May 4, 2012

# BOARD ACTION/DISCUSSION ITEMS
## MAY 2012 – JULY 2012

| PRIORITY* | PROJECT/ISSUE | TYPE OF ACTION | TIMING** |
|---|---|---|---|
| | ***AS NEEDED*** | | |
| **H** | Update on wastewater treatment capacity evaluation/steering committee | Status Report | As needed |
| **H** | Acquisition/Growth Strategy Activities | Status Report | As needed |
| **H** | Jordan Creek Wastewater Plant | Status Report | As needed |
| | ***WITHIN 45 DAYS*** | | |
| **H** | SCARP Program – Basis of Rehabilitation for existing CCTV work | Approval | May (B) |
| **H** | PADOT RT 309 & Sand Spring Improvements - Water Main Relocations - Design Phase *Project & Professional Services Authorizations and Budget Amendment* | Approval | May (B) |
| **H** | RT 309 Crossing @Sand Spring Road - Design Phase *Project & Professional Services Authorizations* | Approval | May (B) |
| | ***WITHIN 75 DAYS*** | | |
| **H** | Western Weisenberg WTP (re-bid ) *Project Authorization Amendment Construction Phase &, Contract Awards* | Approval | June (W/B) |
| **H** | Approval of Hillwood developer's contribution agreement in regard to Western Weisenberg WTP | Approval | June (W/B) |
| **M** | Upper Milford Central Division Radon Mitigation Study *Project & Professional Services Authorizations* | Approval | June (B) |
| **H** | Wastewater Capacity Act 537 Planning *Professional Services Authorizations* | Approval | June (B) |
| **H** | LLRI Physical Condition Assessment | Approval | June (B) |
| **H** | Wastewater Capital Recovery Fees | Approval | June (B) |
| **05/21/12** | May Board Meeting | | |
| **06/04/12** | June Workshop Meeting | | |

*** H – High**
**M – Medium**
**L – Low**

**** (W) – Workshop**
**(B) – Board**
**(W/B) - Either**

**LEHIGH COUNTY AUTHORITY**

**WORKSHOP AGENDA**

**Monday, May 14, 2012 – 12:00 PM**

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

**1.** ***Identify items for May Board Meeting***

- *Review Board Discussion items, May 2012 – July 2012*

**ACTION/DISCUSSION ITEMS**

**1.** ***2011 Financial Statements (Statements)*** *(Acceptance)*

A presentation will be made by the Authority's auditor. The Statements will be sent under separate cover prior to the Workshop.

**2.** ***Lehigh County Authority Facility Emergency Power*** *(Approval)*

This project provides emergency back-up power for the LCA Office Operations Center and ten other facilities. An RFP for design related services was sent to eight responding firms, proposals were received from five of those firms on April 16, 2012; a memorandum and supporting information are attached ***(blue)***. Board approval for the Design Phase of this project is requested.

**3.** ***Main Extension Policy*** *(Approval)*

In August 2010, 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. An extension of this policy is requested; a memorandum is attached ***(orange)***.

**4.** ***Boston Beer Wastewater Rates*** *(Approval)*

In October 2011, the Board approved an amendment to the 2005 Boston Beer Agreement effective March 2011 for a five year term. The amendment included rates for the first year and also included the process for calculating the annual Boston Beer wastewater service rates. A memorandum explaining the 2012 rate structure is attached **(yellow)**.

**INFORMATION ITEMS**

**1.** ***Education and Training***

| | | |
|---|---|---|
| Linda Eberhardt | GFOA-PA Conference – State College, PA | 4/30-5/2; $955 |
| Liesel Adam | PA-AWWA Conference– Lancaster, PA | 5/2-/4; $305 |
| Tom Williams<br>Alan Hill<br>Joseph McMahon | ICS 400 – State College, PA | 5/8-9 |

**OTHER ITEMS**

***None.***

# MEMORANDUM

**Date:** April 30, 2012

**To:** Authority Board
**From:** Jason Peters, Frank Leist
**Subject:** Lehigh County Authority Facilities Emergency Power Capabilities Project
Design Phase - Capital Project and Professional Services Authorizations

**MOTIONS / APPROVALS REQUESTED:**

| No. | Item | Amount |
|---|---|---|
| 1 | Capital Project Authorization - Design Phase | $128,840 |
| 2 | Professional Services Authorization - Hanover Engineering Associates, Inc. (1), (2) | $79,840 |

*(1) Included in the Capital Project Authorization.*
*(2) Does not include Construction phase related engineering services.*

**PROJECT OVERVIEW:** The Project consists of installing emergency power generators and automatic transfer switches at seven water pumping stations, three waste water treatment plants, and the LCA Office Operations Center located in seven municipalities within Lehigh County and one water pumping station located in Moore Township, Northampton County (Reference Professional Service Authorization, RFP Exhibit 1-A for facility location map). The intent of this project is in the event of a power loss to replace PPL or Met Ed power from the grid with power from an emergency generator. The 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. 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.

In the event of power outages the proposed facility improvements will increase the reliability of water and wastewater service for our customers; and will allow full utilization of the Office Operations Center.

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm to provide design, permitting, bidding and construction related engineering services for the Lehigh Country Authority Facility Emergency Power Capability Project. Authorization for construction phase services is not requested at this time. The following table summarizes the professional services to be performed:

| Professional Services |
|---|
| 1. Determine the size of generator and automatic transfer switch. |
| 2. Investigate the availability of natural gas. |
| 3. Prepare per-facility generator fuel type cost comparative. |
| 4. Evaluate the repurposing of existing generators. |
| 5. Prepare plans and specification for design |
| 6. Perform permitting services (regulatory and municipal). |
| 7. Perform bidding services. |
| 8. Perform construction engineering services. (future authorization) |

**CONSULTANT SELECTION PROCESS:** A highly detailed Request for Proposals (RFP) was developed and sent out to eight engineering consulting firms. Five firms responded to the invitation and attended the mandatory pre-proposal facilities open house where they visited each site and received answers to their questions. Proposals were received from all five firms the results of which are listed below in Table 1.

**Table 1**
**Firms Submitting a Proposal**

| Firm | Man-Hours *(1)* | Cost *(1)* |
|---|---|---|
| **Hanover Engineering Associates Inc. (Recommended)** | **1,092** | **$89,256.00** |
| T&M Associates | 769 | $102,650.00 |
| Buchart Horn, Inc. | 868 | $113,146.00 |
| Barry Isett & Associates, Inc. | 1,148 | $116,217.00 |
| Generator System Integrators, LLC | 1,226 | $145,735.00 |

*(1) Includes Construction phase related engineering services*

Based upon our review of all aspects of both the Technical and Cost Proposals submitted by the five firms, we recommend award of the Design phase services (~$79,840) of the project to Hanover Engineering Associates, Inc. Their proposal is on scope and represents what we believe is the best overall value for the Authority. Note: Construction phase engineering services ($9,420) future authorization.

Hanover Engineering Associates will be utilizing Lehigh Valley Engineering as their electrical sub consultant and will perform the services outlined in LCA's RFP, mandatory open-house Response to Questions, and amendments to the RFP sent via email on March 26, 2012 and March 27, 2012 under the terms of a Professional Services Authorization.

**HANOVER ENGINEERING ASSOCIATES COMPANY INFORMATION & REFERENCE CHECK:**
Hanover Engineering Associates, Inc. was founded over 40 years ago and provides engineering services to their county, municipal, and authority clients that typically includes municipal engineering and planning, environmental studies, utility line permitting, storm water management, subdivision and land development, transportation planning and permitting, financing and grant applications, structural design, and surveying. Hanover Engineering also provides geologic and hydrological evaluations, as well as lake and watershed management and wetlands services. Hanover Engineering staff members participating in this project will be based in offices in Wescosville and Bethlehem, PA.

Hanover Engineering is very familiar with LCA's public works document preparation process, having worked with Ed Hoyle, PE of LCA to prepare designs, specifications and bidding documents for the South 7th Street Phase 2 sewer project. Along with our previous experience with Hanover Engineering we contacted several firms as reference for design services related to the installation of emergency power generator facility upgrades. The firms reported that Hanover Engineering Associates had the skills and manpower necessary to perform the work, was responsive to their needs, and met their expectations.

**PROJECT SCHEDULE:** The design phase project will take approximately 3 to 4 months to complete with award of the construction contracts no-later than mid November 2012. Although not anticipated, it should be noted if land development and/or zoning approvals are required at certain facilities that the approximate design phase deadline would not likely be obtainable. Depending upon the availability of the generators we expect the Construction Phase of the project to be completed by July 2013.

**FUTURE AUTHORIZATIONS:** Capital Project Authorization (CPA) Amendment(s) will be presented to the Board at a later date for:

- Procurement Phase: We have allowed for separate procurement of the generators by LCA if it is deemed advantageous from both logistical and cost stand points.
- Construction Phase: Which will include the general and electrical construction contracts, as well as for construction engineering services, and staff costs.

# CAPITAL PROJECT AUTHORIZATION

**PROJECT NO.:** W-12-1 **BUDGET FUND:** Water\Capital

**PROJECT TITLE:** **Lehigh County Authority Facilities Emergency Power Capabilities Project**

**PROJECT TYPE:**

- ☒ Construction
- ☐ Engineering Study
- ☐ Equipment Purchase
- ☐ Amendment

**THIS AUTHORIZATION:** **$128,840**

**DESCRIPTION AND BENEFITS:**

The Project consists of installing emergency power generators and automatic transfer switches at eight water pumping stations, three waste water treatment plants, and the office operational center located in eight municipalities. 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.

In the event of power outages the proposed facility improvements will increase the reliability of water and wastewater service for our customers; and will allow full utilization of the Office Operations Center.

Please reference the cover Memo for additional information.

**Authorization Status:**

| **REQUESTED THIS AUTHORIZATION** | |
|---|---|
| **Design Phase** | |
| Staff | $30,000 |
| Engineering Consultant *(1)* | $79,840 |
| Miscellaneous | $2,000 |
| Contingencies | $17,000 |
| **Total This Authorization** | **$128,840** |

| Future Authorization | |
|---|---|
| Construction Phase | $777,160 |

| | |
|---|---|
| Total Estimated Project | $906,000 |

*(1) Does not include Construction phase engineering services ($9,420) future authorization.*

**REVIEW AND APPROVALS:**

| | | | |
|---|---|---|---|
| Project Manager | 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 * Email: service@lehighcountyauthority.org**

# PROFESSIONAL SERVICES AUTHORIZATION

**Professional:** HANOVER ENGINEERING ASSOCIATES, INC.
5920 Hamilton Blvd, Suite 108
Allentown, PA 18106

**Date:** April 30,2012

**Requested By:** JP

**Approvals**
**Department Head:**
**General Manager:**

**Water**

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

## Lehigh County Authority Facilities Emergency Power Capabilities Project

Hanover Engineering Associates, Inc. will perform design, permitting, bidding and construction related engineering services for the Lehigh Country Authority Facility Emergency Power Capability Project. The Project consists of installing emergency power generators and automatic transfer switches at seven water pumping stations, three waste water treatment plants, and the LCA Office Operations Center located in seven municipalities within Lehigh County and one water pumping station located in Moore Township, Northampton County.

Please reference the attached Hanover Engineering Associates technical and cost proposal, proposal clarification sent via email on April 26, 2012 by Brad Youst of Hanover Engineering, Lehigh County Authority's request for proposals with supporting exhibit 1-A, and amendments to the RFP sent via email on March 26, 2012 and March 27, 2012 for additional information related

**Design Phase:**
**Cost Estimate (not to be exceeded without further authorization):** $79,840.

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

**(For Authority Use Only)**

**Authorization Completion:**

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

# Hanover

Engineering Associates Inc

# Technical Proposal for
# Professional Engineering Services
# To
# Lehigh County Authority
# For
# Emergency Power Capability Project


☐ **Bethlehem Office (Corporate Headquarters)**
252 Brodhead Road, Suite 100 · Bethlehem, PA 18017-8944
610.691.5644 · Fax 610.691.6968

■ **Lehigh Office**
5920 Hamilton Blvd., Suite 108 · Allentown, PA 18106-8942
610.395.9222 · Fax 610.395.9262
Contact: J. Bradley Youst, PE, VP jbyoust@hanovereng.com

☐ **Lancaster-Lebanon Office**
20 C Snyder Lane · Ephrata, PA 17522-9101
717.721.7444 · Fax 717.721.7447

☐ **Elizabethtown Office**
48 North Market Street · Elizabethtown, PA 17022-2025
717.367.0144 · Fax 717.361.1012

☐ **Pocono Office**
3355 Route 611, Suite 1 · Bartonsville, PA 18321-7822
570.688.9550 · Fax 570.688.9768

☐ **Towanda Office**
1 Elizabeth Street, Suite 11 · Towanda, PA 18848-1629
570.265.1020 · Fax 570.265.1021

☐ **Wellsboro Office**
5 East Avenue, Suite 201 · Wellsboro, PA 16901-1613
570.724.5326 · Fax 570.724.5386

## SUMMARIZED REQUEST FOR PROPOSALS

Lehigh County Authority (LCA) has requested proposals for engineering services for improving operational reliability at twelve (12) LCA water or wastewater facilities in various municipalities within Lehigh and Northampton Counties. This improvement would be in the form of adding backup electrical power generating equipment at the facilities to maintain operation in the event of temporary loss of the existing primary power source(s). Certain sub-facilities specified by LCA would not have permanent generators installed, but would be upgraded with connections for use with portable generator equipment.

The technical scope of the engineering services involves assessing existing and future electrical demand requirements at each site, establishing generator and switchgear capacity requirements, evaluating options and comparative costs for alternative generator fuel sources, preparing specifications for generators and related equipment, and preparing bidding documents for procurement and installation of the new equipment.

Supporting services include determining the applicability of permitting requirements, preparation of permitting documents, verifying easements on a limited number of the facility sites, and preparing site plans sufficient for contractors to identify the intended location of all proposed equipment and for obtaining construction permits for the work.

Administrative services include managing the public bidding and contract award phases of the work (with all contract award decisions being made by LCA), reviewing the selected contractor's shop drawings, other technical submittals, and closeout documents, tracking the construction project progress, and evaluating the contractor's applications for progress and final payments.

Additionally, certain "out of scope" services have been identified, which may or may not be needed. These include:

- Designing natural gas service connection(s) (if natural gas service is found to be available and technically and financially feasible),
- Designing modifications to existing electrical systems,
- Preparing Land Development or Zoning Permit Plans,
- Preparing funding documents for PennVEST or other funding agencies.

The complete scope of requested services is included in the LCA Request for Proposals document, with amendments and supplementary information, as provided by Mr. Jason M. Peters, Lehigh County Authority Capital Works Assistant.

Routine inspection of the construction progress is specifically excluded from the scope of the Request for Proposals.

Lehigh County Authority expects the engineering consultant to complete the project research, design, permitting, specification, and bidding phases of the work so that a construction contract may be awarded by November 16, 2012.

## PROPOSED PROJECT TEAM

The Request for Proposals clearly identifies multiple distinct types of expertise required for successful completion of the project's engineering work. Accordingly, this Proposal has been

prepared based on a proposed cooperative engineering arrangement between two highly qualified Lehigh Valley based engineering firms, Hanover Engineering Associates, Inc. and Lehigh Valley Engineering, Inc. (together, the Project Team).

Hanover Engineering Associates, Inc. (HEA) is a Pennsylvania Corporation that was formed in January 1970. All company shareholders are full-time employees of Hanover Engineering. Over the past 40 years, the company has grown steadily to its current staff of over 150 employees based in multiple office locations in eastern and central Pennsylvania, and more recently, in eastern Ohio. Hanover Engineering staff members participating in this project are based in offices in Wescosville and Bethlehem, PA.

Engineering services provided to Hanover Engineering's county, municipal, and authority clients typically include municipal engineering and planning, environmental studies, utility line permitting, storm water management, subdivision and land development, transportation planning and permitting, financing and grant applications, structural design, and surveying. Hanover Engineering also provides geologic and hydrogeological evaluations, as well as lake and watershed management and wetlands services.

Hanover Engineering is very familiar with the public bidding process, including issuance of printed or electronic bidding documents. Hanover Engineering has participated in PennBid training and has handled the public bidding of at least eight (8) public works construction projects using the PennBid web tools. Hanover has assisted many of its public clients with funding applications, construction project fund disbursements and grant reimbursement requests, including working with PennVEST, the Commonwealth Financing Authority, and the Community Development Block Grant program.

Hanover Engineering is very familiar with LCA's public works project document preparation process, having worked with Ed Hoyle, PE of LCA to prepare designs, specifications and bidding documents for the South 7th Street Phase 2 sewer project within the past five years.

Lehigh Valley Engineering, Inc. (LVE) is a Pennsylvania Corporation that was formed in June 2001. All company shareholders are full-time employees of Lehigh Valley Engineering. LVE has a staff of 14 people. Lehigh Valley Engineering staff members participating in this project are based in the company's office in Bethlehem, PA.

LVE provides mechanical and electrical systems consulting, including process and space heating and cooling, energy studies and conservation projects, plumbing, fire protection, power, lighting, communications, and safety and security systems. We have designed the MEP systems for some of the most innovative buildings built in the Lehigh Valley in the past decade, including PPL Plaza and Broughal Middle School, both certified LEED gold by the USGBC. LVE provides services to a wide variety of clients, including government, public and private education, health care, and industry.

Our two firms routinely share project information via high-speed electronic data communication systems. Each office utilizes state of the art computer systems and software, and all project data stored in our computer networks is safely backed-up routinely. We have black and white and color copier/scanners as well as large format drawing scan/copy/printing systems in our offices. We also have a wide array of specialty field equipment available, including total station and GPS surveying instruments, portable sewer flow meters, ground penetrating radar equipment, soil samplers, traffic counters and ultrasonic metal thickness gauges.

Our two firms utilized this same cooperative engineering arrangement to successfully evaluate existing systems, prepare designs, specifications, and bidding documents, and administer the construction project for a complete SCADA control changeover for the Borough of Emmaus water system within the past five years.

Members of our supporting staffs are trained and available to ensure the timely completion of projects in accordance with our clients' schedules. Our staff professionals are very familiar with the EJCDC construction and procurement documents, as well as MasterFormat and the CSI 3-part standard of Project Manual organization. Project Team members will be readily available for client consultations and to attend meetings and site visits in support of municipal improvement projects.

Experience summaries for key project personnel are attached, in Appendix A. Additionally; a list of similar project experience is attached, in Appendix B.

## PROJECT-SPECIFIC DELEGATION OF RESPONSIBILITIES

Hanover Engineering and Lehigh Valley Engineering have developed a Project Team approach for delegation of responsibilities to complete the engineering for this project in accordance with the requested schedule.

Hanover Engineering will be responsible for the following project engineering tasks:

- Site field surveying, including verifying easement limits where specifically required.
- Researching municipal site planning requirements and preparation of required site plans.
- Researching PA DEP storm water or wetland permitting requirements and submittal of any required application documents.
- Researching applicable erosion and sediment control requirements and submittal of any required designs and application documents.
- Preparing bidding documents and general project specifications.
- Preparing technical specifications for site related construction activities.
- Distributing bidding documents, including technical and/or administrative addenda, to bidders.
- Compiling bid documents received from bidders, reviewing bonds and other documents accompanying bids, and providing summary recommendations for award of contract(s).
- Administering project meetings, reviewing payroll certificates and other documentation required for progress and closeout payments.

Lehigh Valley Engineering will be responsible for the following project engineering tasks:

- Assessing existing and future electrical demand requirements at each site.
- Establishing generator and switchgear capacity requirements.
- Evaluating options and comparative costs for alternative generator fuel sources.
- Designing natural gas utility service connections, if this option is feasible at any facility.
- Researching building, fire prevention, and electrical Code requirements and designing generators and related equipment in accordance with applicable Code requirements.
- Preparing technical specifications for generators and related equipment.
- Conducting technical portion of pre-bid and pre-construction meetings.
- Reviewing technical experience record of bidders and providing summary recommendations for award of contract(s).
- Reviewing shop drawings and technical submittals.
- Reviewing contractor requests for information and recommending contract time or cost changes when justified.
- Monitoring the contractor's construction progress for partial payment requests.
- Reviewing the completed generator and switchgear installations for compliance with technical specifications, drawings, approved submittals, and for overall proper operation.
- Reviewing technical documentation required for contract closeout.

As identified in the Request for Proposals, it is presumed that standard project conditions, supplementary conditions, and other bidding forms would be provided by LCA. It is also presumed that LCA would provide copies of all deeds or easement documents required by the consultant for confirming facility site boundaries, but it is understood that only limited as-built documentation of actual site construction may exist.

As identified in the Request for Proposals, it is presumed that construction observation would be performed by LCA personnel. For quality control purposes, it is assumed that all of the construction observer's records would be available to the Project Team for review of progress payment and project closeout requests.

## PROJECT-SCHEDULE

The Project Team understands the schedule requested by Lehigh County Authority for undertaking the engineering investigations, designing and specifying site specific improvements, and bidding the construction work. With proposals being accepted April 16, 2012, and allowing LCA sixty (60) days for review and award of a consultant contract (as indicated in the RFP), engineering work would be expected to commence by mid-June 2012.

With a desired construction contract award date of mid-November 2012, an aggressive approach to the engineering contract tasks must be undertaken for completion within a three (3) to four (4) month period. Immediately upon consultant contract award, the Project Team would meet with LCA representatives to obtain reference information and copies of LCA standard bidding documents.

It should be noted that if it is found that land development planning and municipal approval is required for any of the sites, the mid-November target date for award of work at those sites would likely not be attainable. Hanover Engineering would notify LCA of its findings in this regard immediately, and seek guidance on suitable options and alternative approaches for facility improvement at the affected sites.

Site visits to confirm exact system loads and space requirements would follow the initial LCA-consultant meetings. Upon completing review of deed documents, and performance of any additional required legal research, field surveys would be completed and individual site base plans would be prepared. These plans would be prepared and any outside agency review and permitting processes would begin while the electrical system specifics were being evaluated.

Lehigh Valley Engineering's generator sizing, fuel alternatives analysis, and final design work would progress in a parallel timeframe with Hanover Engineering's site planning, permitting, and Project Manual preparation work. The project staff members of each firm would communicate through their Project Team managers to routinely track their respective work progress against the specified project timeline. Project reports would be provided to the LCA project manager regularly and progress documents would be discussed at the 30% and 90% completion phases.

Upon completion of the bidding documents and approval by LCA, the construction project would be publically advertised. The Project Team would provide additional notifications of the project to equipment suppliers and contractors who, in the consultant's first-hand experience, have proven to be capable of providing the required work on previous projects.

Upon receipt of bids, the Project Team would immediately review the documentation submitted, perform due diligence reviews of the bidders, and promptly provide LCA with recommendation(s) for award of contract(s).

During the course of the construction project, the Project Team would monitor the contractor's progress and report and signs of potential delays or other deviations from the required timeline for joint decision with LCA on the need for contractor notices or other remedial measures.

## PROJECTED TIME AND COSTS

The Request for Proposals includes a very specific list of required project activities and sub-tasks. It also includes a number of "out of scope" allotments for work that would only be performed if deemed necessary and separately authorized by LCA. We have estimated the time requirements for each line item identified in the Request for Proposals and listed on the LCA-provided Exhibit 2 worksheet.

Two completed versions of the worksheet have been provided. One version, with estimated hours but with no hourly rates, is included in Appendix C of the Technical Proposal for Engineering Services. A second version of the worksheet, including the same estimated hours with job classification hourly rates and total estimated costs, is included as the separately packaged Cost Proposal for Engineering Services. Complete copies of the current Professional Fee Schedules for Hanover Engineering and Lehigh Valley Engineering, along with a copy of our current Terms and Conditions of Service Agreement, accompany the Cost Proposal.

The project estimated cost, in terms of man-hours and reimbursable expenses is based on the use of the PennBid program for distribution of Bidding Documents. If conventional paper distribution is required, the project estimated cost would be higher.

## CONFLICTS OF INTEREST

Hanover Engineering Associates, Inc. has a policy, consistent with the American Society of Civil Engineers' *Code of Ethics*, that it will not provide Engineering or Surveying services to any private enterprises or individuals within a community that retains Hanover Engineering as their appointed Municipal Engineer. None of the project sites encompassed under the scope of this proposal are located within any municipality currently served by Hanover Engineering.

Additionally, Hanover Engineering Associates, Inc., Lehigh Valley Engineering, Inc., and their owners and employees have no financial interests in any firms likely to bid for the supply of materials or the performance of any work on the proposed facility improvements projects.

# APPENDIX A

## PERSONNEL EXPERIENCE DOCUMENTATION

## EDUCATION

B.S. Civil Engineering – Lehigh University, 1976

## ADDITIONAL TRAINING

Multiple Continuing Education Courses

## PROFESSIONAL REGISTRATIONS

Registered Professional Engineer: Pennsylvania

## PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

Construction Specifications Institute

Board of Directors for Lehigh County Conservation District, Appointed Associate Director, May 2007 - Present

## EXPERIENCE

**Engineer – Project Manager – Hanover Engineering Associates, Inc.**

Mr. Youst has over 30 years experience in the planning, design, and management of municipal infrastructure, including roadways, parks, site grading, stormwater, water distribution, sanitary sewage collection, and pumping and treatment systems for Public Works projects, as well as for private residential and commercial development.

*Examples of Specific Experience*

- **South Londonderry Township Municipal Authority, Lebanon County.** Prepared designs, obtained state permits, and specified chemical treatment system for disinfection and de-chlorination of effluent at two 210,000 gpd wastewater treatment plants. Prepared designs and specified equipment for triplex pump influent lift station at 210,000 gpd wastewater treatment plant. Prepared designs and specified equipment for influent flow equalization at 24,000 gpd wastewater treatment plant. Prepares NPDES plant operating permit renewals for four wastewater treatment plants.
- **East Hanover Township Board of Supervisors, Lebanon County.** Prepared easement documents for proposed sanitary sewer system. Prepared bidding documents for sewer project test boring investigation. Served as designer of record for the preparation of design, state permitting, and bidding documents for construction of a 3.5-mile gravity collection and pumped discharge sewer system. Provided assistance with administration of Pennsylvania Department of Environmental Protection Safe Water Grant reimbursement applications.
- **East Allen Township Municipal Authority, Northampton County.** Prepared designs for construction of new storage, pumping, and treatment facilities and complete replacement of water distribution piping for 10,000 gpd Shady Lane water system.
- **Delaware Valley School District, Pike County.** Prepared Site Plans and obtained local and State approvals for multischool campus expansion. Prepared specifications for all site improvements. Prepared designs, obtained State permits, and specified equipment for 21,000 gpd sequencing batch reactor wastewater treatment plant to serve K-12 education campus in environmentally sensitive area of northeastern Pennsylvania.
- **KidsPeace, Orchard Hills Campus, Lehigh County.** Prepared Site Plans and obtained local and State approvals for school and hospital facility expansions. Prepared specifications for all site improvements. Prepared grading, utility and erosion control designs, obtained NPDES Stormwater Permit, and assisted in obtaining Township approval for a 200-acre residential/educational/treatment campus preliminary Master Plan.

*Examples of Appointments*

- **Municipal/Authority Engineer Representative.** Serves as Municipal Engineer representative for Lower Saucon Authority and assistant to the Engineer for East Allen Township Municipal Authority in Northampton County. Serves as Municipal Engineer representative for Emmaus Borough, and as Municipal Engineer representative for the Planning Commission and Zoning Hearing Board of Fountain Hill Borough in Lehigh County. Serves as Municipal Engineer representative for sanitary sewer system operations for East Hanover Township and assistant to the Engineer for South Londonderry Township Municipal Authority in Lebanon County.
- **Lower Saucon Authority, Northampton County.** Prepared design and bid documents for extension of sanitary sewer system and for interior and exterior rehabilitation of 165,000-gallon bolted steel water standpipe. Prepared designs, assisted with negotiation of Intermunicipal Agreements, obtained State Permits, and specified equipment for initial sewage holding tank facility and subsequent pump station and force main. Annually, he prepares Chapter 94 Sewer System Operations Report and Water System Operations Report, assists with preparation of Authority budget and long-term capital plan, and reviews developer proposals for water and sanitary sewer system extensions.
- **East Allen Township Municipal Authority, Northampton County.** As assistant Municipal Engineer for the Authority his responsibilities include preparation of permit applications, designs, and bid documents for various water supply and distribution facilities. He assists with negotiation of Intermunicipal Agreements, reviews developer proposals for water and sanitary sewer system extensions, and specifies equipment upgrades and replacements. Annually, he prepares the Chapter 94 Sewer System Operations Report, Water Allocation Compliance Report, and Chapter 110 Reports.
- **Borough of Emmaus, Lehigh County.** Prepared bid documents for ongoing reconstruction of Borough streets, inspection and rehabilitation of sanitary sewer system, and interior and exterior rehabilitation of two million-gallon welded steel reservoirs. Prepared bid documents for conversion of water system control to full SCADA system. Prepared design and bid documents for Broad Street Reconstruction. Annually prepares Chapter 94 Sewer System Operations Report, prepares specifications for sewer I&I inspection and remediation contracts, reviews operating and capital budgets, and establishes billing rates for sewer transportation services provided to out-of-Borough customers in accordance with Intermunicipal Agreements.
- **Borough of Fountain Hill, Lehigh County.** Conducted study of needs, prepared design and bid documents, and successfully applied for CDBG funds to extend public gravity sanitary sewer service to the Star Village neighborhood. Conducted inspections, provided written evaluations, prepared designs, obtained State Permits, and specified replacements and in-place rehabilitation projects for municipal storm sewer systems. Annually, he prepares the Chapter 94 Sewer System Operations Report and provides engineering planning oversight for land development and subdivision activities.
- **East Hanover Township, Lebanon County.** Prepared procedures for analysis of requests and award of reservation of capacity in sewer system. Annually, he prepares Chapter 94 Sewer System Operations Report, updates analysis of available sewer system capacity, prepares sewer system operations budget, and reviews developer proposals for sanitary sewer system extensions.

# Kerry T. Hahn, PLS

**EDUCATION**

B.A. History – Gettysburg College, 1983

**ADDITIONAL TRAINING**

Paralegal Certification – American Institute for Paralegal Studies, 1987

German Language Certificate – Klausenhof Academy, 1983

**PROFESSIONAL REGISTRATIONS**

Professional Land Surveyor: Pennsylvania

**PROFESSIONAL ASSOCIATIONS**

Pennsylvania Society of Land Surveyors

**EXPERIENCE**

**Registered Land Surveyor – Project Manager – Hanover Engineering Associates, Inc.**

Mr. Hahn has over 20 years experience in surveying. As Crew Chief, his duties include performing land, construction, topographic, aerial, property boundary, and floodplain surveys; completing ALTA/ACSM Land Title surveys; establishing GPS control for aerial surveys and subdivisions; providing commercial building stake out and wetlands delineations. In addition to surveying, he also performs deed research, CAD drafting, preparation of plans and legal descriptions for recording.

*Examples of Specific Experience*

- **Structural Surveys.** Provides surveying services at various manufacturing plants for several clients, including Severstal Sparrows Point, LLC (former Bethlehem Steel Facility), ArcelorMittal Steel, Pfizer, Burron, and Lehigh Heavy Forge.
- **Municipal and Private Construction Surveys.** Provides surveying services for various construction firms for new housing, municipal, and structural projects, including Lehigh Valley Industrial Park VI, Lehigh Valley Industrial Park VII, Sanofi-Pasteur, Irwin & Leighton, PPL, and Northstar Construction, as well as Hanover Township, Moore Township, Allen Township, and East Allen Township.
- **Property Surveys.** Provides survey services for the establishment and documentation of land tracts of varying size and type from single-family residences to tracts of over 1,000 acres for the Nature Conservancy, Henryville Flyfishers Club, and Northampton and Lehigh Counties.
- **Natural Gas Industry.** Performs private property, topographical, and GPS surveys, and deed and plan research services in establishing location and construction of natural gas lines.
- **Surveying Management.** Experienced in measurement procedures and practices using total stations, automatic levels, global positioning systems, and electronic data collection. Functions in all aspects of a field crew, working as a rod man, instrument man, and crew chief.
- **Cadastral Surveying.** Experienced in boundary location procedures, and methods of property ownership and conveyance.
- **Utility Design and Stakeout.** Experienced with the stakeout of public utilities and improvements including stormwater, sanitary sewer, waterline, roads, and curbs. Routinely performs calculations associated with the installation of utilities, from the initial layout to the creation of cut sheets for contractor use.
- **Topographic and As-built Surveying.** Experienced in the location of physical features and topography used in the generation of existing condition and As-built Plans.
- **Building Construction Stakeout.** Experienced in the calculations and field methods of building construction stake out.
- **Drafting.** Experienced with the use of AutoCAD and traditional drafting methods for the creation of plans.

# Dean Batten, PE

## Summary of Experience

Over twenty years of experience in electrical systems design including microelectronics, telecommunications, and computing environments. New and renovation construction projects include educational, commercial, health care, governmental, ecclesiastical, laboratory and industrial facilities.

## Education

Post-graduate work at Lehigh University, 1993-2000.

Master of Science in Electrical Engineering, Princeton University, 1990.

Bachelor of Science in Electrical Engineering, with Distinction and Honors, The Pennsylvania State University, 1989. Minors in Mathematics and Physics.

## Professional Experience

2002-present: Principal Electrical Engineer, Lehigh Valley Engineering.

1997-2002: Member of Technical Staff, Digital Signal Processor Research and Development, Lucent Technologies/Agere Systems.

1995-1997: Instructional Technology Consultant, Lehigh University Computing Center.

1991-1995: Electrical Systems Designer, Snyder Hoffman Associates.

## Registrations

Commonwealth of Pennsylvania Professional Engineer PE049132E.

State of New Jersey Professional Engineer 24GE04562500.

State of Maryland Professional Engineer 4124173.

## Organizations

Senior member of the Institute of Electrical and Electronics Engineers (IEEE).

Member of the Illuminating Engineering Society of North America (IESNA).

## Patents

US Patent 6,230,251, May 2001 - File replication methods and apparatus for reducing port pressure in a clustered processor

US Patent 6,256,725, July 2001 - Shared datapath processor utilizing stack-based and register-based storage spaces

US Patent 6,260,189, July 2001 - Compiler-controlled dynamic dispath: a method for reducing unnecessary stalls in pipelined processors

US Patent 6,269,437, July 2001 - Duplicator interconnection methods and apparatus for reducing port pressure in a clustered processor

US Patent 6,282,585, August 2001 – Cooperative interconnection for reducing port pressure in a clustered processor

US Patent 6,317,821, November 2001 - Impatient Execution: A method for virtual single-cycle execution in pipelined processors

US Patent 6,859,871, February 2005 - Method and apparatus for reducing power consumption in a pipelined processor

## Publications

"Profile-directed compilation in DSP applications," *Proceedings for the International Conference on Signal Processing Applications and Technology*, September 1998. Sanjay Jinturkar, Jesse Thilo, John Glossner, Dean Batten, Paul D'Arcy and Stamatis Vassiliadis.

"Interactions between optimizations and a new type of DSP intrinsic function," *Proceedings for the International Conference on Signal Processing Applications and Technology*, November 1999. Dean Batten, Sanjay Jinturkar, John Glossner, Michael Schulte, Ramesh Peri & Paul D'Arcy.

"Intrinsic functions boost compilers," *Electronic Engineering Times*, Issue 1085, November 1, 1999. Dean Batten and Paul D'Arcy.

"A new approach to DSP intrinsic functions," *Proceedings of the Hawaii International Conference on System Sciences*, January 2000. Dean Batten, Sanjay Jinturkar, John Glossner, Michael Schulte and Paul D'Arcy.

## Selected Projects

*Kutztown University/Beck Hall:* Renovations to targeted areas throughout existing building, 30,000 s.f.

*Kutztown University/Lehigh Hall:* Alterations and renovations to targeted areas throughout existing building, 51,000 s.f.

*Muhlenberg College/Hillel Building:* New two-story structure added to existing building and renovation to targeted areas in existing building, 18,500 s.f.

*Cedar Crest College Bio Chem Labs:* New addition to existing building, 8,000 s.f.

*Broughal Middle School, Bethlehem, PA:* New middle school, 175,000 s.f: New multi-story middle school on an urban site, achieved USGBC LEED gold certification.

*Freedom High School, Bethlehem, PA:* New gymnasium and classroom addition, 120,000 s.f. including building-wide emergency power improvements.

*Paxinosa Elementary School, Easton, PA.* Additions and renovations to existing elementary school, 70,000 s.f.

*March Elementary School, Easton, PA:* Building wide renovation, 55,000 s.f.

*Middle Bucks Institute of Technology, Jamison, PA:* Renovations and alterations to targeted areas throughout the existing facility, 140,000 s.f.

*Colonial Academy, IU-20, Wind Gap, AP:* New 76,000 s.f. instructional facility plus detached transportation facility.

*Easton High School, Easton, PA:* New classroom wing, 30,000 s.f.

*Carbon Career Technical Institute, Jim Thorpe, PA:* Proposed renovation to existing 70,000 s.f. facility and new 30,000 s.f. addition.

*PPL Plaza, Allentown, PA:* New 250,000 s.f. office building with many advanced features and significant backup power facilities. Achieved USGBC LEED gold certification.

*Salisbury Middle School, Salisbury Township, PA:* Power and lighting improvements to the existing 120,000 s.f. middle school.

# Matthew Chad Derstine

## Summary of Experience

Over eight years of experience in electrical systems design, with a strong background of hands-on field experience.

## Education

Bachelor of Science in Electrical Engineering Technology, The Pennsylvania State University, 2002.

## Professional Experience

2003-present: Electrical Designer, Lehigh Valley Engineering, Bethlehem, PA.

2002-2003: Electrical Technician, Swartley Brothers Engineers, Lansdale, PA.

1994-2001: Electrical Technician, Delp Electric, Lansdale, PA.

## Notable Experiences

Extensive experience with sound systems at several churches, including management of equipment and technicians.

Toured internationally as a sound and lighting technician.

# APPENDIX B

## SIMILAR PROJECT EXPERIENCE DOCUMENTATION

Appendix B
Lehigh Valley Engineering, Inc. - List of Similar Projects

| Project | Approximate Year Constructed | Description |
|---|---|---|
| Green Tweed Manufacturing Plant | 2002 | New manufacturing plant with emergency generator |
| PPL Plaza | 2003 | New office tower with large (560kW) emergency/standby generator |
| Arcadia East | 2005 | New sewer pumping station with standby generator |
| Sun Inn | 2010 | Add emergency generator to existing facility |
| Grand View Hospital | 2010 | Add transfer switches and add cooling system to generators |
| Richland Township Police Building | 2004 | New facility with 100% generator backup |
| Cedar Crest College Laboratory Addition | 2004 | Addition to science lab building with new emergency/standby generator |
| Salisbury Middle School | 2004 | Replacement of emergency/standby generator |
| Northampton Middle School | 2005 | Replacement of emergency/standby generator |
| Freedom High School | 2005 | Major additions with replacement/enlargement of emergency/standby generator |
| IU20 Second Chance School | 2005 | New facility with emergency/standby generator |
| Northampton School District Stadium | 2004 | Add standby generator and lighting for stadium egress |
| East Penn Bank Headquarters | 2005 | Add emergency/standby generator to existing facility |
| Upper Bucks Vo-Tech Campus | 2005 | Replacement/enlargement of emergency/standby generator to serve multiple buildings |
| Hazleton Ambulatory Care Center | 2005 | New surgery center with generator |
| Lower Moreland Public Works Building | 2006 | New building with emergency/standby generator |
| **Fountain Hill Borough Hall** | **2007** | **Add emergency generator to existing facility** |
| Hecktown Fire Company | 2006 | New building with emergency/standby generator |
| Broughal Middle School | 2009 | New building with emergency/standby generator |
| Langhorne Surgery Center | 2007 | Renovation of building with addition of generator |
| Muhlenberg College MacGregor | 2008 | Add generator to campus network hub |
| PPL North Building | - | Capacity study of existing emergency/standby power systems |
| Hanover Township | 2008 | New facility with standby generator |

| Project | Approximate Year Constructed | Description |
|---|---|---|
| Pumping Station | | |
| Hamilton Surgery Center | 2003 | New facility with generator |
| Ephrata Surgery Center | 2008 | New facility with generator |
| Middle Bucks Vo-Tech | 2007 | Renovation with new generator |
| Paxinosa Elementary School | 2008 | Renovation with new generator |
| March Elementary School | 2008 | Renovation with new generator |
| Truman Elementary School | 2008 | Replacement of emergency/standby generator |
| Salisbury High School | 2009 | Renovation and addition with replacement/enlargement of emergency/standby generator |
| Beck Hall Wellness Center | 2009 | Renovation with addition of emergency/standby generator |
| Western Elementary School | 2009 | Replacement of emergency/standby generator |
| **Northampton School District Administration Building** | **2010** | **Addition of standby generator to existing facility** |
| Rte. 23 Honda | 2010 | Renovation of facility with addition of emergency/standby generator |
| Colonial High School | 2010 | Replacement of emergency/standby generator |
| Carbon County 76 Susquehanna St | 2007 | Renovation of facility with addition of emergency/standby generator |
| Northampton Community College | 2010 | Replacement/enlargement of emergency/standby generator |
| Fountain Hill Elementary School | 2011 | Relocation of existing generator to new site |
| Emmaus Borough | 2008 | New trailer-mounted generator for use at water system sites |
| Pennridge Service Building | 2011 | Replacement/enlargement of emergency/standby generator |
| **Council Rock Data Center** | **2010** | **Addition of standby generator** |
| Lancaster Service Center | Bidding | Replacement/enlargement of emergency/standby generator |

**Project Descriptions**

Lehigh Valley Engineering provides MEP consulting services, and does not usually provide construction contract administration services. Therefore, we do not have payment application and change order records for most of the above projects. We have inquired of our clients for records on some of the most representative projects, but are dependent on their cooperation for our benefit.

**Fountain Hill Borough Hall, LVE Project 05066**

**Administration**: Fountain Hill Borough was the contract administrator.

**Description**: Fountain Hill Borough Hall contains police facilities, Borough offices, and Council chambers. The project was to segregate critical from non-critical loads, and add a generator and transfer switch to serve the critical loads.

**Change Orders: 0%** There were zero cost-related change orders. See attached bid tabulation and final application for payment.

**Northampton School District Administration Building, LVE Project 08197**

**Administration**: D'Huy Engineering was the contract administrator.

**Description**: This building serves as Northampton School District's offices, board room, and data center. The project was to intercept the incoming utility feed and add a standby generator and transfer switch to serve the entire building.

**Change Orders: -2% (net reduction)**. See attached final application for payment.

**Council Rock Data Center, LVE Project 09015**

**Administration**: Council Rock School District was the contract administrator.

**Description**: The project was to add a generator and transfer switch to provide standby power to the existing data center.

**Change Orders: -7% (net reduction)**. See attached final application for payment.

# APPENDIX C

## PROJECT TASK ACCLIVITY WORKSHEET

# Hanover

Engineering Associates Inc

# Cost Proposal for
# Professional Engineering Services
# To
# Lehigh County Authority
# For
# Emergency Power Capability Project


☐ **Bethlehem Office (Corporate Headquarters)**
252 Brodhead Road, Suite 100 · Bethlehem, PA 18017-8944
610.691.5644 · Fax 610.691.6968

■ **Lehigh Office**
5920 Hamilton Blvd., Suite 108 · Allentown, PA 18106-8942
610.395.9222 · Fax 610.395.9262
Contact: J. Bradley Youst, PE, VP jbyoust@hanovereng.com

☐ **Lancaster-Lebanon Office**
20 C Snyder Lane · Ephrata, PA 17522-9101
717.721.7444 · Fax 717.721.7447

☐ **Elizabethtown Office**
48 North Market Street · Elizabethtown, PA 17022-2025
717.367.0144 · Fax 717.361.1012

☐ **Pocono Office**
3355 Route 611, Suite 1 · Bartonsville, PA 18321-7822
570.688.9550 · Fax 570.688.9768

☐ **Towanda Office**
1 Elizabeth Street, Suite 11 · Towanda, PA 18848-1629
570.265.1020 · Fax 570.265.1021

☐ **Wellsboro Office**
5 East Avenue, Suite 201 · Wellsboro, PA 16901-1613
570.724.5326 · Fax 570.724.5386

4/16/2012

COST PROPOSAL FOR ENGINEERING SERVICES

**LEHIGH COUNTY AUTHORITY FACILITIES**
**EMERGENCY POWER CAPIBILITY PROJECT**
***Consultant Proposal Manhour/Cost Allocation Work Sheet***

| Task Nos. | Task / Phase Description | Consultant Manhours / Cost | | | | | | | | | | | | | | | | Consultant Cost | TOTAL COST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Principal | | Engineer | | Sr. Designer | | Eng. /Surv. Tech. | | Drafter | | Registered Surveyor | | 2-Person Field Crew | | Sub-Total | | | |
| | | Mhrs | Cost | Mhrs | Cost | Mhrs | Cost | Mhrs | Cost | Mhrs | Cost | Mhrs | Cost | Crewhrs | Cost | ManHrs | Cost | | |
| | | $115.00 /hour | | $96.00 /hour | | $80.00 /hour | | $69.00 /hour | | $60.00 /hour | | $84.00 /hour | | $126.25 /hour | | | | | |
| | **Not To Exeed Fee** | | | | | | | | | | | | | | | | | | |
| | **Design Engineering Services** | | | | | | | | | | | | | | | | | | |
| 1-3 | General | 12 | $ 1,380 | 12 | $ 1,152 | | $ - | 6 | $ 414 | | $ - | | $ - | | $ - | 30 | $ - | | $ 2,946 |
| | **Design Phase** | | | | | | | | | | | | | | | | | | |
| 1 a-b | Size the Generator and ATS | | $ - | | $ - | 144 | $ 11,520 | | $ - | | $ - | | $ - | | $ - | 144 | $ - | | $ 11,520 |
| 2 | NG Investigation | 4 | $ 460 | | $ - | 4 | $ 320 | | $ - | | $ - | | $ - | | $ - | 8 | $ - | | $ 780 |
| 3 a-d | Per-Facility Generator Fuel Type Cost Comparative | | $ - | | $ - | 48 | $ 3,840 | | $ - | | $ - | | $ - | | $ - | 48 | $ - | | $ 3,840 |
| 4 a-e | Special Considerations | 4 | $ 460 | | $ - | 4 | $ 320 | | $ - | | $ - | | $ - | | $ - | 8 | $ - | | $ 780 |
| 5 | Property Survey/Deed Research | | $ - | | $ - | | $ - | 8 | $ 552 | 36 | $ 2,160 | 12 | $ 1,008 | 32 | $ 4,040 | 120 | $ - | | $ 7,760 |
| 7 | Design Memorandum: | 24 | $ 2,760 | | $ - | 24 | $ 1,920 | | $ - | | $ - | | $ - | | $ - | 48 | $ - | | $ 4,680 |
| 1 a,b-i, b-ii | **Permitting/ Approval Phase Tasks** | | $ - | 4 | $ 384 | | $ - | 24 | $ 1,656 | | $ - | | $ - | | $ - | 28 | $ - | | $ 2,040 |
| 1-6 | **Prepare Plans & Specifications** | 16 | $ 1,840 | 24 | $ 2,304 | 8 | $ 640 | 24 | $ 1,656 | 48 | $ 2,880 | | $ - | | $ - | 120 | $ - | | $ 9,320 |
| 7 a | *Additional Cost for Preparing Plans & Specifications for a Separate Procurement Phase* | | $ - | 12 | $ 1,152 | | $ - | 12 | $ 828 | | $ - | | $ - | | $ - | 24 | $ - | | $ 1,980 |
| 1- 13 | **Bidding Phase** | | $ - | 20 | $ 1,920 | 8 | $ 640 | 8 | $ 552 | | $ - | | $ - | | $ - | 36 | $ - | | $ 3,112 |
| 14 a | *Additional Cost for a Separate Procurement Phase Bid* | | $ - | 12 | $ 1,152 | 8 | $ 640 | 4 | $ 276 | | $ - | | $ - | | $ - | 24 | $ - | | $ 2,068 |
| 1- 16 | **Construction Phase Services** | 4 | $ 460 | | $ - | 112 | $ 8,960 | | $ - | | $ - | | $ - | | $ - | 116 | $ - | | $ 9,420 |
| **Not To Exceed Fee Totals** | | **64** | **$ 7,360** | **84** | **$ 8,064** | **360** | **$ 28,800** | **86** | **$ 5,934** | **84** | **$ 5,040** | **12** | **$ 1,008** | **32** | **$ 4,040** | **754** | **$ -** | **$ -** | **$ 60,246** |
| | **Cost Allotments** | | | | | | | | | | | | | | | | | | |
| | **Design Phase** | | | | | | | | | | | | | | | | | | |
| 2 | *Out of Scope Cost Allotment for NG Service Design ($5,000)* | 4 | $ 460 | 4 | $ 384 | 16 | $ 1,280 | | $ - | 20.25 | $ 1,215 | 7.75 | $ 651 | 8 | $ 1,010 | 60 | $ 5,000 | | $ 5,000 |
| 6 | *Out-of Scope Cost Allotment for Design Modifications to Existing Electrical System ($10,000)* | 40 | $ 4,600 | | $ - | 43.5 | $ 3,480 | | $ - | 32 | $ 1,920 | | $ - | | $ - | 116 | $ 10,000 | | $ 10,000 |
| | **Permitting/ Approval Phase Tasks** | | | | | | | | | | | | | | | | | | |
| 1 b-i-a | *Out-of-Scope Cost Allotment for Land Development / Zoning: ($10,000)* | | $ - | 16.25 | $ 1,560 | | $ - | 80 | $ 5,520 | 40.25 | $ 2,415 | | $ - | 4 | $ 505 | 141 | $ 10,000 | | $ 10,000 |
| | **PennVest & Other Funding Agency Assistance** | | | | | | | | | | | | | | | | | | |
| 14 a | *Out-of Scope Cost Allotment for PennVest & Other Funding Agency Assistance ($2,000)* | | $ - | 20 | $ 1,920 | 1 | $ 80 | | $ - | | $ - | | $ - | | $ - | 21 | $ 2,000 | | $ 2,000 |
| **Cost Allotment Totals** | | **44.00** | **$ 5,060** | **40.25** | **$ 3,864** | **60.50** | **$ 4,840** | **80.00** | **$ 5,520** | **92.50** | **$ 5,550** | **7.75** | **$ 651** | **12.00** | **$ 1,515** | **337** | **$ 27,000** | **$ -** | **$ 27,000** |
| **Not to Exceed Fee + Cost Allotments Totals** | | 108.00 | **$ 12,420** | 124.25 | **$ 11,928** | 420.50 | **$ 33,640** | 166.00 | **$ 11,454** | 176.50 | **$ 10,590** | 19.75 | **$ 1,659** | 44.00 | **$ 5,555** | 1,091 | **$ 27,000** | **$ -** | **$ 87,246** |
| **Estimated Expenses** | | Travel: | | 1,050 Miles @ | | $0.50 per mile = | | $525 | | Printing: | | 2,700 S.F. @ | | $0.55 per S.F. = | | $1,485 | | Other: | **$ 2,010** |
| **PROPOSAL AMOUNT** | | | | | | | | | | | | | | | | | | | **$ 89,256** |

***EXHIBIT 2***

# HANOVER ENGINEERING ASSOCIATES, INC.
## 2012 PROFESSIONAL FEE SCHEDULE

## MUNICIPAL

| DESCRIPTION | | HOURLY RATE |
|---|---|---|
| ENGINEER | | |
| Registered | | $ 96.00 |
| Graduate (Nonregistered) | | 78.50 |
| PLANNER – Certified | | 96.00 |
| REGISTERED LANDSCAPE ARCHITECT | | 96.00 |
| GEOLOGIST – Registered / SENIOR SCIENTIST | | 92.00 |
| SURVEYOR – Registered | | 84.00 |
| GIS (GEOGRAPHIC INFORMATION SYSTEMS) WORK | | |
| GIS Specialist | | 75.25 |
| GIS Technician | | 54.50 |
| DESIGN / DRAFTING / TECHNICAL WORK | | |
| Senior Designer/Senior Technician | | 77.50 |
| Design/Calculations/Technician | | 69.00 |
| Draftsperson 1 (CAD Drafting) | | 58.00 |
| Draftsperson 2/Technician 2 | | 56.00 |
| Draftsperson 3/Technician 3 | | 48.50 |
| GROUND PENETRATING RADAR / GLOBAL POSITIONING SERVICE | | |
| Field Person | | 88.00 |
| SURVEY CREW | | |
| Two-Person Crew (with equipment and truck) | | 126.25 |
| Three-Person Crew (with equipment and truck) | | 160.00 |
| CONSTRUCTION OBSERVER / SEWAGE OFFICER | | |
| Highway, Heavy, Commercial, or Residential Construction | | 64.75 |
| Certified Sewage Enforcement Officer | | 70.25 |
| Onlot Sewer Percolation Test (Pass or Fail) | Lump Sum | 410.00 |
| SECRETARIAL / WORD PROCESSOR | | 32.50 |

1. Travel to and from the job site is chargeable time, with project mileage at $0.50 per mile.
2. Overtime is charged at 1.5 times base rate.
3. Job function controls over individual position – that is, if a Graduate Engineer is doing CAD drafting work, the client would be charged the lower rate.
4. All ordinary overhead expenses, such as general administrative work, are included in the above rates.
5. Extraordinary expenses required specifically for a particular project will be billed at direct cost plus 5%. Examples of these expenses include soil borings costs or testing laboratory charges. All such additional expenses are to be specifically approved by the client prior to their use.
6. A special rate of $112.00 per hour is established for formal hearings and court appearances as an expert witness, for a Professional Engineer, Geologist, Surveyor, or other professional.
7. Cost for copies of plans is $0.55 per square foot.
8. Field equipment usage will be charged as follows: Sewage Flow Meter - $10.50/day, Traffic Counter - $53.00/day, GPS Locator - $21.75/day, RTKGPS - $205.00/day, SUB-RTKGPS - $50.00/day.

*Proudly serving the Community for over 40 years with offices in Bethlehem, Allentown, Poconos, Lancaster-Lebanon, Elizabethtown, Towanda, and Wellsboro.*

www.hanovereng.com

01-02-12

**Lehigh Valley Engineering**
**Mechanical and Electrical Consultants**
1 W Broad St Suite 500 Bethlehem PA 18018
T 610-866-3820 F 610-866-3830
E lve@lve.cc W www.lve.cc

# 2012 Rate Schedule

Effective January 1, 2012

Lehigh Valley Engineering is pleased to offer mechanical and electrical engineering services at the following hourly rates:

| | |
|---|---|
| Principal Expert Witness Consultation | $200.00/hr |
| Principal | $115.00/hr |
| Engineer (PE) | $90.00/hr |
| Senior Construction Administrator | $90.00/hr |
| Junior Engineer (EIT) | $80.00/hr |
| Senior Designer | $80.00/hr |
| Designer | $70.00/hr |
| Draftsperson | $60.00/hr |
| Clerical | $45.00/hr |

Reimbursable expenses will be billed with a 10% mark up.

**Hanover**
Engineering Associates Inc

5920 Hamilton Boulevard, Suite 108
Allentown, Pennsylvania 18106-8942
610.395.9222 – Fax 610.395.9262

## TERMS AND CONDITIONS OF PROFESSIONAL SERVICE AGREEMENT

The undersigned (*Client*) hereby agrees to contract for professional services from Hanover Engineering Associates, Inc. (*Hanover*). It is agreed that all such services shall be subject to the following terms and conditions:

1. Professional services to be performed are described in the Proposal to Client and they are to be provided in accordance with the standard of care normal to local practices.
2. The estimated costs for the services to be performed are as noted in the Proposal to the Client.
3. Unless otherwise specified in the proposal, billing for services will be on an hourly basis, in accordance with the Professional Fee Schedule in effect at the time said services are provided. A copy of the current Fee Schedule with supplementary terms and conditions is provided with the Proposal to Client.
4. Billing will be approximately monthly and will be computed on the basis of work completed during the period indicated on the invoice. Payment is due within thirty (30) days from date of invoice.
5. Client agrees that invoices remaining unpaid after due date shall be subject to a one-and-one-quarter percent (1.25%) per month interest charge on the outstanding balance.
6. Any deposit monies received from Client shall be held by Hanover, to be credited against the final project invoice. Should the amount on deposit exceed the amount of final invoice (and any outstanding account balances), the excess amount will be refunded to Client.
7. Any original engineering and surveying drawings and work product shall remain the property of Hanover and copies of these documents shall be available to Client during the course of the project for Client's use and reproduction. If, however, Client does not pay invoices as due and/or is otherwise in default of this Agreement, then, in that event, Client agrees to terminate utilization of the drawings and engineering work product and agrees to return all copies of the drawings and the engineering work product to Hanover. Even in that event, however, Client shall be obligated to pay Hanover for the time and costs incurred on the project.
8. Hanover's liability is limited to damages resulting directly from negligence in the performance of contracted services. In addition, Hanover shall not be responsible for any damage or claim of damage resulting from a delay in the project. The total liability of Hanover for any and all claims of damage, and/or actual damage that may result directly or indirectly from the work or work product, is limited to a total aggregate amount of $50,000 or the amount of invoiced fees, whichever is the lesser amount.
9. If invoices remain unpaid after 90 days from date of issuance, the Client hereby empowers and authorizes any Prothonotary or Attorney of any court of record to appear for the Client in any and all actions which may be brought for payments for services rendered and to Confess Judgment for Money against the Client for all and any part of the amount due under the invoices then unpaid, including interest due on overdue accounts and costs together with any Attorney's commission of 5%. Said Confession of Judgment for Money shall be pursuant to and as authorized by Rule 2950, et. seq. of Pennsylvania Rules of Civil Procedure. Such authority shall not be exhausted by one exercise thereof, but Judgment may be confessed as aforesaid from time to time as often as any of said invoices shall be in arrears and such powers may be exercised as well after the expiration or termination of the work contract.
10. These Terms and Conditions and the Proposal attached hereto, constitute the entire Agreement between the parties hereto and no changes, modifications, extensions, terminations or waivers of this Agreement, or other such documents, or any of the provisions herein, or therein contained, shall be valid unless made in writing and signed by duly authorized representatives of both Hanover and the Client.

| | |
|---|---|
| CLIENT NAME | Lehigh County Authority |
| STREET ADDRESS | 1053 Spruce Street, PO Box 3348 |
| CITY, STATE, ZIP | Allentown, PA 18106 |

IN CONSIDERATION OF THE TERMS AND CONDITIONS SET FORTH HEREIN, I DO HEREBY ACCEPT PROPOSAL NO. P12-0304 DATED April 16, 2012 AND THESE TERMS AND CONDITIONS AS THE COMPLETE AGREEMENT FOR THE PERFORMANCE OF THE WORK DESCRIBED HEREIN, AND AUTHORIZE SAID WORK TO PROCEED.

ACCEPTED BY CLIENT this _____day of _____ 20___

BY_____
Signature

_____
Type or Print Name and Title

## Jason M. Peters

**From:** J. Bradley Youst [jbyoust@hanovereng.com]
**Sent:** Thursday, April 26, 2012 5:08 PM
**To:** Jason M. Peters
**Subject:** LCA RFP - Emergency Power Project

Jason

Thank you for your call regarding your review of engineering proposals for the emergency power project. Please accept this e-mail in response to your question regarding the intent of our reference to the project scope in the first page of our proposal.

In particular, our paragraph indicating "The complete scope of requested services is included in the LCA Request for Proposals document, with amendments and supplementary information, as provided by Mr. Jason M. Peters, Lehigh County Authority Capital Works Assistant" is intended to directly reference the project scope as you presented it, and to indicate that we intend to provide all of the engineering services as requested in the RFP.

In other words, because we did not take exception to any items in the RFP, we simply opted to cite a reference to your document in our formal proposal rather than repeat every detail from the RFP in the proposal.

I hope this clarifies our intent and confirms our conformance with the request, but if you should need any additional information, please let me know.

Respectfully,

J. Bradley Youst, PE, VP

**Hanover**
Engineering Associates Inc

5920 Hamilton Boulevard, Suite 108
Allentown, PA 18106-8942
Telephone – 610.395.9222
Fax – 610.395.9262
E-mail – jbyoust@hanovereng.com

# LEHIGH COUNTY AUTHORITY FACILITIES EMERGENCY POWER CAPABILITY PROJECT

## Request for Proposals

For
Engineering Services
March 15, 2012

**Due Date:** April 16, 2012
**Contract Award: Approximately 60 days from Due Date**

Lehigh County Authority
Allentown, PA 18106
610-398-2503 phone
610-398-8413 fax

Mailing Address:
P.O. Box 3348
Allentown, PA 18106

Deliveries:
1053 Spruce Street
Wescosville, PA 18106

**Table of Contents**

## INVITATION

Lehigh County Authority (LCA) is a municipal authority formed by Lehigh County in 1966, under the Pennsylvania Municipality Authorities Act. LCA's primary purpose is to provide water and wastewater services throughout portions of Lehigh County, Pennsylvania.

LCA desires to engage the services of a consulting engineering firm to provide design, permitting, bidding, and construction related engineering services for the "Lehigh Country Authority Facility Emergency Power Capability Project" (Project). The Project consists of installing emergency generators at ten facilities located in seven municipalities within Lehigh County and one facility located in Moore Township, Northampton County. LCA currently operates ten of these facilities without emergency power capability, and at one facility LCA wishes to replace an existing mobile generator with a permanent generator.

Interested firms shall submit three copies of their written Technical and Cost Proposals to perform the engineering services requested herein to the attention of Jason Peters at the offices of Lehigh County Authority, located at 1053 Spruce Street, Wescosville, Pennsylvania, with a postal address of P.O. Box 3348, Allentown, Pennsylvania 18106-0348 by end of business day on Tuesday, April 16, 2012. Packages shall be clearly marked ""Lehigh Country Authority Facility Emergency Power Capability Project". The name of the firm shall be clearly labeled. Proposals that are received after the date and time stated above will not be considered.

The successful consultant will perform the work under the terms of a Professional Services Authorization (PSA). The consultant shall perform the work with sufficient resources to complete the work within the timeframe specified. The Construction Phase of the project should be awarded no later than November 16, 2012 with notice to proceed following immediately after.

Any questions or clarifications regarding the Request for Proposals (RFP) should be directed to Jason Peters at (610) 398-2503 or via e-mail at jasonpeters@lehighcountyauthority.org.

## PROJECT OVERVIEW

Eight of the facilities in the Project provide water service, where two of the facilities provide wastewater treatment, and the remaining facility being LCA's central office. It is our objective to provide the highest quality service to our customers and we desire to assure the continuation of service in the event power outages. The intent of this Project is to provide emergency power capability at each of the following facilities.

| Site No. | Site Name | Type (1) | Address |
|---|---|---|---|
| 1 | LCA Office | O | 1053 Spruce Street, Allentown, Lehigh County, Lower Macungie Township |
| 2 | NL15-16 | W | 6337 Meadowview Road, Germansville, Lehigh County, Heidelberg Township |
| 3 | HHWWTP | S | 5132 Heidelberg Heights Road, Germansville, Lehigh County, Heidelberg Township |
| 4 | NL13-14 | W | 4721 Trout Lake Road, Kempton, Lehigh County, Lynn Township |
| 5 | NL4-5 | W | 3948 Crestwood Drive, Schnecksville, Lehigh County, North Whitehall Township |
| 6 | BH | W | 1443 Gable Drive, Coopersburg, Lehigh County, Lower Milford Township |
| 7 | UMC D3 | W | 5086 Gary Drive, Emmaus, Lehigh County, Upper Milford Township |
| 8 | WL18-19 | W | 4475 Far View Court, Emmaus, Lehigh County, Upper Milford Township |
| 9. | NL11-12 | W | 6768 Lime Kiln Road, Slatington, Lehigh County, Washington Township |
| 10. | CFE | W | 555 Donna Drive, Bath, Northampton County, Moore Township |
| 11. | SSWWTP | S | 4050 Sand Spring Road, Schnecksville, Lehigh County, North Whitehall Township |

(1) W=Water, S=Wastewater, O=Office

The intent of this project is in the event of a power loss to replace PPL or Met Ed power from the grid with power from an emergency generator. Since the existing electrical systems in the facilities are "grandfathered" it is **not** the intent of this project to bring the facility up to current electrical code unless required to do so due to the addition of onsite emergency power. In fact, we expect the design of the facilities such that the connection of the automatic transfer switch (ATS) occurs between the electric meter base and electric panel, perhaps mounted outside of the building in a weather-proof enclosure to minimize disturbance to the existing electrical system.

The Design Engineer will determine the size and location of both the emergency power generator (EPG) and ATS at each facility based upon current demands. Accommodations for potential future upgrades at each facility with input from LCA personnel will need to be considered. The Design Engineer shall propose and obtain LCA approval for the size and location of the generator and ATS prior to moving forward. Any necessary improvements to the existing facilities electrical systems that are required by code for the addition of emergency power shall be addressed. During construction, minimize down time at each facility to a maximum of two hours. The Design Engineer shall provide design, permitting, bidding, and construction related engineering services as outlined in greater detail in the Design Engineer Services Section of the RFP.

**Project Goals:**

1. To design and construct an emergency power system for each facility which will reliably meet all current and future needs.
2. Minimize down time at each facility during construction to a maximum of two hours.
3. To develop contract documents that meet the requirements of LCA and permitting agencies, with the goal of limiting construction change orders to a maximum of 5%, not including changes requested by LCA.
4. To complete the construction of the project within 6 months of construction phase contract award.

**PROPOSAL SUBMITTAL**

**Include in the Technical Proposal:**

- A title page with company name, address, telephone number, fax number, e-mail address, name of contact person and date.

- Identify the project approach, fully address all sections of the RFP and demonstrate the consultant's ability to understand and meet LCA's needs within the time frame stipulated.

- The written proposal shall identify and include the firm's project team, individual resumes identifying qualifications, training and expertise, including permitting experience and staff availability to complete the project. The firm's approach to quality control and customer satisfaction shall be addressed. Identify any tasks that would be done by a sub-consultant. Identify any excluded services in your proposal, and services that LCA would perform.

- Identify any experience with PennBid. The use of PennBid is preferred; however, traditional bidding methods are acceptable. Identify which method you would use in your proposal.

- The written proposal shall include summaries for a minimum of three projects of a similar nature, completed in the past five years. Attach a worksheet identifying project name, description of the tasks performed, date, contract costs, change order costs (excluding those requested by the owner), contact names and telephone numbers.

- A description of the specific services that you propose to provide within the various phases of the project. The proposed services should be the basis of your Cost Proposal.

- A spreadsheet identifying the estimated labor man-hours required to perform each task, and applicable sub-tasks, broken down by employee classification.

- A schedule that identifies the estimated number of days to complete the design, permitting, bidding and construction phase tasks. Assume the Bidding Phase of the project will commence within in 4 months of award of professional services.

- The tasks and estimated man-hours should match those provided in the Cost Proposal.

**Include in the Cost Proposal:**

- The Cost Proposal shall be based upon the Technical Proposal and the firm's anticipation of completion of the project within the time frame identified in the RFP.

- The Cost Proposal shall detail man-hours by job classification for each task and applicable sub-task of the work, based on the firm's standard fee schedule. The tasks and estimated man-hours should match those provided in the Technical Proposal. Identify in-house non-labor costs. Identify any estimated costs and markups for sub consultants and other outside services you will require, and calculate an estimated total cost for each task and the project as a whole. These services if not identified as an Out of Scope Cost Allotment shall be provided on a time and expense basis up to a total "Not to Exceed Fee", and shall not be provided on a fixed fee basis.

- *The cost proposal must be submitted on the exhibit 2 form provided with this document. An electronic copy will be provided for the consultants use in Microsoft Excel format also.*

  Not to Exceed Fee: Is understood that Design Engineer will perform the work as outlined in the aforementioned proposal regardless of the actual cost. Billings will be based on a time and expense basis up to a total not to exceed. If the actual costs are less than the not to exceed fee LCA will only be billed for the actual costs.

  Out of Scope Cost Allotment: The cost allotment is understood to mean a maximum number of man-hours and allotted to this task, if less hours are required LCA will not be billed, if more hours are required the Design Engineer will invoice additional hours in accordance with their the Rate Schedule. As work progresses the Design Engineer shall notify the LCA Project Manager in advance if any of the cost allotments are expected to exceed the estimated amounts. At such time the Design Engineer will provide justification and an estimate of additional costs. Work shall not proceed beyond estimated amounts until said additional costs has been approved.

- For comparison purposes, the Cost Proposal shall be based on the engineering tasks to be performed and the deliverables identified in the following sections of this Request for Proposals. If a firm wishes to suggest changes to the scope, they should be identified separately along with the proposed cost impact.

- Your current standard fee schedule.

- Your current standard Terms and Conditions applicable to a Professional Service Agreement.

- The Cost Proposal shall be submitted in a sealed envelope separate from the Technical Proposal.

**DESIGN ENGINEER SERVICES**

**General**

1. The Design Engineer shall prepare and maintain a Project Design Schedule that identifies the tasks and milestone dates by which activities must be completed to maintain the overall project schedule.
2. The Design Engineer shall attend a kickoff meeting to review the aspects and objectives of the project at LCA prior to starting design.
3. The Design Engineer shall attend meetings at the 30% and 90% completion phases for discussion of progress, objectives and alternatives

**Design Phase Tasks**

1. Size the Generator and ATS
   a) Conduct a site visit and perform any other research required to establish the total electrical demand at each facility. Operational use of each facility must take into consideration all electrical sources as some equipment needed to operate the facility may be supplied power from another source (example: supply well and pump placed hundreds of yards away from the facility).

   b) Determine size of the generator (in kilowatts and electrical phase) as well as the size of the ATS required and report back to the LCA Project Manager.

   ***Note***:
   *Generators shall be installed outside of the facility and shall include a factory sound attenuated weather proof enclosure. Diesel fuel generators if utilized will have built in doubled wall fuel tanks. ATS's shall be installed outside of the facility in a weatherproof lockable enclosure*.

2. Natural Gas (NG): Investigate the availability of NG and if applicable determine if the gas main has the required capacity and pressure to meet the proposed generator needs and report back to the LCA Project Manager.

   a) *Out-of-Scope Cost Allotment:* In the event that LCA desires to extend NG to a site(s) the Design Engineer shall include a Project Cost Allotment of $5,000 in the Proposal and indicate the associated number of man hours for said work. This allowance shall only be utilized upon written authorization by the LCA Project Manager.

3. Prepare Per-Facility Generator Fuel Type Cost Comparative: The Design Engineer shall prepare a Cost Evaluation Comparative in a matrix format for each facility comparing generators utilizing each of the following fuel sources; Diesel (DF), Propane Gas (PG) and if available Natural Gas (NG). The cost comparative shall at minimum include the following:

a) Generator size in Kilowatts

b) Capital cost of generator.

c) Operating cost of generator on per/1000 Kwh basis.

d) Additional equipment, if any required for the generator.

The following guidance shall be included when developing the cost comparative

a) For DF: shall include the cost of a fuel containment system

b) For PG: shall include the construction costs as per recommended tank capacity associated with an above the ground tank and shall include a fence to screen the tank. Any land development and or zoning requirements triggered by said tank should be identified.

c) For NG: if available and if it has the required capacity and pressure shall include the cost of permitting, tapping, and construction to extend to the facility site.

4. Special Considerations.

a) *LCA Office /Operations Center:* This facility contains the vital computer and electrical equipment utilized to facilitate day to day business functions and SCADA control of various water and wastewater facilities. Design of an emergency power system for this facility must be sure to address all issues that may damage the vital computer and electrical equipment.

b) *Other Facilities in the Project:* Investigate, identify, recommend and include in the design any electrical protection devices necessary to protect vital electrical components within a facility. Future upgrade to PLC must be considered.

c) *Existing Transfer Switches:* Two of the facilities in this Project have existing transfer switches. The LCA Office /Operations Center has a manual transfer switch (MTS) and the Heidelberg Heights Wastewater Treatment Plant has a ATS transfer switch. For the LCA Office/Operations Center investigate if the existing MTS can be converted to an ATS, if applicable, or if it is more cost effective to replace the MTF with an ATS. LCA believes the existing ATS is adequate at the Heidelberg Heights waste water treatment plant but the design engineer shall confirm.

d) *Repurposing Existing Generators:* Although not part of this Project LCA is in the process of upgrading other water and wastewater facilities that have fixed self contained emergency generators (i.e. weather proof enclosures, fuel tanks under the generator) that will be replaced with larger generators, we also have an older propane generator that is not self contained from a completed project where we installed a larger generator. As a task in this Project, the Design Engineer working

with the LCA Project Manager shall provide recommendations and associated costs for the use of any generators listed in Appendix B.

e) *Additional Emergency Power System needed at facility:* LCA is aware that multiple electrical sources and meters may have been implemented to operate certain facilities. Currently LCA knows that electrical power supplied at CFE is supplied by more than one electric source. Both the pumping station and supply wells that are required to operate the facility at CFE are approximately a quarter mile in distance from each other demanding each their own separate electrical source. As a task in this Project, the Design Engineer shall investigate and identify any facility that is operated by multiple electrical sources. The Design Engineer working together with the LCA Project Manager shall provide recommendations and associated costs for any additional generator or ATS for a facility.

5. Property Survey/Deed Research: Although not anticipated it may be necessary that deed research and/or a property survey be undertaken by the Design Engineer. For this proposal the Design Engineer shall assume this work will be required for four facility sites; and shall include a cost per /site. Written authorization by the LCA Project Manager will be required before proceeding with this work

6. Out-of-Scope Design Modifications to Existing Electrical System: As previously mentioned in this RFP the intent of this project is in the event of a power loss to replace PPL or Met Ed power from the grid with power from an emergency generator. Since the existing electrical systems in the facilities are "grandfathered" it is not the intent of this project to bring the facility up to current electrical code unless required to do so. In fact, we expect the design of the facilities are such that the connection of the ATS occurs between the electric meter base and electric panel, perhaps mounted outside of the building in a weather-proof enclosure to minimize disturbance to the existing electrical system.

   *Out-of-Scope Cost Allotment:* In the event that there may be some instances where a portion of the existing electrical facilities required by code to be modified because there is no other option to install the emergency power system, the Design Engineer shall include a Project allowance of $10,000 in the Proposal and indicate the associated number of manhours for said work. This allowance shall only be utilized upon written authorization by the LCA Project Manager.

7. Design Memorandum: The Design Engineer shall submit a design memorandum broken down by facility which shall include an opinion of cost. LCA personnel shall review said memorandum and respond with comments within two-weeks of receipt. When all comments are addressed to LCA's satisfaction final design shall begin.

**Permitting/ Approval Phase Tasks**

1. Investigate and determine what permits and approvals are required; and when applicable, or unless otherwise stated below, prepare and submit all permit applications, modules, attachments and documentation, as required to obtain the necessary permits, to the respective regulatory agencies or municipalities:

   a) *Regulatory:* Discussions with Richard Stepanski, P.E., DEP North Eastern Region Safe Water Technical Services Chief confirmed that the installation of an emergency power system and associated fuel source will NOT require an amendment to the Public Water Supply Permit. However, the Design Engineer will be responsible, if applicable, for obtaining waivers for clean air emissions standards for the generators and/or any separate permits that may be required for the fuel source, etc.

   *b)* *Municipal:*

      i. Land Development and Zoning: Determine if the installation of an emergency power system will trigger a land development requirement and/or involve any zoning issues.

         a) *Out-of-Scope Cost Allotment:* In the event that it is determined that the installation of an emergency power system will trigger a land development requirement and/or involve any zoning issues, the Design Engineer shall include a Project allowance of $10,000 in the Proposal for said work. This allowance shall only be utilized upon written authorization by the LCA Project Manager.

      ii. Building Code: To include but not be limited to Building and Electrical Permits.

   c) *Other*: Verify all state and local requirements for such things as but not limited to placement of fuel tanks, emissions, noise decibel limits, safety, vegetative screening, fencing, lighting, etc.

2. Address all comments by regulatory and municipal entities until permits are issued.

***Note:*** *Permit fees will be paid by LCA.*

**Prepare Plans & Specifications**

1. Provide plans and specifications and cost estimates for LCA review at 30% completion, 90% completion, and at completion of design.
2. The specifications prepared shall meet the requirements of Pennsylvania and municipal bidding law as well as PennVEST and other potential funding agencies. The specifications must include sections on nondiscrimination in employment, compliance with PA Prevailing or Davis-Bacon wage rates. Regulatory Agency requirements, such as specifying at least two manufacturers followed by the words "or equal", except in special cases and then only with the approval of LCA and the funding agencies, must also be incorporated into the specifications. The Design Engineer must be prepared to provide written justification for non-competitive procurement, if requested.
3. Prepare the General Construction and Electrical Construction contract drawings and specifications, suitable for bidding and submission to permitting agencies. The Design

Engineer will determine if any other separate contracts are required by law. Provide 2 paper copies and 1 electronic copy of the documents to LCA.

4. Prepare a Project Manual that contains all documents required for bidding the project in two contracts: General Construction and Electrical Construction. The front half of the Manual will consist of the EJCDC standard documents that have been modified to meet LCA's needs, including the Instructions to Bidders, Bid Form, Bid Bond, Agreement, Performance and Payment Bonds, and the General and Supplementary Conditions. LCA will provide you with these documents for inclusion in the Contract Documents, as well as the following documents: Agreement of Surety, Certificate as to Corporate Principle, Affidavit of Non-Collusion, Experience Questionnaire, List of Proposed Subcontractors, List of Major Equipment Manufacturers, Pennsylvania Steel Products Procurement Act section, Pennsylvania Prevailing Wage Act section (unless superseded by Davis-Bacon wage rate requirements), and Change Order form. The Design Engineer will customize these documents, while preserving the formatting, insertions and deletions, for the current project.
5. Prepare the Technical Specifications section of the Project Manual organized in standard CSI three-part specification format.
6. Prepare Drawings on 24"x36", 30"x42" or 36"x48" paper using AutoCAD version 2011 or later showing the existing conditions, demolition and proposed improvements. Include all applicable files for plotting, such as CTB file, images, x-references, etc.
7. **Note:** It is anticipated that the Project will be bid in its entirety, where the contractor would supply the emergency generators and automatic transfer switches. However it may be to LCA's advantage to procure the emergency generators and automatic transfer switches in advance of the construction contracts bid and provide them to the contractor for installation.

    a) *Additional Cost for a Separate Procurement Phase:* Please provide a cost for the Preparing Plans & Specifications if LCA elects to procure the aforementioned equipment by separate bid.

**Bidding Phase**

1. Provide 4 sets of final Contract Documents for use by LCA. Provide AutoCAD and Adobe PDF files to LCA.
2. Obtain prevailing wage rates and incorporate them into bid documents.
3. Prepare advertisement in accordance with public bidding laws. Advertising costs will be paid by LCA.
4. Distribute Contract Documents to prospective bidders by paper or CD copy. Payments by prospective bidders shall be used to offset only your reproduction costs.
5. Maintain a list of bidders, addresses, Email and contact information in Microsoft Excel format.
6. Respond to questions by prospective bidders and equipment suppliers concerning information in the Contract Documents.

7. Schedule and conduct a Mandatory Pre-Bid meeting to cover the project, and prepare and distribute minutes to attendees and other appropriate parties.
8. Prepare and issue Addenda as appropriate to interpret, clarify or expand upon the Contract Documents.
9. Attend the bid opening, prepare bid tabulation sheets in Microsoft Excel format, and evaluate the bids received for compliance with the bidding requirements.
10. Review qualifications and experience data furnished by bidders. Review bid bonds, insurance and other information provided for general conformance with Contract Documents.
11. Provide recommendation with respect to acceptance of bids and award of construction contracts.
12. Prepare necessary agreements and performance and payment bonds in an editable electronic version for each prime contract for execution by LCA and the successful bidders.
13. Coordinate receipt of bonds, insurances, signed Agreements and other documents both in paper and scanned electronic version from successful bidders.
14. **Note:** It is anticipated that the Project will be bid in its entirety, where the contractor would supply the emergency generators and automatic transfer switches. However it may be to LCA's advantage to procure the emergency generators and automatic transfer switches in advance of the construction contracts bid and provide them to the contractor. Please provide a separate add-on cost for Bidding Phase if LCA elects to procure the aforementioned equipment.
    a) *Additional Cost for a Separate Bid for a Procurement Phase:* Please provide a cost for the Bidding Phase if LCA elects to procure the aforementioned equipment by separate bid.

**Construction Phase Services**

1. Coordinate receipt of bonds, insurances, signed Agreements and any other documents from successful bidders.
2. Provide 4 conformed, fully executed sets of Contract Documents to LCA for its use.
3. Provide 6 sets of Contract Documents and Addenda for each prime contract to be used with suppliers and subcontractors.
4. Prepare and issue Notices to Proceed to the contractors.
5. Schedule and conduct a pre-construction conference to review required work items, submittals, discuss contractors' schedule, processing payment applications, maintaining records and to address other project-related issues. Prepare minutes of the pre-construction conference and distribute to attendees and other appropriate parties.
6. Review contractors' construction schedule and updates for compliance with project milestones and completion dates. Note discrepancies and advise contractors of needed corrective action in order that the project will not be unnecessarily delayed.

7. Arrange and conduct monthly progress meetings, as needed. Prepare minutes of the meetings and distribute.
8. Review all contractor submittals to ensure that design objectives and requirements of the Contract Documents are met. Shop drawings shall not be approved without accompanying steel origin certifications. Evaluate and provide recommendation to LCA on significant deviations from Contract Documents requested by contractors. Review resubmittal of shop drawings or other data returned to contractors for correction.
9. Provide interpretations and clarifications of the Contract Documents, and in connection therewith, prepare work directives for issuance to contractors.
10. Review certified payrolls and have contractors correct as needed.
11. Review applications for payment submitted by contractors and provide recommendation to LCA.
12. Conduct a walkover of the project site, accompanied by contractors and LCA representative, to determine if the work is substantially complete. If the work is determined to be substantially complete, prepare and issue certificate of substantial completion. If the work is determined not to be substantially complete, notify LCA and contractors in writing stating reasons why work is not substantially complete. Prepare and distribute punch lists that identify work remaining to be completed or corrected.
13. If applicable, Schedule and attend inspection of completed work by PA-DEP and the municipalities. Follow through on deficiencies until resolved. Verify receipt of final approvals and certifications.
14. Provide LCA with recommendation on completeness of work, final acceptance and release of final payment. Prepare and distribute Consent of Surety Company to Final Payment, Contractor's Waiver of Lien, Contractor's Affidavit of Payment of Debts and Claims, Subcontractor/Product Supplier's Release of Liens (provide one for each subcontractor/supplier) after the Design Engineer agrees that the work has been completed and is ready for final payment. Process final payments to the contractors.
15. Review record drawings and O&M Manuals prepared by contractors. Three copies of each shall be provided to LCA.

**Note:** Inspection services are not part of this Proposal.

**Out of Scope PennVest & Other Funding Agency Assistance**

1. If applicable the Design Engineer will be involved in the preparation of funding documents for PennVEST and other funding agencies, and shall be thoroughly familiar with their requirements for preparing documents for settlement, processing cash disbursements, including change order requests, and project closeout.
    a) *Out-of-Scope Cost Allotment:* The Design Engineer shall include a Project allowance of $2,000 in the Proposal in the event that LCA desires to apply for and/or receives said funding. This allowance shall only be utilized upon written authorization by the LCA Project Manager.

## FACILITY OPEN HOUSE

A MANDATORY facility open house will be held on Thursday, March 22, 2012 at 7:00 A.M. and a second day if necessary on Friday, March 23, 2012 at 7:00 A.M. meeting at LCA's office located at 1053 Spruce Street, Allentown, PA 18106. This will allow engineering firms to inspect the facilities, and to familiarize themselves with the nature of the work to be performed. LCA personnel will be available to answer questions.

# APPENDIX A
# LCA SYSTEM SPECIFIC INFORMATION

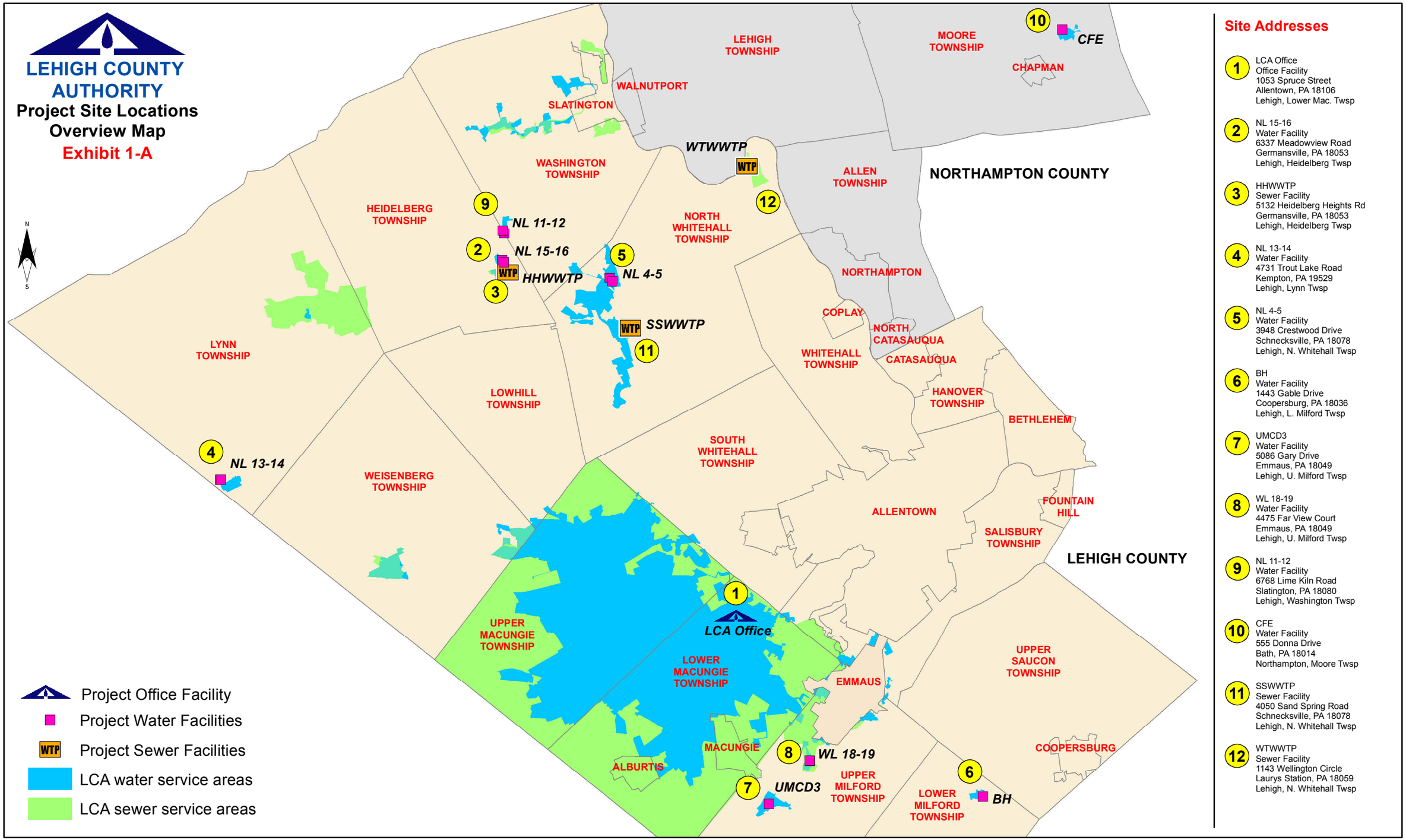
| System | | | | FEE SIMPLE | | Electric Supply | | Pump Horse Power Distribution | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Township | Facility ID | PWSID | PIN # | EASEMENT DOC# | Voltage | Phase | 1 | 2 | 3 | number of supply wells |
| LCA Office & Operations Center | Lower Macungie Township | LCA Office | | 547595298577 | | 408 | 3 | n/a | n/a | n/a | n/a |
| Heidelberg Heights | Heidleberg Township | NL15-16 | 3390047 | 554082963667 | | 120/240 | 1 | n/a | n/a | n/a | 2 |
| Heidelberg Heights WWTP | Heidleberg Township | HHWWTP | | 554091425720 | | 240/480 | 3 | n/a | n/a | n/a | n/a |
| Pine Lakes of Lynn | Lynn Township | NL13-14 | 3390085 | 541714506531 | | 120/240 | 1 | n/a | n/a | n/a | 2 |
| Crestwood | North Whitehall Township | NL4-5 | 3390055 | 546919750347 | V0658 P1119-P1121 | 120/240 | 1 | 3 | 2 | 2 | 2 |
| Beverly Hills | Lower Milford Township | BH | 3390035 | 641312733274 | | 120/240 | 1 | 0.75 | 0.75 | n/a | 1 |
| Buss Acres | Upper Milford Township | UMC D3 | 3390076 | 548331722982 | | 120/240 | 1 | n/a | n/a | n/a | 1 |
| Far View Farms | Upper Milford Township | WL18-19 | 3390111 | 548396196984 | | 120/240 | 3 | 3 | 3 | 15 | 2 |
| Mill Creek | Washington Township | NL11-12 | 3390080 | 554086991348 | | 120/240 | 1 | 2 | 2 | 5 | 2 |
| Clear View Farms | Moore Township | CFE | 3480028 | 5362-10-3328-5814 | | 120/240 | 1 | 5 | 5 | n/a | 2 |
| Sand Spring WWTP | North Whitehall Township | SSWWTP | | 546953285740 | 7239961, 7239951, 7239948, 7239960 | 120/240 | 3 | n/a | n/a | n/a | n/a |

**** The following information provided may not represent to its full extent the existing conditions at each facility therefore all information needs to be verified by the Design Engineer****

# APPENDIX B
# LCA REPURPOSING OF EXISTING GENERATORS

| Manufacturer | Model Number | Serial Number | Spec Number | volts | kw | fuel type |
|---|---|---|---|---|---|---|
| Katolight | L60FGG4 | LM647996 | 83086 | 240 | 60 | Propane |
| Katolight | L35FPG4 | LM374475 | n/a | 208 | 35 | Propane |
| Onan | 125DGEA-1439L | H000145480 | n/a | 240 | 125 | Diesel |
| Martin Machinery | MW3503 | 12013293 | n/a | 240 | 50 | Propane |

**** The following information provided may not represent to its full extent the existing generators available therefore all information needs to be verified by the Design Engineer****


LEHIGH COUNTY AUTHORITY
Project Site Locations
Overview Map
Exhibit 1-A
LEHIGH TOWNSHIP
MOORE TOWNSHIP
CHAPMAN
WALNUTPORT
SLATINGTON
WASHINGTON TOWNSHIP
WTWWTP
WTP
ALLEN TOWNSHIP
NORTHAMPTON COUNTY
HEIDELBERG TOWNSHIP
NL 11-12
NL 15-16
HHWWTP
NORTH WHITEHALL TOWNSHIP
NL 4-5
NORTHAMPTON
SSWWTP
COPLAY
NORTH CATASAUQUA
LYNN TOWNSHIP
WHITEHALL TOWNSHIP
CATASAUQUA
LOWHILL TOWNSHIP
HANOVER TOWNSHIP
BETHLEHEM
NL 13-14
SOUTH WHITEHALL TOWNSHIP
WEISENBERG TOWNSHIP
ALLENTOWN
FOUNTAIN HILL
SALISBURY TOWNSHIP
LEHIGH COUNTY
LCA Office
UPPER MACUNGIE TOWNSHIP
LOWER MACUNGIE TOWNSHIP
UPPER SAUCON TOWNSHIP
EMMAUS
MACUNGIE
WL 18-19
ALBURTIS
UMCD3
UPPER MILFORD TOWNSHIP
COOPERSBURG
LOWER MILFORD TOWNSHIP
BH
CFE
Project Office Facility
Project Water Facilities
Project Sewer Facilities
LCA water service areas
LCA sewer service areas
Site Addresses
1 LCA Office
Office Facility
1053 Spruce Street
Allentown, PA 18106
Lehigh, Lower Mac. Twsp
2 NL 15-16
Water Facility
6337 Meadowview Road
Germansville, PA 18053
Lehigh, Heidelberg Twsp
3 HHWWTP
Sewer Facility
5132 Heidelberg Heights Rd
Germansville, PA 18053
Lehigh, Heidelberg Twsp
4 NL 13-14
Water Facility
4731 Trout Lake Road
Kempton, PA 19529
Lehigh, Lynn Twsp
5 NL 4-5
Water Facility
3948 Crestwood Drive
Schnecksville, PA 18078
Lehigh, N. Whitehall Twsp
6 BH
Water Facility
1443 Gable Drive
Coopersburg, PA 18036
Lehigh, L. Milford Twsp
7 UMCD3
Water Facility
5086 Gary Drive
Emmaus, PA 18049
Lehigh, U. Milford Twsp
8 WL 18-19
Water Facility
4475 Far View Court
Emmaus, PA 18049
Lehigh, U. Milford Twsp
9 NL 11-12
Water Facility
6768 Lime Kiln Road
Slatington, PA 18080
Lehigh, Washington Twsp
10 CFE
Water Facility
555 Donna Drive
Bath, PA 18014
Northampton, Moore Twsp
11 SSWWTP
Sewer Facility
4050 Sand Spring Road
Schnecksville, PA 18078
Lehigh, N. Whitehall Twsp
12 WTWWTP
Sewer Facility
1143 Wellington Circle
Laurys Station, PA 18059
Lehigh, N. Whitehall Twsp

## Jason M. Peters

**From:** Jason M. Peters
**Sent:** Monday, March 26, 2012 2:28 PM
**To:** 'Ron Hilbert'; 'mambrose@tandmassociates.com'; 'jhopkins@bh-ba.com'; 'jbyoust@hanovereng.com'; 'Harry E. Garman, P.E., P.L.S., F. NSPE'; 'jgrohal@bh-ba.com'
**Cc:** 'Timothy Shea'; 'P. E. Michael A. Schober (MSchober@BH-BA.com)'; 'Neal Kern (nkern@barryisett.com)'; 'cpeters@hanovereng.com'
**Subject:** Lehigh County Authority Request for Professional Services
**Attachments:** NL 4-5-001.PDF; sswwtp_1-001.PDF; sswwtp_2-001.PDF; sswwtp_3-001.PDF; sswwtp_4-001.PDF; EmergencyPowerRFP-Exhibit1-A-updated.pdf; EmergencyPowerRFP-Exhibit1-M.pdf

Dear Engineering Consultant:

Please find attached to this email all requested documentation from the mandatory facility meeting for the "Lehigh Country Authority Facility Emergency Power Capability Project" (Project) that was held on March 22, 2012. Also please pay close attention to the following bulleted items when preparing your proposal for guidance as requested at the meeting and also new information on an additional site that has been added to the Project.

1. Attached to this email please find the requested easement documentation for both NL 4-5 and SSWWTP.
2. NL 4-5 for your proposal only the pumping station itself shall have emergency power capabilities as described in the original RFP. The supply wells that have their own electrical source at this facility **will not** have the need to be on emergency power.
3. CFE for your proposal as described in the original RFP the pumping station shall have emergency power capabilities; however as noted and discussed at the mandatory facility meeting there would be a need for capabilities at the supply well location. The Authority has chosen that for your proposal you shall include emergency power capabilities in the form of a fixed base generator and an automatic transfer switch for the supply well that is currently in use close by the pond; however the design proposal shall also include connecting the backup well that is located several yards away with the availability to supply or not to supply power to it when the emergency power starts up for the well that is currently in use.
4. WTWWTTP please refer to the attached updated Exhibit 1-A and Exhibit 1-M for reference. This facility location has been added to the RFP and apart of the Project. Currently at the WTWWTP there is a 120/240 volt 3 pole automatic transfer switch with a temporary towable generator located at the facility. It is the intent of the Project to place a fixed mounted generator at this facility while leaving the towable generator for emergencies when needed. It is not the intent to repurpose this towable unit elsewhere. It will be the design engineers responsibility to verify that the existing automatic transfer switch will meet the facilities need however the Authority believes that it will.

Lehigh County Authority thanks you once again for showing interest and awaits your proposal for the aforementioned Project. If you have any questions or are in need of any clarification regarding the RFP please feel free to contact me at anytime at (610) 398-2503 or via email at jasonpeters@lehighcountyauthority.org.

Sincerely,
Jason Peters
Capital Works Assistant
Lehigh County Authority

## Jason M. Peters

**From:** Jason M. Peters
**Sent:** Tuesday, March 27, 2012 11:51 AM
**To:** 'Ron Hilbert'; 'mambrose@tandmassociates.com'; 'jhopkins@bh-ba.com'; 'jbyoust@hanovereng.com'; 'Harry E. Garman, P.E., P.L.S., F. NSPE'; 'jgrohal@bh-ba.com'
**Cc:** 'Timothy Shea'; 'P. E. Michael A. Schober (MSchober@BH-BA.com)'; 'Neal Kern (nkern@barryisett.com)'; 'cpeters@hanovereng.com'
**Subject:** Lehigh County Authority Request for Professional Services
**Attachments:** EmergencyPowerRFP-Exhibit1-M.pdf

Dear Engineering Consultant:

As an amendment to yesterdays email the following bulleted items shall be addressed when preparing your proposal for the "Lehigh Country Authority Facility Emergency Power Capability Project" (Project).

1. WTWWTP please refer to the attached updated Exhibit 1-M for reference. For your proposal the Authority also requests that the two secondary pumping stations that are a part of our sewer system and shown on the updated Exhibit 1-M be outfitted with a transfer switch. Your proposal shall include sizing and installation of the transfer switch for each pump station, generators for theses two pump station shall **not** be included in your proposal.
2. CFE in additions to bullet number 3 in yesterdays email. When sizing the generator and automatic transfer switch for the supply wells your proposal shall included what size switch and generator would be need just to power the well that is currently in use and what sizes would be needed to supply power to both supply wells if the Authority would choose to operate these wells simultaneously.
3. When utilizing any repurposed generators the Authority requests that you include any costs associated with their utilization. Examples would be transformers, equipment to change 1 phase to 3 phase, an enclosure, etc.

If you have any questions or are in need of any clarification regarding the RFP please feel free to contact me at anytime at (610) 398-2503 or via email at jasonpeters@lehighcountyauthority.org.

Sincerely,
Jason Peters
Capital Works Assistant
Lehigh County Authority

**From:** Jason M. Peters
**Sent:** Monday, March 26, 2012 2:28 PM
**To:** 'Ron Hilbert'; 'mambrose@tandmassociates.com'; 'jhopkins@bh-ba.com'; 'jbyoust@hanovereng.com'; 'Harry E. Garman, P.E., P.L.S., F. NSPE'; 'jgrohal@bh-ba.com'
**Cc:** 'Timothy Shea'; 'P. E. Michael A. Schober (MSchober@BH-BA.com)'; 'Neal Kern (nkern@barryisett.com)'; 'cpeters@hanovereng.com'
**Subject:** Lehigh County Authority Request for Professional Services

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Lehigh County Authority thanks you once again for showing interest and awaits your proposal for the aforementioned Project. If you have any questions or are in need of any clarification regarding the RFP please feel free to contact me at anytime at (610) 398-2503 or via email at jasonpeters@lehighcountyauthority.org.

Sincerely,
Jason Peters
Capital Works Assistant
Lehigh County Authority

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

# MEMORANDUM

**Date:** April 30, 2012

**To:** LCA Board of Directors

**From:** Frank Leist

**Subject:** Extension of Temporary Change in LCA Policy
Constructing Water Facilities w/o a Developers Water System Agreement (DWSA)

On August 9, 2010, because of the changed financial climate for developers due to more stringent bank requirements, the Board approved a temporary change in LCA Policy that allowed developers to construct water facilities ("at their own risk") without a DWSA *(reference Aurel's Memo dated August 2, 2010 attached for additional information).* The Board approval expired on February 15, 2011.

The economic environment has not improved very much and developers still have to deal with stringent bank requirements. The trial procedure put in place has proved to work well. As such, we request that the Board extend the "Temporary Change in LCA Policy" until December 31, 2012.

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

# MEMORANDUM

**Date:** August 2, 2010

**To:** Board of Directors

**From:** Aurel Arndt

**Subject:** Temporary Change in LCA Policy
Constructing Water Facilities w/o Developer's Water System Agreement (DWSA)

## *Background*

Upper Macungie Township (UMT) allows a developer to construct the infrastructure associated with a subdivision/land development (roads, sewers, detention ponds, etc.) without the developer posting performance security, therefore *"the developer's proceeds at his own risk"* without a legal commitment that the Subdivision/Land Development Plan ("Plan") will be recorded.

Lehigh County Authority is governed by the Pennsylvania Municipality Authorities Act (PMA), while a Township/Borough/City falls under the Pennsylvania Municipalities Planning Code (MPC). Only an entity governed by the MPC can record a Plan. The Plan must be recorded before any building permits are issued. Among other requirements, performance security must be posted before the Plan can be recorded. Under the PMA, LCA is allowed to hold performance security for the improvements constructed by the developer that will eventually be dedicated to it.

Under the UMT procedure, the developer enters into an agreement that addresses inspection services, insurance coverage and Township indemnification for the phase of the development to be constructed and the developer provides any applicable deposits. The Township then allows the developer to begin construction. When the developer is ready to have the Plan recorded (so that building permits can be obtained), the developer executes the Township improvements agreement and provides the required performance security for any improvements that were not completed during the *"developer risk*" period.

In light of a recent request because of the changed financial climate for developers due to more stringent bank requirements, we recommend a trial procedure similar to what UMT has done which is simple and minimizes LCA risk.

***Trial Procedure***

The Procedure would be as follows:

**Developer Responsibilities:**

1. The developer submits a written request to LCA that he be allowed to *"proceed at his own risk".* The request must include a:
   - Plan delineating the lots/phase or phases including street addresses that will be served by the water system to be constructed. *Note: The Plan must be suitable to use as an Exhibit in subsequent agreements, therefore if possible should be no larger than ledger size (11" x 17".)*
   - Listing of the street addresses, in an electronic format, of the lots that will be served by the water system to be constructed.
   - An improvements cost estimate for LCA review, listing items, quantities and unit costs.
   - List of principals and/or partners of the developer entity

2. The developer then enters into an interim agreement with LCA that includes/provides:
   - The typical inspection and other applicable deposits, indemnification and insurance, and similar provisions;
   - Exhibits, if applicable;
   - Developer agrees that LCA has no obligation to provide water service and will not approve wastewater allocation for any of the impacted lots, until security is posted and the Plan is recorded;
   - Developer agrees not to request the Township record the Plan ;
   - Developer agrees to notify LCA in writing when he has requested the Township to record the Plan;
   - Developer agrees that he will not sell, any of the impacted lots;
   - If allowed by the MPC, developer may take deposits/reservations for any of the impacted lots, providing said deposits are refundable and are held in a separate escrow account; and
   - In addition to corporate, LP, LLC and or other entity's commitment, the developer agrees that the entity's principal shall be personally liable from a financial standpoint

     *Note: All Permits where LCA is the permittee (PADOT) must be in hand.*

**DWSA:**

When the developer is ready to enter to a DWSA, the following is required:

- The required performance security for any improvements that were not completed during the *"developer risk*" period, plus a 10% contingency, plus maintenance security reflecting 15% of the cost of all the completed improvements based upon the improvements cost estimate provided.
- Any other items required under a standard DWSA, such as easements.

**Township Involvement:**

1. Notice: After entering into an interim agreement with a developer, LCA will provide the Township with a copy of that Agreement and a letter advising them that prior to recording the Plan they should verify with LCA that the developer has entered into a DWSA.

When a DWSA is executed, LCA will provide a copy to the Township.

**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:** April 30, 2012

**To:** Board of Directors & Management Staff

**From:** Pat Mandes

**Re:** Boston Beer 2012 Wastewater Services rates

## Approvals Requested

2012 Wastewater Services Rates for Boston Beer

| | **2012 Rates** |
|---|---|
| Flow (per 1000 gal) | $0.755 |
| BOD (per lb) | $0.212 |
| TSS (per lb) | $0.188 |
| TKN (per lb) | $0.378 |
| Allocation (per 1000 gal) | $0.250 |
| Minimum (per month) | $124,061 |

## Background

In October 2011, the Board approved an amendment to the 2005 Boston Beer Agreement effective March 2011 for a five year term. 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. The fees include a minimum payment and rates for the various parameters as shown above. The annual rates are calculated by a rate model that has been approved by both parties and includes six month capital reserves to be maintained. The amendment provides for a 12% rate cap for either an increase or decrease in rates.

The 2012 wastewater service rates have been calculated by the model and after review by Boston Beer the rates are acceptable. The 2012 rates are an increase of 7.9% from the 2011 rates. These rates became effective on March 1, 2012 for the April invoice. We anticipate receiving just under 2.9 million dollars from Boston Beer in 2012 based on their proposed flows and loads.

It is requested that the Board approve the 2012 rates shown above to become effective retroactively to March 1st.