

**LEHIGH COUNTY AUTHORITY**  
**WORKSHOP AGENDA**  
**Monday, July 13, 2015 – 12:00 PM**

**INITIAL ITEMS** *(Collectively 5 Minutes)*

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1. **Identify items for June Board Meeting**
  - Review Board Discussion Items, June 2015 – August 2015
2. **Review of Agenda**
3. **Public Comment**

**ACTION/DISCUSSION ITEMS**

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1. **Allentown Division – Sanitary Sewer Manhole Lining, Cycle 2**

This annual project will install a lining system (to eliminate infiltration) in approximately 84 aged brick manholes identified by LCA staff. The design phase has been administratively approved. The project is identified as an Administrative Order Work and will be funded by the City. A request for Board approval of the construction phase is requested **(yellow)**.
2. **Allentown Division – Manhole Collars with Water Tight Frame and Covers, Cycle 2**

This three year project will permanently secure the frame and cover of approximately 81 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSO's) from these manholes. The design phase has been administratively approved. The project is identified as an Administrative Order and will be funded by the City. A request for Board approval of the construction phase is requested **(gray)**.
3. **Allentown Division – Roof Rehabilitation and Replacements**

The Project consists of replacing 26 facility roofs that were identified as in need of immediate replacement in the Roof Evaluation report performed by D'Huy Engineering. The project was presented to the City for review/approval as a Major Capital Improvement (MCI), but the city rejected it as such. A PLA study was completed and it was determined that a PLA was inappropriate for this project. A pre-bid meeting was scheduled for 6/18/2015, with bids due on 7/2/2015. The project will be funded by the LCA Allentown Division. A request for Board approval for the construction phase is requested **(purple)**.
4. **Wastewater Capital Recovery Fees**

Approval of updated Capital Recovery Fees for selected wastewater systems, effective July 15, 2015, is recommended. Resolution 7-2015-1 accomplishes that approval. The shaded fees shown on the Summary pages are the ones recommended for approval **(tan)**.

**INFORMATION ITEMS**

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1. **None.**

**OTHER ITEMS**

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1. **None.**

**BOARD ACTION/DISCUSSION ITEMS**  
**JUNE 2015 – AUGUST 2015**

<b>PRIORITY*</b>	<b>PROJECT/ISSUE</b>	<b>TYPE OF ACTION</b>	<b>TIMING**</b>
<i><b>AS NEEDED</b></i>			
<b>H</b>	Acquisition/Growth Strategy Activities	Status Report	As needed
<b>L</b>	Jordan Creek Wastewater Plant	Status Report	As needed
<b>M</b>	Strawberry Acres – AARC - Sewer System	Status Report	As needed
<b>H</b>	Strategic Plan Update	Status Report	As needed
<b>H</b>	Wastewater Capacity Program Update	Status Report	As needed
<i><b>WITHIN 45 DAYS</b></i>			
<b>H</b>	Allentown Division – MH Lining (Cycle 2), Construction Phase	Approval	July (W)
<b>H</b>	Allentown Division – MH Frame/Cover Project (Cycle 2) Construction Phase	Approval	July (W)
<b>M</b>	Electronic Bill Presentment & Payment Processing (EBPP) contract services	Discussion / Approval	July (B)
<b>M</b>	Tellog Site Conversion to SCADA, Professional Services	Approval	August (B)
<b>H</b>	Suburban Division – 3 Pumping Stations, SCADA Professional Services	Approval	July (W)
<i><b>WITHIN 75 DAYS</b></i>			
<b>H</b>	Suburban Division- Lynn Township Wastewater Treatment Plant Upgrades, Phase 1 Construction Phase	Approval	August (W/B)

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## MEMORANDUM

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**Date:** July 6, 2015

**To:** LCA Board of Directors  
**From:** Phil DePoe, Frank Leist  
**Subject:** Allentown Division  
Sanitary Sewer Manhole Lining (Cycle 2) – Construction Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	<i>Capital Project Authorization Amendment No. 1 - Construction Phase</i>	\$263,654
2	<i>Professional Services Authorization Amendment No. 1 – Construction Phase: Barry Isett &amp; Associates (*)</i>	\$24,080
3	<i>Contract Awards – Construction Phase: National Water Main Cleaning Company (*)</i>	\$163,455

(\*)Included in the Capital Project Authorization.

**PROJECT OVERVIEW:**

This project will install a lining system for approximately 84 aged brick manholes identified by previous City staff. This lining system will eliminate infiltration and will provide additional structural reinforcement to the manholes.

**FINANCIAL:**

The project is identified as Administrative Order Work and will be funded by the City.

**PROJECT STATUS:**

In accordance with the Lease Agreement, the City is responsible for determining what Administrative Order (AO) work is to take place, and LCA is responsible to execute said work. The design phase of this project was previously authorized by LCA.

The project was advertised for bid on June 5, 2015. A mandatory pre-bid meeting was held on June 17, 2015. Bids were received on June 26, 2015.

**THIS APPROVAL: CONSTRUCTION PHASE**

Award is contingent upon receipt of the signed Agreement, Performance and Payment Bond, and required insurance paperwork.

**BIDDING SUMMARY: CONSTRUCTION CONTRACT**

This project requires a General Construction Contract. The bidding results, which reflect the Base Bid, are as follows:

Consultant	Cost
<i>National Water Main Cleaning Company</i>	<i>\$163,455.00</i>
National Gunitite	\$169,873.00

Lake County Sewer Company	\$188,321.51
SWERP Incorporated	\$245,540.00
PIM Corporation	\$278,380.00

Reference checks for the low bidder, National Water Main Cleaning Company, have no identified no issues. Therefore, we recommend awarding the General Constriction to National Water Main Cleaning Company subject to receipt of the necessary Performance Bonds, Insurance and other required documentation.

**PROFESSIONAL SERVICES:**

Barry Isett and Associates will provide construction administrative phase services and inspection phase services.

**PROJECT SCHEDULE:**

Assuming approval of the Constriction phase at the July 13, 2015 Board Meeting, Notice to Proceed will be issued late July 2015 with an estimated completion date of early September 2015.

**FUTURE AUTHORIZATIONS:**

None anticipated.

# CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>AD-S-15-1</u>	<b>BUDGET FUND:</b>	<u>Allentown Div\Wastewater\Capital</u>
<b>PROJECT TITLE:</b>	<u>Allentown Division Sanitary Sewer Manhole Lining (Cycle 2) - Construction Phase</u>	<b>PROJECT TYPE:</b>	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> Amendment No. 1
<b>THIS AUTHORIZATION:</b>	<u>\$263,654</u>		
<b>TO DATE (W/ABOVE):</b>	<u>\$295,000</u>		

## DESCRIPTION AND BENEFITS:

This project will install a lining system for approximately 84 aged brick manholes identified by previous City staff. This lining system will eliminate infiltration and will provide additional structural reinforcement to the manholes.

The design phase of this project was previously authorized. The project is identified as Administrative Order Work and will be funded by the City. The project is anticipated to be complete by September 2015.

Please reference the cover Memo for additional information.

## Authorization Status:

Previous Authorizations	
Design Phase	\$31,346
REQUESTED THIS AUTHORIZATION	
<b>Planning &amp; Design Phase</b>	
<b>Staff</b>	\$ 12,500
<b>Professional Services</b>	24,080
<b>General Construction Contract</b>	163,455
<b>Additional Authorization <sup>(1)</sup></b>	58,619
<b>Contingencies</b>	5,000
<b>Total This Authorization</b>	\$ 263,654
(1) This project will be funded by the City - the intent is to utilize a total sum of \$295,000. The City will provide authorization to line additional manholes if necessary to reach their targeted budget goal.	
Future Authorization	
None Anticipated	\$0
<b>Total Estimated Project</b>	<b>\$295,000</b>

## REVIEW AND APPROVALS:

<u>Project Manager</u>	<u>Date</u>	<u>Chief Executive Officer</u>	<u>Date</u>
<u>Chief Capital Works Officer</u>	<u>Date</u>	<u>Chairman</u>	<u>Date</u>



**Lehigh County Authority**

1053 Spruce Street \* P.O. Box 3348 \* Allentown, PA 18106-0348  
(610)398-2503 \* FAX (610)398-8413 \* Email: service@lehighcountyauthority.org

**PROFESSIONAL SERVICES AUTHORIZATION**  
**Amendment No. 1**

**Professional:** BARRY ISETT & ASSOCIATES  
85 S. Route 100  
Allentown, PA 18106

**Date:** July 6, 2015

**Requested By:** Phil DePoe

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

**Allentown Division – Sanitary Sewer Manhole Lining (Cycle 2) – Construction Phase**

Barry Isett & Associates will perform the construction administration and inspection phase services for the Sanitary Sewer Manhole Lining Project (for approximately 84 brick sanitary sewer manholes in the City of Allentown).

Professional Services <sup>(1)</sup>
1. Provide construction administration phase services
2. Provide inspection phase inspections

*(1) For Construction Phase Only.*

Please reference the cover Memo for additional information.

**Previous Authorization - Design Phase:**

*Cost Estimate (not to be exceeded without further authorization): \$17,846*

**This Authorization - Construction Phase:**

*Cost Estimate (not to be exceeded without further authorization): \$24,080*

*Cost Estimate (not to be exceeded without further authorization): \$41,926*

**Time Table and Completion Deadline:** As required to meet various critical deadlines as set forth in the proposal.

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(For Authority Use Only)

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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## MEMORANDUM

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**Date:** July 6, 2015

**To:** LCA Board of Directors  
**From:** Phil DePoe, Frank Leist  
**Subject:** Allentown Division  
Manhole Chimneys (*i.e. Methodologies of Affixing Frame and Covers to Brick Sanitary Sewer Manholes*) – (Cycle 2) Construction Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization Amendment No. 1 – Construction Phase	\$317,522
2	Professional Services Authorization Amendment No. 1 – Construction Phase: Barry Isett & Associates (*)	\$23,100
3	Contract Awards – Construction: Joao & Bradley (*)	\$276,560

(\*) Included in the Capital Project Authorization.

**PROJECT OVERVIEW:**

This project will install a frame and cover anchoring system for approximately 81 aged brick manholes identified by previous City staff. The selected anchoring systems are intended to eliminate sewage overflows during high flow events. In addition, all manholes for this project will receive new bolt down frames if not installed.

**FINANCIAL:**

The project is identified as Administrative Order Work and will be funded by the City.

**PROJECT STATUS:**

In accordance with the Lease Agreement, the City is responsible for determining what Administrative Order (AO) work is to take place, and LCA is responsible to execute said work. The design phase of this project was previously authorized by LCA.

The project was advertised for bid on June 5, 2015. A pre-bid meeting was held on June 17, 2015. Bids were received on June 26, 2015.

**THIS APPROVAL: CONSTRUCTION PHASE**

Award is contingent upon receipt of the signed Agreement, Performance and Payment Bond, and required insurance paperwork.

**BIDDING SUMMARY: CONSTRUCTION CONTRACT:**

This project requires a General Construction Contract. The bidding results, which reflect the Base Bid, are as follows:

<b>Contractor</b>	<b>Cost</b>
<i>Joao &amp; Bradley</i>	<i>\$276,560</i>
Clowa Company	\$341,036

Joao & Bradley successfully executed this project in 2014. Therefore, we recommend awarding the General Construction to Joao & Bradley subject to receipt of the necessary Performance Bonds, Insurance and other required documentation.

**PROFESSIONAL SERVICES:**

Barry Isett and Associated will provide construction administration phase services and inspection phase services.

**PROJECT SCHEDULE:**

Assuming approval of the Construction Phase at the July 13, 2015 Board Meeting, Notice to Proceed will be issued late July 2015 with an estimated completion date of late September 2015.

**FUTURE AUTHORIZATIONS:**

None anticipated.



# CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>AD-S-15-2</u>	<b>BUDGET FUND:</b>	<u>Allentown Div\Wastewater\Capital</u>
<b>PROJECT TITLE:</b>	<u>Allentown Division Manhole Chimneys (Cycle 2) - Construction Phase</u>	<b>PROJECT TYPE:</b>	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> Amendment No. 1
<b>THIS AUTHORIZATION:</b>	<u>\$317,522</u>		
<b>TO DATE (W/ABOVE):</b>	<u>\$345,000</u>		

## DESCRIPTION AND BENEFITS:

This project will install a frame and cover anchoring system for approximately 81 aged brick manholes identified by previous City staff. The selected anchoring systems are intended to eliminate sewage overflows during high flow events. In addition, all manholes for this project will receive new bolt down frames if not installed.

The design phase of this project was previously authorized. The project is identified as Administrative Order Work and will be funded by the City. The project is anticipated to be complete by late September 2015.

Please reference the cover Memo for additional information.

## Authorization Status:

Previous Authorizations	
Design Phase	\$27,478
REQUESTED THIS AUTHORIZATION	
<b>Construction Phase</b>	
Staff	\$ 12,500
Professional Services	23,100
General Construction Contract	276,560
Miscellaneous	0
Contingencies <sup>(1)</sup>	5,362
<b>Total This Authorization</b>	<b>\$ 317,522</b>

(1)This project will be funded by the City - the intent is to utilize a total sum of \$345,000. The City will provide authorization for additional manholes if necessary to reach their targeted budget goal. Contingencies reflects monies allocated for additional staff time.

Future Authorization	
None Anticipated	\$0
<b>Total Estimated Project</b>	<b>\$345,000</b>

## REVIEW AND APPROVALS:

_____	_____	_____	_____
Project Manager	Date	Chief Executive Officer	Date
_____	_____	_____	_____
Chief Capital Works Officer	Date	Chairman	Date



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**PROFESSIONAL SERVICES AUTHORIZATION**  
**Amendment No. 1**

**Professional:** BARRY ISETT & ASSOCIATES  
85 S. Route 100  
Allentown, PA 18106

**Date:** July 6, 2015

**Requested By:** Phil DePoe

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

**Allentown Division – Manhole Chimneys (i.e. Methodologies of Affixing Frame and Covers to Brick Sanitary Sewer Manholes) – (Cycle 2) - Construction Phase**

Barry Isett & Associates (BIA) will perform the construction administration and inspection phase services for MH Frame and Cover Project (affixing frame and covers for approximately 81 brick sanitary sewer manholes in the City of Allentown).

Professional Services <sup>(1)</sup>
1. Provide construction administration phase services
2. Provide inspection phase services.

(1) For Construction Phase Only.

Please reference the cover Memo for additional information.

**Previous Authorization – Design Phase:**

**Cost Estimate (not to be exceeded without further authorization):** \$13,978

**This Authorization – Construction Phase:**

**Cost Estimate (not to be exceeded without further authorization):** \$23,100

**Cost Estimate (not to be exceeded without further authorization):** \$37,078

**Time Table and Completion Deadline:** As required to meet various critical deadlines as set forth in the proposal.

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**(For Authority Use Only)**

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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## MEMORANDUM

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**Date:** July 13, 2015

**To:** Authority Board  
**From:** John Parsons, Frank Leist  
**Subject:** Allentown Wastewater and Water Treatment Plants  
Facility Roof Replacements – Construction Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$1,485,500
2 <sup>(1)</sup>	Professional Services Authorization – D’Huy Engineering	\$34,600
3	General Contract Award – Pro Com Roofing Contractors	\$1,420,900

*(1) Included in the Capital Project Authorization.*

**PROJECT OVERVIEW:**

Presently, the vast majority of the structures that were included within the water and wastewater systems are extremely old and in various states of disrepair. The Distribution/Collection Building (D/C) was erected approximately 1915, and still has the original slate roof. The water and wastewater plants were both built in the 1920s. Although there have been many upgrades at both plants over the years, the original buildings are still in use. East Side and South Mountain Reservoirs were built in the 1930s. The high elevation distribution pump stations and storage tanks were built (mainly) in the 1950s. In summary, the existing slate (sloped) roofs are original. The vast majority of the membrane (flat) and asphalt (sloped) roofs are well past their industry standard useful life.

For numerous years prior to the Lease settlement, the City failed to provide adequate and/or any funding to assure that the various roofing systems at the water filtration plant, wastewater treatment plant, distribution & collection complex, water pumping stations and reservoirs were replaced and/or repaired to extend the useful life of the facilities or

remediate building problems. During this time, the conditions of many roof systems have gone from bad to worse. Others have developed severe leaks resulting in interior mold infestation problems and although remediated by the City, the conditions were not disclosed to the prospective Lessees.

**FINANCIAL:**

This Project will be funded by LCA. With an estimated cost in excess of \$1,000,000, the Project meets the definition of a Major Capital Improvement Project. The City of Allentown has not approved this project as a Major Capital Project. A Project Labor Stabilization Study was performed and it was determined that a PLA was not appropriate for this project.

**PROJECT STATUS:**

D'Huy Engineering has evaluated 43 separate roof systems at the wastewater plant, water plant, distribution & collection (D/C) building and the remote water system stations for existing conditions and an overall assessment. In their report, 26 roofs were listed as Priority 1 and needing immediate replacement. All 26 replacement roof systems have been designed. Four additional roofs that were listed as in need of repairs will be included with this contract. The four additional roofs were listed as deficient on the recent Arcadis report entitled "Annual Consulting Engineer's Report for the Allentown Water and Sewer Utility System Concession" dated July 2, 2015.

**FACILITY ROOF REPLACEMENTS-CONSTRUCTION PHASE**

The construction phase includes activities that are necessary to install the replacement roofing system for all (26) Priority I roofs, and the (4) additional roofs that are to be repaired. The General Contractor will be responsible for all construction activities. The design engineer will be responsible for periodic oversight of the construction, which will be supplemented by in-house supervision provided by LCA.

### **BIDDING SUMMARY:**

The project requires a General Construction (GC) Contract. The project was advertised for bid on June 9, 2015. A mandatory pre-bid meeting was held on June 18, 2015. Bids were received on July 2, 2015. The bid results are summarized below:

<b>Bidder</b>	<b>Amount</b>
<b>Pro Com Roofing Corp</b>	<b>\$1,420,900.00</b>
Alan Kunsman Roofing	\$1,454,750.00
C&D Waterproofing Corp	\$1,698,000.00
<b>Munn Roofing Corp</b>	<b>\$1,101,700.00 (withdrew bid)</b>
Pro Com Roofing Corp	\$1,420,900.00
Alan Kunsman Roofing	\$1,454,750.00
C&D Waterproofing Corp	\$1,698,000.00

In addition to the three contractors listed above in the bidding results Munn Roofing submitted a bid of \$1,101,700. but withdrew their bid as a result of an accidental omission and some calculation errors in developing their bids. LCA Staff has determined that the error meets the definition in the Public Bidding Law to allow Munn Roofing to withdraw their bid and has granted their request.

Based upon the review of the bids, we recommend award of the General Construction contract to Pro Com Roofing Corporation, subject to the receipt of the necessary Performance Bonds, Insurance and other required documentation.

### **PROFESSIONAL SERVICES**

D'Huy Engineers has been our design consultant on this project and will provide construction engineering and on-site inspection services for the construction phase of the facility roof replacements/repairs. Their work will also include:

1. Schedule and chair a preconstruction meeting and monthly job conference meetings
2. Review shop drawings and respond to RFIs.

3. Provide work review visits and assist with contract administration.
4. Assess work for substantial completion and open items
5. Prepare punch list and related close-out documentation. .

Reference attached Professional Services Authorization Amendment #3.

**PROJECT SCHEDULE:** Construction bids were due on July 2, 2015. Included within the specifications is the requirement for project completion by the end of 2015.

**FUTURE AUTHORIZATIONS-**

No future authorizations are anticipated for this project.

## CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>AD-S-18-1</u>	<b>BUDGET FUND:</b>	<u>Allentown Div\Wastewater\Capital</u>
<b>PROJECT TITLE:</b>	<u>Allentown Wastewater and Water Plants Replacement Roof Upgrades – Construction Phase</u>	<b>PROJECT TYPE:</b>	<input type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> <b>Amendment No. 3</b>
<b>THIS AUTHORIZATION:</b>	<u>\$1,485,500</u>		
<b>TO DATE (W/ ABOVE)</b>	<u>\$1,630,260</u>		

### DESCRIPTION AND BENEFITS:

D'Huy Engineering has evaluated (43) separate roof systems at the wastewater plant, water plant, Distribution & Collection (D/C) building and the remote water system stations for existing conditions and an overall assessment. The D/C building roofs, one of which is 1915 vintage slate, were identified as in need of immediate replacement. Extensive leaks have existed throughout the Distribution & Collection (D/C) building prior to lease settlement and have resulted in two recent cases of severe mold problems that required immediate remediation in the interest of employee health and safety.

A total of (26) Priority 1 roofs were designed for replacement and the construction phase will be approved through this authorization. All roof replacements are to be completed by the end of 2015.

### Authorization Status:

<i>Previous Authorizations</i>	
<i>Roof Condition Evaluations &amp; Design Phases</i>	<i>\$144,760</i>

<b>Requested This Authorization</b>	
<b>Construction Phase</b>	
<b>Staff</b>	<b>\$10,000</b>
<b>Construction Contractor</b>	<b>\$1,420,900</b>
<b>Engineering Consultant</b>	<b>\$34,600</b>
<b>Miscellaneous</b>	<b>10,000</b>
<b>Contingency</b>	<b>10,000</b>
<b>Total This Authorization</b>	<b>\$1,485,500</b>

<b>Future Authorizations-</b>	<b>None Anticipated</b>
<b>Total Estimated Project</b>	<b>\$1,630,260</b>

### REVIEW AND APPROVALS:

_____ Project Manager	_____ Date	_____ Chief Executive Officer	_____ Date
_____ Chief Capital Works Officer	_____ Date	_____ Chairman	_____ Date



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**PROFESSIONAL SERVICES AUTHORIZATION**  
**Amendment No. 3**

**Professional:** D'HUY ENGINEERING, INC.  
One East Broad Street, Suite 310  
Bethlehem, PA 18018

**Date:** July 13, 2015

**Requested By:** John Parsons

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

**Allentown Division- Facility Roof Replacements**

**Previous Authorizations**

Roof Condition Evaluation Report	\$18,500
Design Phase-1 (5) roofs at the Distribution and Collection Building	\$17,500
Design Phase-2 Remaining roofs at WFP and WWTP	\$78,760

**This Authorization – Construction Phase:** **\$34,600**

D'Huy Engineering will conduct periodic inspection of the construction activities throughout the entire construction phase. Other consultant services will be provided and are listed below:

Professional Services
1. Facilitate pre-construction and monthly job status meetings
2. Review/approve contractor submittals and respond to RFI's
3. Provide periodic construction inspections throughout project
4. Prepare punch list and final payment certifications

**Cost Estimate (not to exceed without further authorization):** **\$149,360**

Time Table and Completion Deadline: All construction activities are to be completed by the end of 2015.

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**(For Authority Use Only)**

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_



**PROFESSIONAL SERVICES AUTHORIZATION  
INDEMNIFICATION  
Allentown Division – Facility Roof Replacements  
Construction Phase**

(To be signed by Professional and returned to the Authority)

I am or represent the Professional indicated above, and as such I am authorized to:

- ☐ Accept the terms of the professional services authorization dated July 13, 2015 (attached) and
- ☐ Agree to indemnify and hold harmless LCA, the City of Allentown, their employees, agents, officials, representatives, attorneys, and assigns from any and all liability, arising out of all activities conducted by the Consultant in connection with this contract and/or the Consultant's performance hereof, including but not limited to payment of all fees for its/their attorneys and all incidental litigation expenses in the event LCA or any of its employees, agents, officials, representatives, attorneys, and assigns are sued upon a claim emanating from the Consultant's performance thereof. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

\_\_\_\_\_  
Name (signature):

\_\_\_\_\_  
Name (printed)

Title: \_\_\_\_\_

# RESOLUTION No. 7-2015-1

(Duly adopted 13 July 2014)

## ***A RESOLUTION ESTABLISHING THE VARIOUS COMPONENTS OF THE LEHIGH COUNTY AUTHORITY CAPITAL RECOVERY FEES FOR VARIOUS WASTEWATER SYSTEMS.***

WHEREAS, Lehigh County Authority ("Authority") is a Pennsylvania municipal authority incorporated by the County of Lehigh in accordance with the Municipality Authorities Act to provide, among other services, wastewater services; and

WHEREAS, the Authority owns and/or operates wastewater systems throughout the Lehigh Valley of Pennsylvania; and

WHEREAS, the Authority charges certain rates and fees for use of and connection to its systems; and

WHEREAS, the Authority desires to establish its fees in accordance with §5607 of the Municipality Authorities Act, as amended by legislative action in December 2003, setting forth the appropriate fee components; and

WHEREAS, the Authority has calculated the allowable basis for such fees for certain of its wastewater systems in accordance with the attached calculations and its Summary of Selected Wastewater Fund Capital Recovery Fees (including Exhibits A through C, H and J), the current version of which, as well as any future changes thereto, is made a part hereof as if included herein; and

NOW THEREFORE, the Lehigh County Authority, pursuant to powers invested in it by the Pennsylvania Municipality Authorities Act, as amended, hereby resolves that:

1. The capital recovery fees for wastewater service in various of the Authority's wastewater systems as indicated and shown on Summary of Selected Wastewater Fund Capital Recovery Fees, with supporting calculations reflected on Exhibits A through D, H and J, attached hereto and made a part hereof, are adopted effective 15 July 2015.

2. The Authority's Wastewater Schedules of Rates and Charges shall be amended to reflect the fees hereby adopted, which fees shall be effective as of 15 July 2015.

On motion of \_\_\_\_\_, seconded by \_\_\_\_\_, this Resolution was adopted the 13<sup>th</sup> day of July 2015.

**LEHIGH COUNTY AUTHORITY**  
**SUMMARY OF WASTEWATER FUND CAPITAL RECOVERY FEES**  
**EFFECTIVE 7/15/15**

Exhibit	Charge	Per Gallon			Per EDU			(1) Gallons per EDU	(2) Change %	Costing Method
		Existing Charge	Maximum Charge	New Charge	Existing Charge	Maximum Charge	New Charge			
	<b>Interceptor System:</b>									
A	Wastewater Capacity	\$ 5.51	\$ 5.67	\$ 5.67	\$ 1,229.00	\$ 1,264.00	\$1,264.00	223	2.90%	Historical Trended Cost
B	Western Lehigh Interceptor	2.65	2.80	2.80	\$ 591.00	623.00	\$623.00	223	5.66%	Historical Trended Cost
C	Little Lehigh Relief Interceptor	0.94	0.97	0.97	210.00	215.00	\$215.00	223	3.19%	Historical Trended Cost
	Total Western Lehigh Service Area	9.10	9.44	9.44	2,030.00	2,102.00	\$2,102.00			
	<b>Arcadia West, Western Weisenberg</b>									
H	Reimbursement Fee - Collection Part	45.77	47.64	47.64	12,014.63	\$12,505.50	\$12,505.50	262.5	4.09%	Historical Trended Cost
H	Reimbursement Fee - Capacity Part	29.99	31.49	31.49	7,872.38	\$8,266.13	\$8,266.13	262.5	5.00%	Historical Trended Cost
H	LCA Planning	2.37	2.44	2.44	622.13	\$640.50	\$640.50	262.5	2.95%	Historical plus Financing Costs
J	W Weisenberg Treatment Plant	36.00	37.40	37.40	9,450.00	\$9,817.50	\$9,817.50	262.5	3.89%	Historical Trended Cost

(1) The gallons per EDU figure to calculate the per gallon rate has changed with the 2010 census data but the amount sold per EDU remains at 223 gpd with the exception of LMT.

(2) Based on Charge Per Gallon

**EXHIBIT A**  
**2015 CAPITAL RECOVERY FEES**  
**WASTEWATER TREATMENT CAPACITY**

	General Pool	(A) Salisbury Portion	Blended Total
Capacity Cost (6/2009 Purchase)	\$ 1,152,500	\$ 600,000	\$ 1,752,500
<b>ENR Index Increase</b>	1.170319	1.058520	
<b>Trended Capacity Cost</b>	\$ 1,348,793	\$ 635,112	\$ 1,983,905
Capacity in Gallons	250,000	100,000	350,000
<b>Calculated Charge per Gallon</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5.67</b>
Current charge per Gallon			\$ 5.51
<b>Calculation of Gallons per Household:</b>			
2010 Census figure per Household - Lehigh County	2.54		2.54
# of Gallons per day per Capita	90		90
Gallons per EDU	223		223
<b>Charge per EDU (223 gals)</b>			<b>\$1,264.00</b>
Current Charge per EDU			<b>\$1,229.00</b>
Change			2.85%
<b>(A) Allocation purchased on 4/18/13 at \$6.00 per gallon.</b>			

	General	Salisbury
ENR Index June 2009 (Last Purchase Date)	8,578	
ENR Index Salisbury (5/18/13)		9,484
ENR Index June 2015	10,039	10,039
<b>ENR Index Increase</b>	<b>17.03%</b>	<b>5.85%</b>

**EXHIBIT B**  
**2015 CAPITAL RECOVERY FEES**  
**WESTERN LEHIGH INTERCEPTOR**  
**CAPACITY PART**  
**TRENDING COST METHOD**

	(A) Original Interceptor	(B) Phase II, Stg 1	(C) Phase II, Stage 2	(D) Phase II, Stage 4	(E) Flow Equaliz. Basin	Total System
Project Costs	\$ 5,215,326	\$ 884,097	\$ 6,044,664	\$ 3,327,473	\$ 5,495,586	\$ 20,967,146
Contributions/Grants	(2,536,420)	-	-	-	-	(2,536,420)
	2,678,906	884,097	6,044,664	3,327,473	5,495,586	18,430,726
Trend Factor (H)	5.9720	2.0910	1.7155	1.3316	1.1214	
Trended Value	15,998,535	1,848,667	10,369,512	4,430,893	6,162,890	32,647,606
Outstanding Debt (F)	-	-	(238,083)	-	(4,282,574)	(4,520,657)
Cost Basis	15,998,535	1,848,667	10,131,429	4,430,893	1,880,316	28,126,949
System Capacity (Avg Daily Flow)	7,023,000			3,040,000		10,063,000

<b>Maximum Charge per gallon (proposed)</b>	<b>\$ 2.80</b>
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**Calculation of Gallons per Household:**

Census figure per Household - Lehigh County	2.54
# of Gallons per day per Capita	90
Gallons per EDU	223

<b>Maximum Charge per gallon (proposed)</b>	<b>\$ 623.00</b>
<b>Current Charge</b>	<b>\$ 591.00</b>
<b>Change</b>	<b>5.41%</b>

(A) Substantial completion 1/1/72.

(B) Substantial completion 5/1991.

(C) Spring Creek PS and Force Main - Substantial completion 1/1/98. No capacity added by this project due to downstream limitations.

(D) Substantial completion 9/1/05. System Capacity is 7 mgd / 2.3 peaking factor.

(E) Includes actual costs through 12/31/12. Substantial Completion was 12/1/10.

(F) As of 4/30/14

(G) ENR Index:

Substantial Completion	1,681	4,801	5,852	7,539	8,952
June 1, 2015	10,039	10,039	10,039	10,039	10,039

(H) Substantial completion 10/24/08.

**EXHIBIT C**  
**2015 CAPITAL RECOVERY FEES**  
**LITTLE LEHIGH RELIEF INTERCEPTOR- PHASE 1 ONLY**  
**TRENDING COST METHOD**

	Phase 2, Stage 1
Project Cost	\$ 4,750,332
Contributions	(583,221)
Less: Outstanding Debt	-
Total Cost Basis	\$ 4,167,111
Trending Factor (2)	2.31794
Trending Cost Basis	\$ 9,659,115
System Capacity (Avg. Daily Flow)	(1) 10,000,000

<b>Maximum Charge per gallon (proposed)</b>	<b>\$0.97</b>
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**Calculation of Gallons per Household:**

Census figure per Household - Lehigh County	2.54
# of Gallons per day per Capita	90
Gallons per EDU	223

<b>Maximum Charge per gallon (proposed)</b>	<b>\$ 215.00</b>
<b>Current Charge</b>	<b>\$ 210.00</b>
<b>Change</b>	<b>2.38%</b>

(1) PPS Peak flow of 24 MGD / 2.4 peaking factor.

(2) ENR Index 12/31/86 (Substantial Completion)	4,331
ENR Index June 2015	10,039
ENR Mutltiplier	2.31794



**EXHIBIT H**  
**2015 CAPITAL RECOVERY FEES**  
**ARCADIA WEST WASTEWATER SYSTEM**

			(A)	(A)	
	Total	Reimbursement Fees			Collection
		Collector	Capacity		
Arcadia Cost for Collector System	\$ 318,322	\$ 318,322			
Land - Arcadia System	210,403		210,403		
LCA Costs for Arcadia System	19,548				19,548
Original Plant	196,463		-		
Inflation / Trend Factor (B)		1.795856	1.795856		1.499701
Total Cost	\$ 978,830	\$ 571,660	\$ 377,853	\$	29,317
Prorated Share of Design Capacity	12,000	12,000	12,000		12,000
<b>Maximum Fee per Gallon</b>		<b>\$ 47.64</b>	<b>\$ 31.49</b>	<b>\$</b>	<b>2.44</b>

(A) Only applicable to the remaining 5.57 EDU's available in the Arcadia West Commercial area.

After 6/12/13, only 50% of reimbursement fee is returned to Arcadia through 6/12/18. Excludes portion of lateral costs.

(B) The reimbursement rates are inflated by 5% annually beginning in July 2004 per agreement with Arcadia and LCA. LCA Collection system fee is inflated by the ENR index change.

ENR Index 6/30/03	6,694
ENR Index 4/1/14	10,039
Change in ENR Index	49.9701%

Note: By agreement with Arcadia West, an EDU is equal to 262.5 gallons.

**EXHIBIT J**  
**2015 CAPITAL RECOVERY FEES**  
**WESTERN WEISENBERG TREATMENT PLANT**

	Total	Capacity Portion
W. Weisenberg Treatment Plant Estimated Cost (A)	\$ 3,247,214	\$ 3,247,214

Portion attributable to New Customers 0.437

Total \$ attributable to new customers	\$ 1,417,652
ENR multiplier	1.03880
Recoverable Cost	\$1,472,663

Design Capacity (Prorated) GPD 17,463

Maximum Fee per Gallon	\$ 84.33
2014 Existing Fee	\$ 36.00
2015 Recommended fee per gallon (A)	\$ 37.40

Plant Allocation:	Total Allocation (gpd)	LCA Share	Expected Fees	12/31/12 Paymts To Date	Total Payments Expected	Gallons Purch
Arcadia West	10,537	-	\$ -	\$ -	\$ -	-
Arcadia - Remaining Commercial	1,463	1,463	174,052	-	174,052	-
West Hills Business Ctr	12,000	-	-	-	-	-
Weisenberg Elementary School	8,000	8,000	243,100	37,500	205,600	1,500
Bandit Truck Stop	3,000	3,000	112,200	-	112,200	-
Unallocated	5,000	5,000	187,000	61,850	125,150	2,474
	40,000	17,463	\$ 716,352	\$ 99,350	\$ 617,002	3,974
		43.7%				

(A) The unrecovered capital costs will be captured through ongoing user fees. The 2015 fee represents a % increase over 2014.

Note: These fees exclude existing Arcadia West customers and the West Hills Business Center, which is constructing the plant and contributing towards the plant.

ENR Multiplier

June 1, 2015	10039
Substantial Completion Date 1/10/2014	9664
Multiplier	1.038803808

**SUMMARY OF 2015 UPPER MILFORD SYSTEM CAPITAL RECOVERY FEES  
EFFECTIVE JULY 15,2015**

Fee	CHARGE PER GALLON		EDU CHARGE (A)		MFR CHARGE (B)		CHARGE PER 1000 GALLONS		Chnge %
	Existing Charge	New Charge	Existing Charge	New Charge	Existing Charge	New Charge	Existing Charge	New Charge	
RT 29, Ramer Heights, Vera Cruz Areas Only									
Collection Part	\$ 8.52	\$ 9.16	\$ 2,002.20	\$ 2,153.00	\$ 1,201.32	\$ 1,292.00	\$ 8,520.00	\$ 9,160.00	7.51%
Capacity Part (F)	\$ 1.59	\$ 1.71	\$ 373.65	\$ 401.00	\$ 224.19	\$ 241.00	\$ 1,590.00	\$ 1,710.00	7.55%
Planning Cost; All Areas									
Capacity Part	\$ 0.55	\$ 0.56	\$ 129.25	\$ 132.00	\$ 77.55	\$ 79.00	\$ 550.00	\$ 560.00	1.82%
WLI Area Fees (D)	\$ 9.10	\$ 9.44	\$ 2,030.00	\$ 2,102.00	\$ 1,218.00	\$ 1,261.00	\$ 9,100.00	\$ 9,440.00	3.74%
Total Cost for Rt 29, Ramer Heights and Vera Cruz	\$ 19.76	\$ 20.87	\$ 4,535.10	\$ 4,788.00	\$ 2,721.06	\$ 2,873.00	\$ 19,760.00	\$ 20,870.00	5.62%
Total Cost For Other UMiT Areas	\$ 9.65	\$ 10.00	\$ 2,159.25	\$ 2,234.00	\$ 1,295.55	\$ 1,340.00	\$ 9,650.00	\$ 10,000.00	3.63%
Lower Macungie (E):									
Total Cost per EDU	\$ 2.31	\$ 2.37	\$ 552.09	\$ 565.00	\$ 331.25	\$ 339.00	\$ 2,310.00	\$ 2,370.00	2.60%

**Note: All detail related to calculation of the Upper Milford is shown on Exhibit D**

(A) Upper Milford EDU = 250 gallons in 2011 and 235 gallons in 2012 and thereafter

(B) 2015 MFR for Upper Milford fees equates to 134 gallons per day or 60% of EDU.

(C) Includes Upper Milford & WLI fees.

(D) Wastewater Capacity and Interceptor fees for a 2015 EDU equates to 223 gallons which reflects EDU capacity across entire WLI service areas

(E) Represents the capacity charge to a Lower Macungie resident connecting to the Upper Milford Interceptor System.

(F) Only applies to connections where flow is transported by Upper Milford interceptors.

(G) Based on Charge per Gallon

Rev:7/01/2015

Costing Method
Historical Cost Trended
Historical Cost Trended
Historical Cost plus Financing
Historical Cost Trended

**EXHIBIT D**  
**2014 CAPITAL RECOVERY FEES**  
**UPPER MILFORD TOWNSHIP**  
**RT 29 AREA - COLLECTION & CAPACITY PARTS**  
**TRENDING METHOD**

**Project Costs: (A)**

Rt. 29 Project Cost & Capitalized Interest	\$	1,646,084
South 7th Street - Ph - 1		204,222
South 7th Street - Ph - 2		233,261
Ramer Heights Project & Capitalized Interest		148,811
Vera Cruz Project Costs thru 4/30/14		4,475,600
<b>Project Costs Total: (A)</b>	<b>\$</b>	<b>6,707,978</b>
Less federal Grant Vera Cruz (E)		(1,309,500)
Less State Grant Vera Cruz (E)		(1,000,000)
Less Federal Grant - S. 7th St - Ph 1		(172,100)
Less Federal Grant - S. 7th St - Ph 2		(206,649)
<b>Net Project Cost</b>		<b>4,019,729</b>

**ENR Index Change (B)**

Rt 29 Project	2.1739	3,578,397
Ramer Heights Project	2.0138	299,682
South 7th Street - Ph - 1	1.1765	37,791
South 7th Street - Ph - 2	1.1216	29,847
Vera Cruz	1.0666	2,310,399
<b>Cost Basis</b>		<b>6,256,116</b>
Outstanding Debt 4/30/14 (D)		(2,166,100)
<b>Cost Basis for Capital Recovery Fee</b>	<b>\$</b>	<b>4,090,016</b>

% of Collector Cost	84.3%	\$	3,445,949
% of Capacity Cost (C)	15.7%	\$	644,067

System Capacity 386,669

Cost per Gallon - Collector Part \$ 8.91  
**Cost per Gallon (Rounded) - Collector Part \$ 8.52**

Cost per Gallon - Capacity Part \$ 1.67  
**Cost per Gallon (Rounded) - Capacity Part \$ 1.59**

**EXHIBIT D**  
**2014 CAPITAL RECOVERY FEES**  
**UPPER MILFORD TOWNSHIP**  
**RT 29 AREA - COLLECTION & CAPACITY PARTS**  
**TRENDING METHOD**

**Calculation of Gallons per Household:**

Census figure per Household - UMiT	2.61
# of Gallons per day per Capita	90
Gallons per EDU	234.9
Gallons per EDU Rounded	235

<b>Cost per EDU - Collector Part</b>	<b>\$ 2,002.20</b>
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<b>Cost per EDU - Capacity Part</b>	<b>\$ 373.65</b>
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Gallons per MFR (60% of EDU)	141
Gallons per MFR Rounded	141

<b>Cost per MFR Unit - Collector Part</b>	<b>\$ 1,201.32</b>
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<b>Cost per MFR Unit - Capacity Part</b>	<b>\$ 224.19</b>
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**NOTES:**

A) Excludes treatment capacity purchases & capitalized interest.

<u>(B) ENR Index</u>	<u>Subs. Comp</u>	<u>ENR</u>	<u>ENR 6/1/15</u>	<u>ENR Chg</u>
Rt 29 System	8/22/89	4,618	10,039	2.1739
Ramer Heights	12/15/92	4,985	10,039	2.0138
S. 7th St - Ph 1	1/26/09	8,533	10,039	1.1765
S. 7th St - Ph 2	10/15/10	8,951	10,039	1.1216
Vera Cruz	12/31/12	9412	10,039	1.0666

C) Includes 100% of sewers transporting sewage from a collector system to an interceptor.

D) If projects are built to serve exclusively new customers, outstanding debt does not need to be subtracted.

E) Costs incurred and grants as of 4/30/14.

**EXHIBIT D**  
**2014 CAPITAL RECOVERY FEE**  
**UMiT CAPACITY OTHER**  
**CARRYING COST METHOD**

Unreimbursed Planning Costs (B)	\$ 183,425
Less: Contributions	-
Less: Outstanding Debt	-
Plus: Financing & Interest Expenses (A)	30,306

<b>Total Cost Basis</b>	<b>\$ 213,731</b>
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System Capacity:	
Ultimate UMiT flow in gals.(C)	386,669

Planning Charge per Gallon	\$ 0.5527
<b>Planning Charge per Gallon (Rounded)</b>	<b>\$ 0.55</b>
Existing Charge per Gallon	\$ 0.55

**Calculation of Gallons per Household:**

Census figure per Household - Upper Milford	2.61
# of Gallons per day per Capita	90
Gallons per EDU	234.9
Gallons per EDU Rounded	235

<b>Planning Charge per EDU</b>	<b>\$ 129.25</b>
Existing Charge per EDU	\$ 129.25

- (A) Includes interest expense (\$29,122) thru 11/12/99 on \$77,487 borrowed as part of December 1991 loan and the portion of prorated financing costs \$1,184.
- (B) Planning costs thru 12/31/11. Excludes costs for LMT agreement (1993 = \$3,696 & 1994 = \$2,820).
- (C) Lesser of Average System Design Capacity or limiting agreement figure (225,000 gals).

**2014 CAPITAL RECOVERY FEES**  
**Lower Macungie Connections to UMiT Interceptor**

<b>Project Costs: (A)</b>			
Rt. 29 Project Cost		\$	1,646,084
ENR Index Increase (B)			2.1739
Cost Basis		\$	<u>3,578,397</u>
Less O/S Debt (C)			-
Project Cost Basis		\$	<u>3,578,397</u>
% of Project applicable to LMT Interceptor			24.79%
LMT Interceptor Cost Basis		\$	<u>887,085</u>
<b>Avg Day Capacity in gpd</b>			373,632
<b>Charge per Gallon</b>		\$	2.37
<b>Charge per Gallon Rounded</b>		\$	2.31
<b>Calculation of Gallons per Household:</b>			
Census figure per Household - LMT			2.65
# of Gallons per day per Capita			90
Gallons per EDU			238.5
<b>Gallons per EDU Rounded</b>			239
<b>Cost per EDU</b>		\$	552.09
<b>Cost per EDU Rounded</b>			535.36
<b>Cost per MFR (D)</b>		\$	331.25
<b>Cost per MFR Rounded</b>		\$	321.22

**NOTES:**

(A) Includes Capitalized interest but excludes treatment capacity purchases.

<u>(B) ENR Index</u>	<u>Subs. Comp</u>	<u>ENR</u>	<u>4/1/13</u>	<u>ENR Chg</u>
Rt 29 System	8/22/89	4,618	10,039	2.1739

(C) Since the projects were built to serve exclusively new customers, outstanding debt does not need to be subtracted.

(D) Based on 2005 water usage in LMT, an MFR uses 56.96% the amount of water of an EDU.