



LEHIGH COUNTY AUTHORITY

June 18, 2012

BOARD MEETING AGENDA

1. Call to Order
2. Review of Agenda
 - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
 - *May 14, 2012 Workshop Meeting Minutes*
5. Public Comments
6. Action / Discussion Items

FINANCE AND ADMINISTRATION

- *Wastewater Capital Recovery Fees (Approval)*

WATER

- *Sand Spring Road Waterline Relocation (Approval)*
- *Route 309 Crossing at Sand Spring Road (Approval)*
- *Upper Milford Central Division Radon Evaluation & Mitigation Study (Approval)*
- *Allentown Interconnection Phase 2 (Approval)*

WASTEWATER

- *Existing CCTV Physical Condition Assessment (Approval)*
 - *Western Weisenberg (Arcadia West) West WWTP Improvements (Approval)*
7. System Operations Overview
 8. Staff Comments
 9. Solicitor's Comments
 10. Other Comments
 11. Adjournment

JULY MEETINGS

Workshop Meeting
Board Meeting

July 9 – 12:00 p.m.
July 23 – 12:00 p.m.

PUBLIC PARTICIPATION POLICY

In accordance with Authority policy, members of the public shall record their name, address, and discussion item on the sign-in sheet at the start of each meeting; this information shall also be stated when addressing the meeting. Members of the public will be allowed 5 minutes to make comments/ask questions regarding non-agenda items, but time may be extended at the discretion of the Chair; comments/questions regarding agenda items may be addressed after the presentation of the agenda item. Members of the public may not request that specific items or language be included in the meeting minutes.

WORKSHOP MEETING MINUTES

May 14, 2012

The Workshop Meeting of the Lehigh County Authority was called to order at 12:21 p.m., on Monday, May 14, 2012, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Brian Nagle, Norma Cusick, and Emrich Stellar. Authority Staff present were: Aurel Arndt, Doug Young, Bradford Landon, Frank Leist, Patricia Mandes, Joseph McMahon, Cristin Garger, and Jason Peters.

Patrick Kirk and Nate Swartz from Zelenkofske Axelrod, the Authority's auditor, were also in attendance.

Agenda Review

Mr. Arndt stated there were no additional items.

2011 Financial Statements (Statements) (Acceptance)

As chairman of the Audit Committee, Mr. Stellar summarized the 2011 Independent Auditor's Report, noting the Authority had another clean audit. He noted that there were single audit issues that had to be addressed because of the federal funding the Authority received through PennVEST. Mr. Stellar also noted that water revenues do not reflect a full year of the 2011 water rate increase.

Mr. Young stated that audit costs have increased because of the single audit requirement. Some discussion followed.

On a motion from Ms. Cusick, seconded by Mr. Nagle, the Board unanimously accepted the 2011 Audited Financial Statements (4-0).

Lehigh County Authority Facility Emergency Power (Approval)

Mr. Leist introduced Jason Peters, Capital Works Assistant, as he is the project manager for this item. He briefly summarized the previously distributed memorandum regarding acquisition of backup power for the Office/Operations Center and some of the Authority's satellite systems. Mr. Leist explained the intent of this project is to replace PPL or Met Ed power from the grid with power from an emergency generator in the event of a power loss. He noted that size and location of both the emergency power generator and automatic transfer switch at each facility will be based upon current demands and potential future upgrades and any necessary improvements to the existing facilities electrical systems that are required by code for the addition of emergency power will be addressed in the design. Mr. Leist stated that five of the eight firms solicited for the projected responded with bids and Hanover Engineering Associates is recommended for design and construction for this project.

On a motion from Ms. Cusick, seconded by Mr. Stellar, the Board unanimously approved the Capital Project Authorization in the amount of \$128,840 and the Professional Services Authorization for Hanover Engineering in the amount of \$79,840 for the LCA Facility Emergency Power Project, the latter subject to the Solicitor's review of the Terms & Conditions (4-0).

Main Extension Policy (Approval)

Mr. Leist explained that the Board approved a temporary change in LCA Policy that allowed developers to construct water facilities without a Developer's Water System Agreement that expired on February 15, 2011. He recommended this policy be extended through December 31, 2012.

On a motion from Mr. Nagle, seconded by Mr. Stellar, the Board unanimously approved extension of the Authority's Main Extension Policy through December 31, 2012 (4-0).

Boston Beer Wastewater Rates (Approval)

Ms. Mandes referred to the attached presentation noting that in October 2011, the Board approved an amendment to the 2005 Boston Beer Agreement effective March 2011 for a five year term. She stated the amendment included rates for the first year and also included the process for calculating the annual Boston Beer wastewater service rates. The annual rate adjustment is based on the cost of service at the LCA WTP plus a fixed 1.08 revenue coverage ratio. Ms. Mandes explained the fees include a minimum payment and rates for the various parameters as shown above and the annual rates are calculated by a rate model that has been approved by both parties and includes a six month working capital reserve. She stated the amendment provides for a 12% rate cap for either an increase or decrease in rates, and the 2012 rates are an increase of 7.9% from the 2011 rates.

On a motion from Ms. Cusick, seconded by Mr. Stellar, the Board unanimously approved the Boston Beer Company Wastewater Rates, effective retroactively, as of March 1, 2012 (4-0).

OTHER ITEMS

Northern Lehigh Wastewater System

Mr. Arndt informed members that the North Whitehall Township Planning Commission will meet Tuesday, May 22, 2012 to begin the Conditional Use Application process; the Application will then be on the June 4, 2012 Board of Supervisors' agenda for approval.

Little Lehigh Creek

Mr. Nagle informed members and staff the E. coli levels will be tested this month in the Little Lehigh Creek, and the testing will also reveal the source of the fecal matter found in the watershed.

City of Allentown Joint Act 537 Plan

Mr. Stellar inquired about the status of a possible joint Act 537 Plan with the City of Allentown.

Ms. Mandes explained that the Memorandum of Understanding has not been signed by the City to date; however, the scope of work has been agreed upon and joint consultant selection is currently taking place.

City of Allentown Billing Dispute

Mr. Arndt stated a meeting of the municipalities involved in the dispute has taken place and it was decided that arbitration is needed. He explained that the arbiter selection process has begun; noting that each side will get to nominate a possible arbiter, but one will be selected by the Court if there is no consensus between both parties.

There being no further business, the Chairman adjourned the meeting at 1:23 p.m.

Richard H. Bohner
Secretary

FINANCE & ADMINISTRATION

ACTION ITEMS

1. Wastewater Capital Recovery Fees (Approval)

Attached (*blue*) is the summary of existing fees, recommended changes and supporting detail. The staff recommends approval of the new fees effective July 1, 2012.

DISCUSSION ITEMS

1. *None.*

INFORMATION ITEMS

1. Recently Purchased Investments – Certificates of Deposit (CDs)

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
2010 Wtr Cons A	PSDLAF Flex Pool		5,750,000	3/27/12	6/29/12	0.200
2010 Wtr Cons AA	PSDLAF Flex Pool		600,000	3/27/12	6/29/12	0.200
WDSR	World Financial Capital Bank	Salt Lake City, Ut	99,000.00	4/12/12	4/14/14	0.500
2010 WDSR	PSDLAF Collateralized CD		380,000.00	4/18/12	6/29/12	0.200
2010 WDSR	Sterling National Bank	NY, NY	150,000.00	4/18/12	4/18/13	0.450
Cons Wtr (2)	Modern Bank National Association	New York, NY	240,000.00	5/3/12	11/3/13	0.600
WW Capac	PSDLAF Collateralized CD		603,000.00	5/8/12	6/29/12	0.200
WW Capac	Private Bank and Trust		245,000.00	5/11/12	5/10/13	0.350
WW Capac	First Republic Bank - Div of BOFA	San Francisco, Ca	150,000.00	5/11/12	5/13/13	0.300
Cons LL2 (314)	PSDLAF Flex Pool		245,000.00	5/14/12	6/29/12	0.200
WDSR	BMW Bank	Salt Lake City, Ut	149,000.00	5/24/12	5/16/14	0.700
WDSR	GE Capital Financial Inc.	Salt Lake City, Ut	49,000.00	5/25/12	5/27/14	0.800
LLRI CR	GE Capital Retail Bank (GE Money	Salt Lake City, Ut	99,000.00	5/25/12	5/27/14	0.800

Fund Descriptions for Investments:

WDSR	Water Debt Service Reserve
LLRI CR	Little Lehigh Relief Interceptor Capital Reserves
2010 Wtr Cons A	Water Construction, Series A Bonds
WW Capac	Wastewater Capacity
Cons Wtr (2)	Consolidated Water 2
Cons LL2 (5)	Consolidated Little Lehigh Relief Interceptor 2 (5)
2010 Wtr Cons AA	Water Construction, Series AA Bonds

2. Knowledge Sharing Skills Development

A Request for Proposals was issued on May 23rd for consulting services to assist in developing internal capabilities for knowledge sharing, including development of standing operating procedures and process maps, and conducting mentoring and coaching programs. The scope of work includes prioritizing this work for 12-month and 3-year time horizons, and developing program structure and templates to ensure organization-wide consistency in implementing the tools. Staff members and other supervisory personnel will be advised of employee time commitments required to complete this work, following Board authorization, which will be requested at the July 2012 Board meeting.

WATER

ACTION ITEMS

1. **Sand Spring Road Waterline Relocation** (Approval)

PaDOT is planning to widen the intersection of Rt. 309 and Sand Spring Road in North Whitehall Township. This work may impact our waterline as it crosses Sand Spring Road. Through a request for proposals, staff has secured the services of ARRO Consulting, the low proposer, to assist with the impact determinations, alternatives and design for relocating these facilities. It is anticipated that the construction work will be incorporated into the PaDOT contracts for the road work. Construction is currently planned for summer 2013. A Memorandum to the Board, Capital Project Authorization (CPA), are attached for Board approval (*orange*).

2. **Route 309 Crossing @ Sand Spring Road (formerly @ Education Park Drive)** (Approval)

PaDOT is planning to widen the intersection of Rt. 309 and Sand Spring Road in North Whitehall Township. As part of that work, it would be cost effective to install a casing crossing Rt. 309, to prepare for future main extensions that would provide water service to LCCC and properties on the western side of Rt. 309. The work would be incorporated into the PaDOT contracts. Through a competitive request for proposals, staff has secured the services of ARRO Consulting, the low proposer, to assist with the design for a casing and future 12-inch main extension. A Memorandum to the Board, Capital Project Authorization (CPA), are attached for Board approval (*green*).

3. **Upper Milford Central Division Radon Evaluation & Mitigation Study** (Approval)

Authorization is requested for this project which will evaluate various options for radon mitigation of the existing water supplies in the UMCD and/or determine an alternate water supply. A Memorandum to the Board and the Capital Project Authorization (CPA) are attached (*gray*).

4. **Allentown Interconnection Phase 2** (Approval)

Additional authorization is requested for construction-phase engineering services due to out-of-scope work, and the extended construction schedule. A Professional Services Authorization Amendment is attached for Board Approval (*pink*).

DISCUSSION ITEMS

1. *None.*

INFORMATION ITEMS

1. **Interconnection with Allentown**

Phase 2 - Connection to City Transmission System at 26th and Chew Streets – Over 90% of the pipeline has been installed, with pipelaying in Mertz Lane West Walnut Street and Haines Mill Road now complete. Approximately 1,300 linear feet of pipe remains to be installed. The final work area, along Ott and Chew Streets, will begin June 11. On June 1, Staff authorized a 73-day contract time extension due to extreme weather in the fall of 2011, numerous conflicts with utilities that were mis-marked by their owners during design, and a delay to accommodate the Mayfair festival in Allentown. The Substantial Completion deadline for the project is now July 25, 2012.

DRBC: The City of Allentown requests that we change the proposed methodology to calculate DRBC water withdrawal fees for water purchased by LCA. We are exploring options. DRBC requires a plan to be submitted 120 days before using the Phase 2 Interconnection.

2. **Water Main Replacement Project – Oakland Park (UMT)**

We received Administrative Completeness of our NPDES submittal from LCCD on April 6, 2012. The project was advertised in the PA Bulletin on April 28th. A 30-day public comment period follows this advertisement and comments from the initial technical review are expected in early June. We anticipate going out to bid in July with construction beginning as early as late August. We still expect to reach substantial completion of this project in 2012, though final restoration will most likely occur in spring 2013

3. **Water Main Relocation Project – Slatedale**

Our water facilities on West Grant Street were successfully relocated in June of 2011. Work on Main Street was completed in May 2012. Staff is assembling costs for presentation to PaDOT in consideration of the cost sharing agreement. Our exposure, by PaDOT Agreement, is about \$25,000.

4. **Water Meter Replacement Project**

Phase 2 - TSE, Inc. has replaced 3,844 out of 3,869 aging meters, radio-read units and backflow preventers through May 25. There were 15 accounts removed from the project where the water has been turned off. This leaves 10 accounts where meters must be upgraded. In addition, TSE must address accounts that were identified as incomplete and/or had deficiencies identified in our quality control checks. Substantial completion was issued on June 9, 2012.

5. **Arcadia West Pumping Station Modifications**

On May 30, T&M submitted a Basis of Design Report, contract plans and technical specifications for the pumping station improvements for our review. The specifications will coordinate aspects of the SCADA contract and security upgrade of the station with the general and electrical contracts T&M is preparing.

6. **Developments**

Water system construction is occurring at the following developments:

Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT (*There has not been any construction activity at this development in over two years.*)

Water system plans are being reviewed for the following developments:

Above & Beyond (personal care facility), 2 commercial lots, UMT

Diocesan Pastoral Center, 2 commercial lots, 3 additional lots, & residual lot for existing cemetery, LMT

Grant Street Townes, 18 sfa residential lots, WashT

Hamilton Crossings, 2 commercial lots with 20 buildings with retail, financial, convenience and restaurant uses, LMT

Hickory Park Estates, 3 residential lots (sfd), UMT

Highgate, Phase 3 (Dunbar Tract), 63 sfa & 22 sfd residential lots, UMT

Hillview Farms, 31 residential lots (sfd), LMT/SWT

Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer

Lehigh Hills, 247 residential lots (sfa/sfd), UMT

Morgan Hills, 40 residential lots (sfd), Water & Sewer, WeisT

North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water & sewer

Parkland Fields (formerly Rabenold Farms I), 205 residential lots (sfd), (Portion south of I-78), UMT

Rabenold Farms II, 288 apartment units and clubhouse, (Portion north of I-78), UMT
Route 100 Bypass & Cetronia Road Proposed Commercial Development, 1
commercial lot with 4 buildings with auto, convenience, financial and day care
uses, UMT

Shepherd's Corner, 1 commercial lot, LMT

Spring Creek Properties Subdivision 1, 14 commercial and industrial lots, LMT

Trexler Business Center, Lot 1, 1 commercial building, LMT

Trexler Senior Living Center, 2 commercial lots, LMT (*In bankruptcy*)

Weilers Road Twins, 82 residential lots (sfa), UMT

West Hills Business Center, 8 industrial lots, WeisT

Woodmere Estates, 60 residential units (sfd), UMT

WASTEWATER

ACTION ITEMS

1. **Existing CCTV Physical Condition Assessment** (Approval)

A Professional Services Authorization (*tan*) for Malcolm Pirnie is being presented to the Board for consideration. The work is for the physical condition assessment (PCA) of 148,000 LF of pipe in the Signatory Collector Systems as part of the I & I SCARP Program and has been recommended by the Signatories' Consultant. The 148,000 LF has been televised within the last three years and the database has been provided to Malcolm Pirnie. The work will rate, assess and recommend follow-up actions if required. PCA figures showings the findings and recommended follow-up actions will be prepared. This work will lead to the actual rehabilitation within the system and the actual removal of I and I.

2. **Western Weisenberg (Arcadia West) West WWTP Improvements** (Approval)

Construction bids were received on June 1, 2012. Attached is a Staff memo recommending award of the three prime contracts. A Capital Project Authorization Amendment and a Professional Services Authorization are also attached for approval (*purple*).

DISCUSSION ITEMS

1. ***None.***

INFORMATION ITEMS

1. **Vera Cruz Area Sewer Project**

PACT Construction has completed all piping facilities in Milestone Area #3 and reached substantial completion for the construction contract as a whole on April 13, 2012. Final paving throughout the project area, has begun and is anticipated to be complete by June. Seventy-three property owners in Milestone #1 have connected and all but 14 in Milestone #2 have taken action to move forward with connections. No connections have begun in Milestone #3.

The Project Team and PACT have met to discuss closeout documents for the project. PACT is claiming changes for additional work. However, they have not substantiated their claims, nor filed a request for change order. Staff has directed them to complete the requests and submit with appropriate justification and documented costs. The largest item on their list is the cost of final pavement restoration in PaDOT right of way.

2. **Infiltration and Inflow (I&I) Program Update**

A meeting was held with the SCARP Partners to identify potential projects for 2012 that will provide a reduction in I & I. The Partners were in agreement to initiate these "low hanging fruit" projects that will require LCA capital funding. We are currently developing the scope and budget for the 2012 projects.

Areas have been identified as needing CCTV work to determine the extent of the leakage and for determining the basis of rehabilitation. The total footage includes over 57,000 LF of pipe and are located in Upper Macungie Township and Lower Macungie Township with a few segments in Macungie Borough.

The City has scheduled the semi-annual I & I meeting with the City Signatories in June.

The WLI Physical Condition Assessment of the Alburtis/Macungie Branch has been completed. The results and report will be presented to LCA on May 22nd. The LCA personnel have completed the CCTV work on four other WLI areas. Malcolm Pirnie is currently reviewing that CCTV work and will provide the report later this year. The LLRI assessment is also on the schedule for CCTV and assessment in 2012. The scope of the work is being reviewed.

3. Wastewater Treatment Capacity

LCA has not yet received the executed Memo of Understanding regarding working together on a joint Act 537 Plan from the City. It is my understanding that the document is in the City's Solicitor's office. The City representatives continue to work on the selection of the consultant despite not having an executed MOU.

We received qualifications from seven consulting firms for the joint 537 Plan Study. Two firms will be interviewed and board approval of the selected firm is expected at the Board Meeting.

Whole Effluent Toxicity Testing has been scheduled on the LCA WTP effluent to determine if there are any toxicity issues related to the plants effluent that could limit the plants ability to discharge directly into the Jordan Creek or Lehigh River.

Talks with Coplay-Whitehall Sewer Authority and Salisbury Townships may result in the sale and/or lease of allocation. An offer was presented to Salisbury for consideration several months ago. The Manager from Salisbury recently provided LCA with a counter offer. Documents supporting the Salisbury counter-offer are being reviewed.

4. Northern Lehigh Wastewater System

The project is proceeding in a number of areas:

Wastewater Treatment Plant (on a 5 acre tract at Kids Peace)

In March, LCA representatives met with NWT Supervisor, Steve Panny; Solicitor, Lisa Young; and Township Manager, Jeff Bartlett to discuss the Act 537 Plan. In summary, for the westside of Rt. 309 (the 1-5 year service area) LCA has agreed to limit the size of the WTP to 200,000 GPD which in essence reflects the need for this area. Any expansion beyond 200,000 GPD would require NWT approval). For the eastside of Rt. 309, LCA has agreed to work with NWT in developing a solution for the wastewater treatment needs for this area, which may include one (or more) WTP(s) that discharge to the Coplay Creek. NWT wills the lead on this effort, with LCA providing support and expertise. After which NWT would amend the Act 537 Plan.

On April 2, 2012 LCA submitted a Conditional Use application which was accepted by NWT. The Planning Commission at their May 22, 2012 meeting recommended the Conditional Use to the Board of Supervisors. A Conditional Use hearing in front of the Board of Supervisors started at the June 4, 2012 meeting and was continued to June 12, 2012.

The total cost of the WTP including soft costs and Kids-Peace acquisition costs is estimated at \$4.69 million.

Offsite Conveyance Facilities (OSCF)

- a) Wal-Mart has stopped design of the necessary conveyance facilities, which includes gravity sewers, a pump station and force main to deliver the wastewater from their proposed development and other future wastewater customers to the wastewater treatment facilities until a cost sharing agreement is reached with LCA. Wal-Mart has proposed that LCA assume the responsibility of designing, permitting and constructing the OSCF, which is a change from the previous plan where Wal-Mart

had the responsibility. Ongoing cost-sharing negotiations are still on hold while Wal-Mart internally reevaluates the proposed store's financial viability.

The construction cost of the conveyance facilities is estimated at \$1.354 million.

Kids Peace Agreement

- a) An amendment to the agreement with KidsPeace is being negotiated to reflect the changed circumstances since the original agreement was signed in 2006.

5. Park Pump Station Improvements

Fuel Tank Replacement – Staff has received and is reviewing the plans for replacement of the fuel tank at the Park Pump Station. We are in the process of acquiring additional easement area from the COA for the tank. The project is anticipated to go to bid in 2012.

6. LCA WTP- Truck Waste Receiving Station & Digester Mixer Replacement

Truck Waste Receiving Station: The project design is underway.

Digester Mixer Replacement: Procurement of six 24-inch diameter digester mixers was awarded to Olympus Technologies at the April Board meeting.

The current schedule anticipates completion of both the aforementioned improvements in the first quarter of 2013.

LEHIGH COUNTY AUTHORITY
ANNUAL SUMMARY OF TAPPING, CONNECTION AND CUSTOMER FACILITIES FEES
WASTEWATER FUND
EFFECTIVE 7/1/12

Exhibit	Charge	Per Gallon			Per EDU			(3) Gallons per EDU	Costing Method
		Existing Charge	Maximum Charge	New Charge	Existing Charge	Maximum Charge	New Charge		
Interceptor System:									
A	Wastewater Capacity	\$ 4.71	\$ 4.98	\$ 4.98	\$ 1,050.33	\$ 1,110.54	\$ 1,110.54	223	Historical Trended Cost
B	Western Lehigh Interceptor	2.10	2.40	2.40	468.30	535.20	535.20	223	Historical Trended Cost
C	Little Lehigh Relief Interceptor	0.84	0.87	0.87	187.32	194.01	194.01	223	Historical Trended Cost
	Total Western Lehigh Service Area	7.65	8.25	8.25	1,705.95	1,839.75	1,839.75		
Upper Milford Collector System:									
D	Collection Part	6.08	10.25	10.25	1,520.00	2,408.75	2,408.75	235	Historical Trended Cost
D	Capacity Part	8.40	2.45	2.45	2,100.00	575.75	575.75	235	Historical Trended Cost
D	Capacity Part - Other	0.90	0.53	0.53	225.00	124.55	124.55	235	Historical plus Financing Costs
D	Capacity Part - Lower Macungie	2.14	2.19	2.19	511.46	523.41	523.41	239	Historical Trended Cost
Heidelberg Heights Collector System:									
E	Collection Part	1.46	2.24	1.49	362.08	539.84	359.09	241	Historical Trended Cost
E	Capacity Part	9.24	14.26	9.45	2,291.52	3,436.66	2,277.45	241	Historical Trended Cost
	Total Heidelberg Heights	10.70	16.50	10.94	2,653.60	3,976.50	2,636.54		
Wynnewood Terrace Collector System:									
F	Collection Part	9.14	9.38	9.38	2,257.58	2,260.58	2,260.58	241	Historical Trended Cost
F	Capacity Part	5.57	5.71	5.71	1,375.79	1,376.11	1,376.11	241	Historical Trended Cost
	Total Wynnewood Terrace	14.71	15.09	15.09	3,633.37	3,636.69	3,636.69		
Sand Spring Collector System:									
G	Collection Part	2.24	2.30	2.30	553.28	554.30	554.30	241	Historical Trended Cost
G	Capacity Part	3.34	3.43	3.43	824.98	826.63	826.63	241	Historical Trended Cost
	Total Sand Spring	5.58	5.73	5.73	1,378.26	1,380.93	1,380.93		
Western Weisenberg System:									
Arcadia West Direct Connections:									
H	Reimbursement Part (1)	89.28	68.35	68.35	23,436.00	17,941.88	17,941.88	262.5	Historical Trended Cost
H	Collection Part	2.20	2.26	2.26	577.50	593.25	593.25	262.5	Historical Trended Cost
		91.48	70.61	70.61	24,013.50	18,535.13	18,535.13		
Western Weisenberg Treatment Plant: (2)									
J	Capacity Part	27.55	27.55	28.90	7,586.25	7,231.88	7,586.25	262.5	Future Costs

- (1) By agreement with Arcadia, this fee only applies to the remaining 5.57 Edu's still available for connections in the Arcadia West Commercial area.
- (2) A new customer connecting directly to the Western Weisenberg System and not contributing a collector line would pay the Arcadia Collector reimbursement fee, the Capacity Reimbursement fee, the Collection part and Western Weisenberg Treatment Plant Capacity fees (\$99.51/gallon).
- (3) 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.

Exhibit A
2012 CAPITAL RECOVERY FEES
WASTEWATER TREATMENT CAPACITY

Capacity Cost (June 2009)	\$ 1,152,500
ENR Index Increase	1.081
Trended Capacity Cost	<u>\$ 1,245,853</u>

Capacity in Gallons	250,000
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Calculated Charge per Gallon	\$ 4.98
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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	229

Maximum Charge per EDU	\$ 1,140.42
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ENR Index June 2009 (Last Purchase Date)	8,578
ENR Index April 2012	9,273
ENR Index Increase	8.10%

EXHIBIT B
2012 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	\$ 5,488,588	\$ 20,960,148
Contributions/Grants	(2,536,420)	-	-	-	-	(2,536,420)
	2,678,906	884,097	6,044,664	3,327,473	5,488,588	18,423,728
Trend Factor (H)	5.5164	1.9315	1.5846	1.2300	1.0359	
Trended Value	14,777,808	1,707,609	9,578,293	4,092,805	5,685,397	30,156,515
Outstanding Debt (F)	-	-	(951,636)	-	(5,013,877)	(5,965,513)
Cost Basis	14,777,808	1,707,609	8,626,657	4,092,805	671,521	24,191,002
System Capacity (Avg Daily Flow)	7,023,000			3,040,000		10,063,000
Maximum Charge per gallon					\$ 2.40	

Calculation of Gallons per Household:

Census figure per Household - Lehigh County
of Gallons per day per Capita
Gallons per EDU

2.54
90
229

Maximum Charge per EDU	\$ 549.60
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- (A) Substantial completion 1/1/72.
(B) Substantial completion 5/1/991.
(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 12/31/11. Substantial Completion was 12/1/10.
(F) As of 6/30/12.
(G) ENR Index:
Substantial Completion
Apr 2012

1,681
9,273

4,801
9,273

5,852
9,273

7,539
9,273

8,952
9,273

EXHIBIT C
2012 CAPITAL RECOVERY FEES
LITTLE LEHIGH RELIEF INTERCEPTOR
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)	2.1411
Trending Cost Basis	\$ 8,922,101
System Capacity (Avg. Daily Flow)	(1) 10,000,000

Maximum Charge per gallon	\$ 0.87
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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	229

Maximum Charge per EDU	\$ 199.23
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- | | |
|---|-------|
| (1) PPS Peak flow of 24 MGD / 2.4 peaking factor. | |
| (2) ENR Index 12/31/86 (Substantial Completion) | 4,331 |
| ENR Index Apr 2012 | 9,273 |

Exhibit D
2012 UPPER MILFORD CONNECTION FEE SUMMARY

Fee	Cost per Gallon		Cost per 1000 Gallons		Costing Method
	Existing Charge	New Charge	Existing Charge	New Charge	
Collection Part	\$ 6.08	\$ 10.25	\$ 6,080.00	\$ 10,250.00	Historical Cost Trended
Capacity Part (F)	\$ 8.40	\$ 2.45	\$ 8,400.00	\$ 2,450.00	Historical Cost Trended
Non-UMiT Interceptor Use:					
Capacity Part	\$ 0.90	\$ 0.53	\$ 900.00	\$ 530.00	Historical Cost plus Financing
UMiT Interceptor Use (C):					
Total Cost per EDU (A)	\$ 5,550.95	\$ 4,948.80	\$ 23,030.00	\$ 21,480.00	
Total Cost per MFR (B)	\$ 4,781.95	\$ 3,705.18			
Other UMiT Areas:					
Total Cost per EDU (A)	\$ 225.00	\$ 124.55			
Total Cost per MFR (B)	\$ 180.00	\$ 74.73			
Lower Macungie (E):					
Total Cost per EDU	\$ 511.46	\$ 523.41			
WLI Fees (D)	\$ 7.65	\$ 8.25	\$ 7,650.00	\$ 8,250.00	

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

(B) 2012 MFR for Upper Milford equates to 141 gallons per day or 60% of EDU.

(C) Includes Upper Milford & WLI fees.

(D) Wastewater Capacity and Interceptor fees for a 2012 EDU equates to 223 gallons because fees are sold across municipal lines.

(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.

EXHIBIT D
2012 CAPITAL RECOVERY FEES
UPPER MILFORD TOWNSHIP
COLLECTION & CAPACITY PARTS
TRENDING METHOD

Project Costs: (A)		
Rt. 29 Project Cost	\$	1,646,084
S. 7th St Ph 1 (D)		32,122
S. 7th St Ph 2 (D)		26,612
Vera Cruz		1,250,493
Ramer Heights Project		148,811
Net Project Cost		<u>\$ 3,104,122</u>

ENR Index Change (B)		
Rt 29 Project	1.9565	3,220,522
Ramer Heights Project	1.8124	269,711
S. 7th St Ph 1	1.0588	34,012
S. 7th St Ph 2	1.0094	<u>1,262,228</u>
Cost Basis		<u>4,786,472</u>

Outstanding Debt 5/1/12		<u>-</u>
Cost Basis for Capital Recovery Fee		<u>\$ 4,786,472</u>

% of Collector Cost	80.7%	\$ 3,862,683
% of Capacity Cost (C)	19.3%	\$ 923,789

Limiting System Capacity per agreement		386,669
--	--	---------

Maximum Charge per Gallon - Collector Part	\$	<u>10.25</u>
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Maximum Charge per Gallon - Capacity Part	\$	<u>2.45</u>
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Calculation of Gallons per Household:

Census figure per Household - UMiT	2.61
# of Gallons per day per Capita	90
Gallons per EDU	235
Gallons per MFR - 60% of EDU (E)	141

Maximum Charge per EDU - Collector Part	\$	<u>2,408.75</u>
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Maximum Charge per EDU - Capacity Part	\$	<u>575.75</u>
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Maximum Charge per MFR Unit - Collector Part	\$	<u>1,445.25</u>
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Maximum Charge per MFR Unit - Capacity Part	\$	<u>345.45</u>
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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 5/1/11</u>	<u>ENR Chg</u>
Rt 29 System	8/22/89	4,618	9,035	1.9565
Ramer Heights	12/15/92	4,985	9,035	1.8124
S. 7th St - Ph 1	1/26/09	8,533	9,035	1.0588
S. 7th St - Ph 2	10/15/10	8,951	9,035	1.0094

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

D) Net of federal and state grants.

(E) Per 2011 Water usage, MFR equates to 60% of EDU usage.

EXHIBIT D
2012 CAPITAL RECOVERY FEE
UNIT CAPACITY OTHER
CARRYING COST METHOD

Unreimbursed Planning Costs (B)	\$ 172,930
Less: Contributions	-
Less: Outstanding Debt	-
Plus: Financing & Interest Expenses (A)	30,306
Total Cost Basis	\$ 203,236

Limiting System Capacity per agreement	386,669
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Maximum Charge per Gallon	\$ 0.53
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Calculation of Gallons per Household:

Census figure per SF Household	2.61
# of Gallons per day per Capita	90
Gallons per EDU	235
Gallons per MFR (C)	141

Maximum Planning Charge per EDU	\$ 124.55
Maximum Planning Charge per MFR	\$ 74.73

(A) Includes interest expense (\$29,122) on \$77,487 borrowed as part of December 1991 loan and the portion of prorated financing costs \$1,184.

(B) Planning costs thru 12/31/10. Excludes costs for LMT agreement (1993 = \$3,696 & 1994 = \$2,820).

(C) Per 2011 Water usage, MFR equates to 60% of EDU usage.

Exhibit D
2012 CAPITAL RECOVERY FEES
LOWER MACUNGIE CONNECTIONS TO UMIT INTERCEPTOR
TRENDING METHOD

Project Costs: (A)	
Rt. 29 Project Cost	\$ 1,646,084
ENR Index Increase (B)	2.0080
Cost Basis	<u>\$ 3,305,357</u>
Less O/S Debt (C)	-
Project Cost Basis	<u>\$ 3,305,357</u>
% of Project applicable to LMT Interceptor	24.79%
LMT Interceptor Cost Basis	<u>\$ 819,398</u>
Avg Day Capacity in GPD (D)	373,632
Charge per Gallon	\$ 2.19
Calculation of Gallons per Household:	
Census figure per Household - LMT	2.65
# of Gallons per day per Capita	90
Gallons per EDU	239
Maximum charge per EDU	\$ 523.41
Maximum charge per MFR (E)	\$ 314.05

NOTES:

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

(B) ENR Index	Subs. Comp	ENR	ENR 5/1/09	ENR Chg
Rt 29 System	8/22/89	4,618	9,273	2.0080

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

(D) Equates to 1.5 mgd / 4 peaking factor.

(E) Based on 2011 water usage in LMT, an MFR (Apts/Mobile Homes) uses 60% the amount of water of an EDU (SFA/SFD)

EXHIBIT E
2012 CAPITAL RECOVERY FEES
HEIDELBERG HEIGHTS SYSTEM
TRENDING METHOD

	Collection	Capacity
Project Costs	\$ 123,157	\$ 785,141
Total System Costs	\$ 123,157	\$ 785,141
ENR Index Increase (A)	1.4877	1.4877
Total Project Cost Basis	\$ 183,224	\$ 1,168,075
O/S Debt 5/1/12	(49,541)	(315,829)
Cost Basis for Capital Recovery Fee	\$ 133,683	\$ 852,246
Capacity:		
Total WW Plant Permitted Capacity (Gpd)	60,000	60,000

Maximum charge per gallon	\$ 2.24	\$ 14.26
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Calculation of Gallons per Household:

Census figure per Household - Heidelberg Twp	2.68	2.68
# of Gallons per day per Capita	90	90
Gallons per EDU	241	241

Maximum charge per EDU	\$ 539.84	\$ 3,436.66
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(A) Plant operations initiated on 6/1/00 - Final Acceptance

ENR Index 6/1/00	6,233
ENR Index 4/1/12	9,273

EXHIBIT F
2012 CAPITAL RECOVERY FEES
WYNNEWOOD TERRACE WASTEWATER SYSTEM
TRENDING METHOD

	Collection	Capacity
Total Costs:		
Acquisition Costs	\$ 406,318	\$ 247,393
Improvements	-	-
Total Costs	406,318	247,393
ENR Index Increase (A)	1.3853	1.3853
Total Trended Costs	562,861	342,706
Outstanding Debt	-	-
Total Net Costs	\$ 562,861	\$ 342,706

Capacity:		
Total WW Plant Permitted Capacity (GPD)	60,000	60,000

Maximum charge per gallon	\$ 9.38	\$ 5.71
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Calculation of Gallons per Household:

Census figure per Household - NWT	2.68
# of Gallons per day per Capita	90
Gallons per Household	241

Maximum charge per EDU	\$ 2,260.58	\$ 1,376.11
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(A)

ENR Index 7/1/03	6,694
ENR Index 4/1/12	9,273

EXHIBIT G
2012 CAPITAL RECOVERY FEES
SAND SPRING WASTEWATER SYSTEM
TRENDING METHOD

	Collection	Capacity
Acquisition Costs	\$ 58,452	\$ 88,048
ENR Index Increase (A)	1.2708	1.2708
Total Trended Acquisition Costs	\$ 74,281	\$ 111,891
System Improvements - 2005	\$ -	\$ 6,358
ENR Index Increase (B)		1.2608
Total Trended Sys Improvement Costs	-	\$ 8,016
System Improvements - 2010	\$ 5,980	\$ -
ENR Index Increase (C)	1.0396	-
Total Trended Sys Improvement Costs	\$ 6,217	\$ -
Total Cost Basis	\$ 80,497	\$ 119,907
Outstanding Debt	-	-
Total Net Costs	\$ 80,497	\$ 119,907
Capacity:		
Total WW Plant Permitted Capacity (Gpd)	35,000	35,000

Maximum charge per gallon	\$ 2.30	\$ 3.43
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Calculation of Gallons per Household:

Census figure per Household - NWT	2.68
# of Gallons per day per Capita	90
Gallons per Household	241

Maximum charge per EDU	\$ 554.30	\$ 826.63
Maximum charge per MFR (D)	\$ 360.30	\$ 537.31

- (A) Acquisition
- | | |
|-------------------|-------|
| ENR Index 1/1/05 | 7,297 |
| ENR Index 5/01/11 | 9,273 |
- (B) System Improvement - 2005
- | | |
|-------------------|-------|
| ENR Index 4/1/05 | 7,355 |
| ENR Index 5/01/11 | 9,273 |
- (C) System Improvements 2010
- | | |
|--------------------|-------|
| ENR Index 10/01/10 | 8,920 |
| ENR Index 5/1/11 | 9,273 |
- (D) Based on 2011 water usage in NWT, an MFR uses 65% the amount of water of an EDU.

EXHIBIT H
2012 CAPITAL RECOVERY FEES
ARCADIA WEST WASTEWATER SYSTEM

	Total	(A) 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)		1.551328	1.551328	1.385270
Total Cost	\$ 847,305	\$ 493,822	\$ 326,404	\$ 27,080
Prorated Share of Design Capacity	12,000	12,000	12,000	12,000
Maximum Fee per Gallon	\$	41.15	\$ 27.20	\$ 2.26

(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 4/1/12	9,273
Change in ENR Index	38.5270%

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

EXHIBIT J

2012 Recommended fee per gallon (A) \$ 28.90

43.7%

Note: These fees exclude existing Arcadia West customers and the West Hills

Business Center, which is constructing the plant and contributing towards the plant.



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

MEMORANDUM

To: Board of Directors & Management Staff
From: Lance M. Babbitt
Re: Sand Spring Road Waterline Relocation, W-12-3

Date: June 12, 2012
LMB

MOTIONS / APPROVALS REQUESTED

No.	Motions/Approval Items	Brief Description	Amount
1	Capital Project Authorization	Design Phase	\$12,300.00

BACKGROUND

Pennsylvania Department of Transportation (PaDOT) plans on widening of the intersection of Route 309 and Sand Spring Road, North Whitehall Township. This activity will impact our water facilities as they cross Sand Spring Road. Due to curbing changes and storm water control facilities approximately 300 feet of waterline, three valves and a fire hydrant may need to be relocated. Some of the pipeline is in casing that may also have to be installed. This authorization will take the project through all surveys, designs, easement acquisitions and permitting. Construction may be incorporated into the PaDOT contract. This project is anticipated to be 50% reimbursable through PaDOT.

PROJECT OVERVIEW

The proposed project anticipates relocation of the existing waterline crossing, in casing, across Sand Spring Road. To maintain uninterrupted service to the 115 properties south of this crossing, insertion valves and tapping tees will be installed. We are working with PaDOT to have them consider a redesign of their storm sewer in some areas to minimize the impacts on our facilities. It is anticipated that this work be incorporated into the PaDOT construction project. Based upon the latest PaDOT schedule the project should be completed by September 2013

PROJECT SCHEDULE

Award Design Work	April 20, 2012
Kick off Meeting	April 24
Submit Documentation to PaDOT	June 30
PaDOT Bid	August 1
Review Proposal Costs	October 1
Board Approval- Construction Phase	November 1
Start Construction	March 1, 2013
Complete Construction	September 1, 2013

FUTURE AUTHORIZATIONS:

Construction Phase, to include CPA Amendment and contract award

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.: W-12-3 BUDGET FUND: WATER CAPITAL - NWD

PROJECT TITLE: Sand Spring Road Waterline Relocation

PROJECT TYPE:

- ☒ Construction Design
☐ Engineering Study
☐ Construction
☐ Amendment

COST ESTIMATE: \$ 12,300

DESCRIPTION AND BENEFITS

Widening of the intersection of Route 309 and Sand Spring Road, North Whitehall Township, will impact our water facilities. Due to curbing changes and storm water control facilities approximately 300 feet of waterline, three valves and a fire hydrant will need to be relocated. Some of the pipeline is in casing that will also have to be installed. This project authorization will take the project through all surveys, designs, easement acquisitions, permitting. Construction will be incorporated into the PaDOT contract. This project is anticipated to be 50% reimbursable through PaDOT.

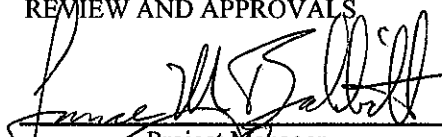
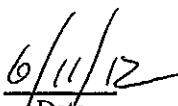
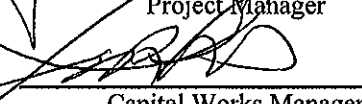
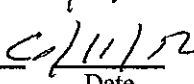
Approval this Authorization Design

Payroll	\$	4,500
Prof. Services	\$	5,704
Easements	\$	1,000
Misc. Expenses	\$	96
Contingency	\$	1,000
Total Design	\$	12,300

Construction	For Future Approval
Total Construction	\$ 155,000
Project Total	\$ 167,300

Typical reimbursement from PennDOT is 100% when facilities are in private easements and up to 50% when facilities are in public right of way.

REVIEW AND APPROVALS

 _____ Project Manager	 _____ Date	_____ General Manager	_____ Date
 _____ Capital Works Manager	 _____ Date	_____ Chairman	_____ Date

UNNAMED

Sand Spring Road
Waterline Relocation
Area
W-12-3

UNNAMED

SAND SPRING RD

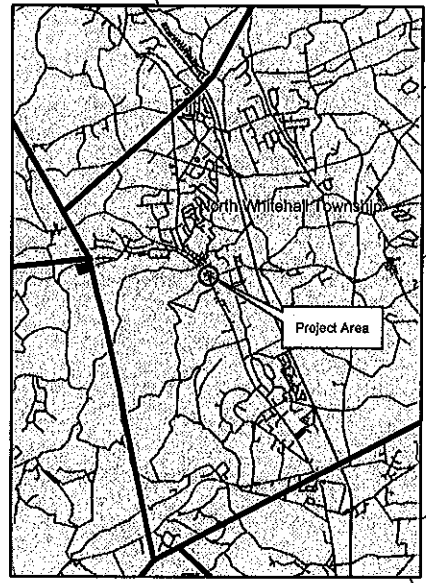
ORCHARD RD

Existing Waterline


Rt. 309 Crossing @
Sand Spring Road
With Easements
W-12-4


LCCC
Property

PA ROUTE 309



Key

 Waterline in Easement

 Casing

**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

MEMORANDUM

Date: June 12, 2012

To: Board of Directors & Management Staff
From: Lance M. Babbitt
Re: Route 309 Crossing @ Sand Spring Road, W-12-4

*LMB***MOTIONS /APPROVALS REQUESTED**

No.	Motions/Approval Items	Brief Description	Amount
1	Capital Project Authorization	Design Phase	\$11,900.00

BACKGROUND

As stated in the memo for Project W-12-3, Sand Spring Road Waterline Relocation the Pennsylvania Department of Transportation (PaDOT) plans on widening of the intersection of Route 309 and Sand Spring Road, North Whitehall Township. Previous Capital Planning anticipated a waterline crossing of Rt. 309 to serve areas on the west side, incorporating a steel casing crossing Rt. 309 for a future water line extension into the PaDOT planning and construction is anticipated to be cost effective. Because this solely benefits LCA, the costs will not be reimbursed by PaDOT.

PROJECT OVERVIEW

The proposed project will initially include approximately 100 feet of 24" casing crossing Rt. 309. Design efforts during this phase will address incorporation the construction of the casing into the PaDOT construction contract, plus design the waterline extension to be constructed at a later date. In addition, PaDOT has agreed to provide the required easements (right-of-way) for the future main extension The PaDOT project should be completed by September -2013.

Construction of the waterline extension will probably be in 2014. A separate project authorization for that effort will be processed in the future.

PROJECT SCHEDULE

Award Design Work	April 20, 2012
Kick off Meeting	April 24
Submit Documentation to PaDOT	June 30
PaDOT Bid	August 1
Review Proposal Costs	October 1
Board Approval –Construction Phase	November 1
Start PaDOT Construction	March 1, 2013
Complete Casing Construction	September 1, 2013

FUTURE AUTHORIZATIONS:

Construction Phase, to include CPA Amendment and contract award

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.: W-12-4 BUDGET FUND: WATER CAPITAL - NWD

PROJECT TITLE: Route 309 Crossing @ Sand Spring Road

PROJECT TYPE:

<input checked="checked" type="checkbox"/>	Construction Design
<input type="checkbox"/>	Engineering Study
<input type="checkbox"/>	Construction
<input type="checkbox"/>	Amendment

COST ESTIMATE: \$ 11,900

DESCRIPTION AND BENEFITS

The proposed project will initially place approximately 100 feet of 24" casing crossing Rt. 309. Design efforts during this phase will accommodate placing the casing into the PaDOT construction contract, plus design the waterline extension to be constructed at a later date. A separate authorization will be requested prior to installation of the casing. The PaDOT project should be completed by late-2013.


Construction of the waterline extension will probably be in 2014. A separate project authorization for that effort will be processed in the future.

Approval this Authorization Design

Payroll	\$	4,500
Prof. Services	\$	3,419
Easements	\$	2,500
Misc. Expenses	\$	481
Contingency	\$	1,000
Total Design	\$	11,900

Construction	For Future Approval
Total Construction	\$ 145,500
Project Total	\$ 157,400

REVIEW AND APPROVALS

	<u>6/11/12</u>
Project Manager	Date
	<u>6/11/12</u>
Capital Works Manager	Date

_____	_____
General Manager	Date

_____	_____
Chairman	Date

UNNAMED

Sand Spring Road
Waterline Relocation
Area
W-12-3

UNNAMED

SAND SPRING RD

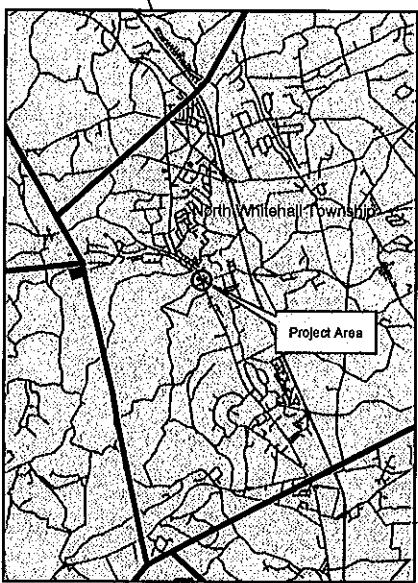
ORCHARD RD

LCCC
Property



Rt. 309 Crossing @
Sand Spring Road
With Easements
W-12-4

Existing Waterline

PA ROUTE 309



Key

-  Waterline in Easement
-  Casing

**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

MEMORANDUM

Date: June 12, 2012

To: Authority Board
From: Emily Gerber
Re: Radon Evaluation and Mitigation Study
Upper Milford Central Division (Buss Acres)
Capital Project Authorization and Professional Services Authorization

MOTIONS /APPROVALS REQUESTED:

No.	Motion / Approval Item	Amount
1	Radon Evaluation & Mitigation Study Capital Project Authorization (CPA) (1)	\$38,040.00

(1) The amount listed for the CPA includes Professional Services for Cowan Associates.

PROJECT OVERVIEW: (REFERENCE ATTACHED MAP – RFP APPENDIX A1)

In 2006, LCA took ownership of the Phillip M. Buss Water Company, a community water system serving 100 residential connections in Upper Milford Township, Lehigh County. It was renamed as the Upper Milford Central Division (UMCD). The water system includes two permitted wells and approximately 14,000 LF of distribution pipeline.

In 2007, LCA was selected by the Pennsylvania Department of Environmental Protection (DEP) to participate in a radon sampling program to determine the level of radon in the water at both entry points as well as at various homes in the system. This sampling was conducted as part of the U.S. Environmental Protection Agency's (EPA) broad research regarding radon in drinking water. The results of this sampling showed that radon levels were substantially higher than the proposed EPA limit of 4,000 picocuries per liter (pCi/L). Even though no regulatory limits were in place at the time of the sampling (nor are any in place today), EPA recommended that customers be notified when radon in drinking water exceeded 10,000 pCi/L. LCA conducted a public meeting to provide additional information to UMCD customers in September of that year.

LCA continued radon testing at the entry points until May 2008. During that time, there was a push for regulatory reform and it was assumed that a radon regulation would be put in place and EPA would mandate radon mitigation in the system. Regulatory limits on radon in drinking water have not yet been adopted, but there is reason to believe that it will occur in the future. To be proactive, LCA will conduct a study to determine the best approach to provide water to the customers of UMCD that will meet future EPA radon level limits.

In order to determine the best short-term and long-term solutions for the UMCD, LCA will hire an engineering firm to complete a radon study of the system. The selected firm, working under a Professional Services Authorization, will start by evaluating the current radon conditions in the system and determine if there is any possibility of changing the way the existing wells are operated that would

reduce the radon to acceptable levels without installing specialized radon mitigation equipment. If no viable options are identified, the consultant will then assess various pre-determined scenarios for radon mitigation. These scenarios are:

1. Keep the existing UMCD wells and mitigate radon onsite;
2. Abandon the existing UMCD wells and drill new well(s) on existing property or newly obtained property within one-half (1/2) mile of the existing system limits; and
3. Abandon existing UMCD wells and interconnect with another system. Interconnection options include:
 - Central Lehigh Division (CLD) via a connection with the Upper Milford Division (UMD)
 - Borough of Macungie
 - Any other Consultant recommended interconnection

Each scenario will be evaluated for capital and operational costs, permitting, easements, obstacles for completion as well as other components. For scenario 1 where mitigation would be required, the consultant will evaluate applicable technologies and recommend the most appropriate solution.

CONSULTANT SELECTION PROCESS:

In mid-April, we solicited proposals from engineering firms for this work. From sixteen firms solicited, we received six proposals. The following firms, listed in order by cost proposal from lowest to highest, submitted technical proposals:

Engineering Firm	Man-hours	Cost
Cowan Associates, Inc.	242	\$19,840.00
Barry Isett & Associates, Inc.	197	\$21,135.00
Arro Consulting, Inc.	293	\$25,482.00
CET Engineering Services	243	\$35,012.00
Buchart Horn, Inc.	403	\$39,586.00
Gannett Fleming	603	\$65,705.00

Upon review of their technical proposal and the receipt of written clarifications to a few questions that derived from their project scope, we will award this project to Cowan Associates, Inc. Their proposal was the lowest and included all of the tasks and subtasks that were included in our RFP.

FUTURE AUTHORIZATIONS:

None anticipated at this time

PROJECT SCHEDULE:

We anticipate the study will be completed by the end of 2012. A project kick-off meeting will be held within the next fifteen days.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.: W-12-2 BUDGET FUND: ADMINISTRATION - WATER CAPITAL

PROJECT TITLE: Upper Milford Central Division (Buss Acres)
Radon Evaluation & Mitigation Study

PROJECT TYPE:

☐ Construction
☒ Engineering Study
☐ Design
☐ Amendment

COST ESTIMATE: \$38,040.00

DESCRIPTION AND BENEFITS

The Upper Milford Central Division (UMCD) has radon levels in both entry point wells that greatly exceed the proposed EPA radon limit of 4,000 picocuries per liter (pCi/L). Even though regulatory limits for radon are not currently in place, we anticipate that EPA will soon mandate radon mitigation in this system. In order to be proactive, LCA needs to determine the best approach for reducing the radon levels in this system.

Professional services have been secured to conduct an engineering study for this project. The consultant will start by evaluating the current radon conditions in the system and determine if there is any possibility of changing the way the existing wells are operated that would reduce the radon to acceptable levels without installing specialized radon mitigation equipment. If no viable options are identified, the consultant will then assess various pre-determined scenarios for radon mitigation. These scenarios are to, a) keep the existing UMCD wells and mitigate radon onsite, b) abandon the existing UMCD wells and drill new wells on existing property or newly obtained property within proximity (1/2 mile) of the existing system limits, or c) abandon the existing UMCD wells and interconnect with another system (LCA or non-LCA owned).

Reference Memo for additional information.

Requested This Authorization		
Project Totals		
Payroll (includes project management & operational staff time)	\$	12,000
Professional Services (Cowan Associates)	\$	19,840
Sampling (existing entry point wells & private wells as needed)	\$	2,300
Contingency	\$	3,900
Total Project Cost	\$	38,040
Future Authorization		
None anticipated at this time		
Total Estimated Project	\$	38,040

REVIEW AND APPROVALS

Project Manager

Date

General Manager

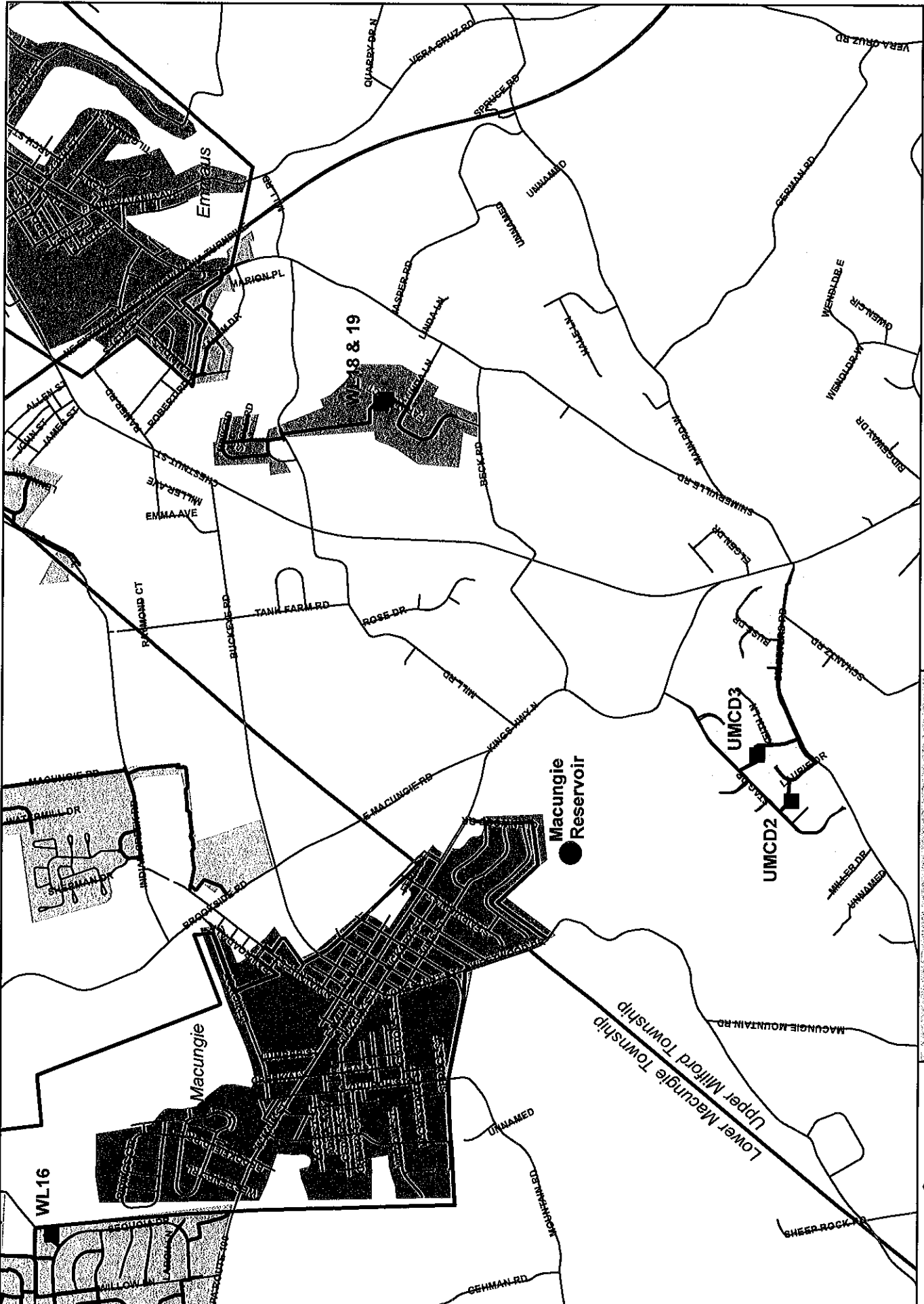
Date

Capital Works Manager

Date

Chairman

Date



APPENDIX A-1
System Location Map
Radon Mitigation RFP

1 inch = 2,000 feet

1 inch = 2,000 feet

LEHIGH COUNTY AUTHORITY
 PO Box 3348, Allentown, PA 18106
 610-398-2503
www.lehighcountyauthority.org

This map is provided as a courtesy by LCA and may not reflect actual system information. LCA assumes no liability for any decisions made or not made based on the data shown on this map or any other information given. Map created 4/13/2012.

existing

6 inch or smaller — 16 inch — Central Lehigh Division

8 inch — 20 inch — Emmaus Consecutive Division

10 inch — 24 inch — Upper Milford Central Division

12 inch — 42 inch — Upper Milford Division

Enmaus Water System

Macungie Water System



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413

PROFESSIONAL SERVICES AUTHORIZATION

Amendment #1

Professional:

Barry Iselt & Associates, Inc.
85 S. Rt. 100 & Kressler Lane
Trexlerstown, PA 18017-0147

Date: June 7, 2012

Requested By: M. Barron

Approvals

Department Head: _____

General Manager: _____

Description of Services (Work Scope, Steps, Check Points, etc.):

**PROJECT: LCA/City of Allentown Water Interconnection, Phase 2
Construction Phase Services**

The following engineering services are added to the construction phase engineering services for the LCA/City of Allentown Water Interconnection, Phase 2 project per the two attached requests dated May 14, 2012 :

Task	Description	Cost
Construction Engineering	Coordinate with LCCD and submit an application to revise the NPDES permit for stormwater from the construction site. Permit revisions were required when record precipitation in the fall of 2011 made it impossible to comply with the original permit requirements.	\$ 6,606
Construction Engineering	Several re-design efforts were required due to utilities being improperly located in the field by the owners, and coordination with UGI's sliplining project in West Walnut Street.	\$ 3,528
Construction Engineering	Additional Construction Engineering services are authorized due to the extended construction schedule	\$ 6,342
Construction Observation	Additional Construction Observation services are authorized thru completion of the project due to the extended construction schedule.	\$ 50,000
TOTAL		\$ 66,476

Original Authorization Limit: \$ 134,089
Addition with this Amendment: 66,476
New Authorization Limit: \$ 200,565

Cost Estimate (not to be exceeded without further authorization) : \$ 200,565

Time Table and Completion Deadline :

Corresponds to completion of construction contract, anticipated to be September 30, 2012

(For Authority Use Only)

Authorization Completion :

Approval : _____ **Actual Cost:** _____ **Date:** _____



BARRY ISETT & ASSOCIATES, INC.

Multidiscipline Engineers & Consultants

www.barryissett.com

Civil | Land Planning & Development | Survey | Code Review | Traffic Planning | Environmental | Landscape Architecture | Parks & Planning | Grants | Forensics
Structural | Mechanical | Electrical | Plumbing | Facilities Services | Geological Services | Construction Services | Water & Waste Water | Municipal Engineering

85 South Route 100
Allentown, PA 18106

610 • 398 • 0904
FAX: 610 • 481 • 9098

May 14, 2012
BIA #01033109.002

Mr. Michael Barron, P.E.
Lehigh County Authority
1053 Spruce Street
Allentown, PA 18106

Dear Mr. Barron,

RE: LCA/ALLENTOWN WATER INTERCONNECT PHASE 2
Construction Engineering Services

As a follow-up to our recent discussion regarding the contractor's schedule, and the fact that the project will probably extend into September, plus the fact that we already incurred some extras in the Construction Engineering budget, I have calculated additional costs (\$17,000) as follows:

ADDITIONAL COSTS – NPDES INVESTIGATION

<u>Invoice #</u>	<u>Date</u>	<u>Amount</u>
77741	12/7/11	\$ 5,619.00
78110	1/9/12	\$ 477.68
78635	2/8/12	\$ 0.00
78904	3/6/12	\$ 418.50
79362	4/5/12	\$ 90.00
TOTAL:		\$ 6,605.18

Additional Design Costs – W. Walnut St. (gas line was in the wrong location, plus relocation of water line at 41st Street, plus meeting with Parkland Place personnel)

36 hours x \$98/hour = \$ 3,528.00

Remaining Resident Engineer Services

5 months x 25 hours/month = 120 hours x \$98/hour =	\$11,760.00
5 months x 3 hours/month = 15 hours x \$42/hour =	\$ 630.00
	\$12,390.00
Less Amount Still in Budget	(-) \$ 6,048.00
	\$ 6,342.00

May 15, 2012

Additional Construction Engineering Cost Summary

\$6,605.18+\$3,528.00+\$6,342.00 = \$16,475.18 – Call \$17,000

All other requirement of the original contract would remain in effect. Please feel free to contact me should you have any questions.

Very Truly Yours,

A handwritten signature in black ink, appearing to read 'Neal E. Kern', written over a horizontal line.

**Neal E. Kern, PE, PLS
Municipal Engineering Services Department Head**



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Allentown, PA 18106

610 • 398 • 0904
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May 14, 2012
BIA #01033109.003

Mr. Michael Barron, P.E.
Lehigh County Authority
1053 Spruce Street
Allentown, PA 18106

Dear Mr. Barron,

RE: LCA/ALLENTOWN WATER INTERCONNECT PHASE 2
Inspection Services

As a follow-up to our recent discussion regarding the contractor's schedule, and the fact that the project will probably extend into September including all pipe laying, plus restoration, plus completion of as-built drawings, we will obviously exceed our budget for inspection. In fact, with our recent invoice no. 79784, dated May 4, 2012, we only have \$31.50 left in the budget. Therefore, I calculated that, assuming 20 work days per month, and assuming the project might go until September 28, 2012, we would need an additional \$50,000 in this budget, calculated as follows:

Remaining construction time from 5/1/12 to 9/28/12

5 months x 20 days/month x 8 hours/day = 800 hours
800 hours x \$63/hour = \$50,400 – Call \$50,000

All other requirements of the original contract would remain in effect. Please feel free to contact me should you have any questions.

Very Truly Yours,

Neal E. Kern, PE, PLS
Municipal Engineering Services Department Head

\\Projects\\2009\\1033109\\docs\\LI\\Inspection Services Budget Issue-NEK.docx(vea)

**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

MEMORANDUM

Date: June 12, 2012

To: Board of Directors & Management Staff
From: Pat Mandes / Frank Leist
Re: Physical Condition Assessment of Signatory Collector Systems

Approvals Requested

Approvals Requested	Brief Description	Amount
Capital Project Authorization Amendment (12) Professional Services Authorization (11)	PCA Malcolm Pirnie	\$156,000

Background

In 2008, the Department of Environmental Protection (DEP) required LCA and the Signatories to generate a Corrective Action Plan for the areas identified as having significant infiltration and inflow (I/I) conditions. In addition, EPA has issued a Compliance Order to the City of Allentown, LCA and all municipalities tributary to the City WWTP to eliminate all SSOs within a five year period (2014).

The LCA 2009-2017 Signatory I/I Investigation & Remediation Project Capital Plan was developed so that LCA could take the lead in working with the Signatories to address the overload and SSO issues. A Sewer Capacity Assurance & Rehabilitation Program (SCARP) Outline was drafted by Malcolm Pirnie that provides a formalized and planned method of evaluating the LCA and Signatory systems, prioritizing and conducting sewer rehabilitation by all the LCA Signatory Partners.

The flow monitoring work performed in 2009 identified areas within the Signatory collector systems with high leakage rates totaling 142 miles of pipe. CCTV inspections were performed in 50 miles of the Signatory collector pipes within the last three years. Of the 50 miles, 28 miles are in the areas identified as high leakage. The next step is to review the CCTV inspections. The review will determine if the pipe is in need of rehabilitation and if so, determine the "Basis of Rehabilitation". Different methods of rehabilitation are used dependent upon the type and extent of the pipe damage and leakage.

Engineering Consulting Services - Project Scope

A Professional Services Agreement and Capital Project Authorization Amendment is attached in the amount of "Not to Exceed" amount of \$156,000 for the PCA of Signatory collector pipe. The Western Lehigh SCARP Partnership I & I Consultant, Malcolm Pirnie will review the existing CCTV inspection records of 148,000 LF of pipe, access, rate, and recommend follow-up actions. PCA figures showing the findings will be presented during three meetings. In making the recommendation for the "Basis of Rehabilitation" for a particular area, a site visit may be necessary to assess site access issues. The scope includes up to four days of site visits if the Signatory or Signatory Consultant cannot provide the information. It is recommended that Malcolm Pirnie provide the PCA of the Signatory pipes because of their expertise and to maintain consistency with the PCA of the WLI and consistency between the Signatories.

**CAPITAL PROJECT AUTHORIZATION
AMENDMENT NUMBER 12**

PROJECT NO.:	<u>S-08-5</u>	BUDGET FUND:	<u>WLI Sewer Capital</u>
PROJECT TITLE:	<u>Signatory I & I Investigation/Remediation Program</u>		PROJECT TYPE:
TOTAL PROJECT THIS AUTHORIZATION	Prior:	\$2,883,031	<input type="checkbox"/> Construction
	Current:	\$156,000	<input type="checkbox"/> Engineering Study
			<input type="checkbox"/> Equipment Purchase
			<input checked="" type="checkbox"/> Amendment

DESCRIPTION AND BENEFITS:

Full Project Overview:

Based on the EPA Compliance Order and the PADEP Chapter 94 requirements, LCA and the LCA Signatories are required to reduce infiltration and inflow from the system and eliminate SSOs from the LCA and Signatory sewer systems within a five year period (2014). The SCARP Program has been developed to investigate the sources of I & I and to remediate areas identified as having excessive I & I. The SCARP Program consists of engineering tasks necessary to define and quantify the problems, to evaluate methods of redress and to determine the corrective actions required to meet the regulatory requirements.

Physical Condition Assessment of Existing CCTV

There are 148,000 LF of Signatory collector pipes that have been televised in recent years that are located in areas where extensive leakage was found through flow monitoring. The CCTV must be reviewed to determine the "Basis of Rehabilitation" and prioritized for rehabilitation.

The work includes reviewing, rating and assessment of the piping, recommended follow-up actions, providing PCA figures showing the findings and attending several meetings for presenting the findings. The Signatories will utilize this information to assist them in developing their rehabilitation projects.

The 2012 budget for the I & I Program includes funds for this work.

Previously Approved		This Amendment	Total Approval
Flow Monitoring Temporary	\$ 1,280,950		\$ 1,280,950
Purchase of Flow Meters (9)	\$63,000		\$63,000
Long Term Metering	\$431,081		\$431,081
Engineering Consulting	\$938,000	\$156,000	\$1,094,000
Staff	\$160,000		\$160,000
Contingencies	\$10,000		\$10,000
Totals	\$ 2,833,031	\$	\$ 3,039,031

REVIEW AND APPROVALS:

<u>Pat Mandes</u> Project Manager	<u>06/08/12</u> Date	_____ General Manager	_____ Date
_____ Capital Works Manager	_____ Date	_____ Chairman	_____ Date



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413

PROFESSIONAL SERVICES AUTHORIZATION

AMENDMENT NUMBER 11

Professional:

Malcolm Pirnie, Inc.
Jim Shelton
824 Market St., Suite 820
Wilmington, DE

Date: 6/8/12

Requested By: Pat Mandes

Approvals

Department Head: _____

General Manager: _____

Description of Services (Work Scope, Steps, Check Points, etc.):

Signatory Collector Systems; Physical Condition Assessment of pipe segments with high leakage.

Provide a physical condition assessment and report for 148,000 LF of Signatory collector piping from the existing CCTV work.

An assessment report shall include a rating of each pipe segment in accordance with industry standards and recommended follow-up activities. Work shall be accomplished in accordance with the attached scope of work and budget estimate dated April 17, 2012.

Cost Estimate (not to be exceeded without further authorization): Not to exceed \$156,000.

Time Table and Completion Deadline:

It is anticipated that this work will be completed by the end of 2012.

(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____



Ms. Pat Mandes
Wastewater Services Director
Lehigh County Authority
P.O. Box 3348
Allentown, PA 18106

ARCADIS U.S., Inc.
640 Freedom Business Center
Suite 310
King of Prussia
Pennsylvania 19406
Tel 610.768.5813
Fax 610.768.5817
www.arcadis-us.com

Subject:
Existing CCTV Physical Condition Assessment – 2012

Dear Ms. Mandes:

In accordance with a request by Lehigh County Authority (LCA), Malcolm Pirnie, the Water Division of ARCADIS, is pleased to provide you with this scope and budget for a physical condition assessment (PCA) of existing CCTV in Alburtis, Lower Macungie Lowhill, Macungie, Upper Macungie, Upper Milford, and Weisenberg (all partners in the Sewer Capacity Assurance & Rehabilitation Program). Consistent with the ongoing inspection program for the Western Lehigh Interceptor, we propose to rate, assess, and recommend follow-up actions, if required, for all of the existing CCTV previously delivered to us which includes approximately 661 segments and 148,000 LF of pipe.

SCOPE OF WORK

Malcolm Pirnie has been provided with a hard drive of existing CCTV and PACP-certified databases for the sanitary sewers in the partner areas noted above.

Malcolm Pirnie will review the inspection records and prepare PCA figures showing the findings and any recommended follow-up actions regarding cleaning and rehabilitation.

Up to four days of site visits for two staff has been included in the budget to assess site access issues. It is assumed that a staff person from LCA or one of the partners will be available to assist Malcolm Pirnie in locating manholes.

Malcolm Pirnie will conduct three separate meetings at LCA to review the findings with LCA and partner staff.

We assume that the existing CCTV has been provided with PACP-certified databases.

Date:
April 17, 2012

Contact:
Tony Dill

Phone:
484.688.0380

Email:
Anthony.Dill@arcadis-us.com

Our ref:
0247

Ms. Pat Mandes
April 17, 2012

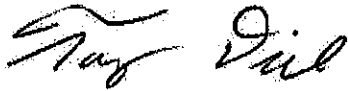
BUDGET ESTIMATE

We estimate that the cost of these services will be \$156,000. We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Malcolm Pirnie, Inc., dated June 17, 1997, and the current Summary of Standard Charges for Lehigh County Authority. We will not exceed this budget without prior authorization from LCA. Payment for services will be based upon the actual labor and expenses incurred.

Please contact me with your authorization to proceed if this scope and budget are acceptable to you. If you have any questions please do not hesitate to call me at 484-688-0380 or 610-761-3253 (mobile).

Sincerely,

ARCADIS U.S., Inc.

A handwritten signature in black ink, appearing to read "Tony Dill". The signature is fluid and cursive, with the first name "Tony" and last name "Dill" clearly distinguishable.

Tony Dill, PE, BCEE
Program Manager – Buried Infrastructure Team

C: Jim Shelton, Malcolm Pirnie
Craig Murray, Malcolm Pirnie

**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

MEMORANDUM

Date: June 6, 2012

To: LCA Board of Directors
From: Mike Barron, Frank Leist
Subject: Arcadia West WWTP Upgrade - Construction Phase

MOTIONS/APPROVALS REQUESTED:

Item	Amount
Capital Project Authorization Amendment - Construction Phase	\$3,034,500
Construction Contract Awards:	
Contract #1, General Construction – JEV Construction, LLC	\$2,074,500
Contract #2, Electrical Construction – George J. Hayden, Inc.	\$349,000
Contract #3, Mechanical & Plumbing Construction – Dual Temp Co., Inc.	\$95,450
	<u>\$2,518,950</u>
Professional Services Authorization for Herbert Rowland & Grubic (HRG)	\$174,100

CAPITAL PROJECT AUTHORIZATION AMENDMENT

We recommend that the Board approve the attached Capital Project Authorization Amendment for the construction phase of the project. The Amendment includes the estimated costs for the construction phase of the project based on the bids received on June 1, 2012. An agreement has been negotiated with Hillwood Associates, developer of the proposed West Hills Business Center, which will receive wastewater treatment service from the new plant, whereby LCA will be reimbursed 30% of the project costs. Project funding will be provided via a low-interest loan from PENNVEST.

CONSTRUCTION CONTRACT AWARDS

Construction proposals were received on June 1, 2012 (Bid tabulation attached.) This was the second time that bids were solicited – the bids received on March 17, 2011 were ultimately rejected because PaDEP maintained that the bid documents did not meet PENNVEST requirements. Unfortunately, the manufacturer that had been working with our engineer throughout the design process and was the original basis of bid, declined to participate in the re-bid. Therefore, to ensure that the new plant equipment would provide proper treatment of the influent wastewater, we added a requirement to the Contract #1- General Construction contract documents that bidders provide with their bids a 5-year process guarantee from the manufacturers of the major pieces of treatment equipment.

When the bids were reviewed, we found that the three lowest bidders for Contract #1 submitted bids which were based on equipment from Siemens Co. Siemens did not sign the Manufacturer's Guarantee Certificates that were in the bid documents, but provided marked-up certificates and a letter stating that they would sign the revised certificates if awarded the contract. Bidders #4 through #8 submitted bids which were based on equipment from Ashbrook Simon-Hartley. Ashbrook Simon-Hartley signed the Manufacturer's Guarantee Certificates that were in the bid documents.

We are recommending that the Authority disregard the bids for Contract #1 that were based on Siemens Co. equipment as non-responsive, and award the contract to the lowest responsible bidder providing Ashbrook Simon-Hartley equipment. Pending a full review of the bid submittal and a financial/reference check by HRG, we believe the lowest responsible bidder to be JEV Construction, LLC.

We are recommending that the Authority award Contracts #2 and #3 to George J. Hayden, Inc. and Dual Temp Co., Inc. as they have been determined to be the lowest responsible bidders for their respective contracts.

We recommend that the General Manager and Solicitor be authorized to sign the Agreement forms, and that each construction contract award should be conditioned upon:

- Receipt of all the required documents to complete the award;
- Receipt of the signed Usage and Contribution Agreement from Hillwood Associates, Inc. committing to their 30% share of the project.

PROFESSIONAL SERVICES AUTHORIZATION

This authorization covers two separate engineering roles during the construction phase of the project

1. Construction Engineering – A proposal was solicited from the design engineer in May, 2012. We recommend that, Herbert Rowland & Grubic, Inc. (HRG) of Harrisburg, PA be authorized to provide engineering services during construction for a cost not to exceed \$74,560. These services include conducting job conferences, reviewing contractor submittals (shop drawings, progress pay requests, change order requests, etc.), observing start-up and testing of equipment and controls, and preparing record drawings.
2. Construction Observation - In April, 2011 (near the time of the original construction bid opening) we solicited proposals from six area engineering firms for an estimated 1,500 hours of construction observation services. We received the following cost proposals:

Engineering Firm	Cost
Herbert Rowland & Grubic (HRG)	\$ 99,540
Keystone Consulting Engineers	\$ 108,000
ARRO	\$ 120,730
Barry Isett & Associates	\$ 120,920
RETTEW	\$ 121,000
Spotts, Stevens & McCoy	\$ 171,400

Communication is simplified on the project if a single firm provides both construction engineering and observation services. In addition, HRG has agreed to honor their pricing from last year. Accordingly we recommend that HRG be authorized to provide construction observation services for the project.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	S-10-02	BUDGET FUND:	Wastewater Capital
PROJECT TITLE:	Arcadia West Wastewater Treatment Plant Upgrade	PROJECT TYPE:	
COST ESTIMATE:	\$3,034,500 Construction Phase (\$ 3,446,600 Total Project)	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study / Design <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> Amendment	

DESCRIPTION AND BENEFITS:

The existing Cromaglass wastewater treatment plant at Arcadia West Industrial Park has a capacity of 12,000 gallons per day, but has not been operating since August 2006, when it was taken off-line because it could not be operated in compliance with the discharge permit. Since that time, treatment for the system's wastewater has been provided via hauling to LCA's Wastewater Treatment Plant in Fogelsville.

A preliminary design for a new treatment plant was completed in 2008 by Hillwood Investment Properties (Hillwood). Hillwood is proposing to develop the West Hills Business Park, which will be served by the new plant. This upgrade consists of expanding the plant capacity to 40,000 gallons per day with a new sequencing batch reactor system, tertiary filtration, and ultraviolet disinfection. The award of a PennVEST low-interest loan in July 2010 requires that the Authority be responsible for constructing the project, rather than Hillwood. Construction will be at the site of the existing plant, which will be abandoned.

The 40,000 gallon per day plant capacity is to be allocated: 12,000 gpd for Arcadia West Industrial Park, representing the capacity of the plant constructed by that developer, 12,000 gpd for West Hills Business Park (Hillwood), 8,000 gpd for the Weisenberg Elementary School (Northwestern Lehigh School District), 3,000 gpd for the Bandit Truck Stop, with 5,000 gpd remaining unallocated. Hillwood has committed to paying a pro-rata share (30%) of the project costs, based on its allocation in the upgraded plant, receiving credit for its costs during preliminary design. Additional costs will be recovered from other users via tapping fees at the time of service.

EXPENSES:

	Authorizations	LCA Share (70%)
Preliminary Design (completed)	\$ 286,100	\$ 200,270
Final Design and Bidding (completed)		
Staff, Misc.	\$ 55,000	\$ 38,500
Professional Services	\$ 65,000	\$ 45,500
Miscellaneous	\$ 6,000	\$ 4,200
Subtotal	\$ 126,000	\$ 88,200
Construction (this auth.)		
Construction Contracts	\$ 2,519,000	\$ 1,763,300
Staff	\$ 164,000	\$ 114,800
Professional Services	\$ 174,100	\$ 121,870
Other	\$ 51,400	\$ 35,980
Contingencies	\$ 126,000	\$ 88,200
Subtotal	\$ 3,034,500	\$ 2,124,150
TOTAL PROJECT COST	\$ 3,446,600	\$ 2,412,620

Preliminary Design includes costs Hillwood paid to their engineer for design and permitting services plus LCA's expenses for operating a pilot treatment plant.

Final Design includes LCA's expenses to complete the design documents and obtain construction proposals.

Capital Plan: This project was presented in the 2012-2021 Capital Plan with a total cost estimate of \$3,234,000, which did not include Hillwood's preliminary design costs of \$198,000.

Budget: A budget amendment for 2012 is not necessary since \$2,745,000 for this project was included.

REVIEW AND APPROVALS:

Project Manager	Date	General Manager	Date
Capital Works Manager	Date	Chairman	Date

ALTERNATIVES

The following alternatives have been considered:

Connection to Western Lehigh Interceptor. This alternative would allow for more flexibility in the types of industries that could locate in the Arcadia West and West Hills developments. However, the extension of a long force main through undeveloped portions of Weisenberg Township would not be consistent with the Township and County comprehensive plans. And, it is unlikely that the Western Lehigh Interceptor signatory municipalities would allow an increase in Weisenberg Twp.'s allocation in the interceptor and Kline's Island treatment plant.

No Action. Although LCA might be able to continue hauling wastewater to the Waste Treatment Plant in Fogelsville for a period of time, we feel that PaDEP will eventually require LCA to upgrade the Arcadia West treatment plant, in conformance with Weisenberg Township's Official Sewerage Facilities Plan. Hillwood's contribution to the project and the low-interest loan from PennVEST would be lost.

APPROVALS

The following permits or approvals apply to the project:

Contact	Permit/Approval	Comment
Pa DEP	<ul style="list-style-type: none"> ▪ NPDES Discharge Permit ▪ Water Quality Management Part 2 Permit ▪ Water Obstruction & Encroachment Permit 	These permits were secured during preliminary design
Weisenberg Township	<ul style="list-style-type: none"> ▪ Building Permit 	After contracts are awarded, a building permit can be issued by the Township.
Lehigh County Conservation District	<ul style="list-style-type: none"> ▪ Construction Permit ▪ Approval of Soil Erosion and Sedimentation Control Plan 	Permit and approval was secured during preliminary design

CONTRACT ARRANGEMENT

The construction contracts have been publicly bid with three prime contracts. Contract documents and bidding procedures have complied with PennVEST requirements.

CONSTRUCTION MANAGEMENT AND INSPECTION

We propose to hire the design engineer (Herbert Rowland & Grubic, Harrisburg PA) to provide construction engineering and observation services.

SCHEDULE

- Authorized HRG to begin Final Design October 29, 2010
- Advertised for construction bids January 19, 2011
- Re-Advertised for construction bids April 10, 2012
- Received Construction bids June 1, 2012
- PennVEST Loan Settlement July 31, 2012
- Issue Notices to Proceed August 3, 2012
- Substantial Completion August 3, 2013
- Final Completion October 3, 2013



Lehigh County Authority

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(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

PROFESSIONAL SERVICES AUTHORIZATION

Professional: HERBERT, ROWLAND & GRUBIC, INC.
369 East Park Drive
Harrisburg, PA 17111

Date: May 24, 2012

Requested By: M. Barron

Approvals

Department Head: _____

General Manager: _____

Services: Consulting Engineering

PROJECT: Arcadia West Wastewater Treatment Plant Improvements
Construction Phase

Description of Services (Work Scope, Steps, Check Points, etc.):

Description	Not-to-Exceed Cost Estimates
1. Construction Engineering - scope and hour estimate is detailed in attached proposal of May 18, 2012	\$ 74,560
2. Construction Observation - scope and hour estimate is detailed in the attached Request proposal dated April 15, 2011.	\$ 99,540
TOTAL	\$ 174,100

Time Table and Completion Deadline: Responds to construction schedule. Anticipated date for Notices to Proceed is August 3, 2012

(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____



369 East Park Drive
Harrisburg, PA 17111
(717) 564-1121
FAX (717) 564-1158
www.hrg-inc.com

VIA ELECTRONIC & STANDARD MAIL

May 18, 2012

Mr. Michael A. Barron, P.E.
Lehigh County Authority
1053 Spruce Street
P.O. Box 3348
Allentown, Pennsylvania 18106

Re: Agreement for Engineering Services
Arcadia West Industrial Park WWTP Upgrade
Construction Phase Services

Dear Mr. Barron:

Herbert, Rowland & Grubic, Inc. (HRG) is pleased to submit this agreement to provide professional engineering services to the Lehigh County Authority (Authority) for completion of the Construction Phase of the Arcadia West Industrial Park Wastewater Treatment Plant (WWTP) Upgrade Project. Bids for construction of the project will be received by the Authority through the PennBID website on May 24, 2012.

It is anticipated that the Authority will award the three (3) construction contracts for this project upon approval of the Bids by the Authority, PENNVEST and the Pennsylvania Department of Environmental Protection (PA DEP). We understand that the Authority is working to achieve settlement of the PENNVEST loan for the project by July 2012.

In accordance with Article II of the Agreement between Owner and Contractor (Section 00500 of the Bidding Documents), the work of this project shall be substantially completed within 365 calendar days following the date of Notice to Proceed. Final Completion shall be within 60 calendar days following the date of Substantial Completion.

SCOPE OF SERVICES

Our proposed Scope of Services below details the effort needed to effectively complete the Construction Phase of the project. Estimated man-hours for completion of each task are included as an attachment to our proposal.

Construction Phase

Upon authorization from the Authority, HRG will complete the following services during the Construction Phase of the project:

- A. Prepare Form of Agreement between Owner and Contractor and related Performance and Payment Bonds and issue copies to the selected Bidders for execution. Provide copies of executed Agreements and Bonds to the Authority, the Authority's Solicitor, and awarded contractors.
- B. Upon authorization from the Authority, issue Notice to Proceed to the contractors.
- C. Provide one (1) set of Contract Documents, including Project Manual and Drawings, to each contractor.
- D. Prepare a conformed Project Manual incorporating signed Bids and executed Contract Documents. Modifications to the Technical Specifications made via addenda during the Bidding Phase will be incorporated into the conformed Project Manual.
- E. Conduct and document one (1) Pre-Construction Conference with the Authority's Project Management Team (PMT) and the contractors. Meeting Minutes will be issued to all attendees.
- F. Conduct and document monthly Job Conferences with the Authority's PMT and the contractors for construction duration through Final Completion. Meeting Minutes will be issued to all attendees. A total of ten (10) Job Conferences are anticipated.
- G. Perform engineering site visits at appropriate intervals during construction to observe the quality and progress of the work. Resident Project Representative (RPR) services for the project are covered under a separate agreement. We assume that engineering site visits will be conducted at a frequency of one (1) time per month.
- H. Review contractor requests for additional contract time or compensation and provide written recommendation to the Authority. We anticipate a minimum of one (1) request per contractor.
- I. Issue Interpretations and Clarifications of the Contract Documents. We anticipate four (4) per Contract.
- J. Review of contractor submittals including shop drawings, samples, the results of tests and inspections, operation and maintenance manuals and other data and submissions made by contractors. Review of substitutions will be billed separately to coincide with the Agreement between Owner and Contractor and the attached General Provisions for Consulting, Design and Construction.
- K. Review, negotiate, prepare and process all requests for Change Orders. A total of four (4) Change Orders are anticipated.
- L. Review contractor Applications for Payment, one (1) per month per contractor.
- M. Conduct one (1) inspection at Substantial Completion and one (1) inspection at Final Completion and prepare punchlists detailing any deficiencies or corrections needed. Issue Certificate of Substantial Completion following successful Substantial Completion inspection and Notice of Acceptability of Work following successful Final Completion inspection.
- N. Observe field tests and start-up/testing of major process equipment and control systems. We anticipate two (2) full-day site visits for field tests and start-up.

- O. Prepare Record Drawings based on data provided by contractors and construction observers/RPR. Provide the Authority with one (1) full-scale paper copy and one (1) electronic copy.
- P. Prepare and issue Contract Closeout Documents.

SPECIFIC SERVICES EXCLUDED

Our agreement excludes the completion of RPR services. HRG's intended Scope of Services and Compensation for completion of RPR services for the project has been provided to the Authority under a separate agreement.

Our agreement does not include services to be completed during the Operations Phase of the Project. Services typically provided by HRG during the Operations Phase include assistance with refining or adjusting equipment or WWTP systems, assistance in developing procedures for the control of the operation and maintenance of the WWTP and training of the Authority's Staff on the operation of major WWTP equipment. HRG would be glad to provide these services to the Authority should they be desired. A specific Scope of Services and Fee for completion of the Operations Phase of the Project would be developed as construction of the project progresses.

Our agreement does not include services relative to the administration of the PENNVEST loan. HRG employs a Financial Services department which is available to provide services to the Authority relative to the administration of the PENNVEST loan upon the Authority's request.

COMPENSATION

We propose to complete the work described within this agreement on a Time and Materials basis for an Estimated Fee of \$74,560.

Our Estimated Fee is based on the attached 2012 Fee Schedule, which is effective from December 31, 2011 through December 31, 2012 and is subject to change for calendar year 2013 activities. HRG adjusts the fee schedule annually to reflect the cost of doing business for the coming year.

We have included a Cost Summary with this proposal which identifies estimated man-hours for each task described in the Scope of Services above and associated fee based on the attached 2012 Fee Schedule. The fees above include reimbursable expenses which will be billed in accordance with the attached schedule of Current Billable Expenses. Our mark-up on reimbursable expenses shall be as noted on the Fee Schedule.

TERMS

All Work will be performed in accordance with the attached General Provisions for Consulting, Design and Construction.

Mr. Michael A. Barron, P.E.
Lehigh County Authority
May 18, 2012
Page 4

AUTHORIZATION

We have developed the above Scope of Services specifically with the Authority's Project needs in mind. To indicate your acceptance of these terms, and authorize the work to begin, please sign the authorization statement below, return one copy to our office, and keep the others for your files.

If you have any questions concerning our agreement, please feel free to contact me to discuss them in greater detail. We appreciate the opportunity to provide the Authority with professional services in this capacity and look forward to working with you on the completion of this Project.

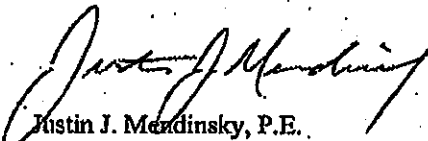
Very truly yours,

Approved By:

Herbert, Rowland & Grubic, Inc.



Andrew Kenworthy, P.E.
Eastern Regional Vice President



Justin J. Mendinsky, P.E.
Water & Energy Project Manager

JJM/vjm/lis

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Enclosures

c: File (w/Encl.)

ACCEPTED BY:

LEHIGH COUNTY AUTHORITY

TITLE

DATE

Proprietary Notice

This proposal contains proprietary information regarding Herbert, Rowland & Grubic, Inc. and is a work product containing business sensitive materials. This proposal was prepared in response to your request for your specific project and no portion of this proposal may be shared with any other party.

Herbert, Rowland & Grubic, Inc.

**GENERAL PROVISIONS
FOR CONSULTING, DESIGN AND CONSTRUCTION PHASE**

**ENGINEER:
HERBERT, ROWLAND & GRUBIC, INC.
ENGINEERING & RELATED SERVICES**

**CLIENT:
LEHIGH COUNTY AUTHORITY**

PROPOSAL AGREEMENT DATED: May 18, 2012

PROJECT: Arcadia West Industrial Park WWTP Upgrade - Construction Phase Services

These General Provisions set forth herein are included by reference in the Agreement for the performance of engineering services which are described in the Agreement. The Agreement shall take precedence over these General Provisions to the extent that there are any inconsistencies or contradictory statements.

1. GENERAL: Herbert, Rowland & Grubic, Inc. (hereinafter referred to as HRG) shall provide for CLIENT professional engineering services in any or all phases of the Project to which the Agreement applies. These services will include serving as Client's Professional Engineering Representative for the Project, providing professional engineering consultation and advice and furnishing customary civil, environmental, transportation and related engineering and surveying services as required. HRG's professional services will be performed in accordance with generally accepted principals of engineering practice. It is understood that HRG shall not be held liable for work performed by other parties, for the accuracy of data supplied by other parties upon which HRG may rely, or for testing or inspection work performed by other parties.

2. TIMING OF PROPOSAL: HRG agrees that the Proposal/ Agreement shall remain open and may be accepted by the CLIENT for thirty (30) days from the above date. Acceptance of the Proposal/Agreement after the end of the 30-day period shall be valid only if HRG elects, in writing, to reaffirm the Proposal/Agreement and waive its right to reevaluate and resubmit the Proposal/Agreement.

3. CONDUCT OF THE WORK: All concept, preliminary and final plans will be submitted to CLIENT or its authorized representative for approval concurrent with proceeding to attempt to secure approvals by local, county, state and all other governmental authorities having jurisdiction over the Project. In the event CLIENT does not respond to such submission within five (5) days, it shall be considered to have been given its approval.

Survey work is weather dependent, and HRG cannot always guarantee the time or date a survey crew will be available. HRG recognizes the importance of survey scheduling and will make a good faith effort to meeting clients' needs.

4. RIGHT OF ENTRY: CLIENT agrees to provide rights of entry and all permits and permissions necessary for the completion of HRG's service under the Agreement at no cost to HRG.

5. USE OF DOCUMENTS: All documents are instruments of service with respect to this Project, and HRG shall retain an ownership and property interest therein (including the right of reuse at the discretion of HRG) whether or not the Project is completed. Upon payment for services rendered, CLIENT may make and retain copies of Documents for information and reference in connection with use on the Project by CLIENT. Such Documents are not intended or represented to be suitable for reuse by CLIENT or others on extensions of the Project or on any other project. Any such reuse or modification without written verification or adaptation by HRG, as appropriate for the specific purpose intended, will be at CLIENT's sole risk and without liability or legal exposure to HRG or to HRG's Consultants. CLIENT shall indemnify and hold harmless HRG and HRG's Consultants from all claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting therefrom. Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle HRG to further compensation at rates to be agreed upon by CLIENT and HRG.

Copies of Documents that may be relied upon by CLIENT are limited to the printed copies (also known as hard copies) that are signed or sealed by HRG. Files in electronic media format of text, data, graphics, or of other types that are furnished by HRG to CLIENT are only for convenience of CLIENT.

Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures

within 30 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 30-day acceptance period will be corrected by the party delivering the electronic files. HRG shall not be responsible to maintain documents stored in electronic media format after acceptance by CLIENT.

When transferring documents in electronic media format, HRG makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by HRG at the beginning of this Project, nor does HRG confer or transfer any software license or right to use with the conveyance of data files.

6. COPYRIGHT: HRG is the exclusive owner and has the exclusive copyright to documents prepared for this Project and will grant a license to use said documents for the Project to the CLIENT upon the CLIENT's payment in full of all invoices rendered by HRG. CLIENT may not in turn transfer said license except as provided in Paragraph 9 of these General Provisions. The failure of HRG to obtain copyright registration shall not affect or impair HRG's ownership of these documents.

7. INDEMNIFICATION: CLIENT will indemnify and hold harmless HRG, its officers, directors, shareholders, or agents, employees, consultants and subcontractors from and against any and all liabilities, damages, or expenses in connection with any personal injury or property damage arising out of or in any way connected with the negligence, recklessness, or intentional acts or omissions by CLIENT, its officers, directors, agents, employees and contractors. CLIENT further agrees to indemnify and hold harmless HRG for any and all fees and expenses incurred in enforcing or defending HRG's right under this Agreement or the performance of its duties under this Agreement.

HRG may settle any claim for which it has a right of indemnification against CLIENT without CLIENT's consent. Notwithstanding that settlement documents shall state that HRG does not admit liability and that it is a disputed claim, HRG shall not be required to prove its liability of the reasonableness of the settlement to obtain indemnification from CLIENT.

8. INSURANCE: HRG and its agents, employees and consultants are covered by Worker's Compensation Insurance and have limited coverage under public liability and property damage insurance policies. Certificates of insurance will be provided upon request. HRG shall not be responsible for any loss, damage, or liability beyond the amounts, limits and conditions of such insurance. Additional coverage may be obtained at the CLIENT's expense. Failure to exercise this option waives any claims of liability beyond such limits. If the CLIENT obtains a builder's risk policy for the construction phase of this Project, HRG shall be a named insured.

9. ASSIGNS: CLIENT and HRG each binds itself and its partners, successors, executors, administrators, assigns, and legal representatives to the other party of this Agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party in respect to all covenants, agreements and obligations of this Agreement. Neither CLIENT nor HRG shall assign or transfer any rights under or interest in this Agreement without the prior written consent of the other, except to the extent that the effect of this limitation may be restricted by law.

10. SUBCONSULTANTS: HRG has the right to employ or retain such independent consultants, associates and subcontractors as it may deem appropriate to assist it in the performance of the services required. HRG has the exclusive right to choose to join any and all such independent consultants, associates, and subcontractors in the resolution of any disputes between the CLIENT and HRG including arbitration, mediation, or suit brought in court.

11. SAFETY RESPONSIBILITY: HRG is not responsible for any safety precautions or programs of the CLIENT or any contractors working on the Project except for the safety of HRG's own employees.

12. CONTROLLING LAW: The Letter Agreement is to be governed by the laws of the Commonwealth of Pennsylvania which is the principal place of business of HRG.

13. HAZARDOUS SUBSTANCES: CLIENT represents and warrants to HRG that it has and will comply with all obligations imposed by applicable law upon the generation, storage or disposal of hazardous substances and/or waste and that it will promptly notify HRG of any notices concerning such matters. CLIENT agrees to hold harmless, identify and defend HRG from and against any and all damages and liabilities and expenses arising out of or in any way connected with the presence, discharge, exposure, release, or escape of hazardous substances, or wastes of any kind, excepting only such liability as may arise out of the sole negligence of HRG in the performance of services under this Agreement.

14. PAYMENTS: Invoices will be submitted by HRG on a monthly basis as the work proceeds. Payments will be due and payable in full on receipt of an invoice by CLIENT without retainage, and will not be contingent upon receipt of funds from third parties. If fees are not paid in full within 30 days of the date of the invoice, HRG reserves the right to pursue all remedies, including withdrawing certifications, stopping work on three (3) days' prior written notice, and retaining all documents without recourse. If at any time an invoice remains unpaid for a period in excess of 30 days, interest at the rate of 1-1/2% per month will be charged on past-due accounts. CLIENT agrees to indemnify and hold harmless HRG from and against any and all reasonable fees, expenses and costs incurred by HRG including, but not limited to, court costs, arbitrators and attorneys' fees and other claim related expenses incurred in the collection process.

All invoicing will be substantiated by HRG cost record sheets and work order system, all of which shall be made available to CLIENT upon request and during regular working hours for inspection and audit. Time spent in additional detailing of invoices is considered extra effort on the Project and will be invoiced as additional work along with any related cost of making copies and reproductions. CLIENT may withhold payment or portion thereof for deficient items, providing ENGINEER is notified of deficiencies within seven calendar days of the date that the invoice is received, in accordance with PA 1994 ACT 7. Any increase in HRG's cost resulting from state or federal legislation shall be reimbursed by the CLIENT.

Timely payment of invoices is a condition of this Agreement. Failure to make payments in full within the time limits stated above will be considered substantial noncompliance with the terms of this Agreement and will be cause for termination of the Agreement if HRG so chooses.

Unless otherwise agreed in writing, all fees and costs payable to HRG pursuant to this Agreement are payable at HRG's principal place of business in Dauphin County, Pennsylvania. It is hereby agreed that all suits will be litigated in Federal or State Court in Dauphin County, Pennsylvania. Acceptance of payment by HRG elsewhere shall not constitute a waiver of this requirement.

15. TERMINATION: The obligation to provide further services under this Agreement may be terminated by either party upon three (3) days' written notice in the event of a substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. CLIENT agrees to be liable and pay HRG for all labor done, work performed, materials furnished, and all expenses incurred for all work and additional work up to and including the day work is terminated, in accordance with the notice required under this section.

A substantial failure to perform shall also include, but not be limited to, the CLIENT'S inability to provide credit references and/or a credit history acceptable to HRG prior or following the execution of this Agreement. Notwithstanding the above, failure of HRG to request said credit references shall not relieve client of its obligation to perform under the terms of this Agreement.

16. THIRD PARTY BENEFICIARIES: Nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than the CLIENT and HRG, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of CLIENT and HRG and not for the benefit of any other party.

17. LIMITATION OF LIABILITY HRG shall endeavor to perform the services under this Agreement with the care and skill ordinarily used by members of HRG's profession practicing under similar conditions at the same time and in the same locality. There are no other warranties, express or implied, including, without limitations, no warranties of merchantability or fitness for particular

purpose, made by HRG in this Agreement or in any reports, opinions, drawings, specifications or other documents furnished by HRG under this Agreement, or otherwise. HRG shall not be liable for the results of services performed with professional care and skill. To the fullest extent permitted by law, HRG's total liability to CLIENT for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in any way related to the Project or this Agreement from any cause or causes including, but not limited to, HRG's negligence, errors, omissions, strict liability, intentional acts, breach of contract or breach of warranty shall not exceed the total compensation received by HRG under this Agreement, or the amount paid on behalf of HRG by their insurers in settlement or satisfaction of CLIENT's claims under the terms and conditions of HRG's professional insurance policy or policies applicable thereto, whichever is greater.

18. OTHER WORK: If the CLIENT requests HRG to provide engineering services on other Projects before a written Agreement is consummated for the other Project, the terms and conditions of this Agreement shall apply in full.

19. AUTHORITY TO SIGN: The individual signing this Agreement warrants that he has authority to sign as, or on behalf of, CLIENT for whom or for whose benefit HRG's services are rendered. If such individual does not have such authority, he understands and agrees that he is personally responsible for this Agreement to HRG in addition to any liability which CLIENT may have.

20. CONTRACTOR/MANUFACTURER SUPPLIED DESIGNS: The Work may require the furnishing and supplying of design services for such products as pre-manufactured buildings, tanks, special structures and systems, etc. CLIENT shall not hold HRG responsible for any such design which is furnished by others.

21. CONSTRUCTION PHASE

21.1. GENERAL ADMINISTRATION OF CONSTRUCTION CONTRACT.

HRG shall consult with and advise CLIENT and act as CLIENT's representative as provided in Articles I through 17, inclusive, of the Standard General Conditions of the Construction Contract by the Engineer's Joint Contract Documents Committee. The extent and limitations of the duties, responsibilities and authority of HRG as assigned in said Standard General Conditions shall not be modified, except to the extent provided in the Agreement, and except as HRG may otherwise agree in writing. All of CLIENT's instructions to Construction Contractor(s) (hereinafter referred to as Contractor(s)) will be issued through HRG who will have authority to act on behalf of CLIENT to the extent provided in said Standard General Conditions except as otherwise provided in writing.

21.2 VISITS TO SITE AND OBSERVATION OF CONSTRUCTION. In connection with observations of the work of Contractor(s) while it is in progress:

21.2.1 HRG shall make visits to the site at intervals appropriate to the various stages of construction as HRG deems necessary in order to observe as an experienced and qualified design professional the progress and quality of the various aspects of Contractor(s)' work. Such visits and observations by HRG are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress or to involve detailed inspections of Contractor's work in progress beyond the responsibilities specifically assigned to HRG in this Agreement and the Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on HRG's exercise of professional judgment. Based on information obtained during such visits and on such observations, HRG shall endeavor to determine in general if such work is proceeding in accordance with the Contract Documents and HRG shall keep CLIENT informed of the progress of the work.

21.2.2 If recommended by HRG and approved by the CLIENT, HRG shall provide the services of a Resident Project Representative (and assistants as agreed) at the site to assist HRG and to provide more continuous observation of such work. The Resident Project Representative (and any assistants) will be HRG's agent or employee and under HRG's supervision. The duties and responsibilities of the Resident Project Representative (and assistants) are set forth in the Exhibit entitled "Duties, Responsibilities and Limitation of Authority of Resident Project Representative."

21.2.3 The purpose of HRG's visits to and representation by the Resident Project Representative (and assistants, if any) at the site will be to enable HRG to better carry out the duties and responsibilities assigned to and undertaken by HRG during the Construction Phase, and, in addition, by exercise of HRG's efforts as an experienced and qualified design professional, to provide for CLIENT a greater degree of confidence that the completed work of Contractor(s) will conform

generally to the Contract Documents and that the integrity of the design concept as reflected in the Contract Documents has been implemented and preserved by Contractor(s). On the other hand, HRG shall not, during such visits or as a result of such observations of Contractor(s)' work in progress, supervise, direct or have control over Contractor(s)' work nor shall HRG have authority over or responsibility for the means, methods, techniques, sequences or procedures of construction selected by Contractor(s), for safety precautions and programs incident to the work of Contractor(s) or for any failure of Contractor(s) to comply with laws, rules, regulations, ordinances, codes or orders applicable to Contractor(s) furnishing and performing their work. Accordingly, HRG can neither guarantee the performance of the construction contracts by Contractor(s) nor assume responsibility for Contractor(s)' failure to furnish and perform their work in accordance with the Contract Documents.

21.3 DEFECTIVE WORK. During such visits and on the basis of such observations, HRG may disapprove or reject Contractor(s)' work while it is in progress if HRG believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents.

21.4 INTERPRETATIONS AND CLARIFICATIONS. HRG shall issue necessary interpretations and clarifications of the Contract Documents (and in connection therewith prepare work change directives and change orders as required) as appropriate to the orderly completion of Contractor's work.

HRG may issue Field Orders authorizing minor variations from the requirements of the Contract Documents. HRG will recommend Change Orders and Work Change Directives to CLIENT as appropriate.

21.5 SHOP DRAWINGS. HRG shall review and approve (or take other appropriate action in respect of) Shop Drawings (as that term is defined in the aforesaid Standard General Conditions), samples and other data which Contractor(s) are required to submit, but only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Such reviews and approvals or other action shall not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto.

21.6 SUBSTITUTES. Upon CLIENT's authorization, HRG shall evaluate and determine the acceptability of substitute materials and equipment proposed by Contractor(s).

21.7 INSPECTIONS AND TESTS. HRG shall have authority, as CLIENT's representative, to require special inspection or testing of the work, and shall receive and review all certificates of inspections, testings and approvals required by laws, rules, regulations, ordinances, codes, orders or the Contract Documents (but only to determine generally that their content complies with the requirements of, and the results certified indicate compliance with, the Contract Documents).

21.8 DISPUTES BETWEEN CLIENT AND CONTRACTOR. HRG shall act as initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the work thereunder and make decisions on all claims of CLIENT and Contractor(s) relating to the acceptability of the work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the work. HRG shall not be liable for the results of any such interpretations or decisions rendered in good faith.

21.9 APPLICATIONS FOR PAYMENT. Based on HRG's on-site observations as an experienced and qualified design professional, on information provided by the Resident Project Representative and on review of applications for payment and the accompanying data and schedules:

21.9.1 HRG shall determine the amounts owing to Contractor(s) and recommend in writing payments to Contractor(s) in such amounts. Such recommendations of payment will constitute a representation to CLIENT, based on such observations and review, that the work has progressed to the point indicated, and that, to the best of HRG's knowledge, information and belief, the quality of such work is generally in accordance with the Contract Documents (subject to an evaluation of such work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and to any other qualifications stated in the recommendation). In the case of unit price work, HRG's recommendations of payment will include final determinations of quantities and classifications of such work (subject to any subsequent adjustments allowed by the Contract Documents).

21.9.2 By recommending any payment HRG will not thereby be deemed to have represented that exhaustive, continuous or detailed reviews or examinations have been made by HRG to check the quality or quantity of Contractor(s)' work as it is

furnished and performed beyond the responsibilities specifically assigned to HRG in this Agreement and the Contract Documents. HRG's review of Contractor(s)' work for the purposes of recommending payment will not impose on HRG responsibility to supervise, direct or control such work or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto or Contractor(s) compliance with laws, rules, regulations, ordinances, codes or orders applicable to their furnishing and performing the work. It will also not impose responsibility on HRG to make any examination to ascertain how or for what purposes any Contractor has used the moneys paid on account of the Contract Price, or to determine that title to any of the work, materials or equipment has passed to CLIENT free and clear of any lien, claims, security interests or encumbrances, or that there may not be other matters at issue between CLIENT and Contractor that might affect the amount that should be paid.

21.10 CONTRACTOR(S)' COMPLETION DOCUMENTS. HRG shall receive and review maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests and approvals which are to be assembled by Contractor(s) in accordance with the Contract Documents (but such review will only be to determine that their content complies with the requirements of, and in the case of certificates of inspection, tests and approvals the results certified indicate compliance with, the Contract Documents); and shall transmit them to CLIENT with written comments.

21.11 INSPECTIONS. HRG shall conduct an inspection to determine if the work is substantially complete and a final inspection to determine if the completed work is acceptable so that HRG may recommend, in writing, final payment to Contractor(s) and may give written notice to CLIENT and the Contractor(s) that the work is acceptable (subject to any conditions therein expressed), but any such recommendation and notice will be subject to the limitations expressed in paragraph 21.9.2.

21.12 LIMITATION OF RESPONSIBILITIES. HRG shall not be responsible for the acts or omissions of any Contractor, or of any subcontractor or supplier, or any of the Contractor(s)' or subcontractor's or supplier's agents or employees or any other persons (except HRG's own employees and agents) at the site or otherwise furnishing or performing any of the Contractor(s)' work; however, nothing contained in paragraphs 21.1 through 21.11, inclusive, shall be construed to release HRG from liability for failure to properly perform duties and responsibilities assumed by HRG in the Contract Documents.

22. CONSTRUCTION PHASE SERVICES: In the event that the CLIENT does not authorize HRG to provide Construction Phase Services or deletes such services at any time and such services are provided by CLIENT or others, the CLIENT assumes all responsibility for interpretation of the Contract Documents and for construction observation and administration and waives any claims against HRG that may be in any way connected thereto.

23. MARKETING/ADVERTISING: CLIENT hereby authorizes and grants to HRG the right to display a company sign at the project site during the construction phase of the project. CLIENT also grants HRG the right to use project related photographs, renderings, artist's depictions, project related articles and the like for marketing and advertisement purposes of the firm without further authorization from or compensation to the CLIENT. HRG will be responsible for securing any applicable permits and/or approvals associated with the installation of said project signs and for all direct costs associated with internal marketing and advertising activities.

24. ENTIRE AGREEMENT: These General Provisions, any drawings, plans, plats, and/or exhibits attached hereto, and the Agreement to which these items are attached, set forth the entire understanding and agreement between the parties with respect to the subject matter contained therein and shall be binding upon and inure (except as otherwise provided herein) to the benefit of the parties and their respective successors and assigns. This Agreement supersedes all prior documents, agreements, and understandings between the parties with respect to the transactions contemplated hereby.



2012 FEE SCHEDULE

Classification	Hourly Billing Rates
Junior Technician	\$60.00
Administrative Staff	\$70.00
Technician I	\$95.00
Technician II	\$110.00
Senior Technician	\$120.00
Staff Professional I	\$115.00
Staff Professional II	\$120.00
Project Professional	\$140.00
Senior Professional	\$160.00
Principal	\$175.00

Professionals include Engineers, Land Surveyors, Landscape Architects, Planners, Geologists, Scientists and similar professionals.

Technicians include Designers, CADD Operators, Inspectors, Survey Technicians and similar technical staff.

All non-exempt employees have overtime rates of 1.5 times their normal billing rate.

Reimbursable expenses are billed at cost plus 10%, including, but not limited to Travel, Printing, Postage, Photography, Videos, Laboratory Work, Equipment Rental, and special outside Consultants.

PLEASE NOTE: HRG adjusts the fee schedule annually to reflect the cost of doing business for the coming year. This fee schedule is effective December 31, 2011 through December 31, 2012.

2012 CURRENT BILLABLE EXPENSES

2" Submersible Pump	\$125.00/Day	Mini-Monsoon Sampling System	\$60.00/Day
Absorbent Sock - Small Size/Large Size	\$3.50/\$5.00/Each	Miscellaneous Charges	At Cost
Air Sampling Pump	\$25.00/Day	Mylar - 24" x 36"	\$6.00/Sheet
All Terrain Vehicle	\$100.00/Day	Mylar - 30" x 42"	\$8.00/Sheet
Bailers (regular)	\$7.00/Each	Oil/Water Interface Probe	\$60.00/Day
Bailers (stainless steel)	\$10.00/Each Use	Peristaltic Pump	\$35.00/Day
Color Copies - 11" x 17"	\$2.15/Copy	pH/Conductivity Meter	\$50.00/Day
Color Copies - 8 1/2" x 11"	\$1.10/Copy	Photocopies	\$0.15/Copy
Color Copies - 8 1/2" x 14"	\$1.25/Copy	Photoinization Detector	\$100.00/Day, \$250.00/Weekly
Concrete Monuments	\$30.00/Each	Postage	As Weighed
Digital Camera	\$15.00/Day	Radon Canisters	\$22.00/Each
DMI	\$25.00/Per Charge	Rotary Hammer Drill Kit	\$100.00/Day, \$50.00/Half Day
Fax Charge	\$1.00/Page	Shop Vac	\$15.00/Day
Field Laptop	\$25.00/Day	Slam Bar/Bucket Auger	\$10.00/Day
Filter (only)	\$20.00/Each	Technology Equipment Charge	\$25.00/Day
Fluke Power Quality Analyzer	\$200.00/Weekly	Terra Core Samplers	\$4.50/Each
Generator	\$45.00/Day	Traffic Counters	\$25.00/Day
GPS System	\$50.00/Day	Tubing - 1/4"	\$12/Foot
Hydrographic System	\$125.00/Day	Tubing - 1/2"	\$25/Foot
Iron Pins	\$1.50/Each	Tubing - 3/16" x 3/8" Silicone	\$1.10/Foot
Lodging	At Cost	Tubing - 1/4" Teflon	\$1.10/Foot
Maps, Permits, Licenses	At Cost	Water Level Indicator - Solinst	\$20.00/Day, \$10.00/Half Day
Meals	At Cost	Water Level Indicator 200' - Heron	\$25.00/Day
Mileage - Company Vehicles	IRS Allowable	Whale Pump	\$30.00/Day
Mileage - Employee Reimbursement	IRS Allowable	Wide Format Printing/Copying	\$0.50/Sq. Ft.

All expenses are subject to a 10% markup, including, but not limited to travel, printing, postage, survey supplies, etc.

PLEASE NOTE: HRG adjusts the current billable expenses annually to reflect the cost of doing business for the coming year. These expenses are effective December 31, 2011 through December 31, 2012.

MANHOURLY ESTIMATE & COST SUMMARY BY TASK - CONSTRUCTION PHASE SERVICES

Lehigh County Authority
Client

Lehigh
County

Arcadia West Industrial Park WWTP - Construction Phase Services
Proposed Project Area

5/18/2012
Date of Report

Task From Scope of Services	COST ESTIMATE												TOTAL
	Principal	Sector Professional	Project Professional	Staff Professional I	Staff Professional II	Staff Professional III	Senior Technician	Technician I	Technician II	Technician III	Administrative Assistant	Reimbursable Expenses	
	Rate/Hour Home	Rate/Hour Cost	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Rate/Hour Home	Cost
CONSTRUCTION PHASE SERVICES													
Task 001 - Mobilization/De-mobilization													\$1,000
Task 002 - Project Agreement and Schedule			2								1	\$20	\$20
Task 003 - Issue Notice to Proceed			2								1	\$20	\$20
Task 004 - Provide Construction Documents to Awarded Contractor			2								4	\$200	\$800
Task 005 - Prepare Construction Project Manual			4								8	\$600	\$2,400
Task 006 - Conduct Pre-Construction Sub Conference and Issue Minutes			18								2	\$140	\$2,520
Task 007 - Monthly Sub Conference			48								16	\$120	\$2,016
Task 008 - Site Visit			60								16	\$120	\$2,016
Task 009 - Claim Review & Determination		2	\$220	36	\$2,340	2	\$240				6	\$420	\$2,580
Task 010 - Issue Interpretation & Clarifications		2	\$200	36	\$2,340	2	\$240				6	\$420	\$2,580
Task 011 - Review of Shop Drawings, Samples, Materials of Work & Inspection			48		\$2,720	30	\$3,600				18	\$1,260	\$7,580
Task 012 - Change Order, Claims Review & Resolution		2	\$220	36	\$2,340	2	\$240				6	\$420	\$2,580
Task 013 - Application for Payment			28		\$3,920						16	\$1,200	\$5,120
Task 014 - Substantial Completion Inspection, Finalization & Certification		6	\$960	24	\$3,360	12	\$1,440				6	\$420	\$5,160
Task 015 - Final Year-End Financial Report		6	\$960	24	\$3,360	12	\$1,440				6	\$420	\$5,160
Task 016 - Record Drawings		1	\$160	4	\$560						2	\$140	\$860
Task 017 - Contract Closeout				6	\$240						4	\$280	\$520
Total	6	28	\$3,680	318	\$25,440	66	\$7,920	6	\$720	42	\$3,360	172	\$13,080

CONSTRUCTION PHASE SERVICES FEES:

HRG LABOR
\$70,660

REIMBURSABLE
EXPENSES
\$3,900

TOTAL
\$74,560



369 East Park Drive
Harrisburg, PA 17111
(717) 564-1121
FAX (717) 564-1158
www.hrg-inc.com

RECEIVED APR 18 2011

VIA ELECTRONIC & STANDARD MAIL

April 15, 2011

Mr. Michael A. Barron, P.E.
Lehigh County Authority
1053 Spruce Street
P.O. Box 3348
Allentown, Pennsylvania 18106

Re: Proposal for Engineering Services
Arcadia West Industrial Park WWTP Upgrade
Resident Project Representative (RPR) Services

Dear Mr. Barron:

Herbert, Rowland & Grubic, Inc. (HRG) is pleased to submit this proposal to provide RPR services for the Authority's Arcadia West Industrial Park Wastewater Treatment Plant (WWTP) Upgrade Project. Providing high-quality RPR services will be a vital part of the success of this project. Based on our understanding of the project gained during the design and bidding phases and our experience with similar projects, we feel that HRG is best suited to provide the RPR services required for the project.

Our firm has successfully completed RPR services for many WWTP upgrade projects, including sequencing batch reactor (SBR) systems similar to the Arcadia WWTP. In addition, we expect to serve as the Construction Engineer for the project, and there is certainly a benefit to the Authority in having HRG's RPR staff work closely with the HRG Construction Engineer to ensure that a quality project is delivered and the Authority's expectations are met.

We have based our proposal on our unparalleled knowledge of the project and the Scope for Construction Observation which you provided to us via email on April 8, 2011. Please refer to our detailed Scope of Services provided below.

SCOPE OF SERVICES

The work to be performed by the RPR for this project is defined in the attached Duties, Responsibilities, and Limitation of Authority of the Resident Project Representative. In addition to the work described within this document, the RPR will perform the work identified below as requested in your April 8, 2011 Scope for Construction Observation.

1. Attend the pre-construction meeting and monthly progress meetings scheduled by the Construction Engineer.
2. Act as the on-site liaison with contractors for the Authority and the Construction Engineer. Obtain clarifications from the Construction Engineer, as required, and assist contractors in understanding the intent of the contract documents.
3. Act as the on-site liaison with local and State regulatory staff. Accompany visiting regulatory personnel on site visits. Notify Authority and Construction Engineer of such visits.
4. Review and maintain copies of executed shop drawings at the work site and verify installation of approved materials. Identify any discrepancies in installed materials with the approved shop drawings to the Construction Engineer.
5. Conduct on-site observations of work in progress to assist in determining if the work is proceeding in accordance with contract documents and project schedule.
6. Observe and document the completion of work which is not identified in the contract documents for the purpose of reviewing and verifying contractor change orders.
7. Observe any sampling for material testing by contractors or third-parties. Observe on-site testing, including testing by third parties. Maintain copies of all testing reports.
8. Submit observation reports to the Construction Engineer and Authority. Reports shall include a summary of construction equipment and manpower used, testing performed, problems observed and any other relevant information. Observation reports shall be completed daily.
9. Maintain digital photographic record of work in progress. Submit weekly photos (JPEG files via e-mail) to the Construction Engineer and Authority
10. Review monthly payment applications with contractors to determine whether the application is appropriate for approval, relative to the schedule of values. Provide Construction Engineer the approved quantities for monthly payment applications.
11. Maintain mark-up set of plans on-site as record drawings. Review Contractor's set of as-built plans for completeness during contract closeout.
12. Maintain list of punchlist items to be completed. Participate in Substantial Completion and Final Completion walk-throughs performed by the Construction Engineer.
13. Observe training and start-up assistance that may be required by contract documents. Report any deficiencies, if any, to the Construction Engineer.

SCHEDULE

In accordance with Article II of the Agreement between Owner and Contractor (Section 00500 of the bidding documents), the work of this project shall be substantially completed within 365 calendar days following the date of Notice to Proceed. Final Completion shall be within 60 calendar days following the date of Substantial Completion. Therefore, for the purpose of this proposal and in accordance with your April 8, 2011 Scope for Construction Observation, we have assumed that 1,500 hours of RPR services will be required for the project as follows:

10 weeks @ 10 hours per week
20 weeks @ 40 hours per week
30 weeks @ 20 hours per week

It is anticipated that the Authority will award the three (3) construction contracts for this project upon the completion of the review of alternate equipment proposals received with the bids and approval of the bids by PENNVEST and the Pennsylvania Department of Environmental Protection. Currently, the PENNVEST settlement date for the project is scheduled for June 14, 2011. HRG has RPR staff available to begin the work of this proposal immediately upon authorization from the Authority and commencement of construction activities.

COMPENSATION

We propose to complete the work described within this proposal on a Time and Materials basis in accordance with the following fee structure:

RPR Services:	\$63/hour
Reimbursable Expenses:	\$24/day on site

Based on the assumed hours indicated under "Schedule" above and this fee structure, our estimated fee for the completion of this work is \$99,540.

The reimbursable expenses include travel, printing, postage, photography, videos, laboratory work, and equipment rental.

TERMS

All Work will be performed in accordance with the attached General Provisions for Consulting, Design and Construction and the attached Duties, Responsibilities, and Limitation of Authority of the Resident Project Representative.

Mr. Michael A. Barron, P.E.
Lehigh County Authority
April 15, 2011
Page 4

AUTHORIZATION

We have developed the above Scope of Services specifically with the Authority's Project needs in mind. To indicate your acceptance of these terms, and authorize the work to begin, please sign the authorization statement below, return one copy to our office, and keep the others for your files.

If you have any questions concerning our proposal, please feel free to contact me to discuss them in greater detail. We appreciate the opportunity to provide the Authority with professional services in this capacity and look forward to providing the Authority with high-quality RPR services for this project.

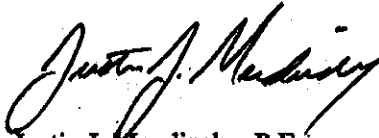
Very truly yours,

Approved By:

Herbert, Rowland & Grubic, Inc.



Edward A. Ellinger, P.E.
Director of Water & Energy Services



Justin J. Mendinsky, P.E.
Water & Energy Project Manager

JJM/vjm

002440.0429

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Enclosures

c: File (w/Encl.)

ACCEPTED BY:

LEHIGH COUNTY AUTHORITY

TITLE

DATE

Proprietary Notice

This proposal contains proprietary information regarding Herbert, Rowland & Grubic, Inc. and is a work product containing business sensitive materials. This proposal was prepared in response to your request for your specific project and no portion of this proposal may be shared with any other party.

Herbert, Rowland & Grubic, Inc.

DUTIES, RESPONSIBILITIES, AND LIMITATION OF AUTHORITY OF THE RESIDENT PROJECT REPRESENTATIVE

Based on
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE
EJCDC No. 1910-1 (1996 Edition), Exhibit D
© NSPE, ACEC, ASCE

- A. ENGINEER shall furnish a Resident Project Representative (RPR), assistants and other field staff to assist ENGINEER in observing progress and quality of the work of CONTRACTOR. The RPR, assistants, and other field staff under this Document 0007320 may provide full time representation or may provide representation to a lesser degree.
- B. Through such additional observations of CONTRACTOR's work in progress and field checks of materials and equipment by the RPR and assistants, ENGINEER shall endeavor to provide further protection for OWNER against defects and deficiencies in the Work. However, ENGINEER shall not, during such visits or as a result of such observations of CONTRACTOR's work in progress, supervise, direct, or have control over CONTRACTOR's Work nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures selected by CONTRACTOR, for safety precautions and programs incident to the CONTRACTOR's work in progress, for any failure of CONTRACTOR to comply with Laws and Regulations applicable to CONTRACTOR's performing and furnishing the Work, or responsibility of construction for CONTRACTOR's failure to furnish and perform the Work in accordance with the Contract Documents. In particular, the specific limitations set forth in paragraph entitled "Construction Phase" of ENGINEER'S Agreement with the OWNER are applicable.
- C. The duties and responsibilities of the RPR are limited to those of ENGINEER in ENGINEER's agreement with the OWNER and in the construction Contract Documents, and are further limited and described as follows:
1. *General:* RPR is ENGINEER's agent at the Site, will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding RPR's actions. RPR's dealings in matters pertaining to the CONTRACTOR's work in progress shall in general be with ENGINEER and CONTRACTOR, keeping OWNER advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.
 2. *Schedules:* Review the progress schedule, schedule of Shop Drawing and sample submittals and schedule of values prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.
 3. *Conferences and Meetings:* Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
 4. *Liaison:*
 - a. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent and assist in understanding the intent of the Contract Documents.
 - b. Assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.
 - c. Assist in obtaining from OWNER additional details or information, when required for proper execution of the Work.
 5. *Interpretation of Contract Documents:* Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER.

6. *Shop Drawings and Samples:*

- a. Record date of receipt of Samples and approved Shop Drawings.
- b. Receive Samples which are furnished at the Site by CONTRACTOR and notify ENGINEER of availability of Samples for examination.
- c. Advise ENGINEER and CONTRACTOR of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by ENGINEER.

7. *Modifications:* Consider and evaluate CONTRACTOR's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR in writing decisions as issued by ENGINEER.

8. *Review of Work and Rejection of Defective Work:*

- a. Conduct on-site observations of the CONTRACTOR'S work in progress to assist ENGINEER in determining if the Work in general is proceeding in accordance with the Contract Documents.
- b. Report to ENGINEER whenever RPR believes that any part of the CONTRACTOR's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of in-progress work that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. *Inspections, Tests, and System Startups:*

- a. Consult with ENGINEER in advance of scheduled major inspections, tests, and systems startups of important phases of the Work.
- b. Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate OWNER's personnel, and that CONTRACTOR maintains adequate records thereof.
- c. Observe, record and report to ENGINEER appropriate details relative to the test procedures and startups.
- d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.

10. *Records:*

- a. Maintain at the Site orderly files for correspondence, reports of job conferences, reproductions of original Contract Documents including all Change Orders, Field Orders, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, Shop Drawing and Sample submittals received from and delivered to CONTRACTOR, and other Project related documents.
- b. Prepare a daily report or keep a diary or log book, recording CONTRACTOR hours on the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to ENGINEER.
- c. Record names, addresses and telephone numbers of all CONTRACTORS, subcontractors and major suppliers of materials and equipment.

- d. Maintain records for use in preparing Project documentation.
- e. Upon completion of the Work, furnish original set of all RPR Project documentation to ENGINEER.

11. *Reports:*

- a. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawing and sample submittals.
- b. Draft and recommend to ENGINEER proposed Change Orders, Work Directive Changes, and Field Orders. Obtain backup material from CONTRACTOR.
- c. Furnish to ENGINEER and OWNER copies of all inspection, test, and system startup reports.
- d. Report immediately to ENGINEER and OWNER upon the occurrence of any Site accidents, any Hazardous Environmental Conditions, emergencies, or acts of God endangering the Work, and property damaged by fire or other causes.

12. *Payment Requests:* Review Applications for Payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the Site but not incorporated in the Work.

13. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and operation manuals and other data required by the Specifications to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for the Work.

14. *Completion:*

- a. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion or correction.
- b. Observe whether CONTRACTOR has arranged for inspections required by Laws and Regulations, including, but not limited to, those to be performed by public agencies having jurisdiction over the Work.
- c. Participate in a final inspection in the company of ENGINEER, OWNER, and CONTRACTOR and prepare a final list of items to be completed or corrected.
- d. Observe whether all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance and issuance of the Notice of Acceptability of the Work.

D. Resident Project Representative shall not:

- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
- 2. Exceed limitations of ENGINEER's authority as set forth in the Agreement or the Contract Documents.
- 3. Undertake any of the responsibilities of CONTRACTOR, subcontractors, Suppliers, or CONTRACTOR's superintendent.

4. Advise on, issue directions relative to, or assume control over, any aspect of the means, methods, techniques, sequences or procedures of CONTRACTOR's Work unless such advice or directions are specifically required by the Contract Documents.
5. Advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the activities or operations of OWNER or CONTRACTOR.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by ENGINEER.
7. Accept Shop Drawing or Sample submittals from anyone other than CONTRACTOR.
8. Authorize OWNER to occupy the Project in whole or in part.

END OF SECTION

**GENERAL PROVISIONS
FOR CONSULTING, DESIGN AND CONSTRUCTION PHASE**

**ENGINEER:
HERBERT, ROWLAND & GRUBIC, INC.
ENGINEERING & RELATED SERVICES**

CLIENT: LEHIGH COUNTY AUTHORITY

PROPOSAL AGREEMENT DATED: APRIL 15, 2011

PROJECT: ARCADIA WEST INDUSTRIAL PARK WWTP UPGRADE – RESIDENT PROJECT REPRESENTATIVE (RPR) SERVICES

These General Provisions set forth herein are included by reference in the Agreement for the performance of engineering services which are described in the Agreement. The Agreement shall take precedence over these General Provisions to the extent that there are any inconsistencies or contradictory statement.

1. GENERAL: Herbert, Rowland & Grubic, Inc. (hereinafter referred to as HRG) shall provide for CLIENT professional engineering services in any or all phases of the Project to which the Agreement applies. These services will include serving as Client's Professional Engineering Representative for the Project, providing professional engineering consultation and advice and furnishing customary civil, environmental, transportation and related engineering and surveying services as required. HRG's professional services will be performed in accordance with generally accepted principals of engineering practice. It is understood that HRG shall not be held liable for work performed by other parties, for the accuracy of data supplied by other parties upon which HRG may rely, or for testing or inspection work performed by other parties.

the data thus transferred. Any errors detected within the 30-day acceptance period will be corrected by the party delivering the electronic files. HRG shall not be responsible to maintain documents stored in electronic media format after acceptance by CLIENT.

When transferring documents in electronic media format, HRG makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by HRG at the beginning of this Project, nor does HRG confer or transfer any software license or right to use with the conveyance of data files.

2. TIMING OF PROPOSAL: HRG agrees that the Proposal/ Agreement shall remain open and may be accepted by the CLIENT for thirty (30) days from the above date. Acceptance of the Proposal/Agreement after the end of the 30-day period shall be valid only if HRG elects, in writing, to reaffirm the Proposal/Agreement and waive its right to reevaluate and resubmit the Proposal/Agreement.

6. COPYRIGHT: HRG is the exclusive owner and has the exclusive copyright to documents prepared for this Project and will grant a license to use said documents for the Project to the CLIENT upon the CLIENT's payment in full of all invoices rendered by HRG. CLIENT may not in turn transfer said license except as provided in Paragraph 9 of these General Provisions. The failure of HRG to obtain copyright registration shall not affect or impair HRG's ownership of these documents.

3. CONDUCT OF THE WORK: All concept, preliminary and final plans will be submitted to CLIENT or its authorized representative for approval concurrent with proceeding to attempt to secure approvals by local, county, state and all other governmental authorities having jurisdiction over the Project. In the event CLIENT does not respond to such submission within five (5) days, it shall be considered to have been given its approval.

7. INDEMNIFICATION: CLIENT will indemnify and hold harmless HRG, its officers, directors, shareholders, or agents, employees, consultants and subcontractors from and against any and all liabilities, damages, or expenses in connection with any personal injury or property damage arising out of or in any way connected with the negligence, recklessness, or intentional acts or omissions by CLIENT, its officers, directors, agents, employees and contractors. CLIENT further agrees to indemnify and hold harmless HRG for any and all fees and expenses incurred in enforcing or defending HRG's right under this Agreement or the performance of its duties under this Agreement.

Survey work is weather dependent, and HRG cannot always guarantee the time or date a survey crew will be available. HRG recognizes the importance of survey scheduling and will make a good faith effort to meeting clients' needs.

HRG may settle any claim for which it has a right of indemnification against CLIENT without CLIENT's consent. Notwithstanding that settlement documents shall state that HRG does not admit liability and that it is a disputed claim, HRG shall not be required to prove its liability of the reasonableness of the settlement to obtain indemnification from CLIENT.

4. RIGHT OF ENTRY: CLIENT agrees to provide rights of entry and all permits and permissions necessary for the completion of HRG's service under the Agreement at no cost to HRG.

8. INSURANCE: HRG and its agents, employees and consultants are covered by Worker's Compensation Insurance and have limited coverage under public liability and property damage insurance policies. Certificates of insurance will be provided upon request. HRG shall not be responsible for any loss, damage, or liability beyond the amounts, limits and conditions of such insurance. Additional coverage may be obtained at the CLIENT's expense. Failure to exercise this option waives any claims of liability beyond such limits. If the CLIENT obtains a builder's risk policy for the construction phase of this Project, HRG shall be a named insured.

5. USE OF DOCUMENTS: All documents are instruments of service with respect to this Project, and HRG shall retain an ownership and property interest therein (including the right of reuse at the discretion of HRG) whether or not the Project is completed. Upon payment for services rendered, CLIENT may make and retain copies of Documents for information and reference in connection with use on the Project by CLIENT. Such Documents are not intended or represented to be suitable for reuse by CLIENT or others on extensions of the Project or on any other project. Any such reuse or modification without written verification or adaptation by HRG, as appropriate for the specific purpose intended, will be at CLIENT's sole risk and without liability or legal exposure to HRG or to HRG's Consultants. CLIENT shall indemnify and hold harmless HRG and HRG's Consultants from all claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting therefrom. Any verification of adaptation of the Documents for extensions of the Project or for any other project will entitle HRG to further compensation at rates to be agreed upon by CLIENT and HRG.

9. ASSIGNS: CLIENT and HRG each binds itself and its partners, successors, executors, administrators, assigns, and legal representatives to the other party of this Agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party in respect to all covenants, agreements and obligations of this Agreement. Neither CLIENT nor HRG shall assign or transfer any rights under or interest in this Agreement without the prior written consent of the other, except to the extent that the effect of this limitation may be restricted by law.

Copies of Documents that may be relied upon by CLIENT are limited to the printed copies (also known as hard copies) that are signed or sealed by HRG. Files in electronic media format of text, data, graphics, or of other types that are furnished by HRG to CLIENT are only for convenience of CLIENT.

Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

10. SUBCONSULTANTS: HRG has the right to employ or retain such independent consultants, associates and subcontractors as it may deem appropriate to assist it in the performance of the services required. HRG has the exclusive right to choose to join any and all such independent consultants, associates, and subcontractors in the resolution of any disputes between the CLIENT and HRG including arbitration, mediation, or suit brought in court.

Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 30 days, after which the receiving party shall be deemed to have accepted

11. SAFETY RESPONSIBILITY: HRG is not responsible for any safety precautions or programs of the CLIENT or any contractors working on the Project except for the safety of HRG's own employees.

12. CONTROLLING LAW: The Letter Agreement is to be governed by the laws of the Commonwealth of Pennsylvania which is the principal place of business of HRG.

13. HAZARDOUS SUBSTANCES: CLIENT represents and warrants to HRG that it has and will comply with all obligations imposed by applicable law upon the generation, storage or disposal of hazardous substances and/or waste and that it will promptly notify HRG of any notices concerning such matters. CLIENT agrees to hold harmless, identify and defend HRG from and against any and all damages and liabilities and expenses arising out of or in any way connected with the presence, discharge, exposure, release, or escape of hazardous substances, or wastes of any kind, excepting only such liability as may arise out of the sole negligence of HRG in the performance of services under this Agreement.

14. PAYMENTS: Invoices will be submitted by HRG on a monthly basis as the work proceeds. Payments will be due and payable in full on receipt of an invoice by CLIENT without retainage, and will not be contingent upon receipt of funds from third parties. If fees are not paid in full within 30 days of the date of the invoice, HRG reserves the right to pursue all remedies, including withdrawing certifications, stopping work on three (3) days' prior written notice, and retaining all documents without recourse. If at any time an invoice remains unpaid for a period in excess of 30 days, interest at the rate of 1-1/2% per month will be charged on past-due accounts. CLIENT agrees to indemnify and hold harmless HRG from and against any and all reasonable fees, expenses and costs incurred by HRG including, but not limited to, court costs, arbitrators and attorneys' fees and other claim related expenses incurred in the collection process.

All invoicing will be substantiated by HRG cost record sheets and work order system, all of which shall be made available to CLIENT upon request and during regular working hours for inspection and audit. Time spent in additional detailing of invoices is considered extra effort on the Project and will be invoiced as additional work along with any related cost of making copies and reproductions. CLIENT may withhold payment or portion thereof for deficient items, providing ENGINEER is notified of deficiencies within seven calendar days of the date that the invoice is received, in accordance with PA 1994 ACT 7. Any increase in HRG's cost resulting from state or federal legislation shall be reimbursed by the CLIENT.

Timely payment of invoices is a condition of this Agreement. Failure to make payments in full within the time limits stated above will be considered substantial noncompliance with the terms of this Agreement and will be cause for termination of the Agreement if HRG so chooses.

Unless otherwise agreed in writing, all fees and costs payable to HRG pursuant to this Agreement are payable at HRG's principal place of business in Dauphin County, Pennsylvania. It is hereby agreed that all suits will be litigated in Federal or State Court in Dauphin County, Pennsylvania. Acceptance of payment by HRG elsewhere shall not constitute a waiver of this requirement.

15. TERMINATION: The obligation to provide further services under this Agreement may be terminated by either party upon three (3) days' written notice in the event of a substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. CLIENT agrees to be liable and pay HRG for all labor done, work performed, materials furnished, and all expenses incurred for all work and additional work up to and including the day work is terminated, in accordance with the notice required under this section.

A substantial failure to perform shall also include, but not be limited to, the CLIENT'S inability to provide credit references and/or a credit history acceptable to HRG prior or following the execution of this Agreement. Notwithstanding the above, failure of HRG to request said credit references shall not relieve client of its obligation to perform under the terms of this Agreement.

16. THIRD PARTY BENEFICIARIES: Nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than the CLIENT and HRG, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of CLIENT and HRG and not for the benefit of any other party.

17. LIMITATION OF LIABILITY HRG shall endeavor to perform the services under this Agreement with the care and skill ordinarily used by members of HRG's profession practicing under similar conditions at the same time and in the same locality. There are no other warranties, express or implied, including,

without limitations, no warranties of merchantability or fitness for particular purpose, made by HRG in this Agreement or in any reports, opinions, drawings, specifications or other documents furnished by HRG under this Agreement, or otherwise. HRG shall not be liable for the results of services performed with professional care and skill. To the fullest extent permitted by law, HRG's total liability to CLIENT for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in any way related to the Project or this Agreement from any cause or causes including, but not limited to, HRG's negligence, errors, omissions, strict liability, intentional acts, breach of contract or breach of warranty shall not exceed the total compensation received by HRG under this Agreement, or the amount paid on behalf of HRG by their insurers in settlement or satisfaction of CLIENT's claims under the terms and conditions of HRG's professional insurance policy or policies applicable thereto, whichever is greater.

18. OTHER WORK: If the CLIENT requests HRG to provide engineering services on other Projects before a written Agreement is consummated for the other Project, the terms and conditions of this Agreement shall apply in full.

19. AUTHORITY TO SIGN: The individual signing this Agreement warrants that he has authority to sign as, or on behalf of, CLIENT for whom or for whose benefit HRG's services are rendered. If such individual does not have such authority, he understands and agrees that he is personally responsible for this Agreement to HRG in addition to any liability which CLIENT may have.

20. CONTRACTOR/MANUFACTURER SUPPLIED DESIGNS: The Work may require the furnishing and supplying of design services for such products as pre-manufactured buildings, tanks, special structures and systems, etc. CLIENT shall not hold HRG responsible for any such design which is furnished by others.

21. CONSTRUCTION PHASE

21.1. GENERAL ADMINISTRATION OF CONSTRUCTION CONTRACT.

HRG shall consult with and advise CLIENT and act as CLIENT's representative as provided in Articles 1 through 17, inclusive, of the Standard General Conditions of the Construction Contract No. 1910-3 (1996 edition) of the HRG's Joint Contract Documents Committee. The extent and limitations of the duties, responsibilities and authority of HRG as assigned in said Standard General Conditions shall not be modified, except to the extent provided in the Agreement, and except as HRG may otherwise agree in writing. All of CLIENT's instructions to Construction Contractor(s) (hereinafter referred to as Contractor(s)) will be issued through HRG who will have authority to act on behalf of CLIENT to the extent provided in said Standard General Conditions except as otherwise provided in writing.

21.2 VISITS TO SITE AND OBSERVATION OF CONSTRUCTION. In connection with observations of the work of Contractor(s) while it is in progress:

21.2.1 HRG shall make visits to the site at intervals appropriate to the various stages of construction as HRG deems necessary in order to observe as an experienced and qualified design professional the progress and quality of the various aspects of Contractor(s)' work. Such visits and observations by HRG are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress or to involve detailed inspections of Contractor's work in progress beyond the responsibilities specifically assigned to HRG in this Agreement and the Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on HRG's exercise of professional judgment. Based on information obtained during such visits and on such observations, HRG shall endeavor to determine in general if such work is proceeding in accordance with the Contract Documents and HRG shall keep CLIENT informed of the progress of the work.

21.2.2 If recommended by HRG and approved by the CLIENT, HRG shall provide the services of a Resident Project Representative (and assistants as agreed) at the site to assist HRG and to provide more continuous observation of such work. The Resident Project Representative (and any assistants) will be HRG's agent or employee and under HRG's supervision. The duties and responsibilities of the Resident Project Representative (and assistants) are set forth in the Exhibit entitled "Duties, Responsibilities and Limitation of Authority of Resident Project Representative."

21.2.3 The purpose of HRG's visits to and representation by the Resident Project Representative (and assistants, if any) at the site will be to enable HRG to better carry out the duties and responsibilities assigned to and undertaken by HRG during the Construction Phase, and, in addition, by exercise of HRG's efforts as an experienced and qualified design professional, to provide for CLIENT a greater degree of confidence that the completed work of Contractor(s) will conform

generally to the Contract Documents and that the integrity of the design concept as reflected in the Contract Documents has been implemented and preserved by Contractor(s). On the other hand, HRG shall not, during such visits or as a result of such observations of Contractor(s) work in progress, supervise, direct or have control over Contractor(s) work nor shall HRG have authority over or responsibility for the means, methods, techniques, sequences or procedures of construction selected by Contractor(s), for safety precautions and programs incident to the work of Contractor(s) or for any failure of Contractor(s) to comply with laws, rules, regulations, ordinances, codes or orders applicable to Contractor(s) furnishing and performing their work. Accordingly, HRG can neither guarantee the performance of the construction contracts by Contractor(s) nor assume responsibility for Contractor(s) failure to furnish and perform their work in accordance with the Contract Documents.

21.3 DEFECTIVE WORK. During such visits and on the basis of such observations, HRG may disapprove of or reject Contractor(s) work while it is in progress if HRG believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents.

21.4 INTERPRETATIONS AND CLARIFICATIONS. HRG shall issue necessary interpretations and clarifications of the Contract Documents (and in connection therewith prepare work change directives and change orders as required) as appropriate to the orderly completion of Contractor's work.

HRG may issue Field Orders authorizing minor variations from the requirements of the Contract Documents. HRG will recommend Change Orders and Work Change Directives to CLIENT as appropriate.

21.5 SHOP DRAWINGS. HRG shall review and approve (or take other appropriate action in respect of) Shop Drawings (as that term is defined in the aforesaid Standard General Conditions), samples and other data which Contractor(s) are required to submit, but only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Such reviews and approvals or other action shall not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto.

21.6 SUBSTITUTES. Upon CLIENT's authorization, HRG shall evaluate and determine the acceptability of substitute materials and equipment proposed by Contractor(s).

21.7 INSPECTIONS AND TESTS. HRG shall have authority, as CLIENT's representative, to require special inspection or testing of the work, and shall receive and review all certificates of inspections, testings and approvals required by laws, rules, regulations, ordinances, codes, orders or the Contract Documents (but only to determine generally that their content complies with the requirements of, and the results certified indicate compliance with, the Contract Documents).

21.8 DISPUTES BETWEEN CLIENT AND CONTRACTOR. HRG shall act as initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the work thereunder and make decisions on all claims of CLIENT and Contractor(s) relating to the acceptability of the work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the work. HRG shall not be liable for the results of any such interpretations or decisions rendered in good faith.

21.9 APPLICATIONS FOR PAYMENT. Based on HRG's on-site observations as an experienced and qualified design professional, on information provided by the Resident Project Representative and on review of applications for payment and the accompanying data and schedules:

21.9.1 HRG shall determine the amounts owing to Contractor(s) and recommend in writing payments to Contractor(s) in such amounts. Such recommendations of payment will constitute a representation to CLIENT, based on such observations and review, that the work has progressed to the point indicated, and that, to the best of HRG's knowledge, information and belief, the quality of such work is generally in accordance with the Contract Documents (subject to an evaluation of such work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and to any other qualifications stated in the recommendation). In the case of unit price work, HRG's recommendations of payment will include final determinations of quantities and classifications of such work (subject to any subsequent adjustments allowed by the Contract Documents).

21.9.2 By recommending any payment HRG will not thereby be deemed to have represented that exhaustive, continuous or detailed reviews or examinations have been made by HRG to check the quality or quantity of Contractor(s) work as it is

furnished and performed beyond the responsibilities specifically assigned to HRG in this Agreement and the Contract Documents. HRG's review of Contractor(s) work for the purposes of recommending payment will not impose on HRG responsibility to supervise, direct or control such work or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto or Contractor(s) compliance with laws, rules, regulations, ordinances, codes or orders applicable to their furnishing and performing the work. It will also not impose responsibility on HRG to make any examination to ascertain how or for what purposes any Contractor has used the moneys paid on account of the Contract Price, or to determine that title to any of the work, materials or equipment has passed to CLIENT free and clear of any lien, claims, security interests or encumbrances, or that there may not be other matters at issue between CLIENT and Contractor that might affect the amount that should be paid.

21.10 CONTRACTOR(S)' COMPLETION DOCUMENTS. HRG shall receive and review maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests and approvals which are to be assembled by Contractor(s) in accordance with the Contract Documents (but such review will only be to determine that their content complies with the requirements of, and in the case of certificates of inspection, tests and approvals the results certified indicate compliance with, the Contract Documents); and shall transmit them to CLIENT with written comments.

21.11 INSPECTIONS. HRG shall conduct an inspection to determine if the work is substantially complete and a final inspection to determine if the completed work is acceptable so that HRG may recommend, in writing, final payment to Contractor(s) and may give written notice to CLIENT and the Contractor(s) that the work is acceptable (subject to any conditions therein expressed), but any such recommendation and notice will be subject to the limitations expressed in paragraph 21.9.2.

21.12 LIMITATION OF RESPONSIBILITIES. HRG shall not be responsible for the acts or omissions of any Contractor, or of any subcontractor or supplier, or any of the Contractor(s) or subcontractor's or supplier's agents or employees or any other persons (except HRG's own employees and agents) at the site or otherwise furnishing or performing any of the Contractor(s) work; however, nothing contained in paragraphs 21.1 through 21.11, inclusive, shall be construed to release HRG from liability for failure to properly perform duties and responsibilities assumed by HRG in the Contract Documents.

22. CONSTRUCTION PHASE SERVICES: In the event that the CLIENT does not authorize HRG to provide Construction Phase Services or deletes such services at any time and such services are provided by CLIENT or others, the CLIENT assumes all responsibility for interpretation of the Contract Documents and for construction observation and administration and waives any claims against HRG that may be in any way connected thereto.

23. MARKETING/ADVERTISING: CLIENT hereby authorizes and grants to HRG the right to display a company sign at the project site during the construction phase of the project. CLIENT also grants HRG the right to use project related photographs, renderings, artist's depictions, project related articles and the like for marketing and advertisement purposes of the firm without further authorization from or compensation to the CLIENT. HRG will be responsible for securing any applicable permits and/or approvals associated with the installation of said project signs and for all direct costs associated with internal marketing and advertising activities.

24. ENTIRE AGREEMENT: These General Provisions, any drawings, plans, plats, and/or exhibits attached hereto, and the Agreement to which these items are attached, set forth the entire understanding and agreement between the parties with respect to the subject matter contained therein and shall be binding upon and inure (except as otherwise provided herein) to the benefit of the parties and their respective successors and assigns. This Agreement supersedes all prior documents, agreements, and understandings between the parties with respect to the transactions contemplated hereby.

Lehigh County Authority
Arcadia Wastewater Treatment Plant
Bid Opening 1:00 PM June 1, 2012

CONTRACT #1: GENERAL CONSTRUCTION

Bidders	Bid Amount
Worth & Company, Inc. 6263 Kellers Church Road Building 500 Pipersville, PA 18947	\$1,975,000.00
Johnston Construction Company 4331 Fox Run Road P O Box 98 Dover, PA 17315	\$2,010,902.00
C&T Associates, Inc 1000 Hagey Road Souderton, PA 18964	\$2,065,750.00
JEV Construction LLC 1040 Potter Avenue Union, NJ 07083	\$2,074,500.00
Lisbon Buildings Infrastructures, Inc. P.O. Box 309 4791 Hillside Road Northampton, PA 18067	\$2,075,000.00
PACT TWO LLC 554 Rt 31 Ringoes, NJ 08551	\$2,260,000.00
Aqua Resources, Inc. 762 W. Lancaster Avenue Bryn Mawr, PA 19010	\$2,288,000.00
DESCO Design and Construction 1 Willow St. Ind. Pk. Fleetwood, PA 19522	\$2,316,265.00

CONTRACT #2: ELECTRICAL CONSTRUCTION

Bidders	Bid Amount
George J Hayden Inc 235 East Maple Street Hazleton, PA 18201	\$349,000.00
Barry J. Hoffman Co., Inc. 213 N. 14th Street Allentown, PA 18102	\$349,400.00
Wind Gap Electric, Inc 125 West Seventh Street Wind Gap, PA 18091	\$363,077.00
J. B. Electric Corp. 201 North Delaware Avenue Minersville, PA 17901	\$365,369.00
Thomas L. Hoffman Co., Inc. 635 E. Westminster Street Allentown, PA 18109	\$408,927.00
BSI 416 Stump Rd. Montgomeryville, PA 18936	\$416,500.00
Diefenderfer Electric 116 S. 2nd st. Allentown, PA 18102	\$593,637.00

CONTRACT #3: MECHANICAL & PLUMBING CONSTRUCTION

Bidders	Bid Amount
Dual Temp Company, Inc. 2050 South 12th Street Allentown, PA 18103	\$95,450.00
W.C.Eshenaur Son, Inc. 200 South 41st Street Harrisburg, PA 17111	\$113,500.00