

LEHIGH COUNTY AUTHORITY

WORKSHOP AGENDA

Monday, January 12, 2015 – 12:00 PM

INITIAL ITEMS (Collectively 5 Minutes)

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

- Review Board Discussion items, February 2015 – April 2015

ACTION/DISCUSSION ITEMS

1. **Wynnewood Terrace Pump Station and Force Main Replacement – Construction Phase - Approval**

This project includes the replacement of the aged main wastewater pumping and approximately ~3,000 linear feet of force main. The project will be funded by 20-year A PENNVEST loan with interest rates of 1.0% for the first five-years; and 1.743% for the remaining fifteen-years. Reference the attached documentation for additional information (**Blue**)

2. **SCADA System Installation – Kline's Island Wastewater Treatment Plant - Approval**

Installation of a new SCADA system at the Kline's Island Wastewater Treatment Plant is a high priority and set the stage for future integration of SCADA systems across all Authority facilities. This project is classified as Uncompleted Work and will be funded by the City of Allentown. Reference the attached documentation for additional information (**Yellow**)

3. **Allentown Division – Roof Rehabilitation and Replacements- Design Phase-2 - Approval**

This project includes the replacement of 24 roofs at various Allentown Division facilities that were identified as in need of immediate replacement in the Roof Assessment report prepared by D'Huy Engineering, Inc. The project will be presented to the city for review as a Major Capital Project, and it will be funded by LCA. Reference the attached documentation for additional information (**Green**)

4. **Laboratory Analysis Contract - Approval**

Bids were received from four contract labs for a three to five year contract for laboratory analytical services for both water and wastewater. A recommendation for award will be presented. Refer to the attached Professional Services Agreement, Board memo, and Service Agreement (**Purple**)

INFORMATION ITEMS

1. **None.**

OTHER ITEMS

1. **None.**

BOARD ACTION/DISCUSSION ITEMS
FEBRUARY 2015 – APRIL 2015

PRIORITY*	PROJECT/ISSUE	TYPE OF ACTION	TIMING**
<i>AS NEEDED</i>			
H	Acquisition/Growth Strategy Activities	Status Report	As needed
L	Jordan Creek Wastewater Plant	Status Report	As needed
M	Strawberry Acres – AARC - Sewer System	Status Report	As needed
H	Strategic Plan Update	Status Report	As needed
H	Wastewater Capacity Program Update	Status Report	As needed
<i>WITHIN 45 DAYS</i>			
H	Allentown Division-WWTP Digester Cover Replacement Design Phase	Approval	January (B)
H	Suburban Division- Main Replacements- Design Phase	Approval	January (B)
H	Allentown Division- Pre-Lease Valve Replacements- Design Phase	Approval	February (W)
<i>WITHIN 75 DAYS</i>			
M	Allentown Division- Water System Hydraulic Model	Approval	February (B)
M	Hydro-Pneumatic Pump Station Upgrade (Pine Lakes of Lynn), Design Phase	Approval	February (B)

* **H – High**
M – Medium
L – Low

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



Lehigh County Authority

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

MEMORANDUM

To: Authority Board
From: Lance M. Babbitt *LMB*

Date: December 29, 2014

Subject: Wynnewood Terrace Pump Station/Force Main Replacement
Construction Phase

MOTIONS /APPROVALS REQUESTED:

No.	Item	Amount
1	<u>Capital Project Authorization – Amendment No. 2</u> Construction Phase	\$808,000
2	<u>Professional Services</u>	
**	Cowan Associates, Inc.	\$7,440
3	<u>Contract Award</u>	
**	• General Construction – Contract #1	\$288,000
	• Electrical Construction – Contract #2	\$70,549
	• Force Main Construction – Contract #3	\$270,075

(**) Included in the Capital Project Authorization

PROJECT OVERVIEW:

The Wynnewood Terrace sewer system serves 217 customers in North Whitehall Township. Design efforts have been progressing to replace the existing primary pump station and force main, with a new 300 gallon per minute, below grade pump station and 3,000 feet of sewer force main.

PROJECT STATUS

The Board approved the professional services to complete the design, bidding, secure regulatory approvals, some inspection services and make a recommendation to award the construction contract in September and October 2012. Three separate bids were proposed. With recommendations in-hand, we are ready to move forward with the construction efforts.

THIS APPROVAL: CONSTRUCTION PHASE

The project was advertised for bid on August 13, 2014. Mandatory pre-bid meetings were held on August 26 and September 15, 2014 at LCA's main office where contractors attended. Bids were received on October 2, 2014.

BIDDING SUMMARY- CONSTRUCTION CONTRACTS

The bidding results are as follows:

General Construction	
Bidder	Amount
Advanced Rehab. Tech.	\$ 288,000.00
DESCCO Design & Cons.	\$ 300,170.00
C & T Associates	\$ 309,925.00
Pioneer Construction Co.	\$ 338,623.90
Electrical Construction	
Bidder	Amount
Diefenderfer Electric	\$ 70,549.00
Albarell Electric, Inc.	\$ 78,200.00
A.N. Lynch Co.	\$ 86,095.00
Force Main Construction	
Bidder	Amount
Wexcon, Inc.	\$ 270,075.00
RGC Development, LP	\$ 291,702.00

Contractors were required to perform a "Good Faith Effort" for securing proposals from Disadvantaged Business Enterprises (DBE), a requirement for all federally funded projects. Those efforts were evaluated for compliance, by the Pennsylvania Department of Protection and found to be acceptable. A "Letter of No Prejudice" was issued on December 24, 2014. This allows LCA to award contracts and start construction, prior to settlement on the PENNVEST loan.

This project was bid utilizing the services of PennBid. Bid submittals, bonds, documents and references are all been submitted via the PennBid website.

Staff recommends Board Approval for the following:

Contract #1 – General Construction of the Pump Station -Advanced Rehabilitation Technology, 01116 County Road 17, Bryan, OH 43506 for a total bid price of \$288,000.

Contract #2 – Electrical Construction - Orlando Diefenderfer Electrical Contractors, Inc., 116 S. Second Street, Allentown, PA 18102, for a total bid price of \$70,549.00.

Diefenderfer Electric failed to include an executed copy of a *Certificate of Corporate Principle* with their proposal. Staff has since secured the certificate and considers this situation to be an informality that can be waived (per §19.01 of the *Instructions to Bidders* cited below); therefore, Board action for Contract #2 should include waiver of the following section, §13.08, in the *Instructions to Bidders*:

“13.08 All names shall be typed or printed in ink below the signatures. Proof of a partner’s, or agent’s authority to obligate the Contractor must be attached to the Bid.”

“19.01 ...Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.”

Contract #3 – Force Main Construction - Wexcon, Inc., 379 Tilden Road, Mohrsville, PA 19541, for a total bid price of \$270,075.00

PROFESSIONAL SERVICES FOR CONSTRUCTION ENGINEERING

The previous Professional Services contracts included most efforts through construction. These efforts involved construction engineering as well as inspection of the force main installation efforts. Previously approved amounts for this work were \$4,200 for the Pump Station and \$18,500 for the force main. Additional Board approval is requested to cover anticipated field inspection expenses for the Pump Station and generator construction. This cost is anticipated to be \$7,440 and includes 120 hours of activity.

PROJECT SCHEDULE:

Award Work	January 12, 2015
Start Construction	February 16, 2015
Complete Construction	August 30, 2015

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.: S-12-1

BUDGET FUND: WASTEWATER CAPITAL NORTHERN LEHIGH

PROJECT TITLE: Wynnewood Terrace Sewer System

PROJECT TYPE:

Pump Station & Force Main Replacement

This Authorization: \$ 808,000

To Date (with above) \$ 949,670

☒ Construction
☐ Engineering Study
☐ Equipment Purchase
☒ Amendment No. 2

DESCRIPTION AND BENEFITS:

This project will replace an aging sewer pump station and force main. These facilities have experienced a number of failures, with 3 occurring in the past year. Previous authorization included the design, permitting and bidding for the 300 gpm pump station and 3,000 feet of 6-inch force main.

This project amendment will proceed with the construction of these facilities. Three contracts are expected to be awarded, along with professional services for Construction Engineering.

This Amendment: Construction Phase

Reference cover memo for additional information

Authorization Status:

Previous Authorization	
DESIGN PHASE COSTS:	\$ 141,670

REQUESTED THIS AUTHORIZATION	
Construction Phase Costs	
Staff	\$ 65,936
Professional Services	\$ 7,440
Contract 1 - Primary	\$ 288,000
Contract 2 - Electrical	\$ 70,549
Contract 3 - Force Main	\$ 270,075
Permits	\$ 5,000
Misc. Expenses	\$ 1,000
Contingency	\$ 100,000
Total This Authorization	\$ 808,000

Future Authorizations: None

Anticipated Project Total \$ 949,670

REVIEW AND APPROVALS

 12/29/14
Project Coordinator Date

Chief Executive Officer

Date

Chief Capital Works Officer

Date

Chairman

Date



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION
Amendment No. 3

Professional: Cowan Associates, Inc.
120 Penn-Am Drive
PO Box 949
Quakertown, PA 18951

Date: December 11, 2014

Requested By: Lance M. Babbitt

Approvals

Department Head:

Chief Executive

Officer:

Wynnewood Terrace Pump Station and Force Main Replacement

Previously Authorized: \$ 83,421.00

This Authorization – Construction Phase: \$ 7,440.00

Previous approvals included services related to Design for the Pump Station and Force Main Replacement, Wynnewood Terrace. This amendment covers Construction services through project completion, identified on attached proposal as Item New Tasks.

Cowan Associates, Inc. will perform construction phase and related services for the replacement of the pump station and 3,000 feet of force main.

Professional Services
1. Review shop drawings and respond to RFIs.
2. Provide Contract Administration
3. Provide Inspection Services
4. Assess work for Contractor Payments and work completion
5. Compile as-built drawings, from Contractors

Cost Estimate (not to be exceeded without further authorization):

\$ 90,861.00

Time Table and Completion Deadline:

Complete by December 31, 2015

(For Authority Use Only)

Authorization Completion:

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

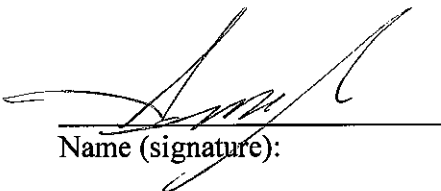
**PROFESSIONAL SERVICES AUTHORIZATION
INDEMNIFICATION
Lehigh County Authority
Wynnewood Terrace Pump Station and Force Main Replacement**

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

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

☒ Accept the terms of the professional services authorization dated DEC 11, 2014 attached;
and

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


Name (signature):

SCOTT McMARKIN
Name (printed)

Title: VICE PRESIDENT

MEMORANDUM

Date: January 6, 2015

To: Authority Board
From: Peter Burkhardt
Subject: Kline's Island Wastewater Treatment Facility SCADA Upgrade

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization	\$1,200,000
2	Professional Services Authorization – Kapsch TrafficCom USA, Inc. (1)	\$966,300

(1) Included in the Capital Project Authorization.

PROJECT OVERVIEW:

Lehigh County Authority (LCA) intends to retain the services of Kapsch TrafficCom USA, Inc. an engineering consulting firm to provide installation, conversion and implementation services related to the upgrade of the existing Kline's Island Wastewater Treatment Plant's Rockwell RSView SCADA application to Dynac ES SCADA application.

LCA Staff has identified the need to upgrade and standardize the SCADA systems at both the Water Filtration and Wastewater Treatment Plants to improve operational efficiencies and increase the ability to control operational costs by reducing power and chemical costs.

The existing WWTP's Rockwell RSView SCADA system was installed in 2003 to replace the Taylor ProcessWindows application installed in the mid-1990's. The current system was designed as a temporary system until a permanent system could be installed. Due to various reasons the City did not replace the RSView system prior to LCA taking over operation of the plant. Communications between the existing server and the remote Programmable Logic Controllers (PLCs) is over a hard wired network using Allen-Bradley Data Highway Plus (DH+) communications protocol. This network has been stretched to it's limits, and frequent communication faults occur as a result.

This project will replace the existing SCADA application with Dynac ES SCADA application providing a plant-wide control system. All existing PLCs (10) will be upgraded and linked to the redundant database servers located in the WWTP Main Pump House by a new wireless Ethernet network. The project will include the purchase and installation of 2 redundant servers, a historical server, and 3 work stations by the consultant. All conduit and wiring identified in the proposal will be provided by the electrical subcontractor.

Crowder Jr. will be retained as a sub-contractor of Kapsch TrafficCom USA to install necessary electrical conduit and wiring.

FINANCIAL:

This Project is identified as Un-Completed Work and will be funded by the City.

PROJECT STATUS:

Pending Board approval of the Capital Plan Authorization and the Professional Services Authorization.

THIS APPROVAL-CONSTRUCTION PHASE

Lehigh County Authority (LCA) intends to retain the services of Kapsch TrafficCom USA an engineering consulting firm to provide installation, conversion and implementation services related to the upgrade of the existing SCADA application to Dynac ES SCADA system. The following table summarizes the professional services to be performed:

Professional Services
1. Hardware Submittals
2. System Design
3. PLC Panel Fabrication
4. Software Submittals
5. Software Configuration
6. Factory Acceptance Test
7. Electrical Work (Subcontractor)
8. Equipment Installation
9. Site Acceptance Test
10. Final Submittals
11. System Training

CONSULTANT SELECTION PROCESS:

Transdyn, Inc. installed the Dynac SCADA application at the Allentown Water Filtration Plant as part of that plants upgrade in 1999, and has supported that system to date. In early 2014 Transdyn, Inc. was acquired by Kapsch TrafficCom.

TRANSDYN, INC. AND KAPSCH TRAFFICCOM USA, INC. -COMPANY INFORMATION:

Transdyn is a well-known systems integrator of control, communication, operations management and security/surveillance systems. For over 35 years, Transdyn has delivered a wide-range of systems for government agencies and private industry in the transportation, environmental, security, energy, and industrial markets throughout the United States and abroad. Transdyn's services include planning, design, systems integration, project management, software development, installation, commissioning, training, maintenance, and long-term support. As an engineering and contracting organization, Transdyn combines specialty contracting, project management, and a variety of technical services to deliver high-performance, high-availability systems tailored to their clients' requirements. Major transportation departments and authorities use Transdyn systems to manage the safety and throughput of their vital roadways, tunnels, bridges, and transit rail lines. The company's traffic management systems are installed in over 30 transportation facilities across the U.S., including the LBJ Express project in North Texas on which Kapsch and Transdyn worked jointly. The LBJ Express project opened the first section of the highway for traffic on December 12, 2013. The major references outside the United States comprise New Zealand, Australia and Israel. Transdyn Inc. is headquartered in Duluth, Georgia, and has branch offices in California, New Jersey and Virginia. With approximately 150

employees, Transdyn generated in its most recently completed fiscal year ended September 30, 2013, a revenue of USD 33.9 million (approximately EUR 25 million).

Kapsch TrafficCom is a provider of ITS in the application fields of road user charging, urban access and parking, road safety enforcement, commercial vehicle operations, electronic vehicle registration, traffic management and V2X cooperative systems. Kapsch TrafficCom covers with end-to-end solutions the entire value creation chain of its customers as a one-stop shop, from components and subsystems to their integration and operation. The solutions of Kapsch TrafficCom help to provide funding for infrastructure projects, to increase traffic safety, to optimize traffic flow, and to reduce environmental pollution from traffic. The core business is to design, build and operate electronic toll collection systems for multi-lane free-flow traffic. References in 43 countries on all continents make Kapsch TrafficCom a recognized supplier of electronic toll collection worldwide. As part of the Kapsch Group, a family-owned Austrian technology group founded in 1892, Kapsch TrafficCom, headquartered in Vienna, Austria, has subsidiaries and representative offices in 33 countries, has been listed on the Vienna Stock Exchange (KTCG) since 2007, and generated with more than 3,000 employees, revenues of EUR 488.9 million (USD 660 million) in fiscal year 2012/13. In North America, the company operates offices in Virginia, Texas, Maryland, Pennsylvania, New York, Ontario, and Mexico.

PROJECT SCHEDULE: The Project is anticipated to be awarded in January 2015 with completion of the work in October 2015.

FUTURE AUTHORIZATIONS- NONE

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.: _____ BUDGET FUND: COA Wastewater Capital

PROJECT TITLE: Kline's Island Wastewater Treatment Plant
SCADA Upgrade

PROJECT TYPE:
☒ Construction
☐ Engineering Study
☐ Equipment Purchase
☐ Amendment

COST ESTIMATE: \$ 1,200,000

DESCRIPTION AND BENEFITS

Lehigh County Authority (LCA) intends to retain the services of Kapsch TrafficCom USA, Inc. an engineering consulting firm to provide installation, conversion and implementation services related to the upgrade of the existing SCADA system at Kline's Island Wastewater Treatment Facility.

The current SCADA application consists of 9 Allen-Bradley PLCs connected by Allen-Bradley Data Highway Plus to a single human machine interface PC running Rockwell RSView. The original Taylor ProcessWindows application was install in the mid-1990s. Additional operator control was provided in 2003 with the installation of Rockwell RSView software by Allentown Staff. PC hardware and software is in critical need of replacement.

This project will replace the existing PC hardware with 2 redundant servers, a historical server, and 3 HMI PCs. Communications will be through a new wireless ethernet network, PLC processors will be upgraded. Dynac ES SCADA system and database will be install and configured for all I/O points.

On-site operator and system administrator training will be conducted.

This project will increase the level of monitoring and automation throughout the plant yielding improved monitoring and control of plant operations at potentially reduced costs.

This Project is identified as Un-Completed Work and will be funded by the City.

Estimated Costs:

Staff	\$	100,000
Land Acquisition	\$	-
Construction/Equip.	\$	966,300
Professional Services	\$	
Other	\$	
Contingencies	\$	<u>133,700</u>
Total Project Cost	\$	<u>1,200,000</u>

REVIEW AND APPROVALS

_____ Information Technology Manager	_____ Date	_____ Chief Executive Officer	_____ Date
_____ Chief Operating Officer	_____ 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:

Date: January 6, 2015

Kapsch TrafficCom USA, Inc.
405 Murray Hill Parkway
East Rutherford, NJ 07073

Requested By: Peter Burkhardt

Approvals

Department Head: _____

General Manager: _____

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

Kapsch TrafficCom USA, Inc. an engineering consulting firm to provide installation, conversion and implementation services related to the upgrade of the existing Taylor ProcessWindows/Rockwell RSView SCADA application to Dynac ES SCADA application at the Kline's Island Wastewater Treatment Plant.

Professional Services
1. Hardware Submittals
2. System Design
3. PLC Panel Fabrication
4. Software Submittals
5. Software Configuration
6. Factory Acceptance Test
7. Electrical Work (Subcontractor)
8. Equipment Installation
9. Site Acceptance Test
10. Final Submittals
11. System Training

Please reference the attached Kapsch TrafficCon USA technical and cost proposal. Please reference the cover Memo for additional information.

Construction Phase:

Cost Estimate (not to be exceeded without further authorization): \$ 966,300.00

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: _____

**PROFESSIONAL SERVICES AUTHORIZATION
INDEMNIFICATION
Kline's Island Wastewater Treatment Facility SCADA Upgrade**

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

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

- ☐ Accept the terms of the professional services authorization dated January 6, 2015 attached; and
- ☐ Agree to indemnify and hold harmless the Authority, its employees, agents, officials, successors and assigns (hereinafter all jointly referred to as "Authority"), from any and all loss and liability for claims, demands, suits or causes of action at law or in equity for damages and injuries (including death of every kind and nature) to persons (including employees of the Professional) and property arising out of error, omission or negligent act of Professional, or any person under contract to it, in rendering professional services under this authorization. The indemnification shall include, but not be limited to, payment of all attorney fees and all incidental litigation expenses of the Authority, whether or not the Authority is held liable. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

Name (signature):

Name (printed)

Title: _____

Peter R. Burkhardt
Information Technology Manager
Lehigh County Authority
1053 Spruce Street
Allentown, PA 18106

Date: 09/24/14

SUBJECT: WWTP SCADA Upgrade Proposal

Dear Mr. Burkhardt:

Kapsch is pleased to offer this Scope of Work and Lump Sum price proposal for providing a SCADA Upgrade at the Lehigh County Authority Wastewater Treatment Plant located in Allentown, PA. Our proposal has been developed in accordance with applicable scope of work provided by the Lehigh County Authority.

Kapsch is the leading provider of mission critical SCADA systems and integrated Transportation systems for critical infrastructure. For nearly 35 years, we have successfully planned, designed, integrated and maintained state-of-the-art systems for vital infrastructure facilities like the Allentown Wastewater Treatment Plant.

LUMP SUM PRICING

Our Lump Sum price to provide the materials and services described in the 'Work Included' section of this proposal in accordance with the applicable plans and specifications is: **\$966,300**

WORK INCLUDED

Kapsch's scope of work includes furnishing materials and services as outlined below.

1. Providing all Labor and Expenses for Project Administration, Design, Procurement, Staging, Integration, Programming, Testing, Startup/Commissioning, Training, Documentation and Warranty as per the 'Scope of Supply' document provided by Lehigh County
2. Procuring and managing an Electrical Contrator for installation of devices, conduit and wiring outside Control Panels Enclosures.
3. Developing the process database for the DYNAC ES SCADA system as required for the complete Wastewater plant including both real and virtual points.

4. Installing all the required OS and software licences in the DYNAC ES servers
5. Developing graphical displays for the DYNAC ES SCADA system. This proposal assumes a quantity of 30 displays.
6. Configuring the DYNAC ES historical database and developing custom reports. This proposal assumes a quantity of five (5) one-page reports.
7. Performing documented, unwitnessed Factory Acceptance Testing (FAT) and a witnessed Site Acceptance Testing (SAT) of all required functionality.
8. Conducting one (1) on-site meeting to discuss the requirements of the graphical displays and one (1) for custom reports.
9. Training - Providing the following on-site training courses for Lehigh County personnel:
 - a. Operator Familiarization (16 hrs total).
 - b. DYNAC ES (40 hrs total).
10. The following documentation shall be generated for use internally by Kapsch personnel for panel Construction and Testing and shall provide these to Lehigh County for reference.
 - a. Panel Hardware Drawings.
 - b. Factory Test Procedures.
10. Providing for review and approval a Cutover Plan prior to installation a new equipment.
11. Providing for review and approval a Site Acceptance Test Plan prior to Acceptance Testing
12. Providing for review and approval a Training Course Plan & Outline describing the course topics for those courses listed in Section F.
13. Providing Operation & Maintenance Manuals for Kapsch-provided equipment only. All O&M Manuals shall be provided electronically in PDF format and in hard-copy form. Kapsch shall provide the manufacturer's standard O&M manuals. Providing or generating any custom documentation beyond what is typically supplied by the equipment manufacturer is excluded.
14. Providing the following "As-installed for Record Purposes" documentation following the conclusion of all on-site activities:
 - a. FAT Procedures (Signed-off);
 - b. SAT Procedures (Signed-Off)
 - c. Panel Hardware Drawings;The above documentation shall be provided electronically in PDF (Acrobat), DWG (AutoCAD), XLS (Excel), DOC (Word) and RSS (RSLogix) format (as applicable) and in hard-copy form.
15. Providing One Year Warranty following final acceptance of the completed system components including support for the DYNAC Software.

*Clarifications/Technical Details*HMI UPGRADE

Lehigh County Authority has requested to upgrade the existing RSVIEW32 to newer HMI package. Kapsch is proposing the DYNAC ES 64 bit redundant server configuration with one server for historical data collection. DYNAC ES will communicate to the RTU's via the wireless Ethernet network to the upgraded PLC processors.

PLC 1

1. Swap the existing processor with new SLC 5/05 processor.
2. Install one (1) 5 port Ethernet switch
3. Provide UPS with dry alarm contact
4. Program existing Square D Model 6 data over Modbus or Modbus/TCP with server for power monitoring.
5. All other existing PLC components, including racks, power supplies, and IO cards, shall remain installed in their respective enclosures. Clean up the enclosure without affecting the existing operation and functionality.
6. Install one (1) Omni directional antenna to communicate with remote RTUs throughout the plant.
7. Install one (1) 900 MHz Ethernet radio receiver.
8. Install one (1) bulkhead surge arrestor for the antenna cable. This equipment shall be installed in the side of the LCP-1.
9. Install one (1) 24 VDC to power both the radio and network switch.
10. Up to 80 feet of LMR-400 antenna cabling. For installations where either additional cable length or reduced attenuation is required, that cabling would be extra cost.
11. Remove existing data logger.
12. Bring climber screener to PLC 1, this will require additional IOs Transdyn will provide programming only.

PLC 7

1. Providing one (1) new Hoffman Model No. A723624SSFSN4 or equal enclosure to replace existing local control panel. This enclosure shall have the following requirements:
 - a. Panel shall be rated NEMA 4X and constructed of 304 Stainless Steel.
 - b. Panel shall have the dimensions of 72-in H x 36-in W x 24-in D and be free-standing.
 - c. Panel shall include all necessary circuit breakers, relays, terminal blocks, 24 Vdc power supplies and incoming power and analog signal surge arrestors required to support the IO complement

from the existing panel to be replaced.

- d. Panel shall include one (1) duplex convenience outlet, one (1) simplex outlet to support an uninterruptible power supply, one (1) thermostat, one (1) electric heater and one (1) fluorescent lamp.
- 2. One (1) Eaton Electrical Pulsar 1000 VA uninterruptible power supply shall be provided and installed within this enclosure.
- 3. Install one (1) Ethernet switch with five port.
- 4. Install one (1) Yagi antenna.
- 5. Install one (1) 900 MHz Ethernet radio transceiver.
- 6. Install one (1) bulkhead surge arrestor for the antenna cable. This equipment shall be installed in the side of the respective PLC's local control panel.
- 7. Up to 80 feet of LMR-400 antenna cabling. For installations where either additional cable length or reduced attenuation is required, that cabling would be extra cost.
- 8. Install one (1) 24 VDC to power both the radio and network switch.
- 9. Load all the programs and database from the existing PLC cabinet so the control object can be moved one at a time during startup

PLC 8

- 10. Providing one (1) new Hoffman Model No. A723624SSFSN4 or equal enclosure to replace existing local control panel LCP-08 Primary Sludge Pump Station. This enclosure shall have the following requirements:
 - e. Panel shall be rated NEMA 4X and constructed of 304 Stainless Steel.
 - f. Panel shall have the dimensions of 72-in H x 36-in W x 24-in D and be free-standing.
 - g. Panel shall include all necessary circuit breakers, relays, terminal blocks, 24 Vdc power supplies and incoming power and analog signal surge arrestors required to support the IO complement from the existing panel to be replaced.
 - h. Panel shall include one (1) duplex convenience outlet, one (1) simplex outlet to support an uninterruptible power supply, one (1) thermostat, one (1) electric heater and one (1) fluorescent lamp.
- 11. One (1) Eaton Electrical Pulsar 1000 VA uninterruptible power supply shall be provided and installed within this enclosure.
- 12. Install one (1) Ethernet switch with five port.
- 13. Install one (1) Yagi antenna.
- 14. Install one (1) 900 MHz Ethernet radio transceiver.

15. Install one (1) bulkhead surge arrestor for the antenna cable. This equipment shall be installed in the side of the respective PLC's local control panel.
16. Up to 80 feet of LMR-400 antenna cabling. For installations where either additional cable length or reduced attenuation is required, that cabling would be extra cost.
17. Install one (1) 24 VDC to power both the radio and network switch.
18. All other required PLC components based on the provided I/O list, including racks, power supplies and IO cards will be part of this cabinet delivery.
19. Provide and program existing six (6) pumps macerator and inverter run status to new PLC cabinet. This will require running conduits from all six (6) pumps back to PLC cabinet.
20. Provide and program existing six (6) discharge pressure back to new PLC cabinet.
21. Provide and program existing six (6) PSI back to new PLC cabinet.
22. Run and program analog output wire from new PLC cabinet to each pump(s) for set point.
23. At this location there would be additional expansion of IOs. This will require to purchase additional equipment as follow:
 - a. Existing 10 slot rack will need to be upgrade to 13 slot rack. (1746-A13)
 - b. 32 points input module
 - c. 16 points 4-20mA input module
 - d. 8 points 0 – 20mA output module

PLC 2-6 AND 9-10

1. Swap the existing processor with new SLC 5/05 processor.
2. Install one (1) Ethernet switch with five port.
3. Install one (1) Yagi antenna.
4. Install one (1) 900 MHz Ethernet radio transceiver.
5. Install one (1) bulkhead surge arrestor for the antenna cable. This equipment shall be installed in the side of the respective PLC's local control panel.
6. Up to 80 feet of LMR-400 antenna cabling. For installations where either additional cable length or reduced attenuation is required, that cabling would be extra cost.
7. Install one (1) 24 VDC to power both the radio and network switch.
8. All other existing PLC components, including racks, power supplies, and IO cards, shall be remained installed in the respective enclosures as is. Clean up the enclosure without affecting the existing operation and functionality.
9. Note: In PLC 5 room provide & program chlorine(s) status from existing Wallace & Tiernan box located in same building around 100 ft. away. Wire(s) may be available.

WORK NOT INCLUDED

The following listing of "Work not included" is intended as further clarification regarding Kapsch's proposed offering.

1. Furnishing any additional control cabinets unless otherwise noted in the Work Included section.
2. Furnishing any additional electrical work unless otherwise noted in the Work Included section. All electrical work shall be provided by electrical subcontractor.
3. Furnishing any Panel Boards, Conduit, Pull Boxes, Junction Boxes, Mounting Hardware, Fiber Optic Cabling, Lights & Power Assemblies.
4. Furnishing any pumps or motors.
5. Providing or installing any field wiring, cables (including telephone cable), or making terminations to panels or instruments unless otherwise noted in the Work Included section.
6. Providing any installation appurtenances such as concrete pads, anchor bolts, structural supports, isolation valves, impulse tubing, companion flanges, pipe stands, stilling wells, hangers, antenna mast, camera poles or other materials required to install the provided equipment.
7. Providing any panels not specifically listed above; providing panels specified as provided with packaged systems or specified under other specification sections.
8. Providing or installing any field conduit, trays, junction boxes, flex connectors, etc.
9. Providing or installing any housekeeping pads, blockouts, core drilling, etc. or any supports not customarily furnished by the original equipment manufacturer.
10. Providing or installing sample piping. Installing inline devices or performing pipe penetrations.
11. Providing any submittal data/drawings, manuals, calibration, commissioning, operational support or any other services for non-provided equipment.
12. Any field craft labor other than what will be provided by the Electrical Subcontractor. Kapsch will provide qualified non-craft technicians to perform calibration, testing and commissioning. However, the cost of any additional craft labor (union or non-union) required to assist or supervise these technicians is not included in this proposal.
13. On-site temporary facilities and special purpose equipment. Contractor shall provide use of all required temporary facilities (including but not limited to trailer, support facilities, storage space, sanitary facilities and safety provisions). Contractor shall also provide use of any lift or special purpose equipment necessary for Kapsch to efficiently perform its work.
14. Maintenance of Traffic.
15. Permits
16. Any other system not expressly stated in Work Included Section.

PAYMENT TERMS

This proposal is based upon mutually agreeable payment terms resulting in neutral cash flow for the project.

TAXES

The above price **does not include** sales or use taxes.

FREIGHT

Equipment furnished by Kapsch is F.O.B. factory with full freight allowed to the jobsite.

INSURANCE

Kapsch carries standard insurance coverage including workman's compensation, comprehensive general liability, and automobile liability as indicated below. No additional coverage for professional liability, builder's risk or installation floater is included in this proposal. Any additional insurance or special coverage will be at added cost.

TERMS AND CONDITIONS

- a) The price quoted is valid for one hundred twenty (120) days from the date of bid opening.
- b) Our proposal is based upon Kapsch and the Contractor entering into an AIA A401 standard form of agreement which shall incorporate this scope letter and such other acceptable terms and conditions acceptable to the parties no less favorable than those between the Contractor and Owner.
- c) **LIMITATION OF LIABILITY.** IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES ARISING IN ANY WAY WHATSOEVER. Kapsch, its contractors and suppliers of any tier, shall not be liable in contract, tort or otherwise for damage to or loss of other property or equipment or systems, cost of capital, cost of replacement power or equipment, increased operating expenses, delay damages, or claims of Contractor's customers no matter how caused, including if caused by: abuse; accident; alteration or repair by anyone other than Kapsch's authorized representatives; improper storage; misuse; improper maintenance; failure to observe instructions; improper or unauthorized access or use; hacker or cracker intrusion or disruption; distributed denial of service attacks; computer viruses or worms; loss, theft, misuse, alteration or corruption of data, programs or information; failure of network security; or other acts, omissions, torts or crimes.

In no event shall Kapsch be liable for project delays, including Liquidated Damages.

Contractor's remedies stated herein are exclusive and the Kapsch's liability with respect to any contract, or the performance or breach thereof, relating in any way to any work or equipment covered by this contract, whether in contract, tort, or otherwise shall not exceed the price of the particular equipment or part or service for which such liability is claimed. This provision shall survive termination of the contract.

- d) **WARRANTIES.** Kapsch warrants the equipment and services of its own manufacture against defects in material and workmanship for one year* from delivery or, if installed by Kapsch, for one year* from installation of equipment/performance of services or portions thereof but not to exceed eighteen months* from shipment, provided Contractor must give Kapsch immediate written notice upon discovery of the defect and immediately ceases use of equipment to prevent further damage. Kapsch's obligation is limited to furnishing a repaired or replacement part or, at its option, to repairing the defective part F.O.B. Kapsch's plant. Contractor shall pay cost of field labor. This warranty excludes equipment or services damaged due to: abuse; accident; alteration or repair by anyone other than Kapsch's authorized representatives; improper storage; misuse; improper maintenance; failure to observe instructions; improper or unauthorized access or use; hacker or cracker intrusion or disruption; distributed denial of service attacks; computer viruses or worms; loss, theft, misuse, alteration or corruption of data, programs or information; failure of network security; or other acts, omissions, torts or crimes.

Kapsch reserves the right to investigate claims by Contractor as to defects. Contractor shall pay costs to investigate invalid claims and for any repair or replacement shown by investigation not to be covered by warranty.

Products supplied but not manufactured by Kapsch shall be subject only to the warranty extended by the original manufacturer.

THE WARRANTIES SET FORTH IN THIS PROVISION ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER STATUTORY, EXPRESS OR, IMPLIED (INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OR TRADE), EXCEPT OF TITLE AND AGAINST PATENT INFRINGEMENT.

- e) *or such period as required by the contract documents

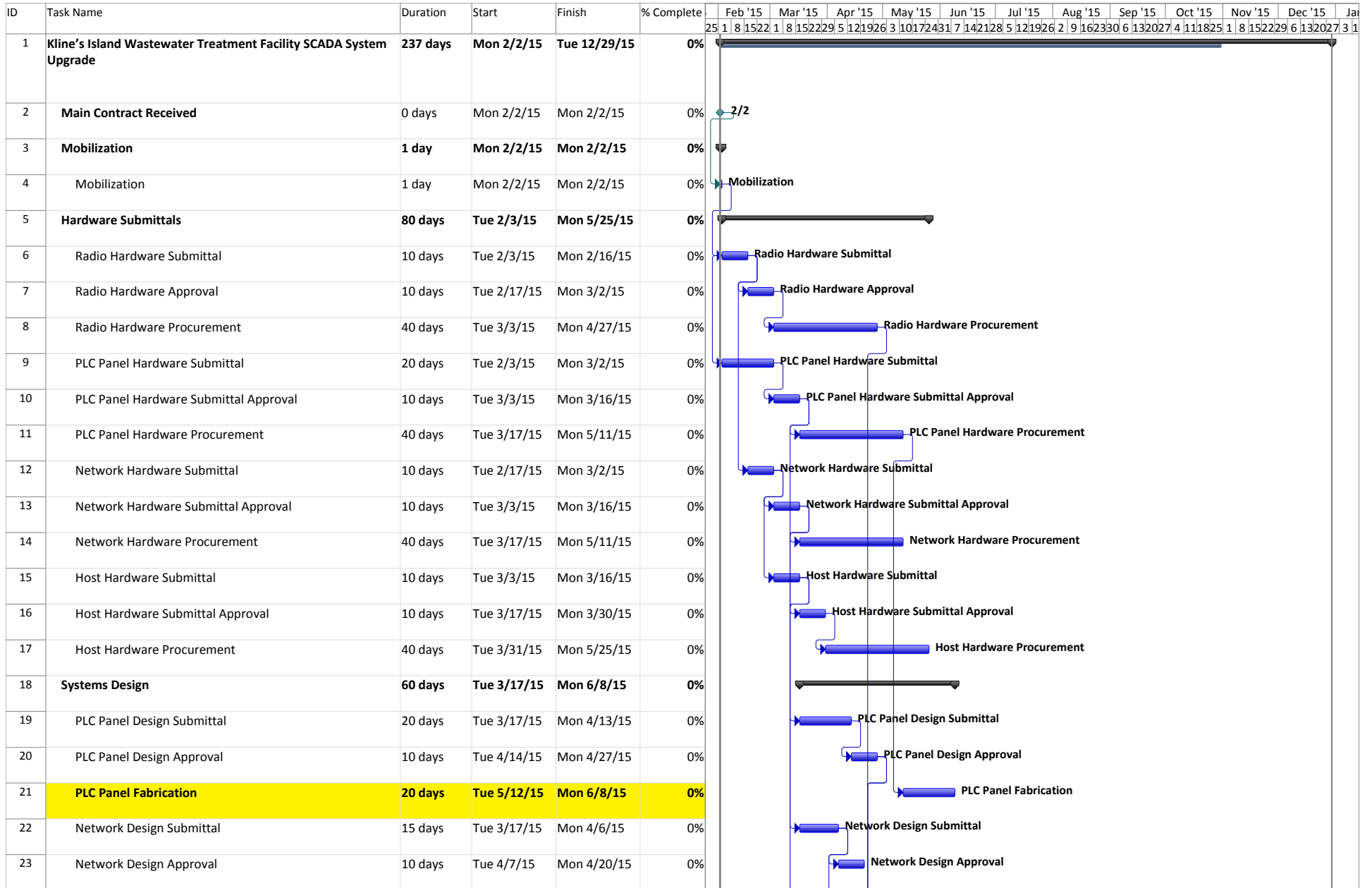
Kapsch TrafficCom appreciates this opportunity to submit our proposal. Should you have any questions concerning the offering, please contact me at 678-473-6400.

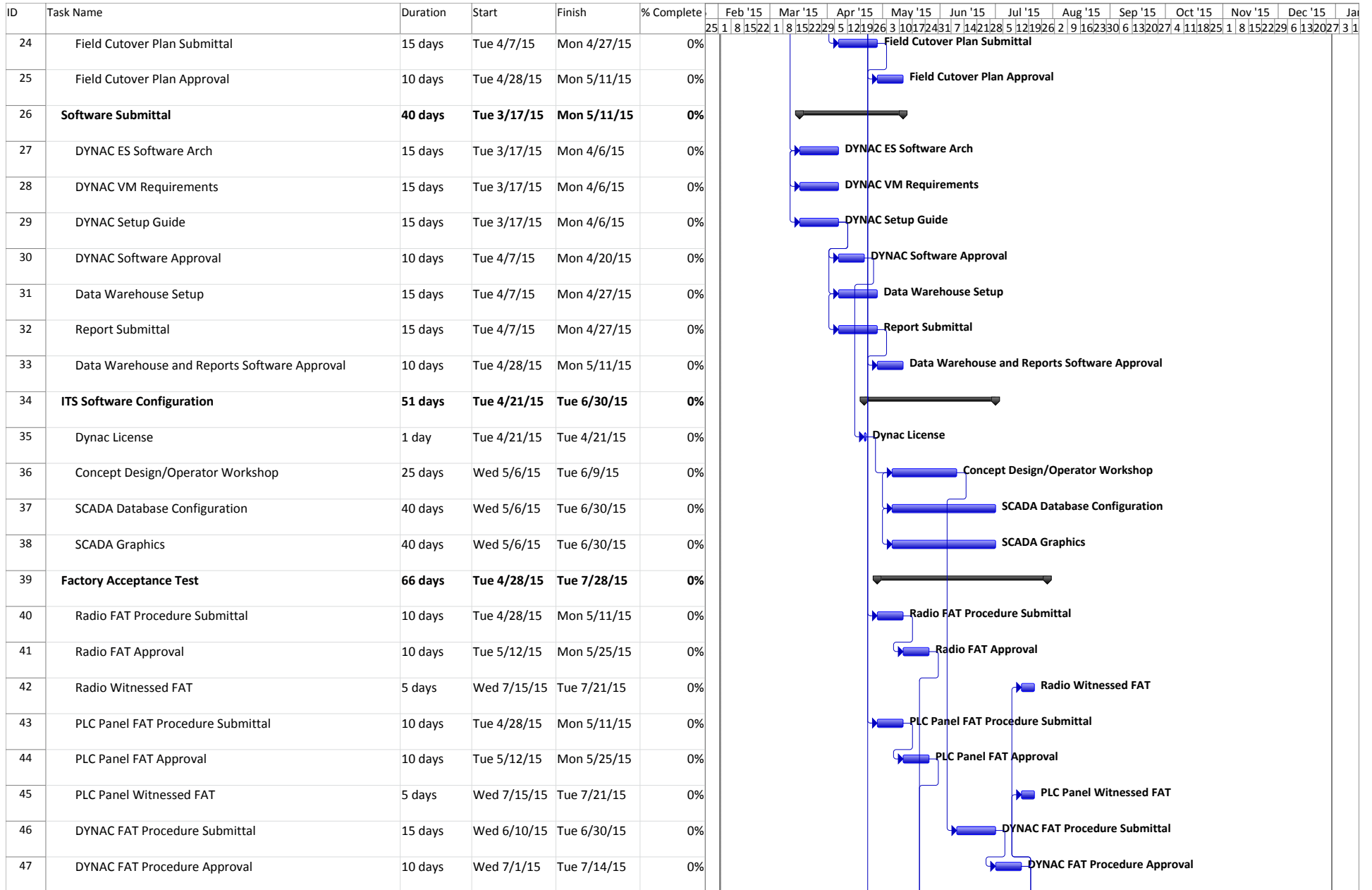
Regards,

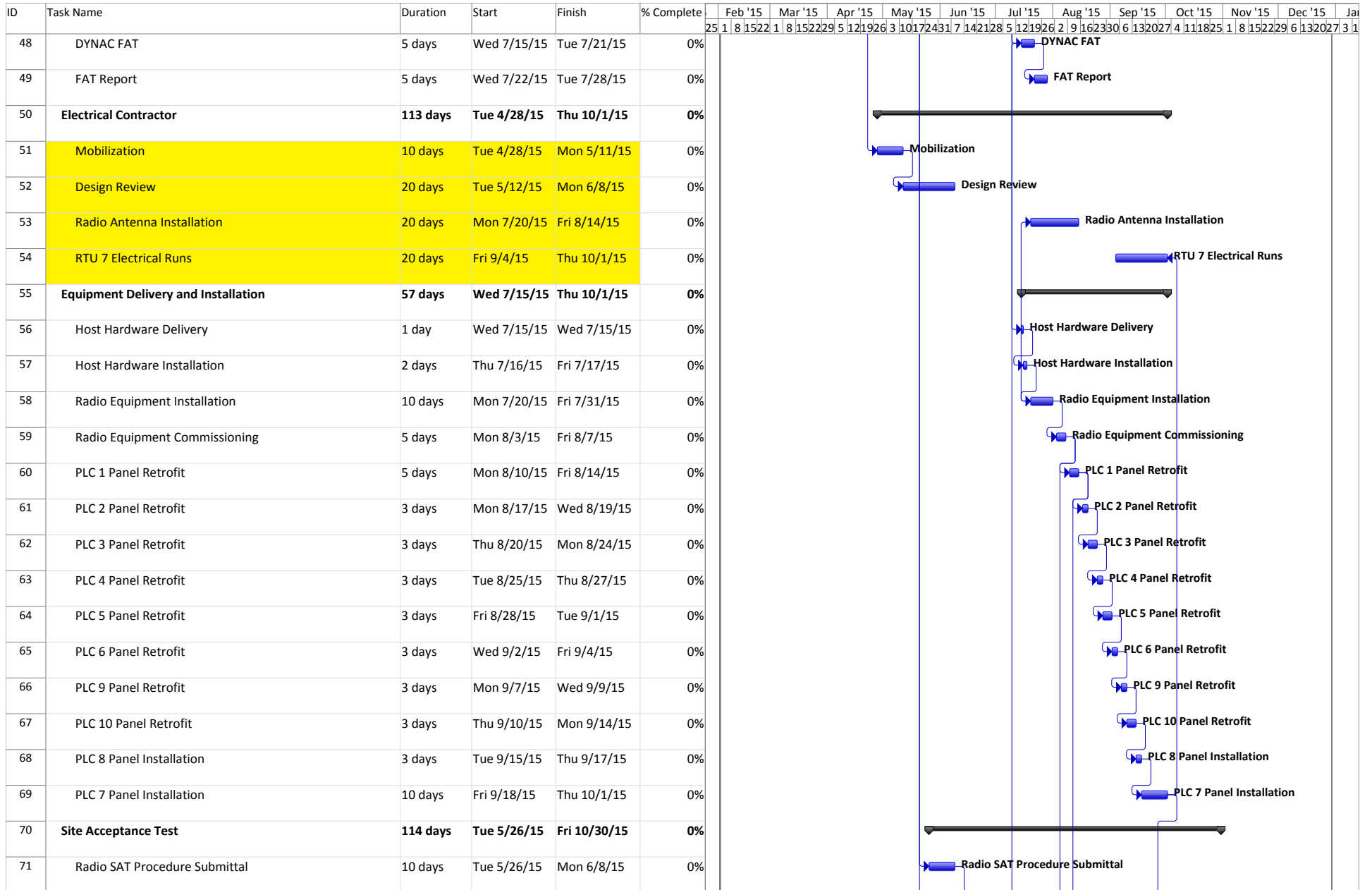


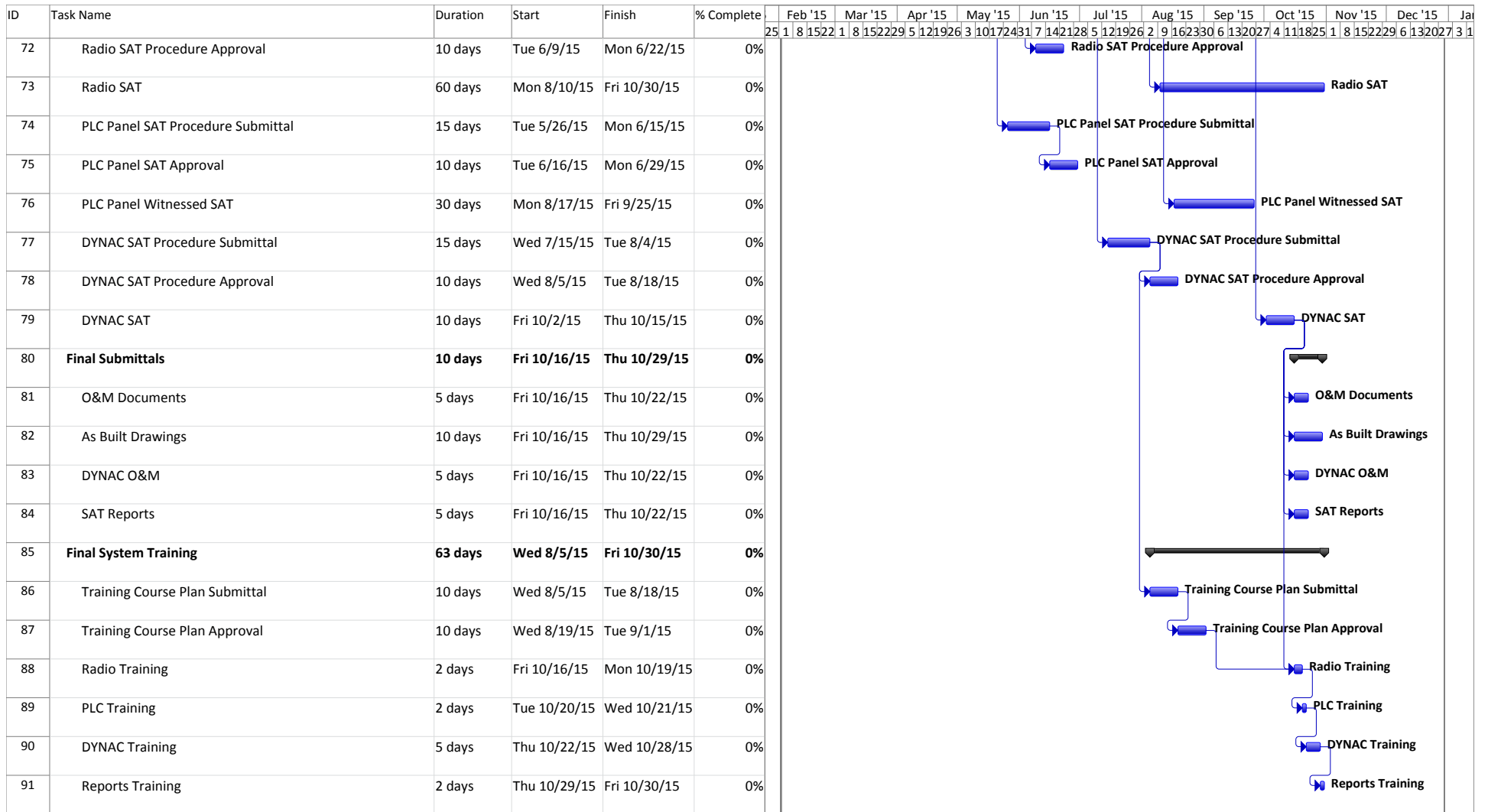
Sam Vidyasagar
Senior Business Development Manager

CC: Tracy Bumpers, David Meier and Bob Blick









MEMORANDUM

Date: December 29, 2014

To: Authority Board
From: John Parsons, Frank Leist
Subject: Allentown Wastewater and Water Treatment Plants
Facility Roof Replacements – Design Phase-2

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Design Phase-2	\$108,760
2 ^{(1), (2)}	Professional Services Authorization – D’Huy Engineering	\$78,760

(1) Included in the Capital Project Authorization.

(2) Does not include Construction Phase related engineering services.

PROJECT OVERVIEW:

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

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

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

FINANCIAL:

This Project will be funded by LCA. With a conceptual estimated cost of ~\$1.875 million, the Project meets the definition of a Major Capital Improvement Project. If approved by the City, the costs can be recaptured outside of the contractual rate caps. In addition, a Labor Stabilization Agreement may be required.

PROJECT STATUS:

As previously authorized administratively, D'Huy Engineering has evaluated 43 separate roof systems at the wastewater plant, water plant, distribution & collection (D/C) building and the remote water system stations for existing conditions and an overall assessment. In their report, 24 roofs were listed as Priority 1, needing immediate replacement, 5 of which at the Distribution & Collection (D&C) building. In addition, D'Huy has also completed the design of (5) roofs on at the D&C building.

THIS APPROVAL –DESIGN PHASE-2

This authorization will allow D'Huy Engineers to complete the design of the remaining (19) roofs that were listed as Priority 1 in their assessment report.

CONSULTANT SELECTION PROCESS:

D'Huy Engineers specializes in the design of new and replacement roofs for public clients. In recent years, they have completed the designs of the replacement roof at the Allentown Water Plant's Chemical Storage Room, and the replacement roof of the Solids Building at LCA's Industrial Pretreatment Plant.

In July 2014, D'Huy Engineers completed the condition assessment of 43 separate roof systems at the Allentown Water and Wastewater Plants. Shortly thereafter, they were authorized to design the replacement roofs of 5 Priority 1 roofs at D/C, which were deemed to be in the worst condition of the 43 that were evaluated. It is our recommendation that it is in LCA's best interest to continue

using D'Huy for the remaining roof designs as they have successfully completed other roof projects for us in the recent past. .

PROJECT SCHEDULE: Construction bid specifications will be completed by the end of March, 2015. Construction bids will be advertised and contracts will be awarded early in May 2015 so work may begin in June 2015. All 24 roof systems that are included as Priority 1 are to be replaced by the end of 2015.

FUTURE AUTHORIZATIONS-

1. Construction Phase.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>AD-S-18-1</u>	BUDGET FUND:	<u>Allentown Div\Wastewater\Capital</u>
PROJECT TITLE:	<u>Allentown Wastewater and Water Plants Replacement Roof Upgrades - Design Phase 2</u>	PROJECT TYPE:	<input type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> Amendment No. 2
THIS AUTHORIZATION:	<u>\$108,760</u>		
TO DATE (W/ ABOVE)	<u>\$144,760</u>		

DESCRIPTION AND BENEFITS:

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

A total of (19) Priority 1 roofs will be designed for replacement through this authorization, with a total of (24) roofs that are to be replaced immediately. The plan is to bid the construction work in April/May of 2015, with construction starting in June 2015 and being completed by the end of 2015.

Authorization Status:

Previous Authorizations	
Roof Condition Evaluations	\$18,500
Design Phase -1 Distribution and Collection	\$17,500

Requested This Authorization	
Design Phase-2	
Staff	\$10,000
Engineering Consultant	\$78,760
Miscellaneous	10,000
Contingency	10,000
Total This Authorization	\$108,760

Future Authorizations	
Construction Phase	\$1,771,401
Total Estimated Project	\$1,880,161

REVIEW AND APPROVALS:

_____ Project Manager	_____ Date	_____ Chief Executive Officer	_____ Date
_____ Chief Capital Works Officer	_____ 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
Amendment No. 2

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

Date: December 29, 2014

Requested By: John Parsons

Approvals

Department Head: _____

Chief Executive

Officer: _____

Allentown Division- Facility Roof Replacements ⁽¹⁾

Previous Administrative Authorizations

Roof Condition Evaluation Report \$18,500

Design Phase-1 (5) roofs at the Distribution and Collection Building \$17,500

This Authorization - Design Phase-2 (19) Roofs at WFP and WWTP: \$78,760

D'Huy Engineering will design the replacement systems for the remaining nine-teen (19) roofs listed as Priority 1, in the evaluation report. The work consists of the following tasks:

Professional Services
1. Provide bid specifications for WFP and WWTP replacement roofs
2. Prepare front-end specifications for construction bidding
3. Coordinate and chair the pre-bid meeting
4. Assist in construction bid tabulation and award

(1) Reference Memo for additional information

Note: Some additional consultant hours may be necessary if a PLA is required.

Cost Estimate (not to exceed without further authorization): \$114,760

Time Table and Completion Deadline: Construction bid specifications will be completed by the end of March, 2015. Construction bids will be advertised and contracts will be awarded early in May 2015 so work may begin in June 2015. All 24 roof systems that are included as Priority 1 are to be replaced by the end of 2015.

(For Authority Use Only)

Authorization Completion:

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

**PROFESSIONAL SERVICES AUTHORIZATION
INDEMNIFICATION
Allentown Wastewater and Water Treatment Plants
Design Phase: (19) Replacement Roofs**

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

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

- ☐ Accept the terms of the professional services authorization dated December 29, 2014 (attached) and
- ☐ Agree to indemnify and hold harmless LCA, the City of Allentown, their employees, agents, officials, representatives, attorneys, and assigns from any and all liability, arising out of all activities conducted by the Consultant in connection with this contract and/or the Consultant's performance hereof, including but not limited to payment of all fees for its/their attorneys and all incidental litigation expenses in the event LCA or any of its employees, agents, officials, representatives, attorneys, and assigns are sued upon a claim emanating from the Consultant's performance thereof. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

Name (signature):

Name (printed)

Title:_____



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 *
(610)398-2503 * FAX (610)398-8413 * Email: ser

MEMORANDUM

Date: January 7, 2015

To: Board of Directors & Management Staff
From: Pat Mandes
Re: Contract Laboratory Services for Water and Wastewater

Approvals Requested

Approvals Requested	Brief Description	Amount
Professional Services Authorization	Suburban Water Testing Laboratories	Unit Prices*

*** It is estimated that total costs over the three year period will be \$450,000 which includes \$35,000 of CH2MHILL costs.**

Background

The existing contracts for laboratory analytical services for the City Division (QC Laboratories) and the Suburban Division (Suburban Water Testing Laboratories) expired at the end of 2014. A Request for Proposal (RFP) was prepared to solicit qualifications and unit prices for the testing needs of the City Division, Suburban Division, and the Pretreatment Plant anticipating the combined quantities of testing would result in favorable pricing.

Project Scope

The project consists of contracting with a single Laboratory to perform over 12,000 water and wastewater analyses per year for both the City and Suburban Divisions, as well as the Pretreatment Plant. The testing is necessary for demonstration of compliance and operational performance.

Both the City and PTP Divisions have labs and perform their own testing while the Suburban Division does not have a lab. This contract is for tests that our existing labs cannot perform.

The term of the contract is for three years with the LCA option to extend for two additional one year periods. Note – the Pretreatment Plant testing needs will be paid by CH2MHILL.

RFP Process

The RFP was issued to four contract laboratories including:

Suburban Water Testing Laboratory (SWTL) of Reading, PA
QC Laboratory (QC) of Southampton, PA
MJ Reider of Reading, PA
Microbac of Upper Saucon, PA

Based on the unit price results, only QC and SWTL were evaluated on unit prices and qualifications. The qualifications evaluated included:

1. Evidence of test “turnaround time”;
2. Key personnel;
3. List of subcontracted tests;
4. Examples of innovative investments;
5. Value-added services

SWTL was ranked #1 in qualifications by the selection team and also provided the lowest costs for testing as shown below.

3-Year Estimate	
QC Laboratories	\$467,593
Suburban Water Testing Labs	\$448,957

Recommendation

After reviewing the proposals, unit charges, and ranking the qualifications, SWTL was selected to recommend to the Board. SWTL has been providing LCA competitively priced external analysis since 2006. They are nationally accredited and located in a brand new facility just east of Reading. We have found them to be superior over other labs in terms of quality control, testing abilities and customer service. They provide added-values services which include field services routing and real-time tracking, a mobile application, exceedance notification, and quality assurance assistance and consulting. They also provide the fastest turnaround time which is extremely important in maintaining compliance with our facilities.

The SWTL proposal is an 8% reduction from the 2014 SWTL charges indicating that the bidding process and inclusion of the analytical needs from all LCA Divisions resulted in favorable pricing.

The Compliance Department is requesting approval of the attached SWTL unit prices for a three-year Professional Services Authorization with the option to extend for two additional one-year terms for as-needed analytical services.



Quotation for Laboratory Analysis

Tuesday, January 06, 2015

Client

Lehigh County Authority
Address: 1053 Spruce St. Allentown, PA 18106
Phone: 610-398-2503 Fax: 610-398-8413
Contact: Pat Mandes

Description of Service

The purpose of the laboratory analysis would be providing analytical data in fulfillment of your water, wastewater, or solids testing requirements. Suburban Testing Labs (STL) will provide a measurement of your samples using methods specified in the quotation. Samples will be collected by STL, shipped to us by the client, or picked-up at your facility as agreed upon in advance.

Quality Control Procedures

Quality Assurance/Control procedures will be followed according to STL's NELAP Accredited Quality Assurance Program unless otherwise specified. A copy of our scope of accreditation is available upon request.

Sample Reporting

Analysis Reports will be made available to our Clients through the mail and electronically. Each Client that chooses the option of electronic receipt has the opportunity to receive reports by way of fax, email, or at their convenience using our Online Report Access system via the Internet. STL will release results only to the Client who ordered the service(s).

Payment

Payment is to be made within 30 days of receipt of analysis results, unless otherwise agreed between the Client and STL. Prices are valid for 90 days.

Pricing includes chain of custody forms, labels, analysis, standard reporting, sample containers/preservatives as specified in method, and drinking water reporting (if required).

Thank you for considering Suburban Testing Labs!
We look forward to the opportunity of working with you.



Quotation for Laboratory Analysis

Analysis

Contract Laboratory Test Lists WASTEWATER	Unit Cost
ALKALINITY	\$ 12.00
ALUMINUM	\$ 4.00
AMMONIA-NITROGEN	\$ 11.00
ARSENIC	\$ 4.00
BOD	\$ 15.00
CBOD	\$ 15.00
CADMIUM	\$ 4.00
CHROMIUM	\$ 4.00
COBALT	\$ 4.00
COPPER	\$ 4.00
CYANIDE	\$ 12.00
FECAL COLIFORM	\$ 15.00
IRON	\$ 4.00
IRON, DISSOLVED	\$ 6.00
LEAD, TOTAL	\$ 4.00
MANGANESE	\$ 4.00
MERCURY	\$ 12.00
MOLYBDENUM	\$ 4.00
NICKEL	\$ 4.00
NITRATE-NITRITE	\$ 10.00
NITROGEN, TOTAL KJELDAHL	\$ 18.00
OIL AND GREASE	\$ 25.00
PHENOLS	\$ 12.00
PHOSPHORUS, TOTAL	\$ 10.00
SELENIUM	\$ 4.00
SILVER	\$ 4.00
SOLIDS, TOTAL < 5%	\$ 7.00
SOLIDS, TOTAL scum/grease	\$ 7.00
SOLIDS, TOTAL VOLATILE scum/grease	\$ 5.00
SOLIDS, TOTAL DISSOLVED	\$ 10.00
SOLIDS, TOTAL SUSPENDED	\$ 7.00



Contract Laboratory Test Lists WASTEWATER (continued...)	Unit Cost
SOLIDS, VOLATILE SUSPENDED	\$ 9.00
SULFIDES (2014 is Sulfate Price)	\$ 10.00
TOTAL PETROLEUM HYDROCARBONS	\$ 38.00
VOCs	\$ 65.00
ZINC	\$ 4.00
PRIORITY POLLUTANT+SCAN INF&EFF	\$ 600.00
PRIORITY POLLUTANT SCAN SLUDGE	\$ 600.00
FORM 43 GRIT	\$ 700.00
FORM 43 SLUDGE	\$ 700.00
BIOSOLIDS	\$ 144.00

Contract Laboratory Test Lists WATER	Unit Cost
REAGENT H2O TESTING-METALS	\$ 24.00
ALKALINITY - ABR	\$ 12.00
ALUMINIUM	\$ 4.00
ARSENIC	\$ 4.00
ASBESTOS	\$ 180.00
CALCIUM	\$ 4.00
CHLORIDE	\$ 9.00
COLOR--ABR	\$ 10.00
CONDUCTIVITY - ABR	\$ 12.00
COPPER	\$ 4.00
COPPER/LEAD LCR	\$ 10.00
FLUORIDE-PROCESS CONTROL	\$ 9.00
FOAMING AGENTS (MBAS)	\$ 40.00
GROSS ALPHA	\$ 35.00
HAA5	\$ 50.00
HARDNESS, TOTAL--ABR	\$ 4.00
**HETEROTROPHIC PLATE COUNT	\$ 10.00
IOC-GROUP	\$ 110.00
IRON	\$ 4.00
LEAD	\$ 4.00



Contract Laboratory Test Lists WATER (Continued...)	Unit Cost
MAGNESIUM	\$ 4.00
MANGANESE	\$ 4.00
NITRATE	\$ 10.00
NITRITE	\$ 8.00
ODOR - ABR	\$ 12.00
SILVER	\$ 4.00
SOC 504	\$ 40.00
SOC 505	\$ 70.00
SOC 515	\$ 75.00
SOC 525	\$ 87.00
SOC 531	\$ 100.00
SOC 547	\$ 95.00
SOC 548	\$ 95.00
SOC 549	\$ 95.00
SOC 1613	\$ 225.00
SODIUM	\$ 4.00
SOLIDS, TOTAL DISSOLVED	\$ 10.00
SULFATE	\$ 8.00
RADIUM 226	\$ 75.00
RADIUM 228	\$ 75.00
TOC	\$ 30.00
TOTAL COLIFORM/E.COLI	\$ 12.00
TTHM	\$ 40.00
URANIUM, COMBINED	\$ 4.00
VOC-21	\$ 55.00
Form U - alum sludge	\$ 866.00

Thank you for choosing
Suburban Water Testing Labs!
We look forward to the opportunity of working with you.



SUBURBAN TESTING LABS

Lehigh County Authority Terms and Conditions

Unless otherwise stated in a formal contract, services provided by Suburban Water Testing Laboratories, Inc. (SWTL) are expressly limited to the terms and conditions stated herein.

Confidentiality Because Client is a municipal authority, all provisions of this section are subject to state and federal public records laws and regulations; Client shall not be liable under the terms of this section for any consequences as a result of documents released pursuant to such laws and regulations. Reports are provided only to the Client or those designated by the Client unless otherwise required by law. Under the revised Pennsylvania Right-to-Know Law, if SWTL considers any document or data provided to Client to be a *trade secret* or *confidential proprietary information*, SWTL must mark each such document or data set as such before providing it to Client. Client cannot assure that the information will not be released, but by doing the proper marking, Client has the ability to initially withhold that information from a public records request.

Acceptance of Samples If SWTL determines that the sample will not yield valid data for any reason (including but not limited to sample preservation, improper sample containers, or samples that require modification of our normal procedures) samples will not be accepted and we will notify Client of such determination. If modification of our procedures is possible, fees for the modification will be determined. If Client agrees to the fees verbally or in writing the samples will be accepted and processed for the agreed upon fees.

Delivery of samples Client is responsible for samples until they are received by SWTL personnel. SWTL is not responsible for samples that are rejected because of holding time or improper preservation or storage before samples are received by SWTL personnel. SWTL reserves the right to refuse to accept samples that are suspected of being hazardous. The remainder of samples found to be hazardous will be returned to Client for proper disposal. It is the responsibility of Client to label and meet all regulations on samples that are hazardous.

Contracts All contracts are subject to review and must be signed by corporate officer.

Payment Terms All services must be prepaid unless credit is established, then net 30 days. Past Due accounts will be charged 1.5% per month of the unpaid balance. Client agrees to reimburse SWTL for the costs of collection of past due debts including but not limited to collection and legal fees. Client may not defer billing to a third party. Paperwork submitted with samples is assumed to describe the testing desired, any changes must be made in writing. If analysis is started before the request for changes is made Client must pay for testing that was already completed. SWTL will not be responsible for holding times or deadlines that are missed because of changes or delays in payment.

Rush Analysis Rush analysis is available but may be surcharged depending on the analysis. It is Client's responsibility to inquire of such charges prior to submission of samples for analysis.

Hazardous Wastes Client must notify SWTL of any materials suspected of being hazardous and provide the appropriate documentation and packaging of such samples. Hazardous samples may be returned to client.

Quality Assurance SWTL agrees to follow their Quality Assurance Manual and Method SOPs unless specified in writing. It is up to Client to determine if these procedures meet their needs prior to placing order.

Litigation Client agrees to assume all costs associated with official requests for documents or testimony if Client is a primary party to the litigation and SWTL ultimately is determined to have no responsibility by the court or in any settlement. SWTL and Client waive the right to a trial by jury.

Indemnification SWTL agrees to indemnify the client for negligence or misconduct on the part of SWTL or its agents except to the extent such negligence is a result of negligent or willful omissions on the part of Client. Client understands and agrees to limit the liability of SWTL to the cost of services provided or the damages incurred, whichever is less; however these limitations shall not apply in the case of fraud on the part of SWTL or its agents. Client agrees to indemnify SWTL for negligence or misconduct on the part of Client or its agents unless such negligence is a result of negligent or willful omissions on the part of SWTL.

Warranty SWTL warrants the accuracy of the results of samples as submitted, no other warranty or liability for the use of the result is expressed or implied.

Reports Standard reporting is included in the analysis price; however, additional charges may apply for special reports (including data packets and SDWA reports). Reports will be kept for 3 years unless otherwise required by law or specified in writing.

Sample containers SWTL will provide containers upon request but reserves the right to charge a fee.

Retention of samples Unless otherwise specified water samples are stored for 7 days. Empty containers and samples that are analyzed for microbiology are disposed of immediately.

Accepted by (Client): _____

Accepted by (SWTL): _____

Richard C. Stump III – President

2015 - 2017 Suburban Water Testing Labs Testing Costs

Contract Laboratory Test Lists WATER	Suburban Water Testing Lab Unit Cost
REAGENT H2O TESTING-METALS	\$ 24.00
ALKALINITY - ABR	\$ 12.00
ALUMINIUM	\$ 4.00
ARSENIC	\$ 4.00
ASBESTOS	\$ 180.00
CALCIUM	\$ 4.00
CHLORIDE	\$ 9.00
COLOR--ABR	\$ 10.00
CONDUCTIVITY - ABR	\$ 12.00
COPPER	\$ 4.00
COPPER/LEAD LCR	\$ 10.00
FLUORIDE-PROCESS CONTROL	\$ 9.00
FOAMING AGENTS (MBAS)	\$ 40.00
GROSS ALPHA	\$ 35.00
HAA5	\$ 50.00
HARDNESS, TOTAL--ABR	\$ 4.00
**HETEROTROPHIC PLATE COUNT	\$ 10.00
IOC-GROUP	\$ 110.00
IRON	\$ 4.00
LEAD	\$ 4.00
MAGNESIUM	\$ 4.00
MANGANESE	\$ 4.00
NITRATE	\$ 10.00
NITRITE	\$ 8.00
ODOR - ABR	\$ 12.00
SILVER	\$ 4.00
SOC 504	\$ 40.00
SOC 505	\$ 70.00
SOC 515	\$ 75.00
SOC 525	\$ 87.00
SOC 531	\$ 100.00
SOC 547	\$ 95.00
SOC 548	\$ 95.00
SOC 549	\$ 95.00
SOC 1613	\$ 225.00
SODIUM	\$ 4.00
SOLIDS, TOTAL DISSOLVED	\$ 10.00
SULFATE	\$ 8.00
RADIUM 226	\$ 75.00
RADIUM 228	\$ 75.00
TOC	\$ 30.00
TOTAL COLIFORM/E.COLI	\$ 12.00
TTHM	\$ 40.00
URANIUM, COMBINED	\$ 4.00
VOC-21	\$ 55.00
Form U - alum sludge	\$ 866.00

Contract Laboratory Test Lists WASTEWATER	Suburban Water Testing Lab Unit Cost
ALKALINITY	\$ 12.00
ALUMINUM	\$ 4.00
AMMONIA-NITROGEN	\$ 11.00
ARSENIC	\$ 4.00
BOD	\$ 15.00
CBOD	\$ 15.00
CADMIUM	\$ 4.00
CHROMIUM	\$ 4.00
COBALT	\$ 4.00
COPPER	\$ 4.00
CYANIDE	\$ 12.00
FECAL COLIFORM	\$ 15.00
IRON	\$ 4.00
IRON, DISSOLVED	\$ 6.00
LEAD, TOTAL	\$ 4.00
MANGANESE	\$ 4.00
MERCURY	\$ 12.00
MOLYBDENUM	\$ 4.00
NICKEL	\$ 4.00
NITRATE-NITRITE	\$ 10.00
NITROGEN, TOTAL KJELDAHL	\$ 18.00
OIL AND GREASE	\$ 25.00
PHENOLS	\$ 12.00
PHOSPHORUS, TOTAL	\$ 10.00
SELENIUM	\$ 4.00
SILVER	\$ 4.00
SOLIDS, TOTAL < 5%	\$ 7.00
SOLIDS, TOTAL scum/grease	\$ 7.00
SOLIDS, TOTAL VOLATILE scum/grease	\$ 5.00
SOLIDS, TOTAL DISSOLVED	\$ 10.00
SOLIDS, TOTAL SUSPENDED	\$ 7.00
SOLIDS, VOLATILE SUSPENDED	\$ 9.00
SULFIDES (2014 is Sulfate Price)	\$ 10.00
TOTAL PETROLEUM HYDROCARBONS	\$ 38.00
VOCs	\$ 65.00
ZINC	\$ 4.00
PRIORITY POLLUTANT+SCAN INF&EFF	\$ 600.00
PRIORITY POLLUTANT SCAN SLUDGE	\$ 600.00
FORM 43 GRIT	\$ 700.00
FORM 43 SLUDGE	\$ 700.00
BIOSOLIDS	\$ 144.00



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional:

Suburban Water Testing Labs
Sara Kuzma-Stump
1037F MacArthur Road
Reading, PA 19605

Date: 1/06/15

Requested By: Pat Mandes

Approvals

Department Head:

Chief Executive

Officer:

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

Provide full service accredited external environmental testing for the Lehigh County Authority (LCA) as per the LCA Request for Proposal dated November 2014 and the Suburban proposal dated December 9, 2014. The Professional Services Authorization is inclusive of the LCA Suburban Water and Wastewater Division, LCA City Water and Wastewater Division, and the LCA Pretreatment Plant operated by CH2MHILL.

Cost Estimate: The cost estimate is based on the estimate of quantities in the RFP and the unit prices submitted by Suburban on December 9, 2014. It is estimated that the cost of the three year testing will be \$460,000 but could be substantially less. The actual costs will be based on the unit costs and the quantities of testing performed. SWTL may only charge LCA for services actually rendered.

Time Table and Completion Deadline:

January 12, 2015 through December 31, 2017 with an LCA option of two additional years.

The SWTL Standard Agreement is attached.

(For Authority Use Only)

Authorization Completion:

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