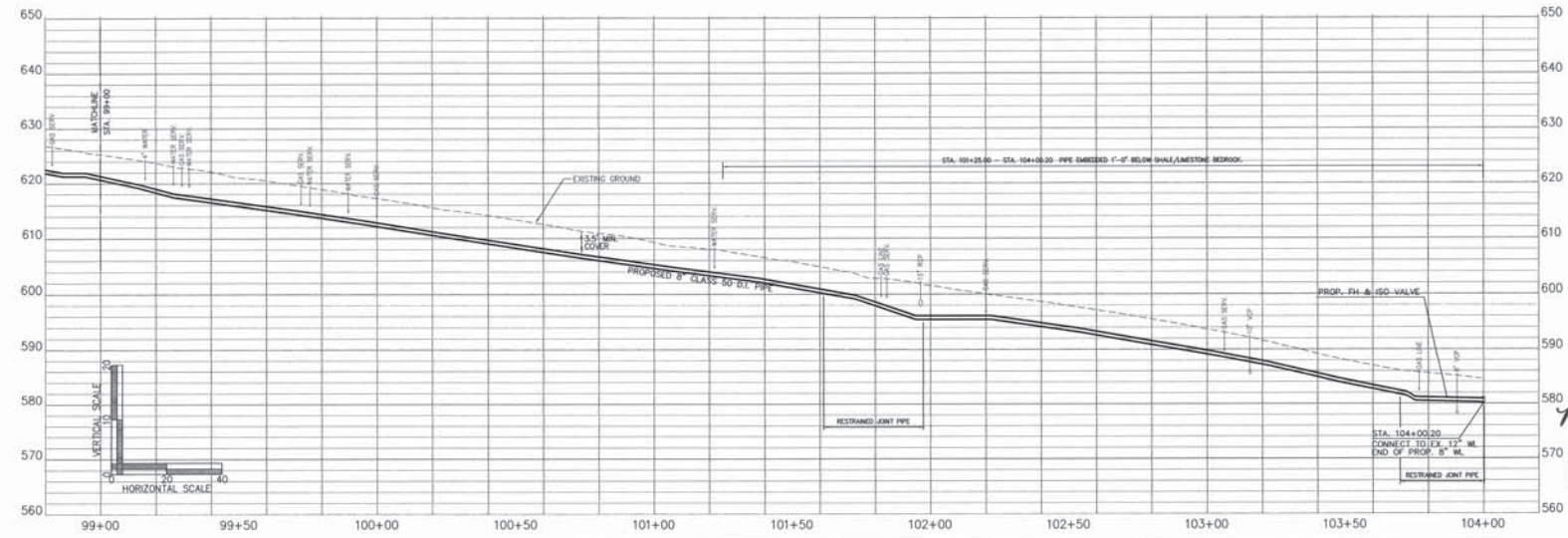


SCALE	DATE	REVISION	BY	DATE
AS SHOWN				
DESIGNED BY				
CHECKED BY				
PROJECT NO.	2009-0032			
DATE DRAWN	08/21/11			
DRAWN BY	00032/PARK/004			

NORTHERN KENTUCKY
 WATER DISTRICT
 2835 CRESCENT SPRINGS ROAD
 ERLANGER, KENTUCKY 41018

PARKVIEW AVENUE - PLAN & PROFILE
STA. 98+00 - STA. 104+00.20
 Parkview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project

M. Jamison
 10/2/11
 PROFESSIONAL ENGINEER
 STATE OF KENTUCKY
 LICENSE NO. 10221



SHEET NUMBER
 5

000025

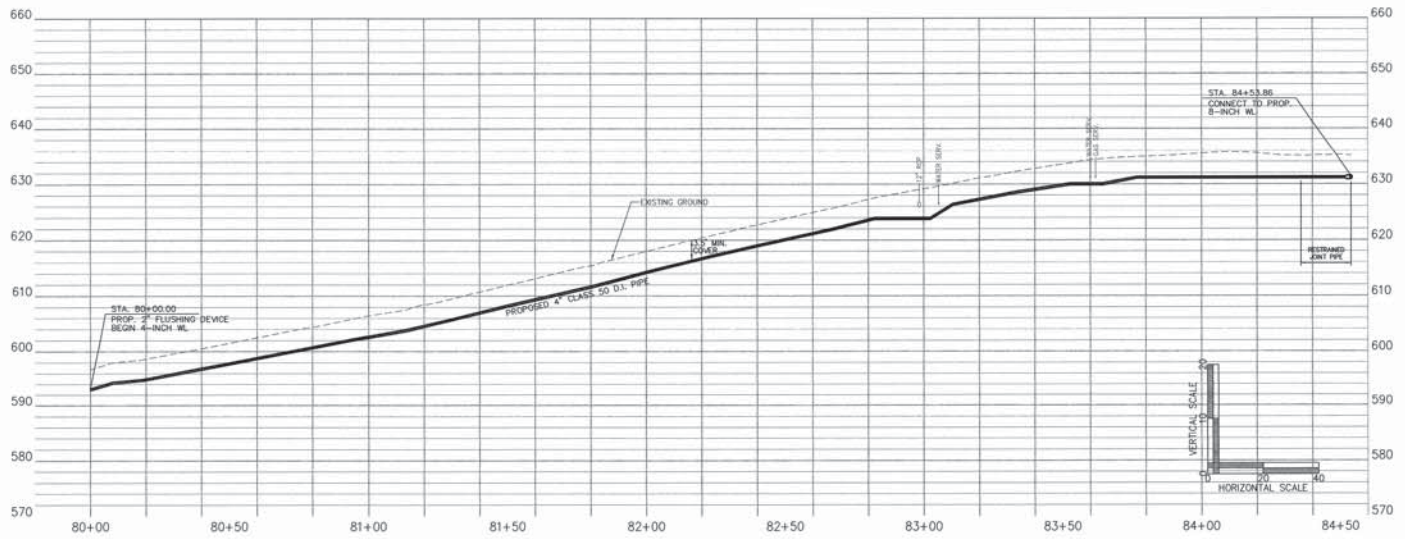
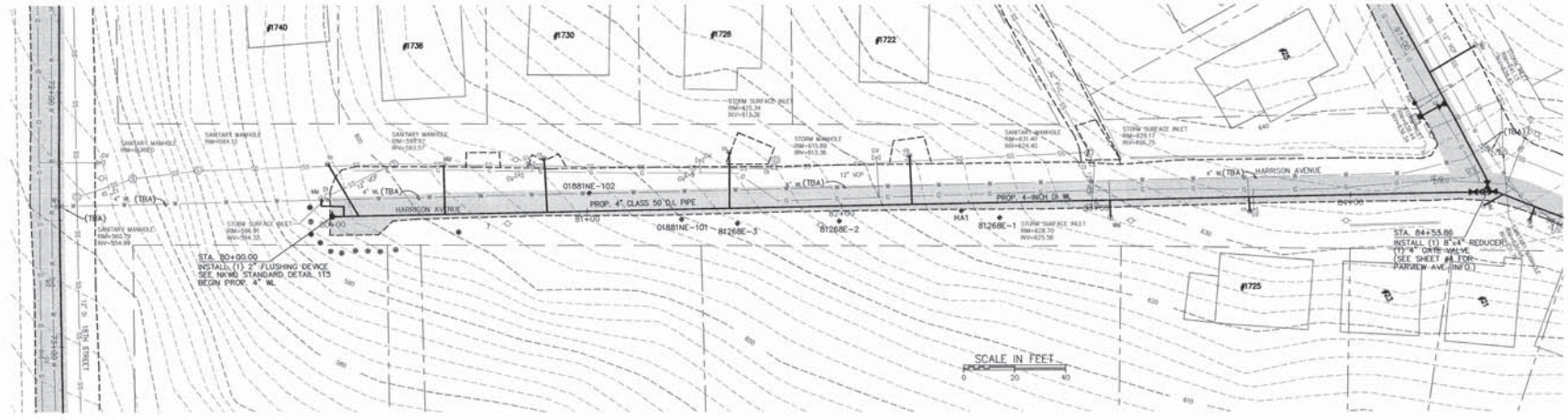
RESTRAINED JOINT PIPE TO BE UTILIZED AS FOLLOWS:
STA. 84+35.86 - STA. 84+53.86

SIDEWALK RESTORATION

 MILLING AND PAVING / RESTORATION OF STREETS

NOTE:
SEE SHEET 18 FOR "INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEMS.

NOTE:
ALL EXISTING SERVICES ARE TO BE REPLACED FROM THE NEW WATER MAIN TO THE EXISTING METER CROCK.



M. L. Johnson

 1042/11

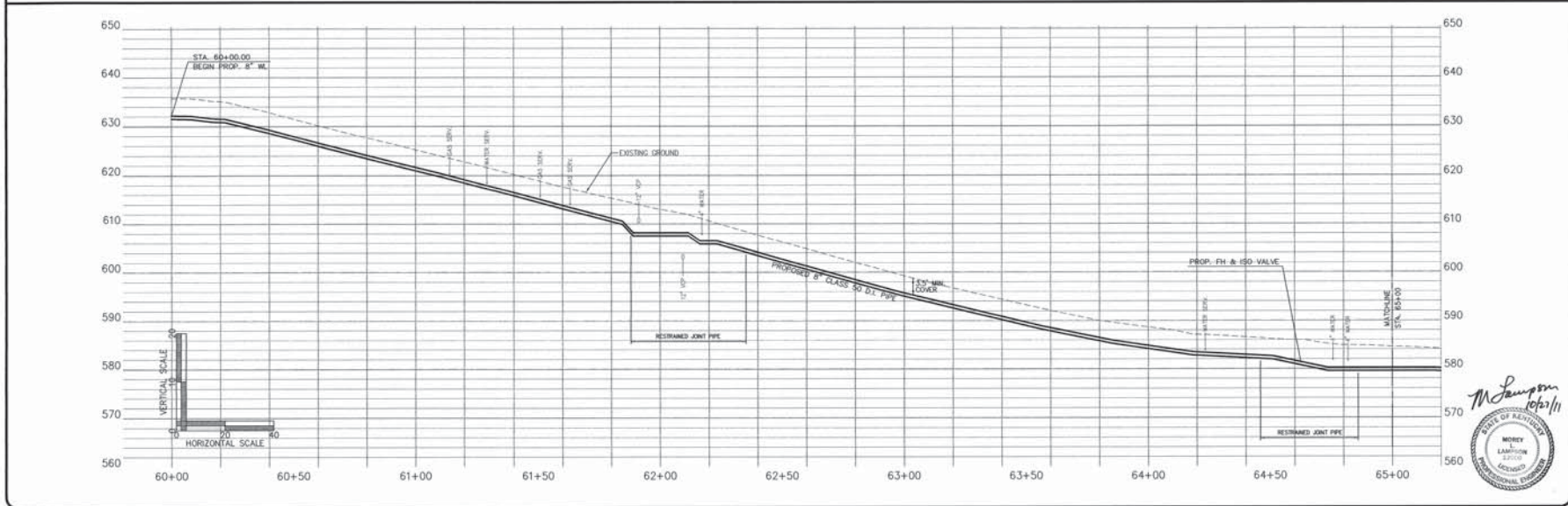
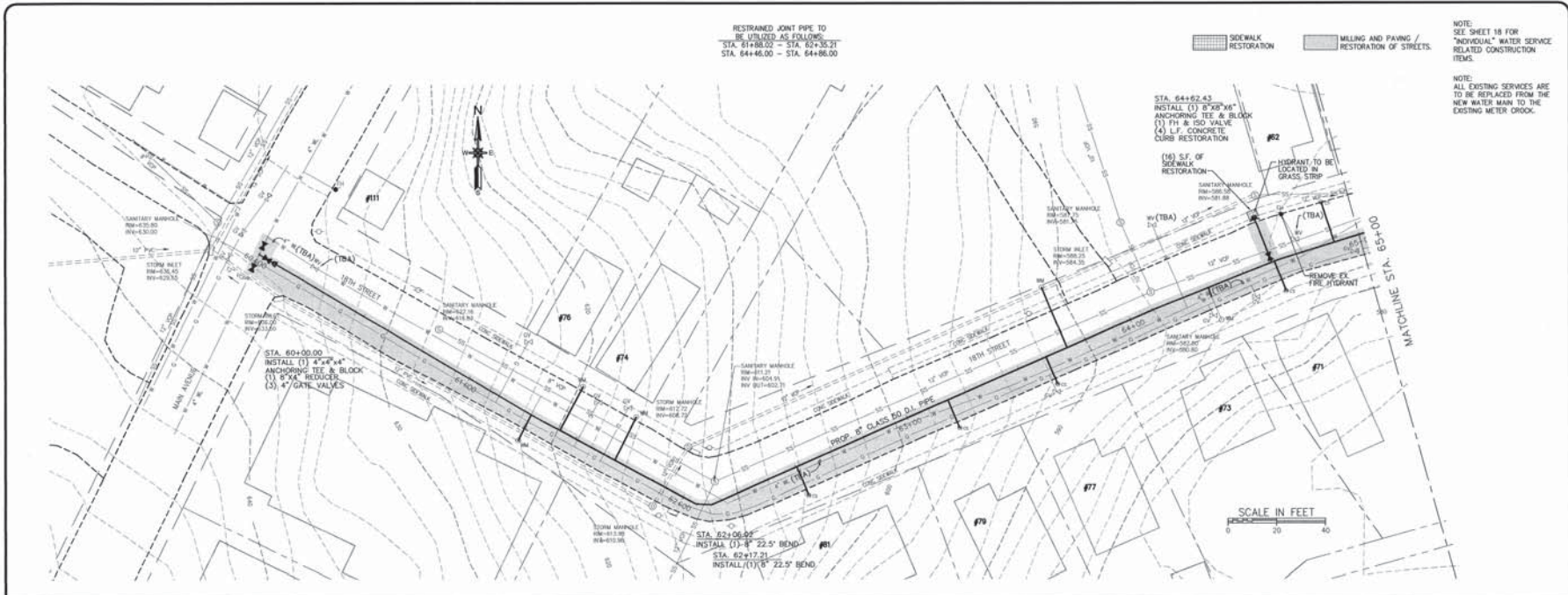


SCALE	AS SHOWN	DATE
DESIGNED BY	DATE	DATE
DRAWN BY	DATE	DATE
CHECKED BY	DATE	DATE
PROJECT NO.	2007-0039	
DATE	SEPTEMBER 2011	
CADD DRAW BY	2007-0039/004	

NORTHERN KENTUCKY
 WATER DISTRICT
 3835 CRESCENT SPRINGS ROAD
 FRANKLIN, KENTUCKY 41018

HARRISON AVENUE - PLAN & PROFILE
STA. 80+00 - STA. 84+53.86
 Parkview Ave., Harrison Ave., 18th St., 19th St., &
 Summer Hill Ave Water Main Replacement Project

SHEET NUMBER
6

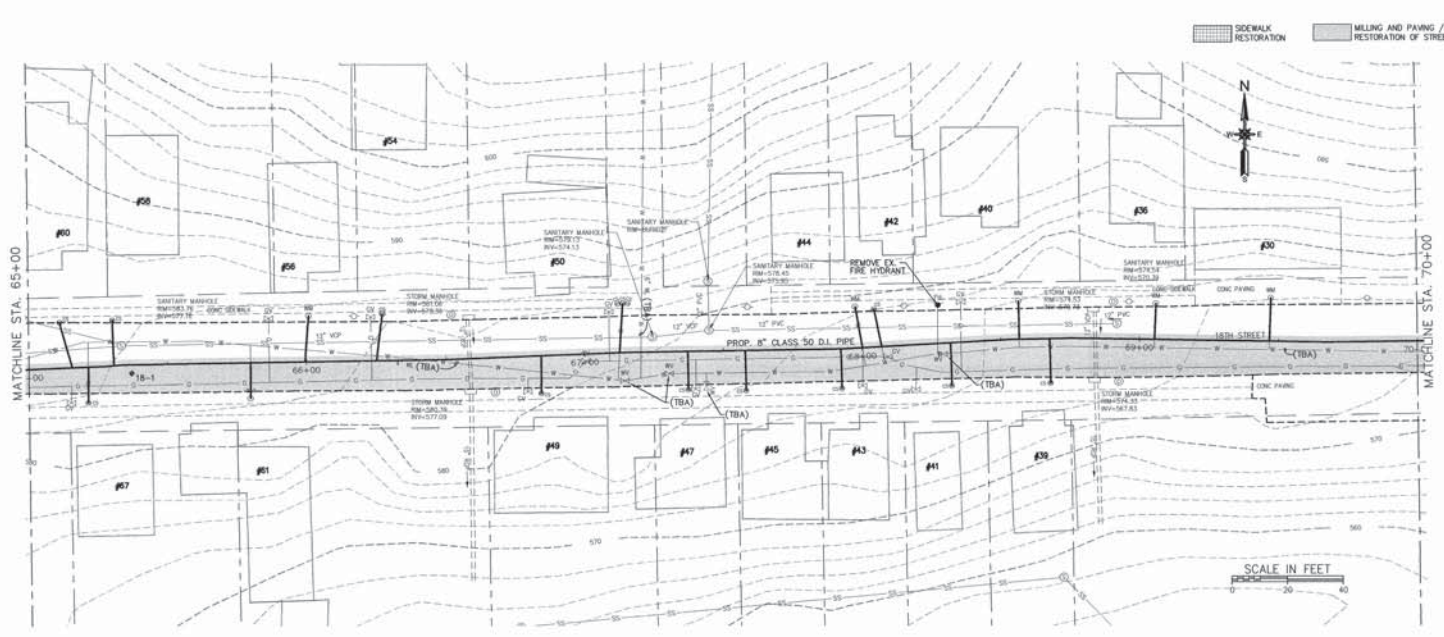


SCALE	AS SHOWN	DATE
DESIGNED BY	COL. JAK	
DRAWN BY	COL. JAK	
PROJECT NO.	2009-0039	
DATE	SEPTEMBER 2011	
LOG SHEET NO.	00025-18TH STREET	

NORTHERN KENTUCKY
WATER DISTRICT
2835 CRESCENT SPRINGS ROAD
ORLANDER, KENTUCKY 4108

18TH STREET - PLAN & PROFILE
STA. 60+00 - STA. 65+00
Parkview Ave., Harrison Ave., 18th St., 19th St., &
Summer Hill Ave Water Main Replacement Project

SHEET NUMBER
7

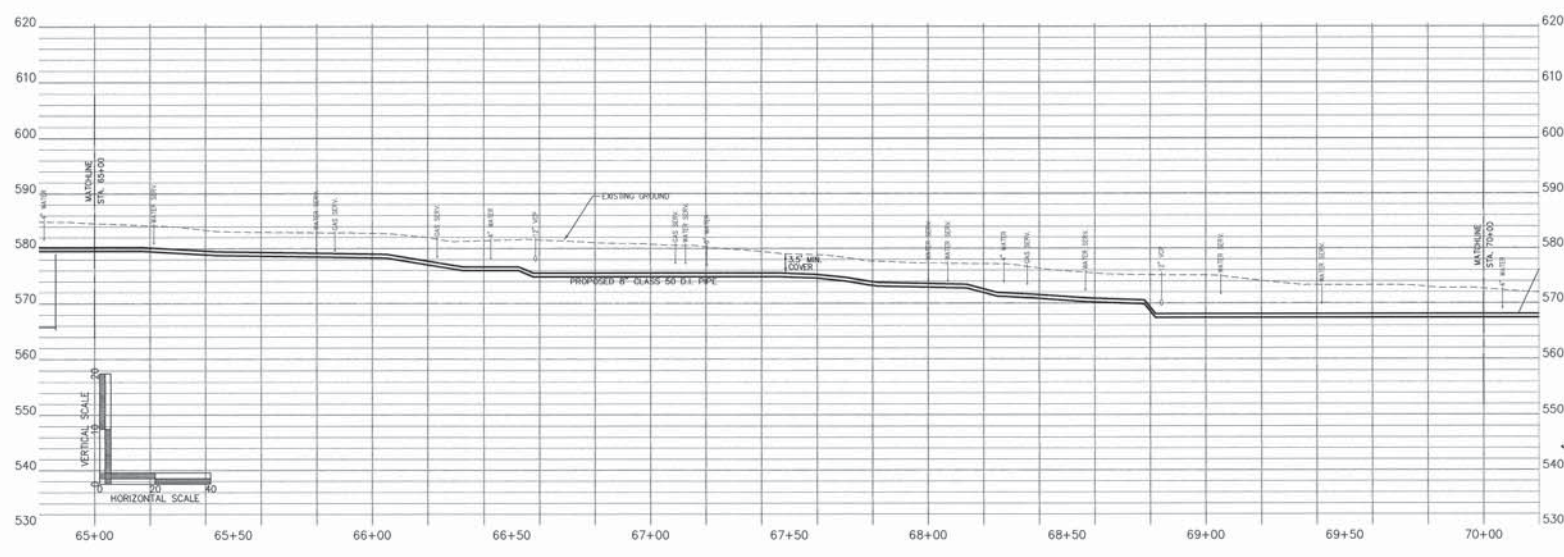


NOTE:
SEE SHEET 18 FOR
"INDIVIDUAL" WATER SERVICE
RELATED CONSTRUCTION
ITEMS.

NOTE:
ALL EXISTING SERVICES ARE
TO BE REPLACED FROM THE
NEW WATER MAIN TO THE
EXISTING METER CROCK.



SCALE	AS SHOWN	REVISION	BY	DATE
DESIGNED BY	DOM JAK			
DRAWN BY	DOM JAK			
PROJECT NO.	2009-0039			
DATE	SEPTEMBER 2011			
CADD FILE #	200909-18TH STREET			

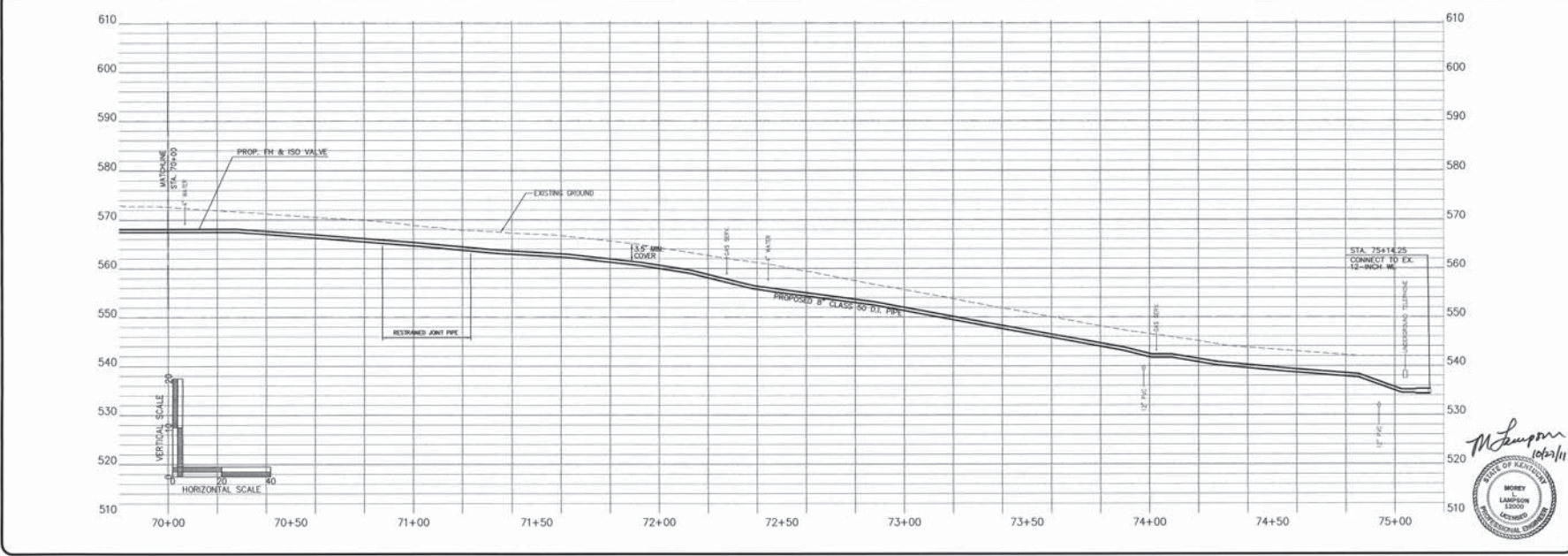
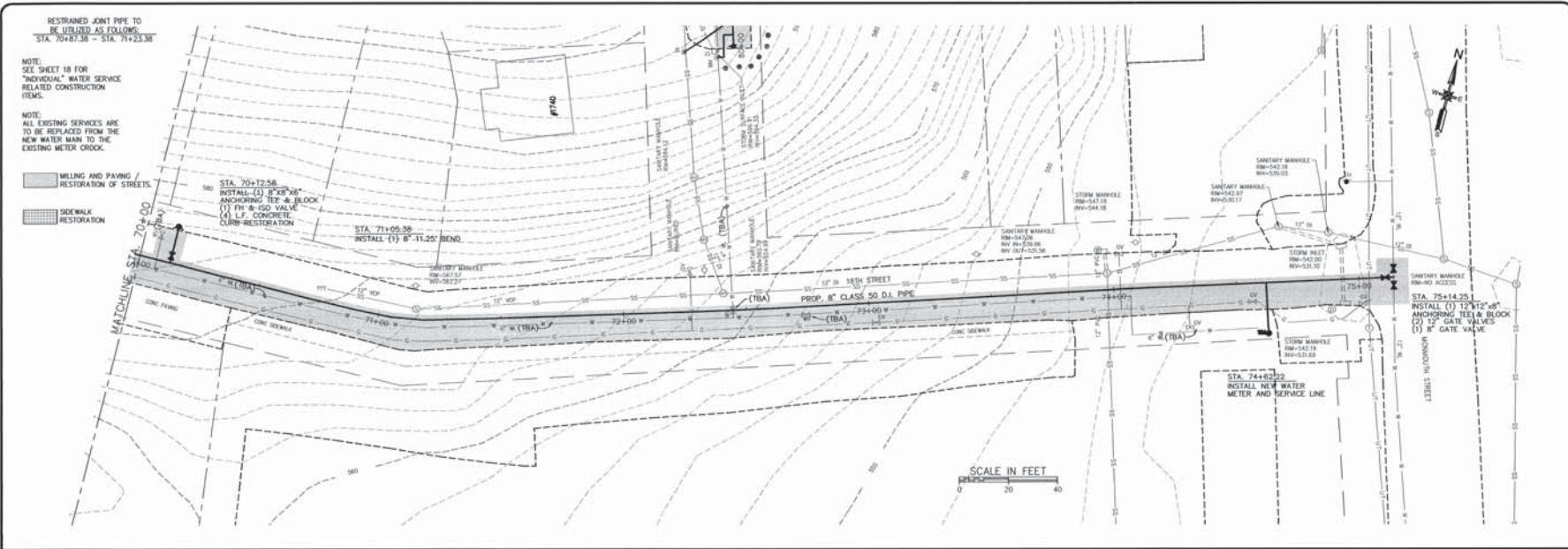


NORTHERN KENTUCKY
WATER DISTRICT
2635 CRESCENT SPRINGS ROAD
DUBLAND, KENTUCKY 41018

18TH STREET - PLAN & PROFILE
STA. 65+00 - STA. 70+00
Parkview Ave., Harrison Ave., 18th St., 19th St., &
Summer Hill Ave Water Main Replacement Project

M. Lamson
10/21/11

SHEET NUMBER
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SCALE	DATE	REVISION	BY	DATE
AS SHOWN				
DRAWN BY				
PROJECT NO.				
DATE				
CADD DWG #				

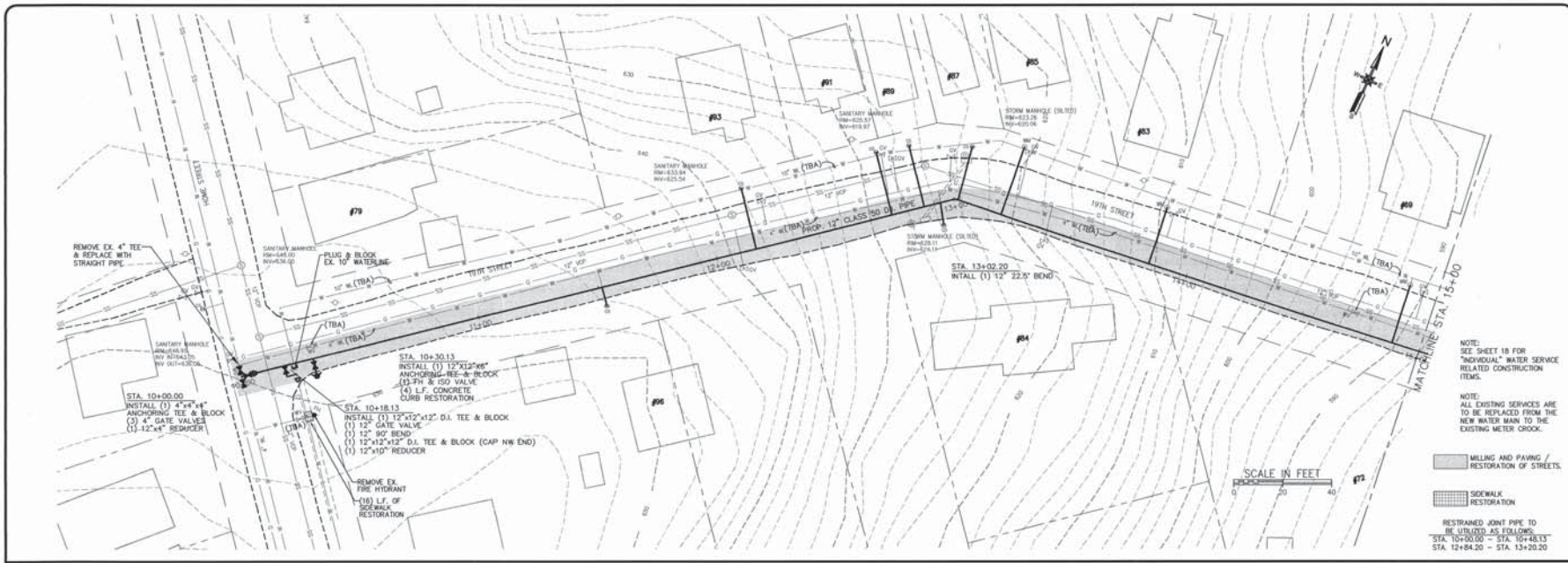
NORTHERN KENTUCKY
WATER DISTRICT
2835 CRESCENT SPRINGS ROAD
DUBLANDER, KENTUCKY 41018

18TH STREET - PLAN & PROFILE
STA. 70+00 - STA. 75+14.25
Parkview Ave., Harrison Ave., 18th St., 19th St., &
Summer Hill Ave Water Main Replacement Project

M. Thompson
10/23/11



SHEET NUMBER
9

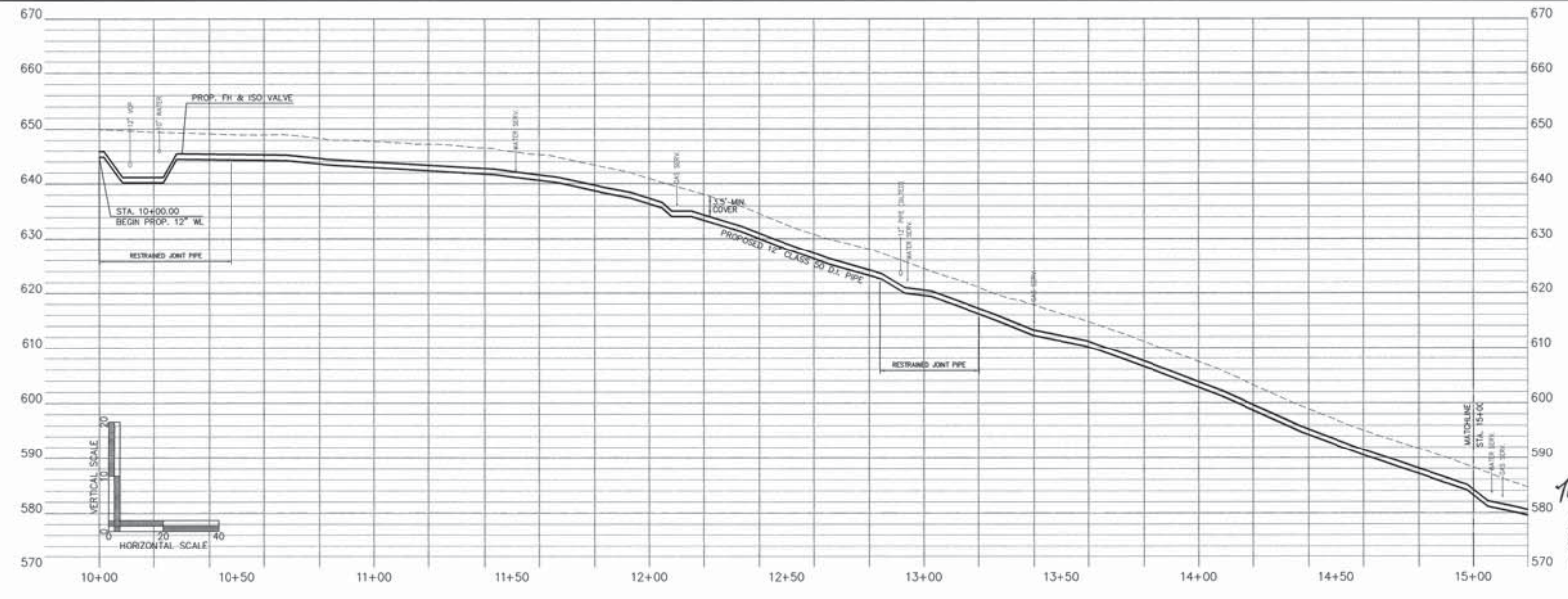


NOTE: SEE SHEET 18 FOR "INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEMS.

NOTE: ALL EXISTING SERVICES ARE TO BE REPLACED FROM THE NEW WATER MAIN TO THE EXISTING METER CROCK.

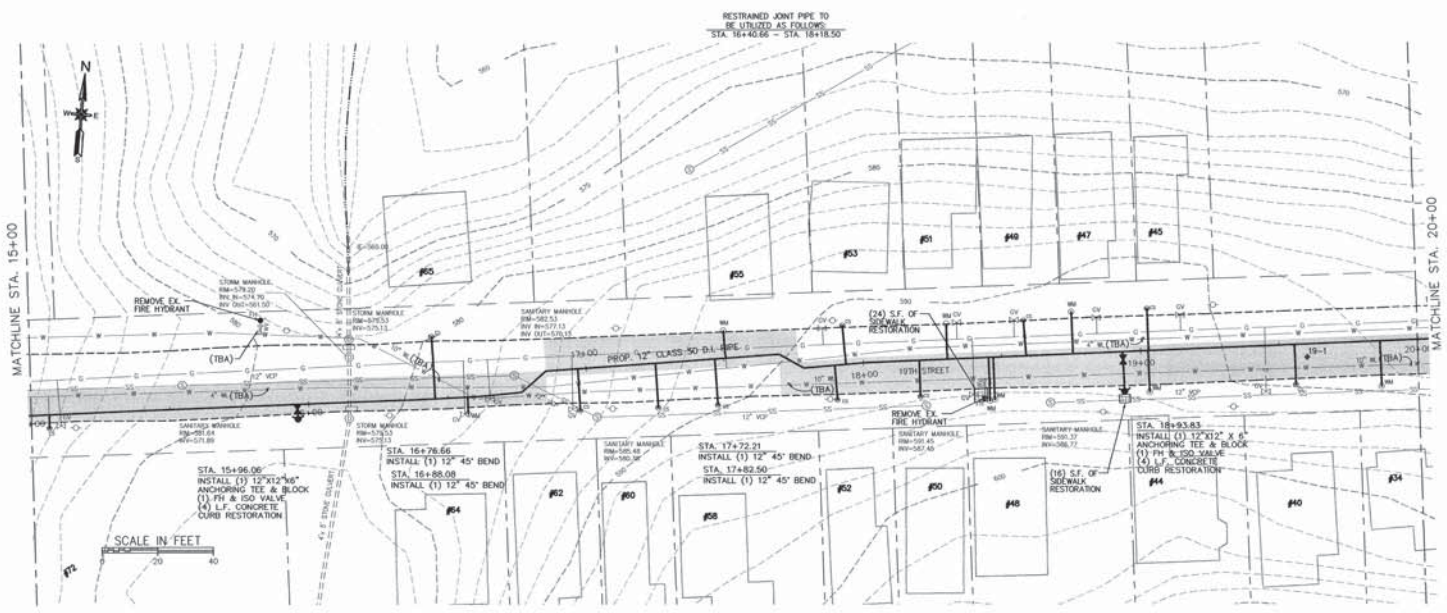
MILLING AND PAVING / RESTORATION OF STREETS.
 SIDEWALK RESTORATION

RESTRAINED JOINT PIPE TO BE UTILIZED AS FOLLOWS:
 STA. 10+40.00 - STA. 10+40.13
 STA. 12+84.20 - STA. 13+20.20



McLumpkin
 10/23/18

19TH STREET - PLAN & PROFILE STA. 10+00 - STA. 15+00 Parkview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project	NORTHERN KENTUCKY WATER DISTRICT 2815 CRESCENT SPRINGS ROAD DUBLANDER, KENTUCKY 41018	SHEET NUMBER 10
SCALE: AS SHOWN DESIGNED BY: DML, JAS DRAWN BY: DML, JAS PROJECT NO.: 2007-0339 DATE: SEPTEMBER 2011 CASE FILE NO.: 20025-2718 STREET	REVISION: 1 DATE:	183.24.1291



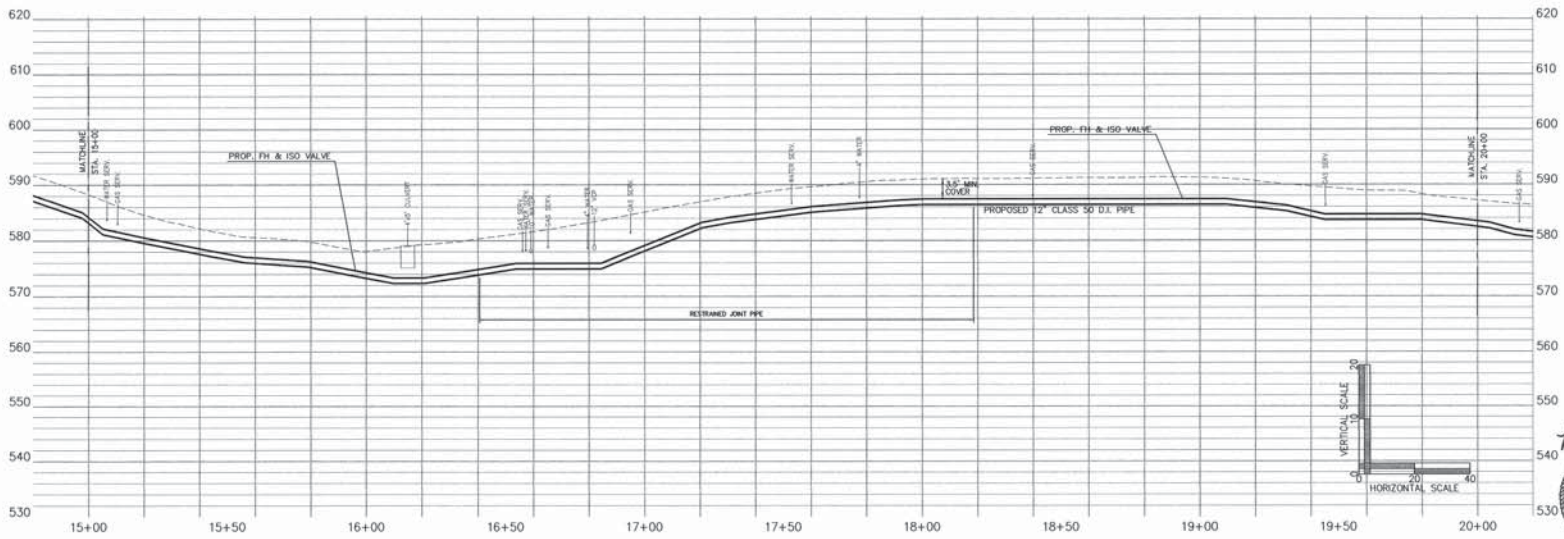
NOTE:
SEE SHEET 18 FOR
"INDIVIDUAL" WATER SERVICE
RELATED CONSTRUCTION
ITEMS.

NOTE:
ALL EXISTING SERVICES ARE
TO BE REPLACED FROM THE
NEW WATER MAIN TO THE
EXISTING METER CROCK.

■ MILLING AND PAVING /
RESTORATION OF STREETS.

■ SIDEWALK
RESTORATION

SCALE IN FEET
0 20 40



VERTICAL SCALE
0 10 20
HORIZONTAL SCALE
0 20 40

M. Sampson
10/22/11

STATE OF KENTUCKY
MOSEY
LAMPSON
ENGINEERS
INCORPORATED
COMMERCIAL ENGINEERS

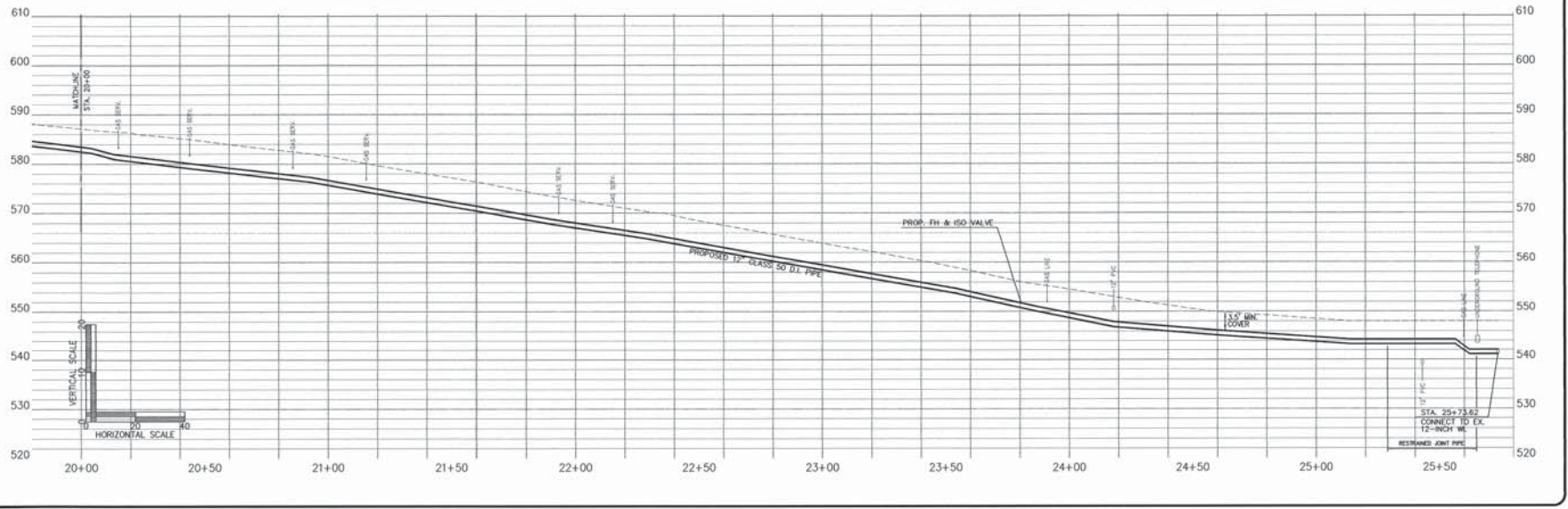
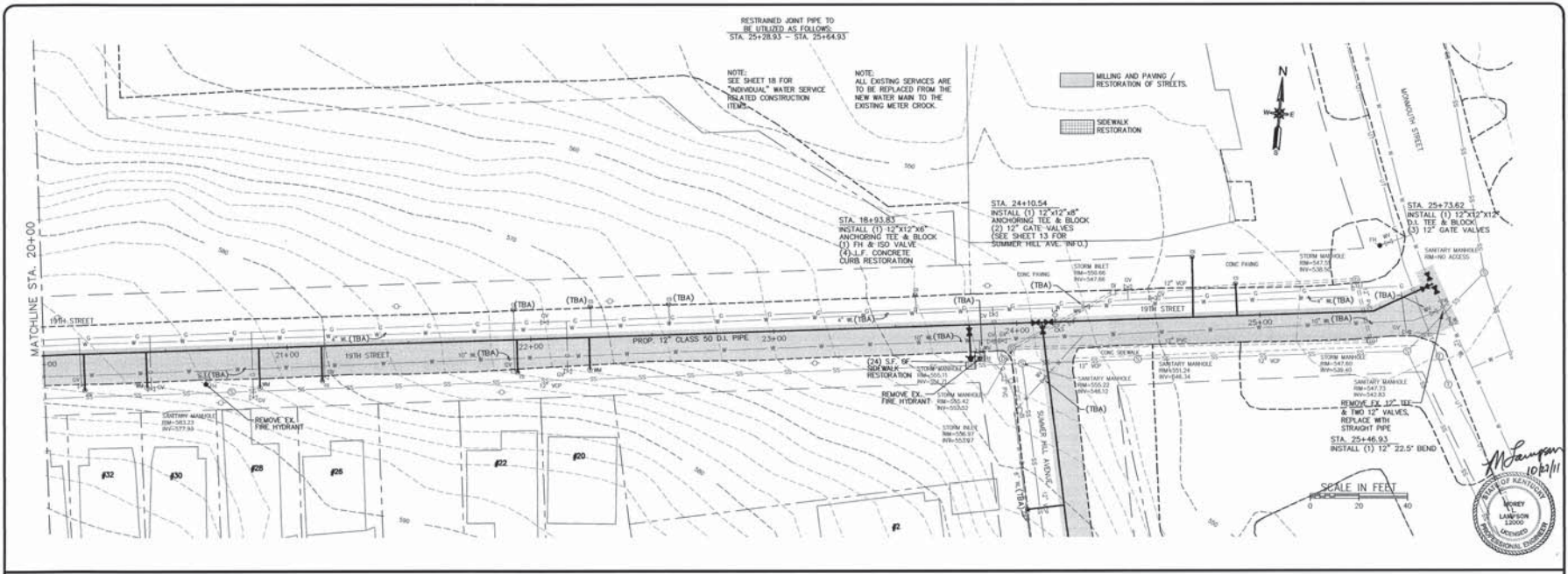
cdpengineers
2020 Smart Park Lane, Louisville KY 40208 | 502.241.7000 | 1803.241.7001

SCALE	AS SHOWN	DESIGNED BY	DOM JAY
DATE	SEPTEMBER 2011	CHECKED BY	DOM JAY
PROJECT NO.	2009-0038	PROJECT NAME	19TH STREET - PLAN & PROFILE
DATE	SEPTEMBER 2011	PROJECT LOCATION	NORTHERN KENTUCKY WATER DISTRICT
DATE	SEPTEMBER 2011	PROJECT ADDRESS	2835 CRESCENT SPRINGS ROAD
DATE	SEPTEMBER 2011	PROJECT CITY	EVANSVILLE, KENTUCKY 40128
DATE	SEPTEMBER 2011	PROJECT CLIENT	NORTHERN KENTUCKY WATER DISTRICT
DATE	SEPTEMBER 2011	PROJECT TITLE	19TH STREET - PLAN & PROFILE

19TH STREET - PLAN & PROFILE
STA. 15+00 - STA. 20+00
Parview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project

SHEET NUMBER
11

000031



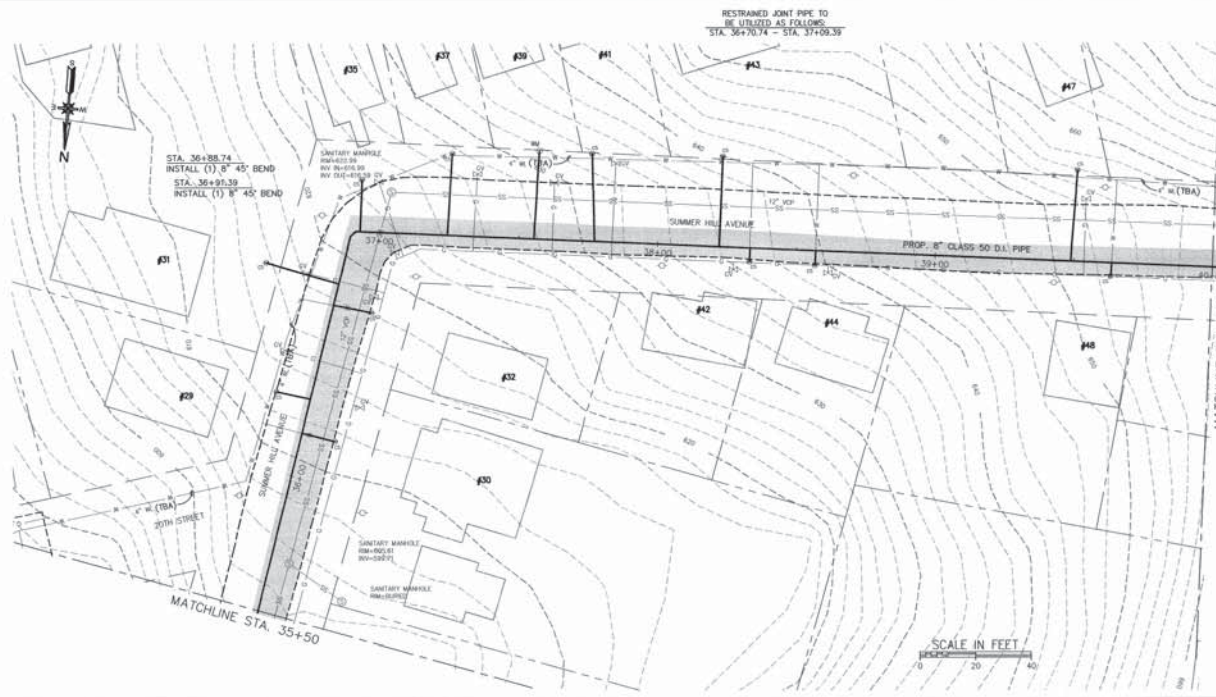
cdpengineers
2205 Brentwood Parkway Lexington KY 40508 1-800-241-3307 1-606-241-2921

SCALE	AS SHOWN	DATE
DESIGNED BY	DOA, JAR	
CHECKED BY	DOA, JAR	
PROJECT NO.	2009-0039	
DATE	SEPTEMBER 2011	
CADD FILE ID	20090324.PLT, SHEET	

19TH STREET - PLAN & PROFILE
STA. 20+00 - STA. 25+73.62
Northern Kentucky Water District
2835 Crescent Springs Road
Briarcliff, Kentucky 41018

SHEET NUMBER
12

000032

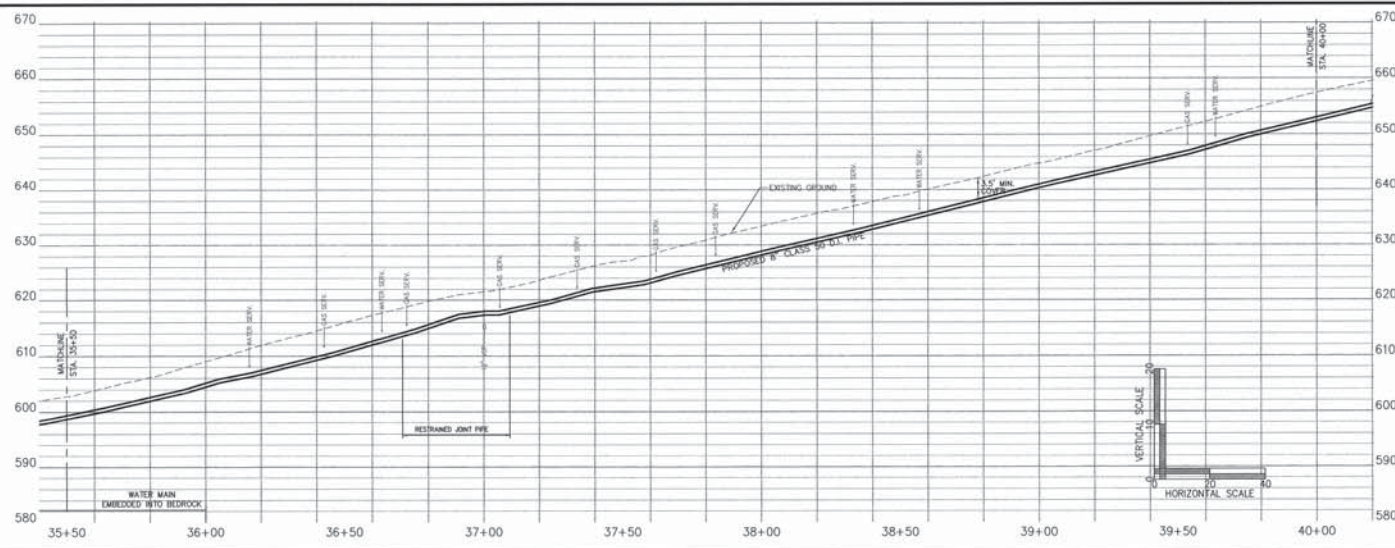


NOTE:
SEE SHEET 18 FOR
"INDIVIDUAL" WATER SERVICE
RELATED CONSTRUCTION
ITEMS.

NOTE:
ALL EXISTING SERVICES ARE
TO BE REPLACED FROM THE
NEW WATER MAIN TO THE
EXISTING METER CROCK.

■ MILLING AND PAVING /
RESTORATION OF STREETS.

▨ SIDEWALK
RESTORATION



M. Lampson
10/6/11

MOREY
LAMPSON
12500
PROFESSIONAL ENGINEER

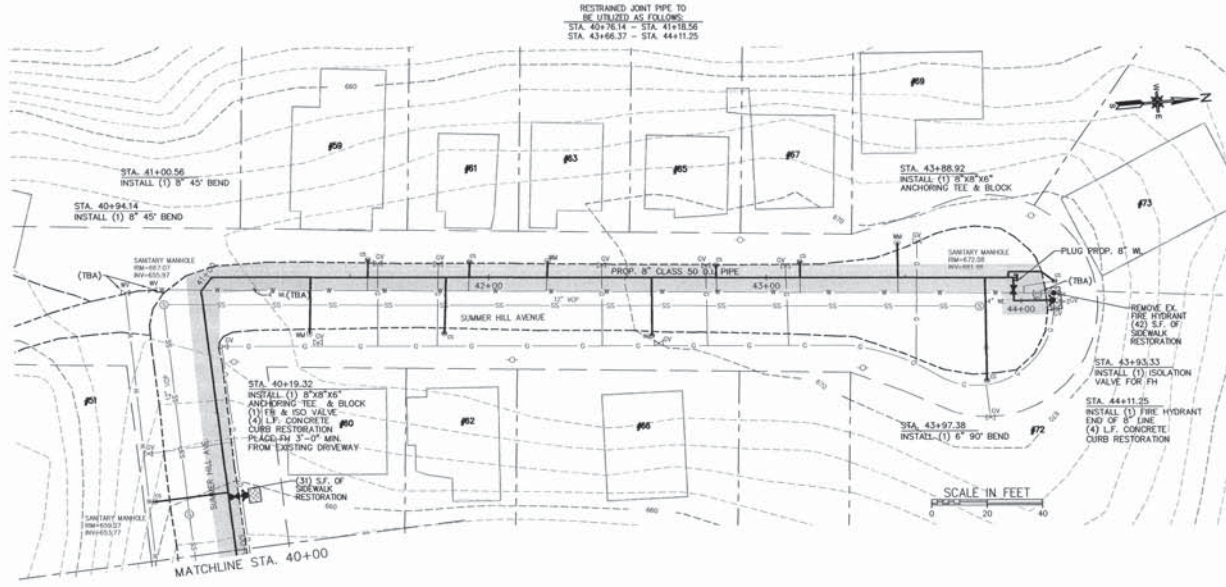
cdpengineers
2000 Brent Park Lane Lexington KY 40505 1-888-241-2507 FAX 606-241-2501

SCALE	AS SHOWN	DESIGNED BY	DATE
DRAWN BY	PROJECT NO.	REVISION	BY
DATE	DATE	DATE	DATE
CADD USER ID	000000000000000000		

NORTHERN KENTUCKY
WATER DISTRICT
2835 CRESCENT SPRINGS ROAD
FIRLANDER, KENTUCKY 41018

SUMMER HILL AVENUE – PLAN & PROFILE
STA. 35+50 – STA. 40+00
Parkview Ave., Harrison Ave., 18th St., 19th St., &
Summer Hill Ave Water Main Replacement Project

SHEET NUMBER
14



RESTRAINED JOINT PIPE TO BE UTILIZED AS FOLLOWS:
 STA. 40+78.14 - STA. 41+18.56
 STA. 43+68.37 - STA. 44+11.25

NOTE:
 SEE SHEET 18 FOR "INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEMS.
 ALL EXISTING SERVICES ARE TO BE REPLACED FROM THE NEW WATER MAIN TO THE EXISTING METER CROCK.

- MILLING AND PAVING / RESTORATION OF STREETS.
- SIDEWALK RESTORATION

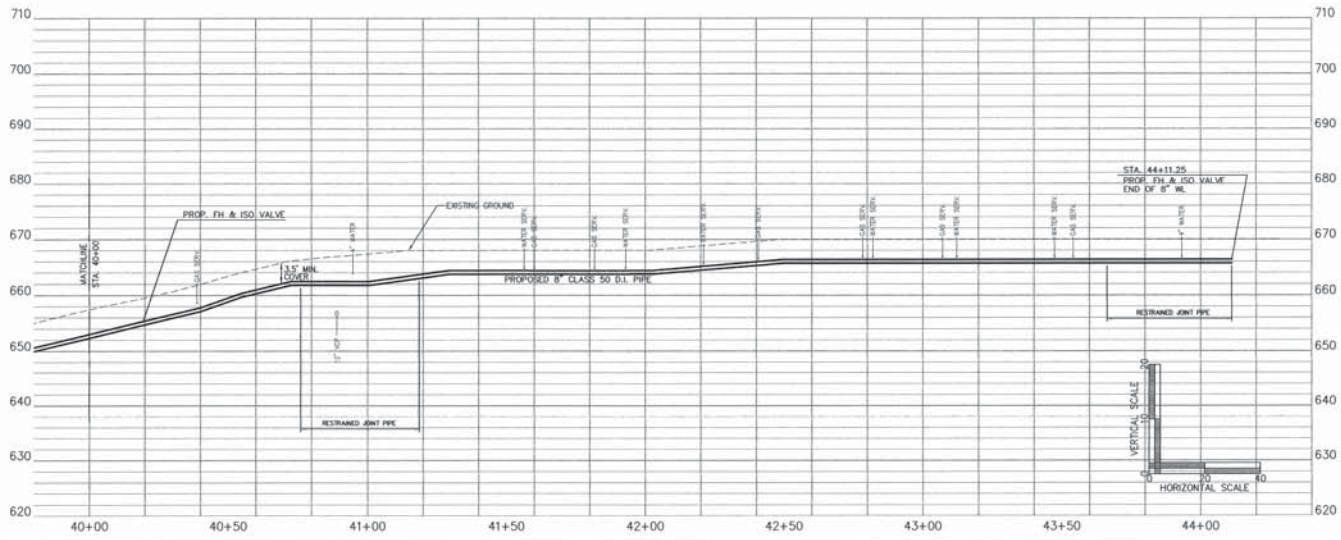


3200 Sasser Pkwy Ladangon NY 4088 | 888.244.7300 | 888.244.7301

SCALE	AS SHOWN	SECTION	REV.	DATE
DESIGNED BY	COL JAS			
DRAWN BY	COL JAS			
CHECKED BY	COL JAS			
PROJECT NO.	2009-0032			
DATE	SEPTEMBER 2011			
CAD FILE	200909-200909-0032			

NORTHERN KENTUCKY
 WATER DISTRICT
 2835 PRESIDENT SPRINGS ROAD
 ERLANGER, KENTUCKY 41018

SUMMER HILL AVENUE - PLAN & PROFILE
STA. 40+00 - STA. 44+10.02
 Parkview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project

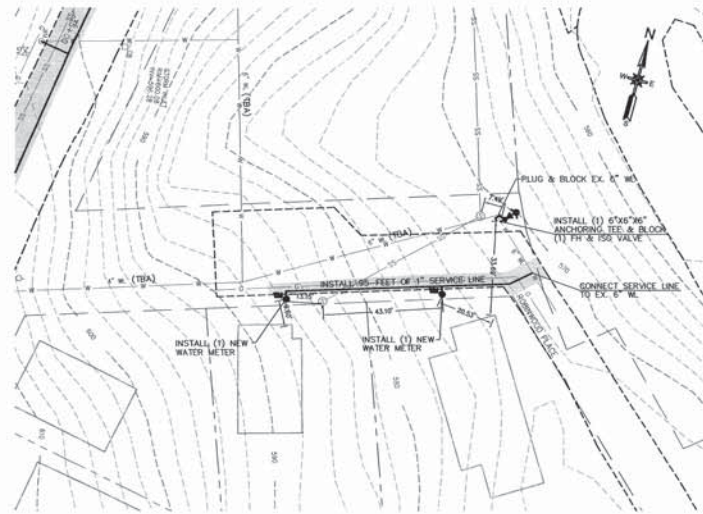


SHEET NUMBER
 15

000035

NOTE:
SEE SHEET 18 FOR
"INDIVIDUAL" WATER SERVICE
RELATED CONSTRUCTION
ITEMS.

MILLING AND PAVING /
RESTORATION OF STREETS.



SCALE IN FEET
0 20 40

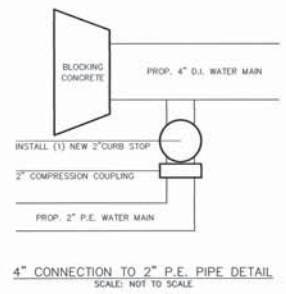
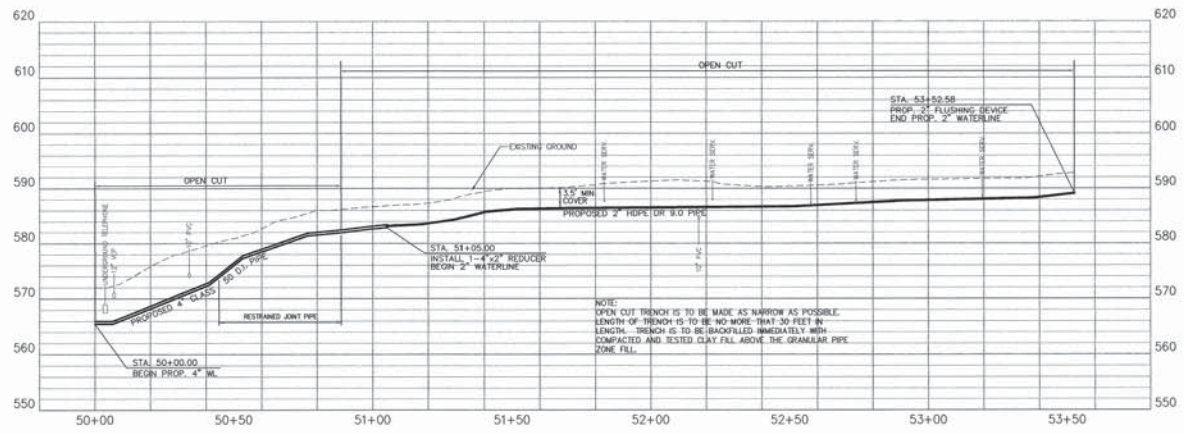
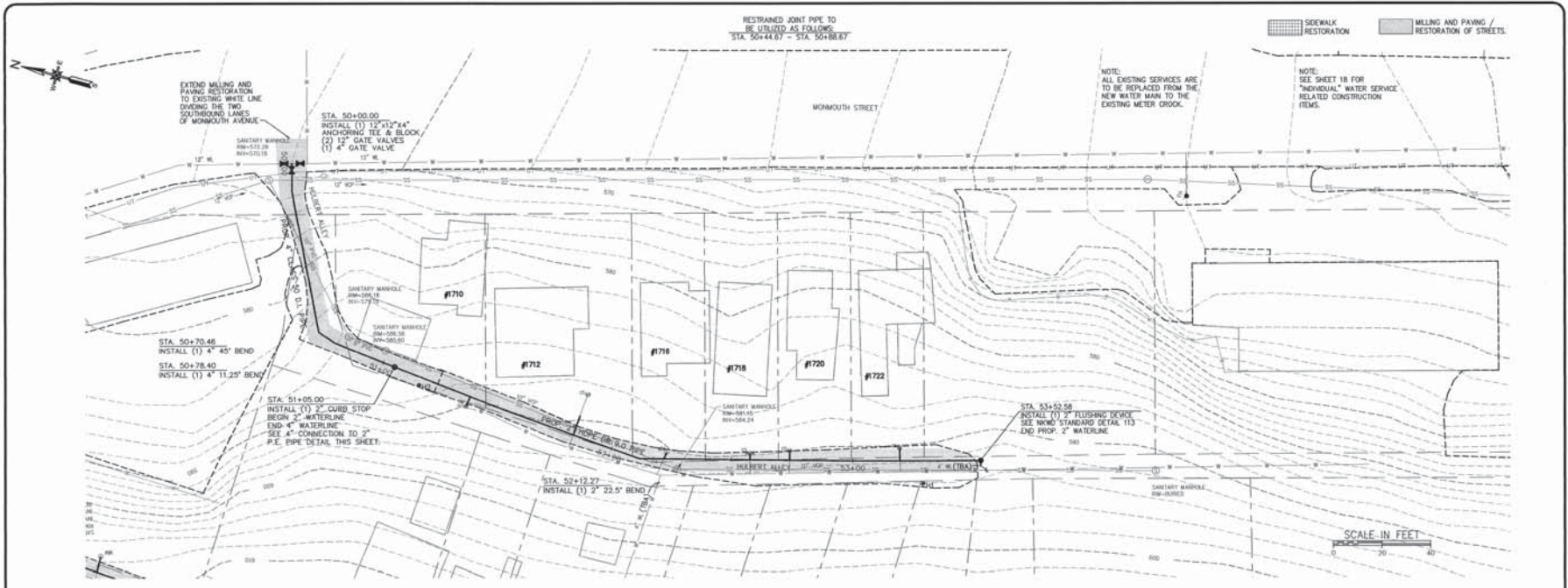


SCALE	AS SHOWN	BY	DATE
DESIGNED BY	DOM JAK		
DRAWN BY	DOM JAK		
PROJECT NO.	2009-0339		
DATE	SEPTEMBER 2011		
CAD FILE	01_091013P_2011.rvt		

NORTHERN KENTUCKY
WATER DISTRICT
2835 CRESCENT SPRINGS ROAD
DUBLANDER, KENTUCKY 41018

20th STREET
PLAN VIEW
Parkview Ave., Harrison Ave., 18th St., 19th St., &
Summer Hill Ave Water Main Replacement Project

SHEET NUMBER
16



M. Jamison 10/23/11

STATE OF KENTUCKY
MONEY
LANDS
20000
PROFESSIONAL ENGINEER

cdpengineers
3220 Bear Pond Lane, Lexington, KY 40508 | 606.851.2412 | FAX 606.241.2921

SCALE	AS SHOWN	DRAWN BY	DATE
DESIGNED BY	DATE		
CHECKED BY	DATE		
PROJECT NO.	DATE		
DATE	DATE		
DATE	DATE		

NORTHERN KENTUCKY WATER DISTRICT
2833 OREGON SPRINGS ROAD
ORANGE, KENTUCKY 4108

HILBERT ALLEY - PLAN & PROFILE
STA. 50+00 - STA. 53+52.58
Parkview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project

SHEET NUMBER
17

- PARKVIEW AVENUE -

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULE

SPECIFICATION SECTION	S.F. CONC. RESTORATION	S.F. CONC. SIDE WALK RESTORATION	L.F. CONC. CURB RESTORATION	SERVING HOUSE NUMBER	SHEET NUMBER	REMARKS
1				#2	5	
1			16	#4	5	
				#104	5	#104 ON MONMOUTH ST.
1				#7	5	
1				#9	5	
1				#11	4	
1				#15	4	
1				#17	4	
1				#19	4	
1			16	#20	4	
1				#21	4	
1				#22	4	
1				#23	4	IN FRONT OF HOUSE #21
1				#24	4	
1				#25	4	
1				#27	4	
1				#28	4	
1				#29	4	
1				#31	4	
1				#32	4	
1				#33	4	
1				#34	4	
1				#37	4	
1				#38	4	
2				#40	4	
1				#44	3	
1				#46	3	
1				#47	3	
1			16	#53	3	
1				#55	3	
1				#57	3	
1				#59	3	
1			32	#61	3	
1				#63	3	
1			1	#64	3	
1			16	#65	3	
1				#67	3	
1				#69	3	
1			16	#61	3	#5 17TH ST. (OBROD)

- HARRISON AVENUE -

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULE

SPECIFICATION SECTION	S.F. CONC. RESTORATION	S.F. CONC. SIDE WALK RESTORATION	L.F. CONC. CURB RESTORATION	SERVING HOUSE NUMBER	SHEET NUMBER	REMARKS
1				#1740	6	
1				#1736	6	
1			16	#1730	6	
1				#1726	6	
1			16	#1722	6	
1				N/A	6	SOUTH SIDE OF #1725
1				#1725	6	

- HULBERT ALLEY -

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULE

SPECIFICATION SECTION	S.F. CONC. RESTORATION	S.F. CONC. SIDE WALK RESTORATION	L.F. CONC. CURB RESTORATION	SERVING HOUSE NUMBER	SHEET NUMBER	REMARKS
1				#1710	17	
1				#1712	17	
1				#1716	17	
1				#1718	17	IN PAVEMENT
1				#1720	17	
1				#1722	17	

- 18TH STREET -

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULE

SPECIFICATION SECTION	S.F. CONC. RESTORATION	S.F. CONC. SIDE WALK RESTORATION	L.F. CONC. CURB RESTORATION	SERVING HOUSE NUMBER	SHEET NUMBER	REMARKS
1			16	#1800	9	#1800 MONMOUTH ST.
1			16	#180	8	
1			16	#18	8	
1				#39	8	
1				#40	8	
1				#41	8	
1			16	#42	8	
1				#43	8	
1			16	#44	8	
1				#45	8	
1				#47	8	
1				#49	8	
1			32	#50	8	
1				#54	8	
1				#56	8	
1				#60	8	
1			2	#61	8	
1				#62	7	
1			1	#67	8	
1				#71	7	
1				#72	7	
1				#74	7	
1				#76	7	
1				#77	7	
1				#78	7	
1				#81	7	
1			16	#99	7	#99 MAIN STREET WEST OF #82
1				N/A	7	

- 19TH STREET -

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULE

SPECIFICATION SECTION	S.F. CONC. RESTORATION	S.F. CONC. SIDE WALK RESTORATION	L.F. CONC. CURB RESTORATION	SERVING HOUSE NUMBER	SHEET NUMBER	REMARKS
1				#190	12	#190 MONMOUTH ST.
1		4	16	N/A	12	NORTH SIDE OF STREET
1				#22	12	
1				#26	12	
1				#28	12	
1				#30	12	
1				#32	12	
1				#34	11	
1				#40	11	
1				#44	11	
1				#45	11	
1				#47	11	
2				#48	11	
1				#49	11	
1				#50	11	
1				#51	11	
1				#52	11	
1				#53	11	
1				#55	11	
1				#58	11	
1				#60	11	
1				#62	11	
1				#64	11	
1				#65	11	
1				#69	10	
1				#72	11	
1			16	#83	10	
1				#84	10	
1				#85	10	
1			16	#87	10	
1				#89	10	
1				#91	10	
1				#93	10	
1				#96	10	

- SUMMER HILL AVENUE -

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULE

SPECIFICATION SECTION	S.F. CONC. RESTORATION	S.F. CONC. SIDE WALK RESTORATION	L.F. CONC. CURB RESTORATION	SERVING HOUSE NUMBER	SHEET NUMBER	REMARKS
1				#6	13	
1				#8	13	
1			32	#5	13	SEE NOTE 1
1			16	#12	13	
1				#22	13	
1				#24	13	
1				#29	14	
1				#30	14	
1				#31	14	
1				#32	14	
1				#35	14	
1				#37	14	
1				#39	14	
1				#41	14	
1				#42	14	
1				#43	14	
1				#44	14	
1				#47	14	
1			16	#48	14	
1				#51	15	
1				#59	15	
1				#60	15	
1			16	#61	15	
1				#62	15	
1				#63	15	
1				#65	15	
1				#66	15	
1				#67	15	
1				#69	15	
1				#72	15	
1			16	#73	15	

NOTE: 1. PLACE NEW WATER METER IN CONCRETE DRIVEWAY 2' FROM THE CURB.

- 20TH STREET -

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULE

SPECIFICATION SECTION	S.F. CONC. RESTORATION	S.F. CONC. SIDE WALK RESTORATION	L.F. CONC. CURB RESTORATION	SERVING HOUSE NUMBER	SHEET NUMBER	REMARKS
1				#6	16	
1				N/A	16	EAST OF #6

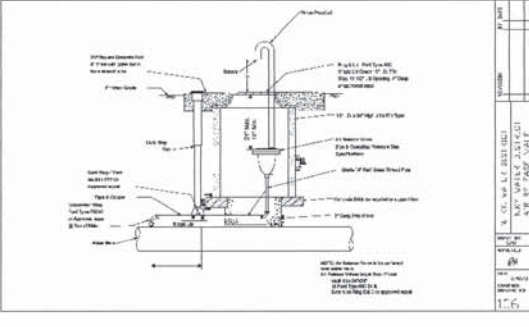
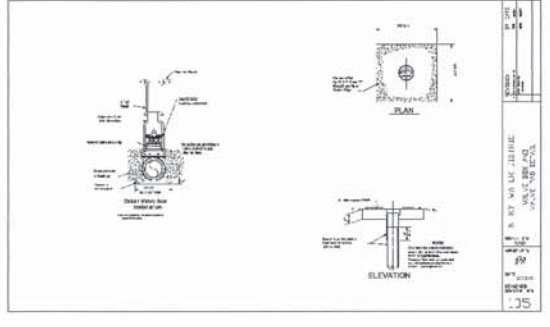
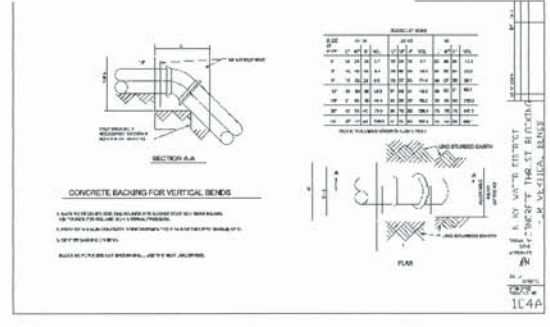
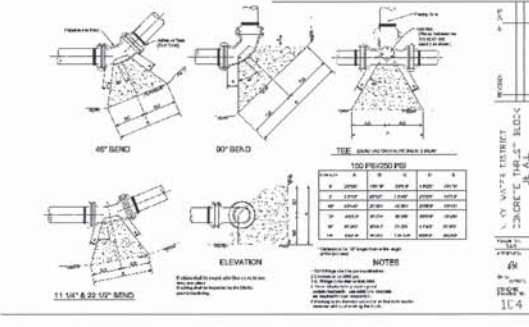
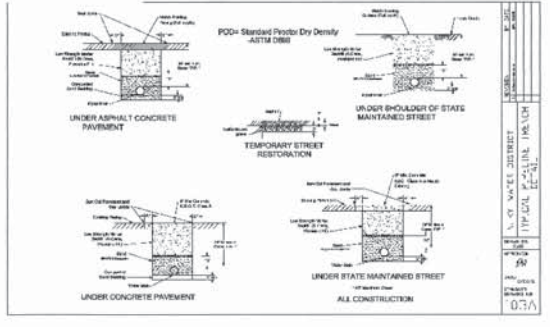
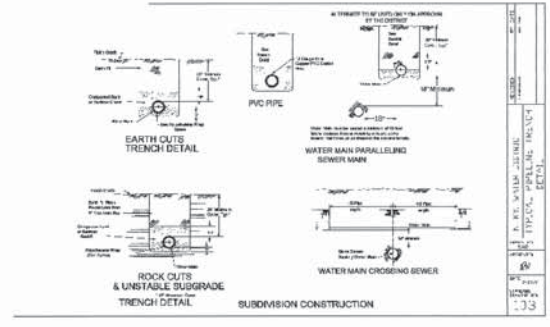
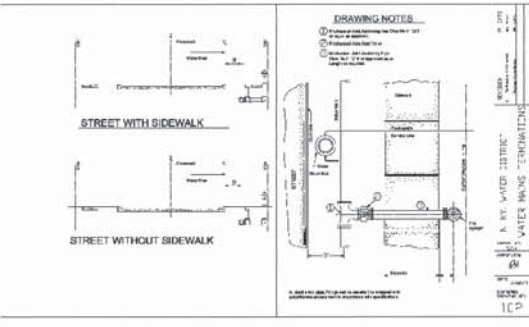
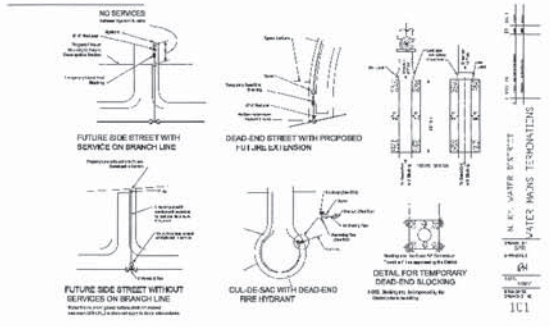


SCALE	AS SHOWN	REVISION	E	DATE
DESIGNED BY	JAS			
CHECKED BY	JAN			
PROJECT NO.	2009-0338			
SHEET NO.	1			
DATE	SEPTEMBER 2011			
DRAWN BY	CDP			

NORTHERN KENTUCKY WATER DISTRICT
2835 CRESCENT SPRINGS ROAD
DUBLANDER, KENTUCKY 41018

"INDIVIDUAL" WATER SERVICE RELATED CONSTRUCTION ITEM SCHEDULES
Parkview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project





LATEST NORTHERN KENTUCKY WATER DISTRICT STANDARD DRAWINGS CAN BE OBTAINED FROM www.nkywater.org

cdpengineers
 2005 Board Point Lane, Louisville, KY 40081 502.261.2900 1.800.264.2901

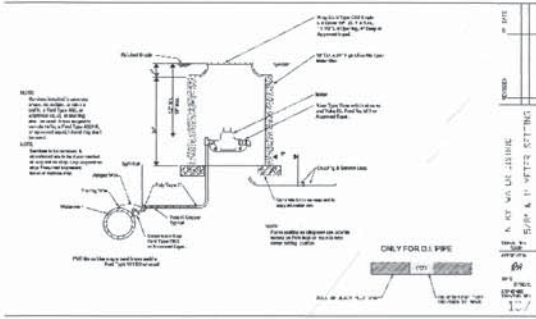
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DESIGNED BY	JAS			
CHECKED BY	JAS			
PROJECT NO.	2009-2039			
DATE	SEPTEMBER 2011			
DRAWN DATE BY	09/23/11 JAS			

NORTHERN KENTUCKY WATER DISTRICT
 WATER DISTRICT
 3833 CRESCENT SPRINGS ROAD
 DUBLAND, KENTUCKY 41018

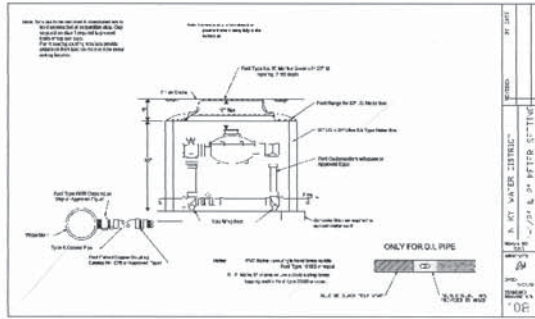
NORTHERN KENTUCKY WATER DISTRICT
 STANDARD DRAWINGS
 Parkview Ave., Harrison Ave., 18th St., &
 Summer Hill Ave Water Main Replacement Project

SHEET NUMBER
 19

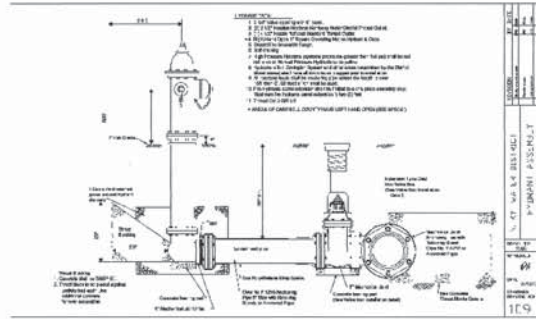
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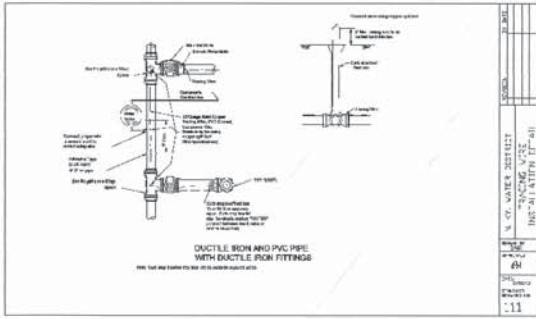
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DESIGNED BY	JAS
DRAWN BY	JAS
PROJECT NO.	2009-0039
DATE	SEPTEMBER 2011
SCALE SHEET	SDS-335-010



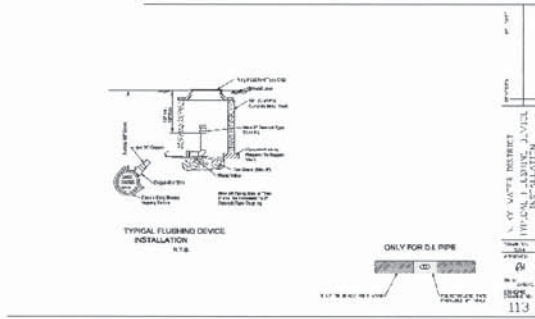
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DESIGNED BY	JAS
DRAWN BY	JAS
PROJECT NO.	2009-0039
DATE	SEPTEMBER 2011
SCALE SHEET	SDS-335-010



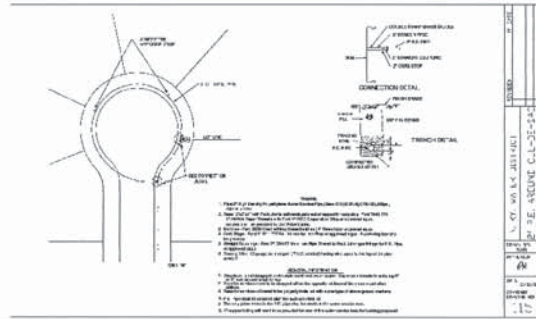
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DESIGNED BY	JAS
DRAWN BY	JAS
PROJECT NO.	2009-0039
DATE	SEPTEMBER 2011
SCALE SHEET	SDS-335-010



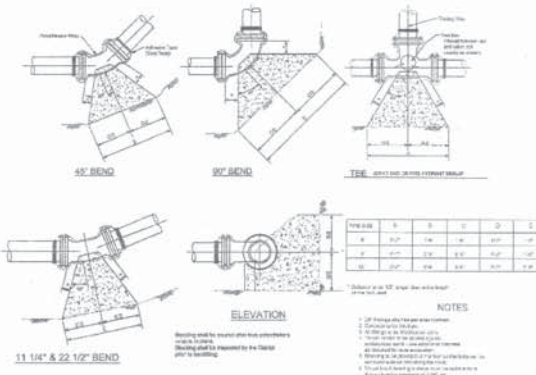
SCALE	AS SHOWN
DESIGNED BY	JAS
DRAWN BY	JAS
PROJECT NO.	2009-0039
DATE	SEPTEMBER 2011
SCALE SHEET	SDS-335-010



SCALE	AS SHOWN
DESIGNED BY	JAS
DRAWN BY	JAS
PROJECT NO.	2009-0039
DATE	SEPTEMBER 2011
SCALE SHEET	SDS-335-010



SCALE	AS SHOWN
DESIGNED BY	JAS
DRAWN BY	JAS
PROJECT NO.	2009-0039
DATE	SEPTEMBER 2011
SCALE SHEET	SDS-335-010



M. Simpson
10/27/11
MONEY LANTSON
15001
PROFESSIONAL ENGINEER

FIGURE 1 - HORIZONTAL CONCRETE THRUST BLOCK DETAILS FOR RESTRAINED JOINT PIPE

LATEST NORTHERN KENTUCKY WATER DISTRICT STANDARD DRAWINGS CAN BE OBTAINED FROM www.nkywater.org

SCALE	AS SHOWN	BY	DATE
DESIGNED BY	JAS		
DRAWN BY	JAS		
PROJECT NO.	2009-0039		
DATE	SEPTEMBER 2011		
SCALE SHEET	SDS-335-010		

NORTHERN KENTUCKY WATER DISTRICT
STANDARD DRAWINGS
Parkview Ave., Harrison Ave., 18th St., 19th St., & Summer Hill Ave Water Main Replacement Project

NORTHERN KENTUCKY WATER DISTRICT
2835 CRESCENT SPRINGS ROAD
EVANSVILLE, KENTUCKY 40318

SHEET NUMBER
20

cdpengineers

3000 Shawnee Ferry Lane, Louisville KY 40298 | 502.261.7300 | 1.800.246.7901