



Little Washington Wastewater Company
A Subsidiary of Aqua Pennsylvania, Inc.

762 West Lancaster Avenue
Bryn Mawr, PA 19010
Phone: 610.525.1400
Fax: 610.527.3929

January 25 2012

Mr. Robert L. Johnston, P.E.
Municipal Services Manager
Gilmore & Associates, Inc.
415 McFarlan Road
Suite 213
Kennett Square, PA 19348

Re: Summary Results of the Sanitary Sewer Smoke Testing

Dear Bob:

Enclosed, please find a summary report describing our findings while performing smoke testing of the sanitary sewer collection system in the Borough of Media.

As I had indicated in my letter of 10/17/2011 to Mr. Jim Jeffery and subsequent presentation to the Borough Council on 10/25/2011, the tests mainly covered the area south of Front Street and East of Edgemont to primarily look for potential cross-connection(s) with the storm sewer.

These tests were performed in the most professional, courteous and safe manner. Our customers, residents of the Borough, were very cooperative and understanding. We hope this relationship with the Borough will strengthen in the future as we move ahead in doing critical and necessary infrastructure improvements.

We look forward to working with you and Borough officials in addressing these potential areas of concern.

Please call me if you have any question.

Regards,

Saad S. Yousif

Saad S. Yousif, P.E.
Senior Engineer
Aqua America
(610) 645-1011
ssyousif@aquaamerica.com

cc: Alan Roth, Operation Manager (LWWC)
Preston Luitweiler, VP & Chief Environmental Officer (Aqua America)

Discussion

The purpose of this report is to summarize the results of smoke testing the sanitary sewer collection system in the Borough of Media, PA. The tests were conducted by Aqua Pennsylvania, Inc. during the period of December 5 through 9 of 2011.

While performing the smoke tests, multiple locations were found to be of interest:

1. Radnor and E. Jasper Intersection

On 12/5/2011, crew isolated a section of the sanitary sewer between manholes LI-140 (E. Jasper passed Manchester Ave) and LI-131 (Radnor and E. Baker). Smoke was introduced at manhole LI-132 located at the intersection of Radnor and E. Jasper near the tennis court at Barrall Community Park. All three existing inlets near manhole LI-132 were emitting smoke (see sketch and associated photos).

2. Worrall b/w Providence Rd & Alleyway Passed Vernon

On 12/6/2011, crew isolated a section of the sanitary sewer between manholes LI-124 (near Worrall & Providence Rd) and LI-110 (near Worrall & Manchester). Smoke was introduced at manhole LI-113 located at the intersection of Worrall & Vernon.

During the test, smoke was observed out of an existing storm inlet in the back of 434 E. Baltimore Pike (Worrall St side). Smoke was also observed from several vents located in pavement in the back of a number of houses (see sketch and associated photos)

3. Radnor & Worrall

On 12/6/2011, crew isolated a section of the sanitary sewer between manholes LI-110 (Worrall near Alleyway) and LI-106A (Radnor & E. Franklin). Smoke was introduced at manhole LI-106 located at the intersection of Radnor & Worrall.

During the test, smoke was observed from a vent located at the entrance of the Sunoco gas station on the Radnor St side (see sketch and associated photos).

4. Providence Rd & State St

On 12/7/2011, crew isolated a section of the sanitary sewer between manholes LI-155 (Providence Rd & State St) and LI-127 (Providence Rd & Worrall St). Smoke was introduced at manhole LI-151 located on E. Baker at the former Media Inn Lodge.

During the test, smoke was observed out of two existing storm inlet at the intersection of Providence Rd & State St north of the trolley tracks (see sketch and associated photos)

5. Edgmont St & Baltimore Pike

On 12/9/2011, crew isolated a section of the sanitary sewer between manholes LI-63 (Edgmont & E. Baker St) and LI-46 (Edgmont & Baltimore Pike). Smoke was introduced at manhole LI-63 located at the intersection of Edgmont & E. Baker.

During the test, smoke was observed out of an existing storm inlet at the intersection of Edgmont and Baltimore Pike near Bevan's Candy Shop (see sketch and associated photos)

Recommendation:

The smoke test only identified potential sources of extraneous water intrusion into the sanitary sewer. It is recommended that these storm inlets be cleaned of debris and the nearby sanitary sewer mains in question be televised in order to assess the extent of the problem in order to present solution(s) with estimated cost to rectify the problem.

In order to meet the milestone set by PADEP in the letter of 12/16/2011 (enclosed), we need to move ahead with the first step of cleaning these inlets. We request the inlet cleaning be performed by February 29, 2012. Let us know if this is an acceptable timetable for the Borough to complete this task. If desired, Aqua can use its vacuum truck and crew to perform this task at a fair cost to the Borough.



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MEDIA SANITARY SEWER COLLECTION SYSTEM SMOKE TESTING LOG

Date:	12/5/2011
Street Name:	E. Jasper, Radnor
Basin/Subarea:	Lincoln/Subarea-B
Weather Condition:	Mild 60°F
Prepared By:	SY
Photo No.	

Observations

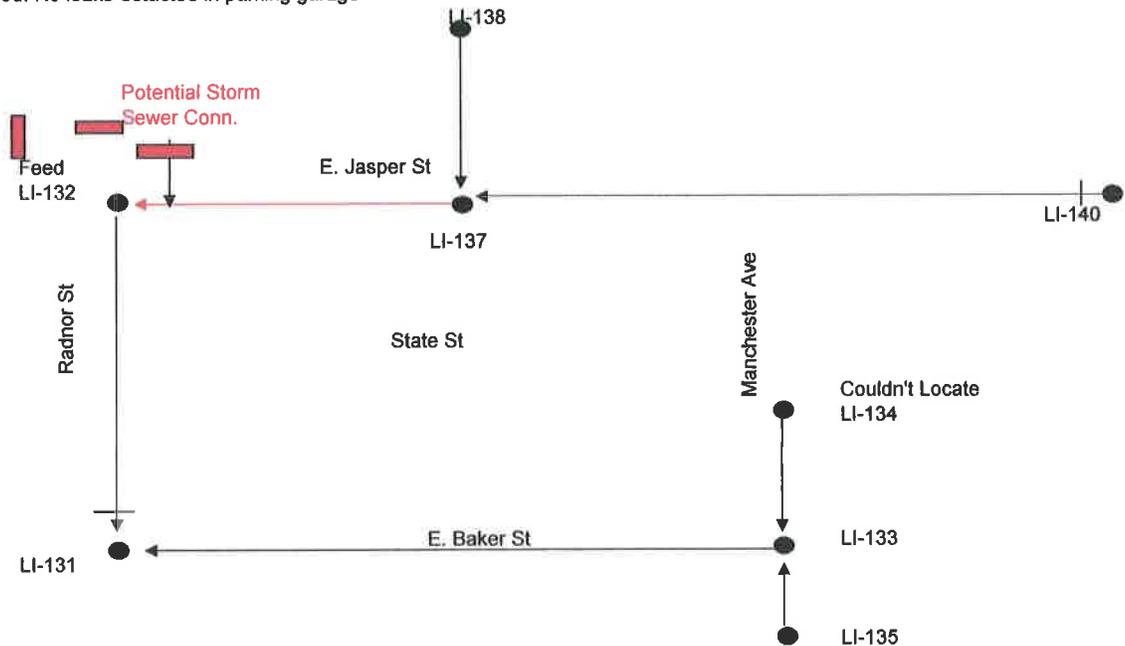
LI-132 to LI-140 : Potential cross connection w/storm. Smoke came out of 3-CBs at the intersection of Radnor & E. Jasper St (2-CB on the east side of Radnor near the white garage and 1-CB on the west side of Radnor on the park side)

LI-137 to LI-138 : Smoke came out of vents on curbside in backyard of houses #14, 16, 18, 20 Manchester Ave

Also, smoke came out of vents in backyard on E. Jasper for homes facing E. State

Notice MH LI-134, 133 on Manchester Ave indicating a tie-in along Manchester Ave & E. Jasper St contrary to the map

LI-132 to LI-131 : Good. No leaks detected in parking garage



54 Radnor Street

Exit Street View



N

Intersection of E. Jasper & Radnor
(Storm Inlets)

East Jasper Street/Radnor Street

Sanitary Manhole
L1-102

© 2011 Google
© 2011 Google



6 ft

Report a problem

39°55'05.59" N 75°23'01.58" W elev 298 ft

Eye alt 285 ft

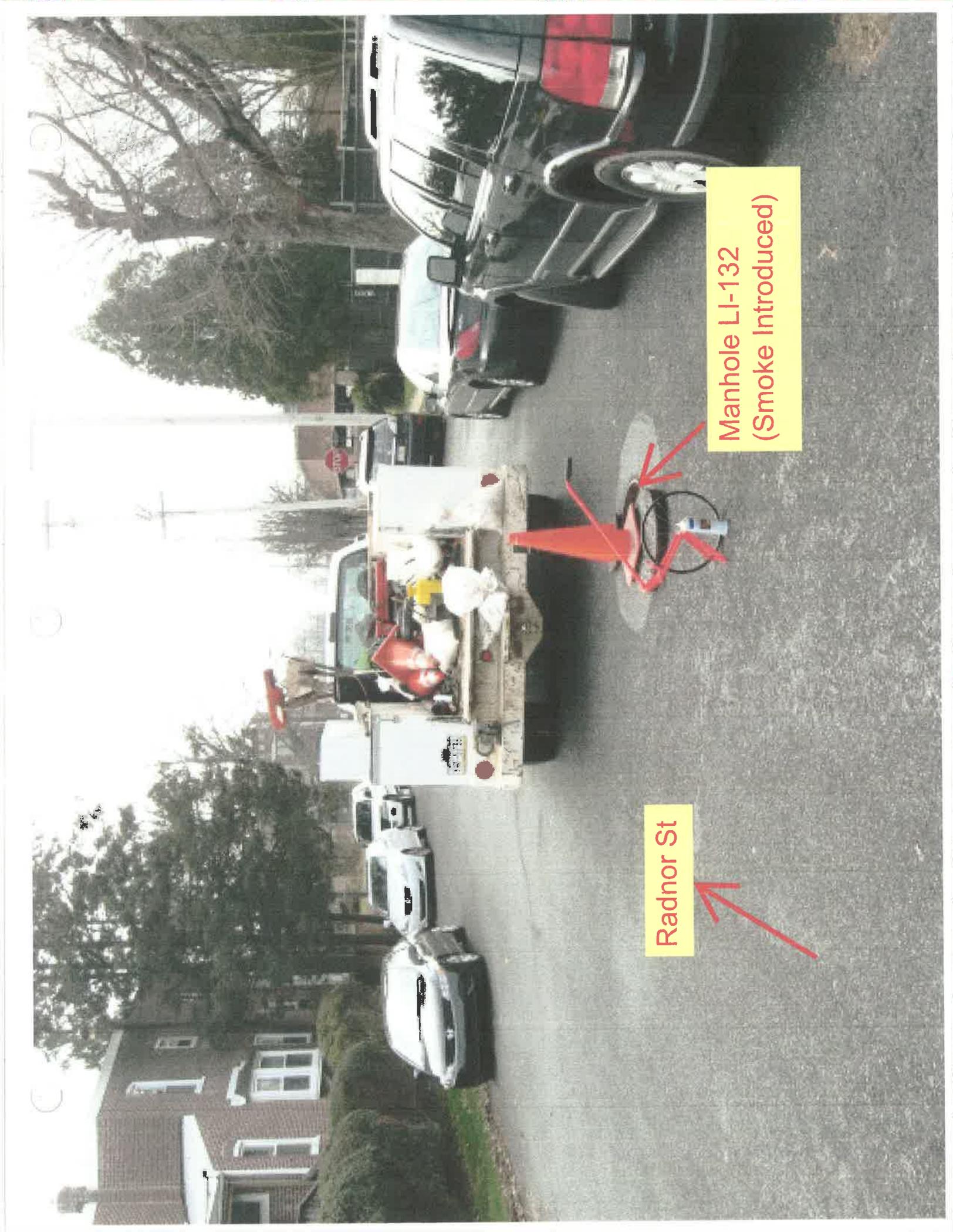
JASPER ST.





E. Jasper

Radnor St

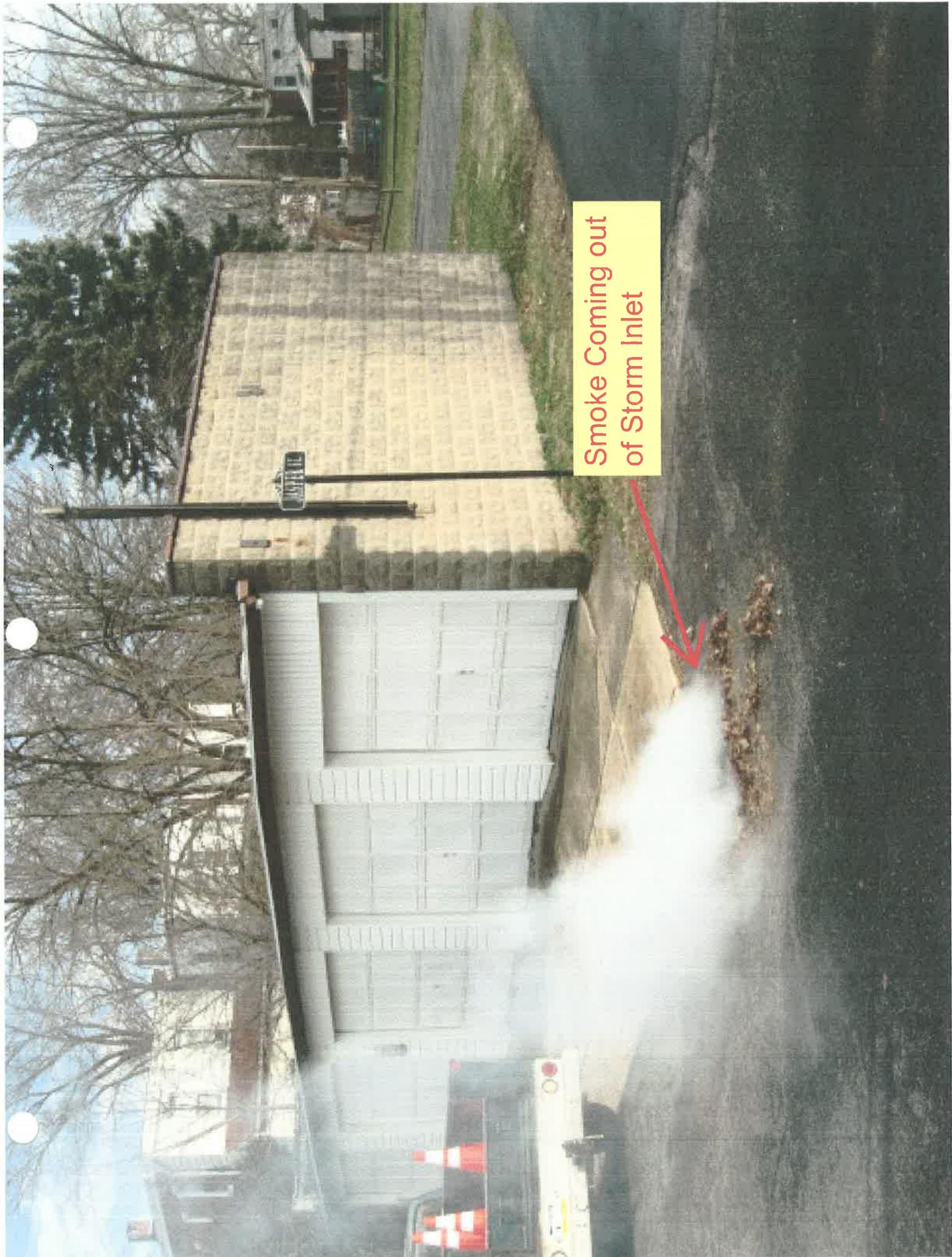


Manhole LI-132
(Smoke Introduced)

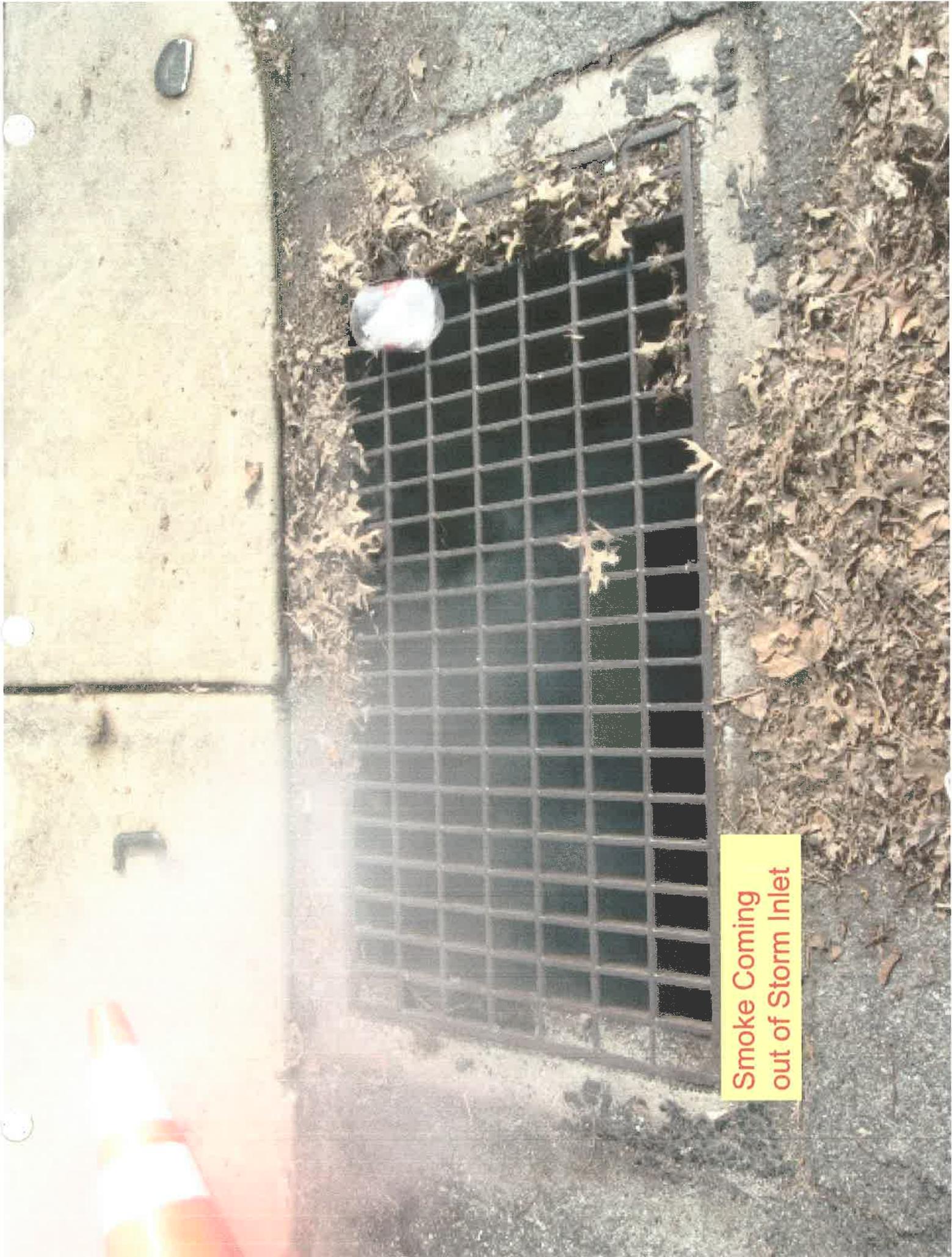
Radnor St

Barrall Community
Park





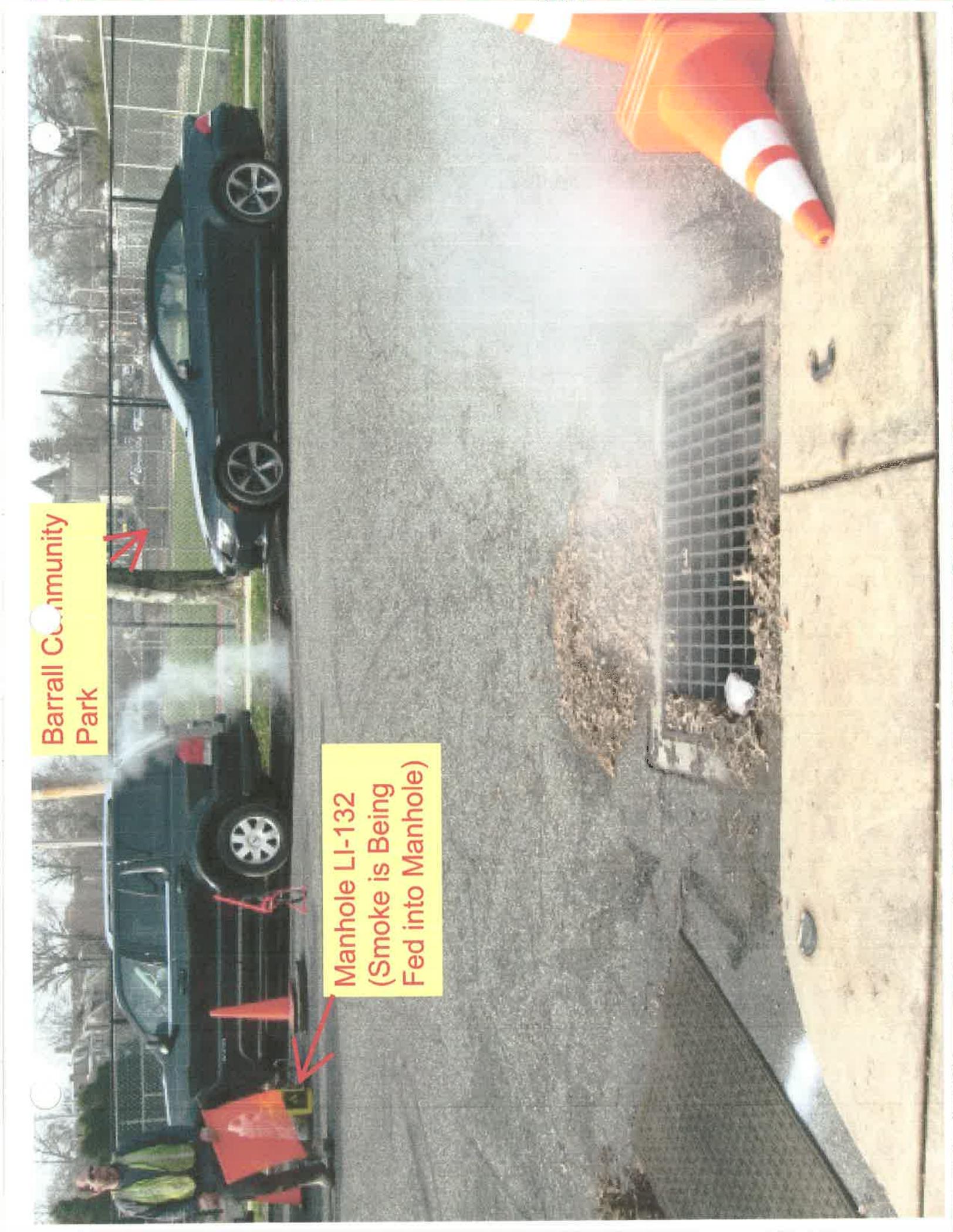
Smoke Coming out
of Storm Inlet



Smoke Coming
out of Storm Inlet

**Barrall Community
Park**

**Manhole LI-132
(Smoke is Being
Fed into Manhole)**



Barrall Community
Park



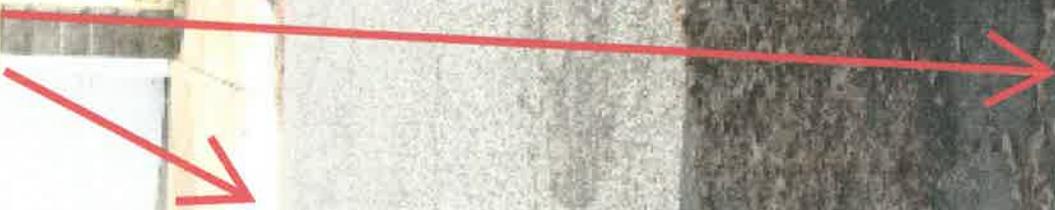
Smokin Coming
out of Storm Inlet





Smoke Coming
out of Storm Inlets

Smoke Coming out of Storm Inlets





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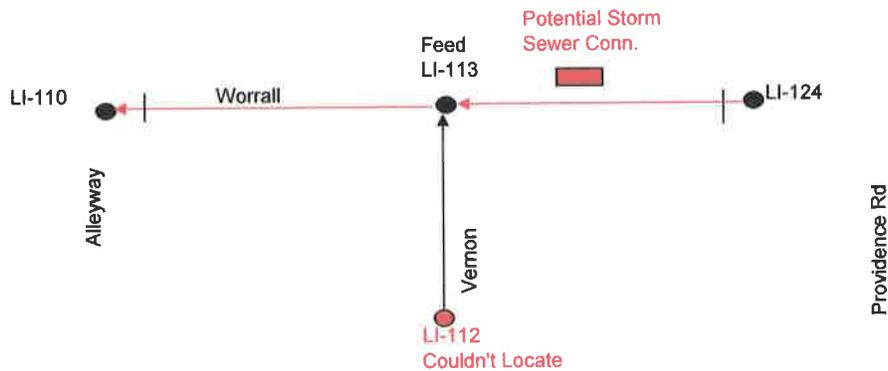
762 West Lancaster Avenue
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**MEDIA SANITARY SEWER COLLECTION SYSTEM
SMOKE TESTING LOG**

Date: 12/6/2011
Street Name: Worrall
Basin/Subarea: Lincoln/Subarea-B
Weather Condition: Overcast 60°F
Prepared By: SY
Photo No. _____

Observations

LI-124 to LI-113: Smoke came out of vent in yards
Potential of cross-connection b/w sanitary & storm as smoke came out of inlet in back of 434 E. Balt. Ave.
 Smoke came out of vent in back of 436 E. Balt. Ave
 Smoke came out of vent in back of vacant business (former political campaign bldg.)
 Smoke came out of vent in back of 422 E. Balt. Ave
 Smoke out of side of existing shed at the intersection of Worrall & Vernon (Worrall side)
 Smoke out of vent in the paved driveway of 439 E. Franklin on the Worrall St. side (needs cap)
 LI-113 to LI-110: Vent in backyard of 414 E. Balt. Ave. (Law office)
 210 Vernon St vacant house suspicious line coming down from the roof to which another line is connected coming out of the 2nd floor building extension
 Smoke out of broken vent in curbside for 215 Vernon





Vent in Back of 434
E. Balt. Pk (Worrall
St Side)



Vent in Back of 434
E. Balt. Pk (Worrall
St Side)

Vent in Back of 434
E. Balt. Pk (Worrall
St Side)





Storm Inlet in Back
of 434 E. Balt. Pk
(Worrall St Side)

Storm Inlet in Back
of 434 E. Balt. Pk
(Worrall St Side)



Storm Inlet in Back
of 434 E. Balt. Pk
(Worrall St Side)



Back of 439 E.
Franklin St (Worrall
St Side)



Back of 439 E.
Franklin St (Worrall
St Side)





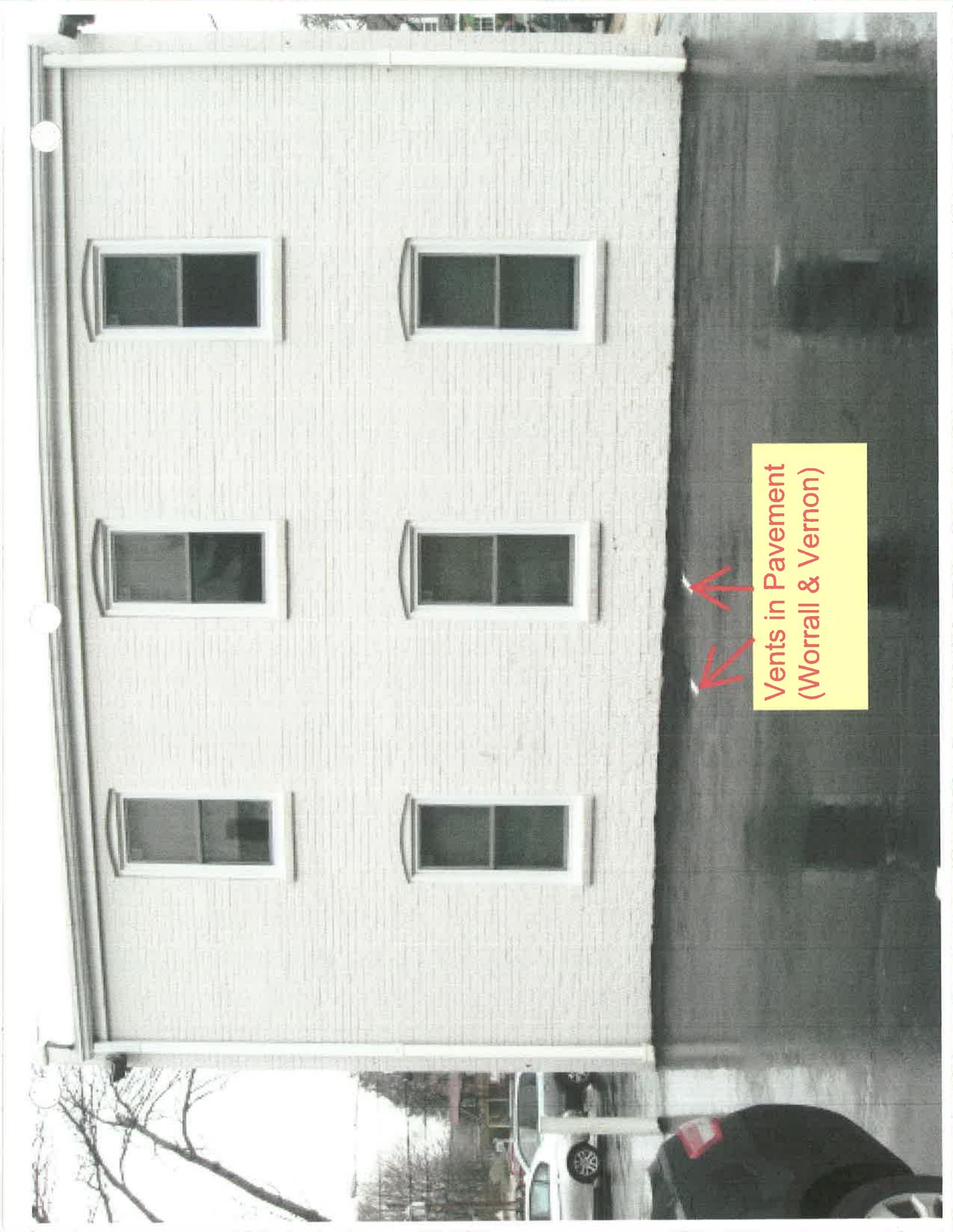
Smoke out of Vent
in Pavement
(Vacant Business)











Vents in Pavement
(Worrall & Vernon)



Vents in Pavement
(Worrall & Vernon)





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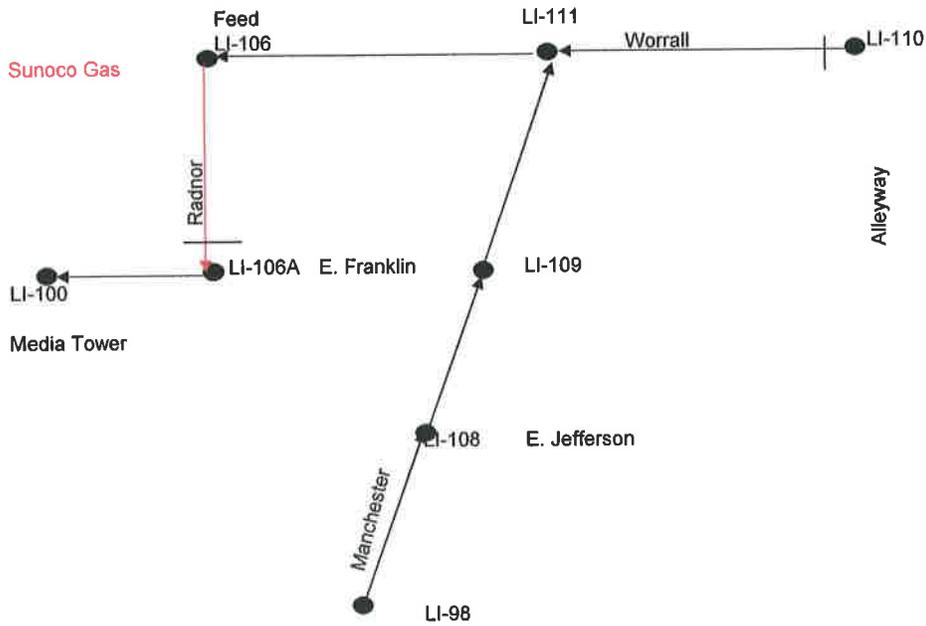
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**MEDIA SANITARY SEWER COLLECTION SYSTEM
SMOKE TESTING LOG**

Date: 12/6/2011
Street Name: Worrall, Manchester
Basin/Subarea: Lincoln/Subarea-B
Weather Condition: Light Rain 60°F
Prepared By: SY
Photo No. _____

Observations

LI-106 to LI-106A: Smoke out of vent at Sunoco Gas entrance on Radnor St
Media Tower Apts. smoke came out in grass in the median





Vent @ Entrance of
Sunoco Gas
(Radnor St Side)

Vent @ Entrance of
Sunoco Gas
(Radnor St Side)



Vent @ Entrance of
Sunoco Gas
(Radnor St Side)





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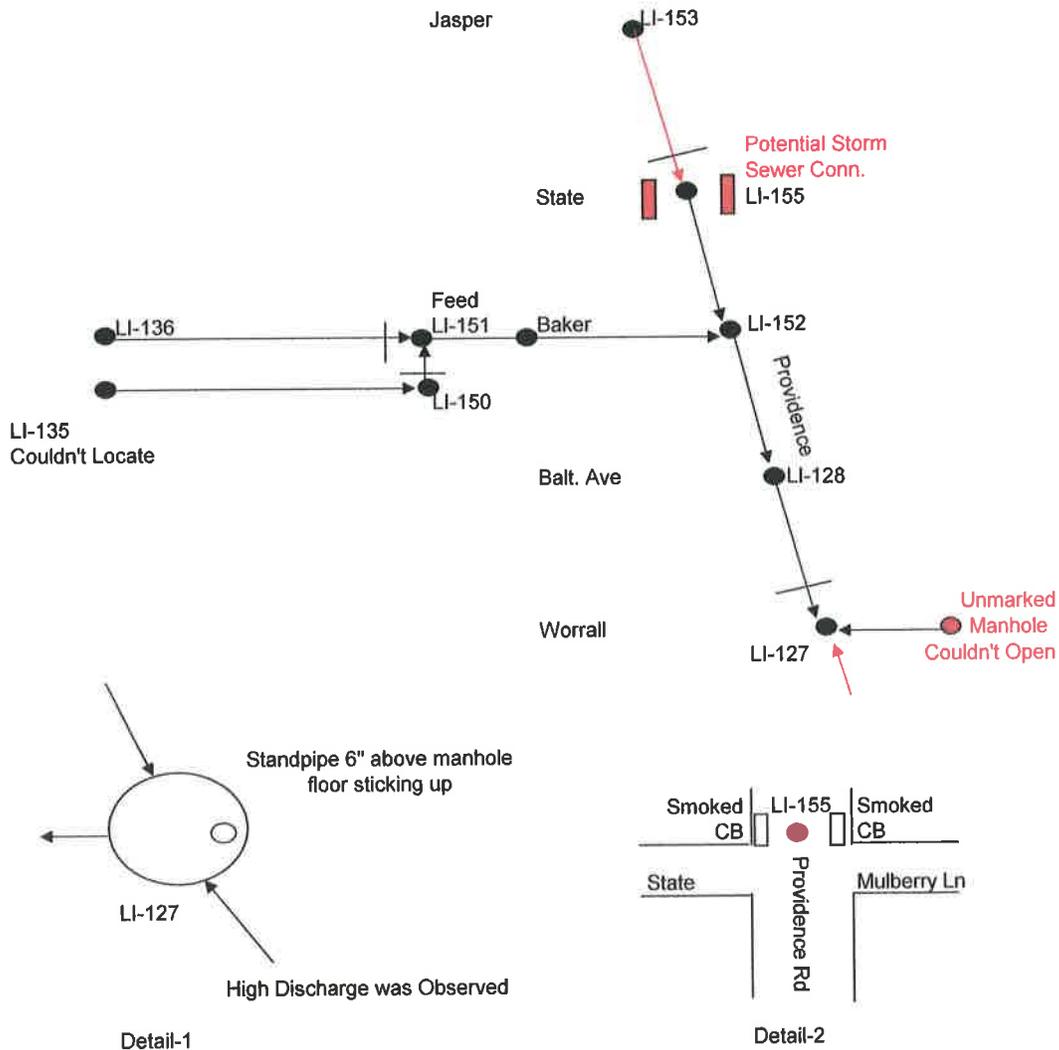
762 West Lancaster Avenue
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MEDIA SANITARY SEWER COLLECTION SYSTEM SMOKE TESTING LOG

Date: 12/7/2011
Street Name: Baker, Providence
Basin/Subarea: Lincoln/Subarea-B
Weather Condition: Heavy Rain 55°F
Prepared By: SY
Photo No. _____

Observations

LI-127 has a 6" or 8" standpipe sticking out of the manhole bottom approx. 6" above the floor and full with water (relief? See detail 1)
Potential cross connection with stormsewer at the intersection of Providence & State (See detail 2)
High Discharge was Observed coming into LI-127 coming north along Providence Rd





N Providence Rd & E State St, Media, PA 19063

Find an Intersection
of Providence Rd &
State St

Google

©2010

©2011 Google

©2011 Europa Technologies

Eye alt 1018 ft

39°55'00.50" N 75°22'51.82" W elev. 285 ft

Imagery Date: 10/7/2011

1992

173 ft

PROVIDENCE RD

E. STATE ST.



Inlet at Intersection
of Providence Rd &
State St





Inlet at Intersection
of Providence Rd &
State St

N



Inlet at Intersection
of Providence Rd &
State St

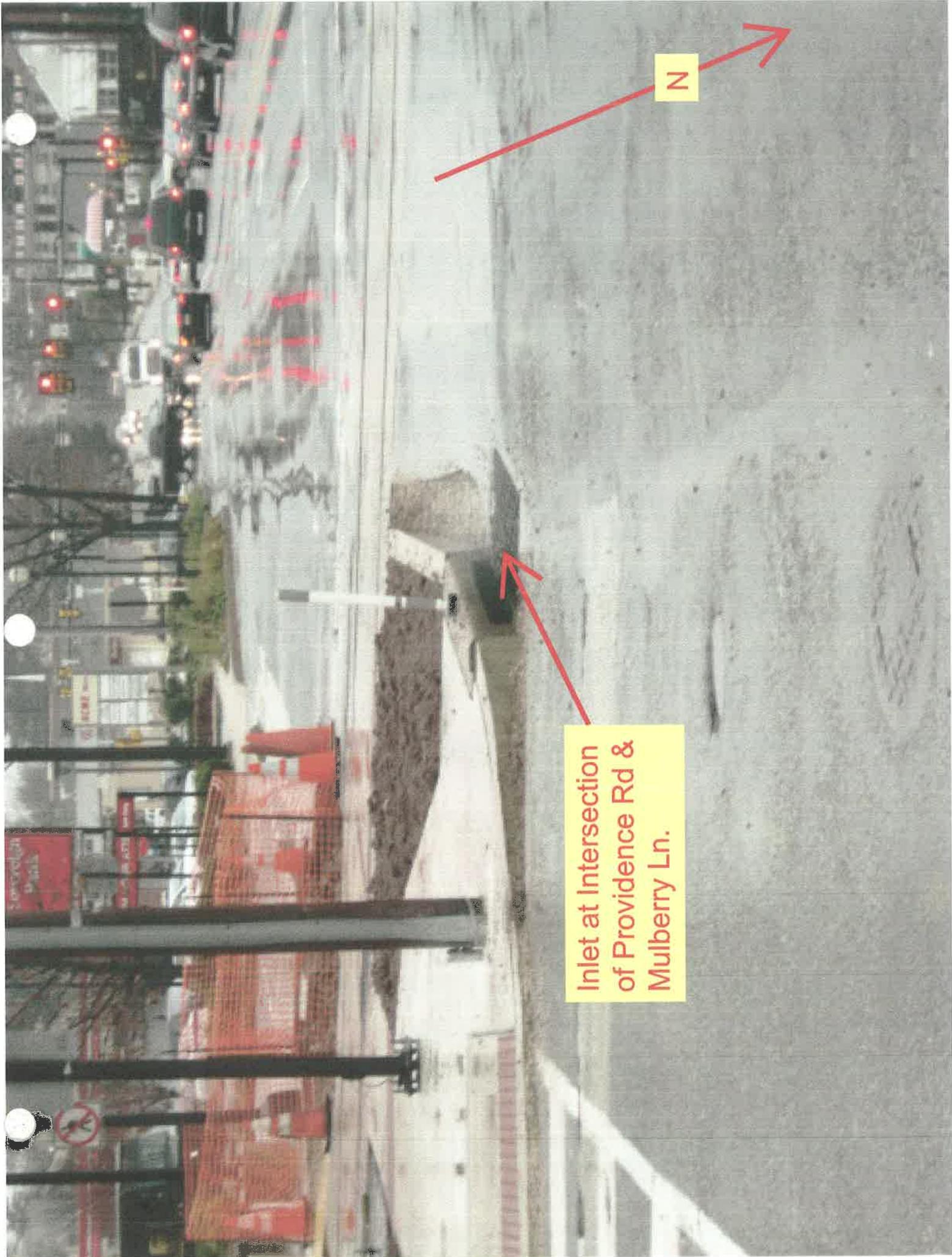
N

STOP
HERE
ON
RED

Mulberry Ln
State St

339"
349"
369"
488

72L-753



N

Inlet at Intersection
of Providence Rd &
Mulberry Ln.



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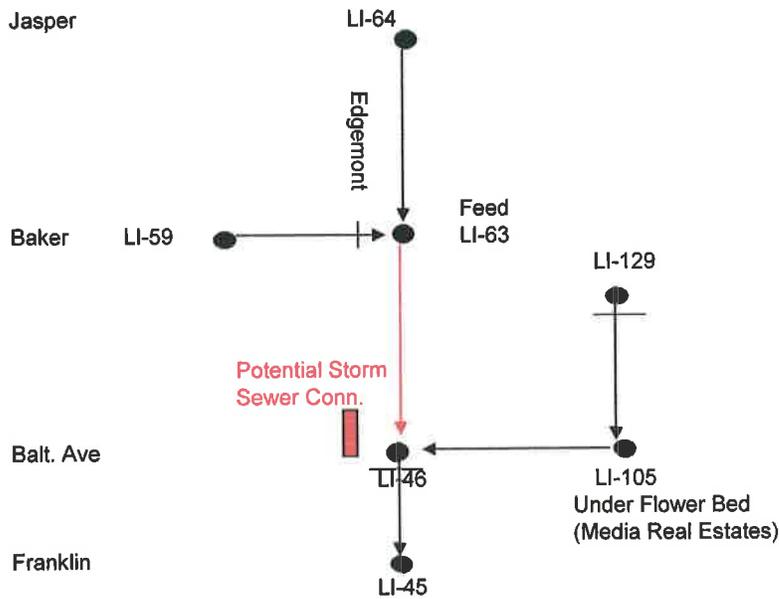
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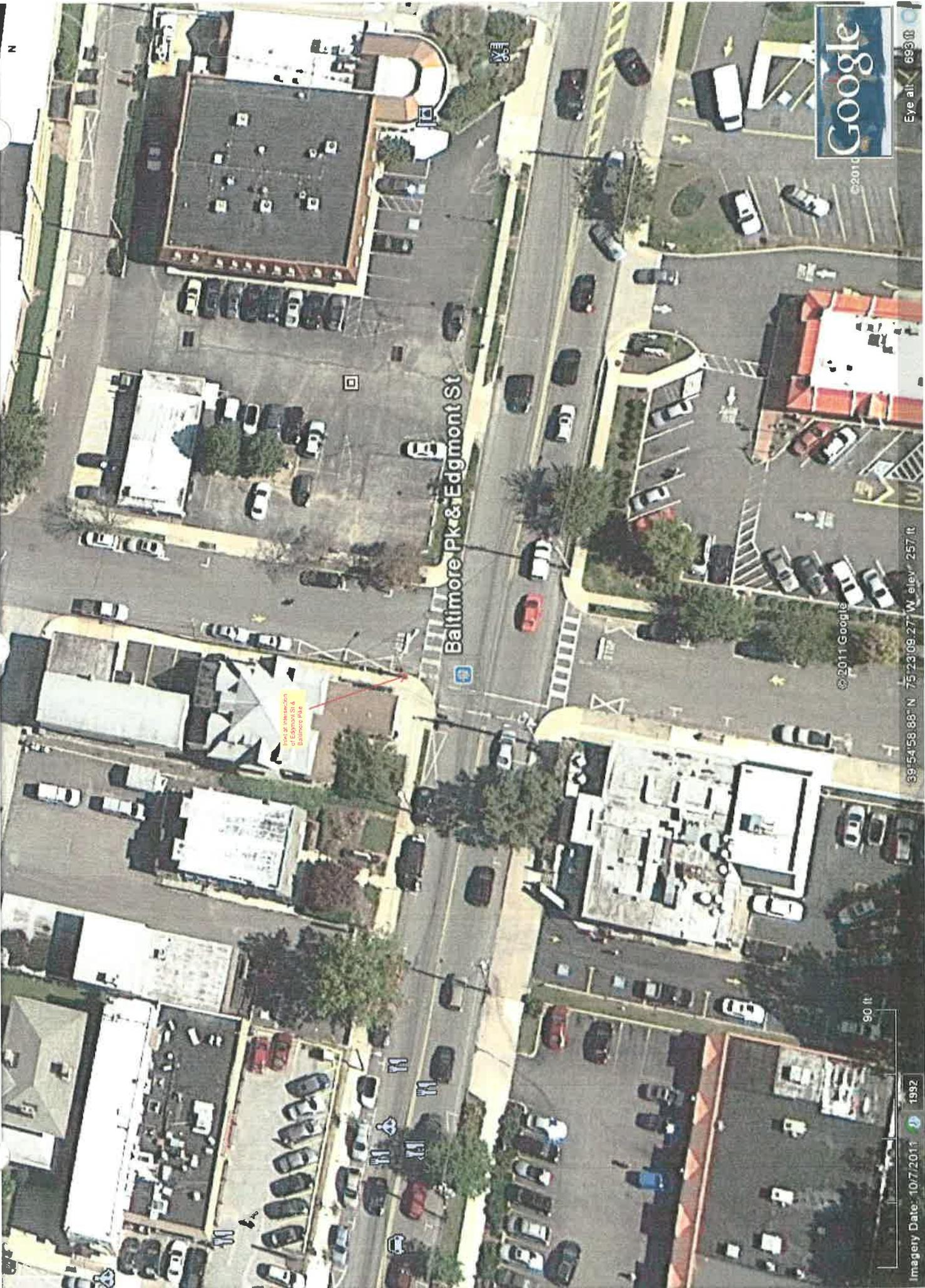
MEDIA SANITARY SEWER COLLECTION SYSTEM SMOKE TESTING LOG

Date: 12/9/2011
Street Name: Edgemont
Basin/Subarea: Lincoln/Subarea-B
Weather Condition: Sunny 40°F
Prepared By: SY
Photo No. _____

Observations

Smoke came out of CB at the intersection of Edgemont & Balt. Ave (NW corner by candy store) which indicates a potential for cross-connection with stormsewer





Google

©2011

Eye alt 693 ft

Baltimore Pk & Edgmont St

The 4th Intersection
of Baltimore Pk &
Edgmont St

© 2011 Google

39°54'58.88" N 75°23'09.27" W elev 257 ft

90 ft

Imagery Date: 10/7/2011 1992

SIDGEMONT ST

BALTIMORE

shop's

679





Inlet at Intersection
of Edgmt St &
Baltimore Pike

STOP

CELEBRATE

Penny's
FRESH CANDY

**Inlet at Intersection
of Edgmont St &
Baltimore Pike**





pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

December 16, 2011

Mr. Alan Roth
Manager, Wastewater Operations
Little Washington Wastewater Company
762 West Lancaster Avenue
Bryn Mawr, PA 19010-3489

Re: Little Washington Wastewater Company
Media Wastewater Treatment Facility
Media Borough
Delaware County

Dear Mr. Roth:

The Department of Environmental Protection (Department) has reviewed information submitted in support of your request for the release of additional connections tributary to the Lincoln Street Pumping Station. The information includes the following:

1. Documentation that the third pump installed at the Lincoln Street Pumping Station has generally relieved environmental damage from sanitary sewer overflows in the past year.
2. Little Washington Wastewater Company (LWWC) has identified an interconnection between the sanitary sewer and storm sewer through smoke testing. LWWC has calculated an area of 3.32 acres of impervious surface which results in runoff that is collected in the sanitary sewer. During a 1-inch rain event, approximately 90,155 gallons per day is calculated to be discharged to the sanitary sewer.
3. LWWC has committed to working with Media Borough to rectify the interconnection.
4. Proposed connections are from new land development and will generally not bring flow to the system for over 1 year, allowing sufficient time for LWWC to continue its I/I abatement program and to negotiate the repairs of the interconnection identified through smoke testing.

Based on the information above, the Department hereby releases 34 connections (EDUs) for allocation to projects tributary to the Lincoln Street Pumping Station.

In addition, LWWC has submitted information documenting that 23 EDUs were gained as a result of the summer 2011 demolition of the Media Inn Motor Lodge. Therefore, the Department releases an additional 23 connections (EDUs) for allocation to projects tributary to the Lincoln Street Pumping Station. A total of 57 additional connections are available for allocation.

The Department also approves LWWC's updated Connection Management Plan. Capacity has been allocated as follows:

Lincoln Street Pumping Station Drainage Area									
Project Name	DEP Code Number	Approved or Requested Flow	Date Approved by DEP	EDUs Requested or Approved	Projection Schedule				
					2010	2011	2012	2013	2014
Buzz Stubbe (316 Edgemont St.)	1-23826-034-X	262.5 gpd	09/10/2010	1	1				
Hampton Inn (Providence Rd. and Beatty Rd.)		7,560		29		29			
22 Residential Units (235 East Jefferson St.)		8,800		34		34			
Philip Jaisohn Memorial (100 Lincoln St., Upper Providence Township)	1-23834-096-X	192		1		1			
Connections Released					11	57			
Connections Allocated					1	64			
Connections Remaining					10	3			

Lemon Street Pumping Station Drainage Area									
Project Name	DEP Code Number	Approved or Requested Flow	Date Approved by DEP	EDUs Requested or Approved	Projection Schedule				
					2010	2011	2012	2013	2014
Lemon Street Pumping Station Drainage Area									
Bonaventure Builders, Inc. (North Jackson St.)	1-23826-020-X	1,050 gpd	08/31/2010	4	4				
Bonaventure Builders, Inc. (North Olive St.)	1-23826-026-3J	788	01/04/2008	3		3			
Rose Tree Tavern	1-23834-095-X	90	09/10/2010	1		1			
Connections Released					14	0			
Connections Allocated					4	4			
Connections Remaining					10	6			

As a result of the connections released to date and the capacity allocated to projects as indicated above, LWWC has a balance of 3 connections available for allocation for projects tributary to the Lincoln Street Pumping Station and 6 connections available for allocation for projects tributary to the Lemon Street Pumping Station.

Although other repair work has been completed in the sewers tributary to the Lincoln Street Pumping Station, there is insufficient flow data at this time to show any potential realized peak flow reductions. LWWC will continue to monitor flows and the flows will be evaluated by the Department if additional connections are requested in the future.

If you have any questions, please contact me at 484.250.5182.

Sincerely,



Kelly A. Sweeney
Sewage Planning Specialist
Water Management

cc: Mr. Smith – Media Borough
Mr. Cashman – Upper Providence Township
Mr. Clark – Middletown Township
Ms. Fields
Mr. O’Neil
Ms. Sweeney
Planning Section
Re 30 (GJS11WQM)350