

Bill No. 180972

Exhibit "A"

**PHILADELPHIA MUNICIPAL AUTHORITY AND CITY OF PHILADELPHIA
INTERGOVERNMENTAL AGREEMENT**

INTERGOVERNMENTAL AMI AGREEMENT

THIS INTERGOVERNMENTAL AMI AGREEMENT (“Intergovernmental Agreement”) is dated as of _____ (“Effective Date”) by and between the City of Philadelphia (“City”) acting through its Water Department, Revenue Department and Procurement Department and the Philadelphia Municipal Authority, a body corporate and politic organized and existing under the laws of the Commonwealth of Pennsylvania (“Authority”).

RECITALS

WHEREAS, the Authority is a body corporate and politic organized under the provisions of the Pennsylvania Municipality Authorities Act of 1945 (the Act of May 2, 1945, P.L. 382, as amended) pursuant to ordinances of the Council of the City of Philadelphia; and

WHEREAS, the Authority, by Bill No. 970352 (approved July 1, 1997), is authorized to acquire, maintain and operate facilities and equipment for the automated collection and delivery of water usage data from water and sewer customers to the Department of Revenue or other designated City department; and

WHEREAS, the City, with the assistance of the Authority, desires to undertake a certain long-term advanced metering infrastructure (“AMI”) project consisting of the AMI System, meter interfacing unit installation and maintenance, network operations and maintenance, AMI System software services, AMR to AMI transition meter reading services, provision of meters, and other related additional services; and

WHEREAS, the Water Department has requested that the Authority enter into a contract (“AMI Contract”) with Sensus USA Inc., (“VENDOR”), for long-term AMI project services; and

WHEREAS, the Council of the City of Philadelphia enacted an ordinance, Bill No. _____, approved by the Mayor on _____ duly empowering the City and the Authority to enter this Intergovernmental AMI Agreement and Exhibits thereto; and

WHEREAS, by resolution dated _____, the Board of Directors of the Authority has authorized its Chairman, Vice-Chairman or its Executive Director to execute this Intergovernmental AMI Agreement; and

WHEREAS, the VENDOR and the Authority have entered into the AMI Contract, in the form attached hereto as Exhibit A, contemporaneously with this Intergovernmental AMI Agreement.

NOW, THEREFORE, in consideration of the mutual promises and agreements contained herein, the City and the Authority (collectively, the “Parties”) hereby agree as follows:

1. Definitions.

Capitalized terms used and not defined in this Intergovernmental AMI Agreement shall have the meanings ascribed to them in the AMI Contract.

2. Term.

The term of this Intergovernmental AMI Agreement shall commence on the Effective Date and shall terminate one day after the expiration or termination of the AMI Contract; provided that to the extent that any obligations of the Authority under the AMI Contract survive expiration or termination of the AMI Contract, the City’s corresponding obligations under this Intergovernmental Agreement shall remain in effect and be enforceable following such expiration or termination.

3. Obligations of the Authority.

(a) **Administrative Obligations.** Authority shall provide all required administrative services necessary to fulfill its obligations to the VENDOR and the City for the prompt and timely submission of any required representations and documents required under the AMI Contract.

(b) The Authority shall provide the City with copies of any notices received by the Authority from the VENDOR, unless the Authority shall have determined by reasonable means that the City received a copy of such notice directly from such party.

(c) The Authority shall provide the City with a copy of any notices received from any governmental authority with respect to the AMI project or transactions contemplated by this Intergovernmental AMI Agreement or the AMI Contract.

(d) The Authority shall not amend, modify, alter or otherwise change the AMI Contract, once fully executed, without the prior written consent of the City.

(f) The Authority shall not assign the AMI Contract once fully executed, without the prior written consent of the City.

(g) The Authority shall pay over to the City any payments due from the VENDOR with respect to the AMI Contract.

(h) The Authority shall provide the City with water meters as needed for the AMI project services.

(i) The Authority shall transfer all rights and ownership to the City of all AMI equipment and facilities, warranties, licenses or other materials required for AMI project services.

4. Obligations of the City

(a) With the exception of administrative obligations of the Authority set forth herein, the City hereby assumes and shall perform all other non-financial obligations specifically required of the Authority to the VENDOR under the AMI Contract. In addition, the City shall make timely payments to the Authority for all approved invoices submitted to the City.

(b) Wherever the AMI Contract states that the Authority shall respond, inspect, review, approve, provide data or undertake similar obligations for AMI project services, the City shall undertake such obligations.

(c) The City shall timely and promptly review all required representations and documents required under the AMI Contract.

5. Indemnification.

Subject to the provisions and limitations of this Section, the City hereby indemnifies and holds harmless the Authority and each member, officer, and employee of the Authority against any and all claims, losses, damages or liabilities, joint and several, to which the Authority or any member, officer or employee of the Authority may become subject, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of this Intergovernmental AMI Agreement or the AMI Contract, unless the losses, damages or liabilities arise from an adjudication of bad faith, fraud or deceit of the member, officer or employee of the Authority. In the event any claim is made or action brought against the Authority, or any member, officer, or employee of the Authority, the Authority may request that the City assume the defense of the claim and any action brought thereon and pay all reasonable expenses incurred therein; or the Authority may assume the defense of any such claim or action, provided, however, that counsel selected by the Authority shall be approved by the City, and further provided that the City may engage its own counsel to participate in the defense of any such action. The defense of any such claim shall include the taking of all actions necessary or appropriate thereto.

6. Payment to the Authority for Administrative and Legal Costs

(a) From time to time, but no more frequently than monthly, the Authority may submit invoices to the City for its reasonable administrative costs associated with this Intergovernmental AMI Agreement and the AMI Contract. The Authority shall prepare and submit to the City a schedule of anticipated administrative fees.

(b) The City agrees to reimburse the Authority for its reasonable legal fees and other transaction costs associated with the execution of this Intergovernmental AMI Agreement and the AMI Contract.

7. Successor Authority.

In the event that the Authority ceases to exist or otherwise does not perform its obligations hereunder, or the City chooses to cause the Authority to assign the AMI Contract to another Authority, the City shall have the right to appoint and substitute a successor authority (“Successor Authority”) to succeed to the rights and assume the obligations of the Authority hereunder. The City’s right to appoint a Successor Authority shall be a continuing right and shall not be exhausted by the exercise thereof.

8. Limitation of Liability: Special Obligations of the Authority.

Notwithstanding anything contained in this Intergovernmental AMI Agreement to the contrary, the payment obligations of the Authority arising under this Intergovernmental AMI Agreement are special obligations of the Authority, payable solely from payments received from the City. The Authority will do all things lawfully within its power to obtain, maintain and properly request from the City and pursue funds from which the payments may be made.

9. Tort Claims Act.

Nothing in this Intergovernmental AMI Agreement or the AMI Contract shall waive or be construed to waive or amend, or be deemed to waive or amend, any immunity which the City or the Authority, or their officials, members, officers, agents, employees or representatives, may have under Title 42, Chapter 85 of the Pennsylvania Consolidated Statutes Annotated, as applicable, or other Applicable Law.

10. Effect of City Approval

Review, approval or acceptance by the Water Department of any documents submitted to the City by the Authority, the VENDOR or any other party under or in connection with this Intergovernmental AMI Agreement or the AMI Contract shall not constitute approval otherwise required under Applicable Law by any and all City of Philadelphia departments, boards or commissions, or by any other federal, state or local governmental authority having jurisdiction.

11. No Merger.

The rights and obligations of the Parties under this Intergovernmental AMI Agreement shall remain in effect and shall not merge, even if the same Party holds rights of both Parties hereunder, unless such Party terminates this Intergovernmental AMI Agreement in writing.

12. Severability.

In the event that any of the provisions, or portions or applications thereof of this Intergovernmental AMI Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, the Parties shall negotiate an equitable adjustment in the provisions of this Intergovernmental AMI Agreement with a view toward effecting the purpose of this Intergovernmental AMI Agreement, and the validity and enforceability of the remaining provisions, or portions or applications thereof, shall not be affected thereby.

13. Notice.

Any notice required to be given by City to the Authority hereunder shall be in writing and shall be addressed to:

The Philadelphia Municipal Authority
1515 Arch Street, 9th Floor
Philadelphia, PA 19102
Attention: Executive Director

Any notice required to be given by the Authority to the City hereunder shall be in writing and shall be addressed to:

City of Philadelphia Water Department
1101 Market Street, 5th Floor
Philadelphia, PA 19107
Attention: Deputy Commissioner for Operations

All notices under this Section shall be delivered in person, sent via certified mail with a return receipt requested or sent via facsimile and shall be effective when received at the address specified above. The Parties hereto, by like notice in writing, may designate, from time to time, another address or facsimile number to which notices may be given pursuant to this Intergovernmental Agreement.

14. Entire Agreement.

This Intergovernmental AMI Agreement contains the entire agreement between the Parties hereto and supersedes any and all prior written and oral agreements, proposals, negotiations, understandings and representations pertaining to the subject matter hereof.

15. Amendments.

The parties acknowledge that from time to time the Intergovernmental AMI Agreement may require amendments to support the Parties interests and obligations under the AMI

Contract. Such requests for amendment from either Party shall not be unreasonably denied or delayed. However, no amendments or modifications of this Intergovernmental AMI Agreement shall be valid unless evidenced in writing and signed by a duly authorized representative of the Party against which enforcement is sought.

16. No Third Party Rights.

The Parties hereby acknowledge the VENDOR is a third party beneficiary to this Intergovernmental AMI Agreement. Except with respect to the VENDOR as third party beneficiary, this Intergovernmental AMI Agreement and all rights hereunder are intended for the sole benefit of the Parties and shall not imply or create any rights on the part of, or obligations to, any other Person.

IN WITNESS WHEREOF, the Parties have executed this Intergovernmental AMI Agreement of the date first above written.

APPROVED AS TO FORM:
Marcel S. Pratt, City Solicitor

CITY OF PHILADELPHIA, acting
through its Water Department

By: _____
Ji Y. Jun
Deputy City Solicitor

By: _____
Debra A. McCarty
Commissioner

and its Revenue Department

By: _____
Frank Breslin
Commissioner

and its Procurement Department

By: _____
Trevor Day
Commissioner

**PHILADELPHIA MUNICIPAL
AUTHORITY**

By: _____
Lorna B. Gallman
Executive Director

Bill No. 180972

Exhibit “B”

PHILADELPHIA MUNICIPAL AUTHORITY AND SENSUS CONTRACT

ADVANCED METERING INFRASTRUCTURE SERVICE CONTRACT

By and Between

THE PHILADELPHIA MUNICIPAL AUTHORITY

and

VENDOR

DATED: [_____]

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ADVANCED METERING INFRASTRUCTURE SERVICE CONTRACT

THIS ADVANCED METERING INFRASTRUCTURE SERVICE CONTRACT is made this [_____] day of [_______], 2018 (“Effective Date”), by and between THE PHILADELPHIA MUNICIPAL AUTHORITY, a body corporate and politic organized and existing under the laws of the Commonwealth of Pennsylvania (“PMA” or “Customer”), and SENSUS USA INC., a [-----] State corporation authorized to do business in the Commonwealth of Pennsylvania (“VENDOR” or “Sensus”) (together, “Parties”).

RECITALS:

WHEREAS, PMA is a body corporate and politic organized under the provisions of the Pennsylvania Municipality Authorities Act of 1945 (Act of May 2, 1945, P.L. 382, as amended) pursuant to ordinances of the Council of the City of Philadelphia (“City Council”); and

WHEREAS, the City of Philadelphia (“City”), acting through its Water Department and with the assistance of PMA, desires to undertake a certain long-term advanced metering infrastructure (“AMI”) project consisting of the AMI System, MIU installation, network operations and maintenance, MIUs maintenance, and AMI System Software Services, AMR to AMI Transition Meter Reading Services, provision of Meters, and other related Additional Services (“AMI Project Services”); and

WHEREAS, VENDOR has responded to the Request for Proposals issued by the City with a proposal (“Proposal”) to provide the AMI Project Services; and

WHEREAS, on [_______], the City Council approved an ordinance, Bill No. [_______], signed by the Mayor of the City of Philadelphia (“Mayor”) on [_______] (“Ordinance”), attached as Exhibit A, pursuant to which the City Council and the Mayor have authorized the execution of the AMI service agreement between the City and PMA (“City-PMA Agreement”), and have duly empowered PMA to undertake the AMI project; and

WHEREAS, by resolution dated [_______], the Board of Directors of PMA has authorized its Chairman to execute this Contract and the City-PMA Agreement; and

WHEREAS, City and PMA have entered into the City-PMA Agreement on this same date, a copy of which is attached as Exhibit B, pursuant to which City shall perform certain obligations required of PMA under this Contract, and receive certain performance from PMA; and

WHEREAS, the Parties acknowledge the importance of the timely performance of the mutual obligations set forth in this Contract concerning the AMI Project Services, and the cost savings to City associated with such timely performance.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Contract, the Parties, intending to be legally bound by this Contract, covenant and agree as follows:

ARTICLE I GENERAL PROVISIONS

A. Rules of Interpretation. For all purposes of this Contract, except as otherwise expressly provided:

1. All references in this instrument to designated "Articles," "Sections" and other subdivisions are to the designated Articles, Sections and other subdivisions of this instrument as originally executed.
2. The term "including" shall not be considered in a limiting nature, but shall be construed to mean "including, without limitation."
3. The terms defined in this Contract have the meanings assigned to them in this Contract and include the plural as well as the singular and vice versa.
4. The Table of Contents and the headings or captions used in this Contract are for convenience of reference only and shall not define, limit, describe or amplify the terms or provisions of this Contract or the scope or intent of this Contract.
5. Unless expressly stated in the Contract to the contrary, where the approval or consent of a Party is required under this Contract, such approval or consent shall be in writing from the Party, or its authorized representative as designated, or a designated successor in interest to the Party to this Contract.
6. The Parties have jointly prepared this Contract.

B. Definitions.

1. "Additional Services" means uses of the Network other than for Meter Data read and delivery and that require VENDOR's equipment and/or support.
2. "Ally Meter" means VENDOR's Meters designated as "ally" water meters.
3. "AMI Project Schedule" means the schedule and timeframes provided in the Statement of Work for performance of AMI Project Services.
4. "AMI Project Services" is defined in the Recitals.
5. "AMI System" means, as provided by VENDOR, the MIUs, Network, system hardware, other equipment and system software needed to collect, store, manage and deliver Meter Data as required by this Contract.

6. “*AMI System Acceptance*” or “*System Acceptance*” means the acceptance by PMA of the VENDOR-installed AMI System, as described in Article IV. Section J. and the Statement of Work.
7. “*AMI System Acceptance Date*” means the day that the AMI System has been accepted by PMA in accordance with the provisions of Article II. Section A.
8. “*AMI System Software Services*” means all VENDOR services related to AMI System Headend, Meter Data Management system, customer service interface, customer portal, and the Work Order Management System.
9. “*AMR to AMI Transition Meter Reading Services*” shall have the meaning set forth in Article III. Section C.
10. “*Applicable Laws*” means all applicable federal, state or local laws, ordinances, executive orders, rules, regulations and all court orders, injunctions, decrees and other official interpretations thereof of any federal, state or local court, administrative agency or governmental body, including the City, the Commonwealth of Pennsylvania and the United States of America.
11. “*Billing Month*” means a calendar month, commencing on the first day of such month.
12. “*Billing Read*” means at least one complete read from the MIU and Meter delivered to the Billing System Interface during the three-calendar day billing window; with the billing window being defined by the City's meter reading schedule.
13. “*Billing System*” means the City’s Basis 2 system or another City system for the billing of customers for water, sewer, stormwater and related charges.
14. “*Billing System Interface*” means the hardware and software that permits the Billing System to utilize Meter Data provided by the AMI System.
15. “*Billing Unit*” means one hundred (100) cubic feet of water.
16. “*Business Day*” means a business day of the City of Philadelphia.
17. “*Change*” shall have the meaning set forth in Article III. Section E.
18. “*City*” is defined in the Recitals.
19. “*City-PMA Agreement*” means the AMI service agreement between the City and PMA in Exhibit B.
20. “*Compensation*” means payments from PMA to VENDOR for AMI Project Services, as set forth in Article VI and Exhibit G.
21. “*Confidential Information*” shall have the meaning set forth in Article XI. Section M.
22. “*Contract*” means this Advanced Metering Infrastructure Service Contract between PMA and VENDOR, as may be amended from time to time.
23. “*Daily Read*” means one complete read, including all alarms and interval data, from the MIU and Meter delivered to the Headend system, MDM, and other system interfaces as required by the City over one calendar day.
24. “*DCU*” means the Network’s fixed data collection units, which are VENDOR manufactured devices consisting of one transceiver, to be located on a tower that

- receives readings from MIUs by radio frequency and transmits those readings by TCP/IP backhaul communication. For clarity, VENDOR's FlexNet Base Stations are DCUs.
25. "*Default Installation Benchmark*" shall have the meaning set forth in Article IX. Section B.1.
 26. "*Deliverables*" means those AMI Project Services described in Article III. Section B.
 27. "*Delivery Success Rate*" means the Large Meter Data Delivery Success Rate or Small Meter Data Delivery Success Rate.
 28. "*DSL*" means designated service locations that have been assigned to the VENDOR for the installation of MIUs.
 29. "*End User*" means any end user of water that pays PMA or City for the consumption of water.
 30. "*Effective Date*" is defined in the introductory paragraph.
 31. "*Equipment*" means the tools and electronics, including the handheld computer devices, required for the retrofit and installation of MIUs.
 32. "*Escrow Deposit*" means: (i) a cash substitute equivalent to the amounts set forth in Article IX. Section E.1., to be held in escrow for the benefit of PMA and VENDOR or (ii) a cash deposit to be held in escrow for the benefit of PMA and VENDOR in accordance with the terms and conditions of the Performance and Payment Bond and/or the O&M Services Term Bond.
 33. "*Event of Default*" shall have the meanings ascribed to each party in Article IX.
 34. "*FCC License*" means the radio frequency license issued by the Federal Communications Commission to VENDOR.
 35. "*Force Majeure Event*" means any of the events specifically described in Article IX. Section I.
 36. "*Fortuitous Installations*" means the installation of MIUs at DSLs by PMA or City, including by City employees during the course of routine customer service calls.
 37. "*Guaranteed Accuracy*" shall have the meaning set forth in Article VII. Section A.
 38. "*Guaranteed Installation*" shall have the meaning set forth in Article IV. Section G.
 39. "*Guaranteed Meter Data Delivery Success Rate*" shall have the meaning set forth in Article VII. Section A.
 40. "*Guarantor*" means an entity that enters into an agreement with PMA, substantially in the form of Exhibit Q (Guaranty Agreement), to guarantee the obligations of VENDOR under this Contract, in accordance with Article IX.
 41. "*Hardware*" means the Network DCUs and retrofitted MIUs, including appurtenant components of the Network DCUs and retrofitted MIUs.
 42. "*Headend*" means the VENDOR back office system that controls and collects data from Network equipment and MIUs.

43. “*Installation Benchmarks*” means the minimum acceptable quantity of VENDOR-installed MIUs at certain milestones during the Turnkey Installation Term as identified in Article IV. Section H.
44. “*Installation Total*” means the total number of MILs at DSLs calculated on the expiration of the Turnkey Installation Term including the total number of Fortuitous Installations.
45. “*Intellectual Property*” means patents and patent applications, inventions (whether patentable or not), trademarks, service marks, trade dress, copyrights, trade secrets, know-how, data rights, specifications, drawings, designs, maskwork rights, moral rights, author’s rights, and other intellectual property rights, including any derivations and/or derivative works, as may exist now or hereafter come into existence, and all renewals and extensions thereof, regardless of whether any of such rights arise under the laws of the United States or of any other state, country or jurisdiction, any registrations or applications thereof, and all goodwill pertinent thereto.
46. “*Irrevocable Letter(s) of Credit*” means the letter(s) of credit described in Article IX. Section E.1.
47. “*Large Meter*” means non-residential water meters that are one inch and larger in size.
48. “*Large Meter Data Delivery Success Rate*” means the Meter Data Delivery Success Rate for Large Meters.
49. “*Licensed Software*” means all proprietary software required for the AMI Project Services provided by VENDOR and/or its subcontractors to PMA.
50. “*MDM*” means Meter Data Management System selected by the PMA and provided by the VENDOR under this Contract.
51. “*MDM Provider*” means the entity (selected by PMA) that provides the MDM to VENDOR.
52. “*Mediator*” means a mediator designated to resolve disputes arising under this Contract in accordance with Article X.
53. “*Meter*” means the AMI System compatible water meter selected by PMA and provided by VENDOR under this Contract, comprised of the meter body and the meter head (including the register).
54. “*Meter Data*” means all data required to be collected, stored, managed, and delivered by VENDOR to PMA under this Contract.
55. “*Meter Data Delivery Success Rate*” means the average of Daily Reads, on a Billing Month basis, of the total number of MIUs at MILs from which Meter Data has been delivered divided by the total number of MIUs at MILs, expressed as a percentage.
56. “*Meter Datum*” means a datum electronically collected from a single MIU and delivered to the Billing System Interface pursuant to a request for such datum by PMA.
57. “*Meter Warranty*” means the warranty provided to PMA by the VENDOR as described in Article VIII. and the Meter Warranty Form, attached as Exhibit K.

58. “*MIL*” or “*MIU Installed Location*” means locations where (i) an MIU has been installed and (ii) the MIU remains installed.
59. “*Missed Meter Data*” means Meter Data, not received by PMA, including those caused by tamper.
60. “*Missed Meter Data Location*” means where an MIU has been installed and for which a Meter Datum was not provided as scheduled, excluding all Tamper Locations as defined in this Contract and service call locations after the expiration of thirty (30) days from the date of an initial service call request.
61. “*MIU*” means VENDOR’s meter interface unit retrofitted with the City or other meter register that is compatible with the existing meter.
62. “*MIU Installation Commencement Date*” means the date on which VENDOR receives the Notice to Proceed.
63. “*MIU Retrofit*” means the incorporation of the MIUs into the existing City-owned Badger register or Badger replacement register or other meters as described in the Statement of Work.
64. “*MIT*” means MIU installation technician.
65. “*Mobilization Payment*” shall have the meaning set forth in Article VI. Section F.1.
66. “*Network*” means, as provided by Vendor, the DCUs, FCC licensed radio frequencies as described in the Spectrum Manager Lease, system hardware, system software, power supplies, utilities and any other required services or equipment for delivering Meter Data from an MIU to the City’s Billing System (except for MIUs).
67. “*Network Acceptance*” means that the Network has been inspected, tested and determined to be materially functional in accordance with the Network Acceptance Test Plan in the Statement of Work.
68. “*Network Acceptance Date*” means the date that PMA provides notice to the VENDOR of Network Acceptance.
69. “*New Water Meter*” shall have the meaning set forth in Article III. Section C.2.ii.
70. “*Notice to Proceed*” means written notice from PMA to VENDOR to proceed with MIU installation.
71. “*O&M Services*” means all VENDOR-provided services for the provision of Meter Data to PMA, including network operations and maintenance, MIU maintenance, AMI System Software Services and other related services during the Term in accordance with this Contract and the Statement of Work.
72. “*O&M Services Term*” means the period described in Article II. Section B.
73. “*O&M Services Term Bond*” shall have the meaning set forth in Article VII. Section D.
74. “*Other Project Services*” means the services identified in Article III. Section C. (Other VENDOR Deliverables).
75. “*Parties*” is defined in the introductory paragraph.
76. “*Party*” means either PMA or VENDOR.

77. “*Performance and Payment Bond*” shall have the meaning set forth in Article VII. Section D.
78. “*Performance Guarantees*” means collectively, the performance obligations of VENDOR set forth in this Contract, defined as the Guaranteed Installation, the Guaranteed Meter Data Delivery Success Rate, Guaranteed Accuracy, and the Installation Benchmarks.
79. “*Performance Standards*” means performing AMI Project Services in compliance with this Contract, including all Performance Guarantees as set forth in the Contract.
80. “*Person*” means any individual, corporation, partnership or other entity.
81. “*PMA*” is defined in the introductory paragraph.
82. “*PMA Data*” is defined in Article XI. Section B.2.
83. “*Project Labor Agreement*” means Exhibit D.
84. “*Project Management Services*” means VENDOR’s services for project coordination and Network design, configuration, and integration.
85. “*Proposal*” means the proposal submitted by the VENDOR on March 3, 2017 and any updates or modifications to the proposal submitted in writing to the City and PMA.
86. “*Provisional Acceptance of DCUs*” shall have meaning set forth in Article VI. Section C.
87. “*Provisional Acceptance of a Route*” shall have meaning set forth in Article VI. Section E.1.
88. “*RFP*” means the Request for Proposals issued by the City on December 12, 2016, including any addenda and exhibits.
89. “*Rate Sheet*” means Exhibit G (Rate Sheet), which sets forth certain fees under this Contract.
90. “*Recitals*” means the Section titled “Recitals” of this Contract.
91. “*Renewal Term*” means the additional terms following the O&M Services Term as described in Article II. Section C.
92. “*Route*” means (i) for the Turnkey Installation, groupings of DSLs determined by PMA for the installation of MIUs; or (ii) for the provision of O&M Services, groupings of MILs based on the days on which Meter Data from certain MILs may be entered into the Billing System. Route shall also mean a substantially equivalent unit in a modified Billing System.
93. “*Seed Stock*” means the registers provided to VENDOR in accordance with Article IV. Section C.2.
94. “*Senior Account Manager*” means the Person designated by VENDOR for day to day supervision of the AMI Project Services who shall be the primary VENDOR contact Person under this Contract.

95. “*Service Fee Billing Statement*” means the invoice provided on a monthly basis by VENDOR to PMA for O&M Services provided by VENDOR, as described in Article VI. Section G.4.
96. “*Service Fee Due Date*” is defined in Article VI. Section G.4.
97. “*Small Meter*” means (i) residential water meters that are five-eighths inch (5/8") sized meters and (ii) residential fire sprinkler system meters.
98. “*Small Meter Data Delivery Success Rate*” means the Meter Data Delivery Success Rate for Small Meters.
99. “*Software Implementation*” shall have the meaning set forth in Article IV. Section I.
100. “*Spectrum Manager Lease*” means the lease specified in Exhibit M.
101. “*Statement of Work*” means Exhibit E.
102. “*Surety Company*” means the company that shall issue the Performance and Payment Bond and/or the O&M Services Term Bond in accordance with Article VII. Section D.
103. “*Tamper Location*” means a MIL from which a signal has been received indicating tampering with any MIU.
104. “*Term*” means the period described in Article II. Section D.
105. “*Turnkey Installation*” means the installation of the AMI System by VENDOR pursuant to this Contract.
106. “*Turnkey Installation Fee Due Date*” means the day described in Article VI. Section F.8.
107. “*Turnkey Installation Term*” means the period described in Article II. Section A.
108. “*Work Order Management System*” means the system used by the City for the installation and maintenance of MIUs and their appurtenant components.
109. “*WDA*” means workforce development agency.

C. Incorporation of Recitals. All of the provisions of the Recitals portion of this Contract are incorporated as if fully set forth in this Contract and shall constitute an integral part of this Contract. However, in the event of a conflict between the Recitals and any other portion of this Contract, it is agreed that the other portions of this Contract shall control.

D. General Representations, Warranties.

1. Certificates of Representations and Warranties.
 - i. The representations and warranties of VENDOR set forth in this Contract shall be true and correct in all material respects as of the Effective Date as if made on and as of such date.
 - ii. The representations and warranties of PMA set forth in this Contract shall be true and correct in all material respects as of the Effective Date as if made on and as of such date.
2. Opinion of Counsel.

- i. On or before the Effective Date, PMA shall have received an opinion of counsel from VENDOR, dated the Effective Date in substantially the form set forth in Exhibit C.
- ii. On or before the Effective Date, VENDOR shall have received an opinion of counsel from each of PMA and City, each dated the Effective Date, in substantially the forms set forth in Exhibit C.

ARTICLE II TERM OF THE CONTRACT

A. Turnkey Installation Term.

1. Turnkey Installation Term shall include the Network design, installation of the Network, AMI System Software Services implementation and integration, MIU Retrofit, and the installation of the MIUs and shall commence on the Effective Date and expire on the earlier of: (i) the day preceding the first day of the 25th month following the MIU Installation Commencement Date; or (ii) the date of AMI System Acceptance (“AMI System Acceptance Date”). The Turnkey Installation Term may be extended at the sole discretion of PMA with concurrence by the City. Any such extension to the Turnkey Installation Term shall be in writing and shall state the cause of the delay in reaching the AMI System Acceptance and the new deadline for AMI System Acceptance.
2. Network installation shall commence within 60 days of the Effective Date.
3. MIU Retrofit shall commence after the Effective Date in accordance with the AMI Project Schedule.
4. Recruitment, hiring and training of MITs shall commence so that a full staffing of MITs is complete on the MIU Installation Commencement Date. The hiring shall be consistent with the Project Labor Agreement attached to this Contract as Exhibit D.
5. The MIU installation shall commence upon the MIU Installation Commencement Date and shall continue uninterrupted until the AMI System Acceptance Date or 24 months following MIU Installation Commencement Date, whichever is earlier; provided, however, that the installation period may be extended due to delays in accordance with the Contract. PMA may only issue the Notice to Proceed following both (i) Network Acceptance and (ii) VENDOR’s notice to PMA of sufficient availability of retrofitted MIUs and of VENDOR’s subcontractors’ ability to begin MIU installation.

B. O&M Services Term.

1. O&M Services Term shall commence upon AMI System Acceptance Date and, unless otherwise terminated pursuant to this Contract, shall expire on the day preceding the 20th anniversary of the AMI System Acceptance Date.

2. O&M Services Term includes: the periods for MIU maintenance, Network O&M Services, and AMI System Software Services.
 3. Notwithstanding the O&M Services Term:
 - i. VENDOR shall maintain all installed DCUs prior to the AMI System Acceptance Date.
 - ii. VENDOR shall maintain all installed MIUs prior to the AMI System Acceptance Date.
 - iii. AMI System Software Services implementation and integration shall commence on Effective Date and the O&M for AMI System Software Services shall commence at AMI System Software Final Acceptance or at AMI System Acceptance Date whichever is earlier.
- C. Renewal Term(s). At PMA's sole option, the O&M Services Term may be renewed for all or part of the AMI System, for up to a total of three (3) additional terms of one (1) year each, upon the same terms and conditions, including cost (subject to escalation as provided in Exhibit G and any additional VENDOR costs and fees due to a renewal for only a portion of the AMI System), as set forth in this Contract; on condition that PMA provides VENDOR notice of its intent to renew for one (1) or more years, not later than one hundred and eighty (180) days prior to the expiration of the then current Term.
- D. Term. The Turnkey Installation Term, the O&M Services Term and any Renewal Term(s) shall be called collectively the "Term."

ARTICLE III GENERAL SCOPE OF SERVICE

- A. General Obligations.
1. VENDOR's Obligations. During the Term, VENDOR, by itself, or through subcontractors approved by PMA, shall be fully responsible and shall provide all AMI Project Services required by this Contract and the Statement of Work, attached as Exhibit E. VENDOR shall perform and provide all such AMI Project Services in accordance with industry practices and in accordance with this Contract and the Statement of Work.
 2. PMA's Obligations.
 - i. PMA shall itself, or acting through the City, provide support for VENDOR to perform its obligations. PMA may designate the City as the recipient of VENDOR's Deliverables as set forth below in Sections B and C and as the entity to perform PMA's obligations under this Contract; except that no such designation will relieve PMA of its obligations under this Contract. Such designations are as identified in this Contract and the Statement of Work and

as subsequently may be identified by PMA in writing. PMA will make available to VENDOR the facilities, equipment, furnishings, fixtures, and other materials and information necessary or reasonably requested by VENDOR for VENDOR's performance of the AMI Project Services as provided in this Contract, including the Statement of Work. PMA will ensure that City performs City's obligations under this Contract. If PMA fails to perform any of its responsibilities set forth in this Contract (including those set forth in this Article III. Section A.2), VENDOR will be excused from performing any obligations under this Contract only to the extent that the VENDOR is impeded by such failure.

- ii. If PMA causes a delay in VENDOR's performance under this Contract after the MIU Installation Commencement Date, VENDOR provides notice to PMA that PMA is causing a delay and a description of the delay, and that delay persists more than 30 days from the date of the notice, PMA will pay VENDOR its actual costs related to the delay.
- iii. PMA and City will not amend, modify, or otherwise change the City-PMA Agreement, to the extent that such changes will materially affect VENDOR's or PMA's rights or obligations under this Contract, without VENDOR's prior written approval.

3. MDM Performance.

- i. To the extent that VENDOR's performance under this Contract is prevented, delayed, or impeded by the MDM or the MDM Provider, VENDOR will be excused from any such performance (a) only for so long as performance is prevented, delayed, or impeded, and (b) if VENDOR has materially complied with Article III. Section A.3.ii with respect to the MDM or MDM Provider's performance that prevented, delayed, or impeded VENDOR's performance. For example, VENDOR will incur no penalties (including any reduction in fees) for a failure to meet Performance Guarantees to the extent the failure is caused by the MDM or the MDM Provider, and PMA and City will have no termination rights as a result of such failure.
- ii. VENDOR will (a) use reasonable efforts to manage the MDM Provider's performance under this Contract, including through any applicable terms and conditions of VENDOR's agreement with the MDM Provider; and (b) will not intentionally prevent, delay, or impede the MDM Provider's performance and (c) use reasonable efforts to inform PMA of material performance issues of the MDM Provider.
- iii. PMA and City will work with VENDOR in good faith to address any such performance issues disclosed by VENDOR, which may include selecting an alternate MDM Provider.

- iv. If PMA determines to transition to an alternate MDM Provider, VENDOR will perform certain services to enable the transfer at VENDOR's then-current rates or other rates agreed by the Parties. The Parties will mutually agree upon a plan for the transfer, which will contain a description of the Parties' obligations necessary to complete the transfer, any milestones, and any applicable fees and costs. The plan will, without limitation, provide for redundancy or parallel processing as may be necessary to continue to meet the requirements of this Contract.

B. VENDOR Deliverables. VENDOR shall provide the AMI Project Services, as listed below and detailed in the Statement of Work. AMI Project Services shall include shipping, transportation, warehousing, staging, disposal of batteries, and fabrication, in each case as required in providing the AMI Project Services.

- 1. AMI System Hardware and Software.
 - i. Hardware. Network DCUs and retrofitted MIUs, including appurtenant components of the Network DCUs and retrofitted MIUs.
 - ii. AMI System Software. AMI System Headend, MDM, customer service interface, customer portal, and the Work Order Management System.
- 2. AMI System Installation and Project Management.
 - i. AMI Project Services planning.
 - ii. Network design and installation of DCUs.
 - iii. Develop, implement and document an effective integration of the AMI System with all required interfaces, as detailed in the Statement of Work.
 - iv. Training and system documentation.
 - v. Project Management Services
- 3. O&M Services.
 - i. MIU Maintenance.
 - ii. Network operation and maintenance.
 - iii. AMI System Software Services.

C. Other VENDOR Deliverables. VENDOR shall provide the Other Project Services, as listed below and detailed in the Statement of Work.

- 1. AMR to AMI Transition Meter Reading.
 - i. VENDOR shall provide AMR system meter data during transition from automatic meter reading ("AMR") to AMI starting on or before September 2019 until AMI System Acceptance ("AMR to AMI Transition Meter Reading Services"). VENDOR shall maintain the AMR service levels as set forth in the Statement of Work.

2. Meters.
 - i. Provision, delivery and integration of City-approved AMI System compatible water meters manufactured by VENDOR as needed and requested by PMA during the Term.
 - ii. As requested by the City and in a timely manner as provided in the Statement of Work, VENDOR shall integrate the AMI System with a New Water Meter if (a) the New Water Meter vendor integrates its New Water Meter in accordance with VENDOR's design requirements; (b) the City commits to purchasing a certain minimum number of units of the New Water Meter (10,000 for Small Meters and 250 for Large Meters); or (c) the New Water Meter meets the most recent issue of the UI-1203 protocol and are from the approved manufacturer list set forth in Exhibit R (Compatible Meters). "New Water Meter" means a single type of water meter that is not manufactured by VENDOR.
3. Additional Services. VENDOR shall provide Additional Services as requested by PMA in accordance with the Change Order process as provided in Section E below.

D. Permits and Licenses.

1. VENDOR shall at all times during the Term obtain and maintain all permits, licenses, and approvals necessary to fulfill its obligations under this Contract.
 - i. FCC License. VENDOR shall obtain and maintain the FCC License and sublease the same to PMA in accordance with the terms of the Spectrum Manager Lease.
2. VENDOR shall promptly provide PMA with copies of all such permits, licenses and approvals upon request from PMA.
3. PMA and City represent and warrant that no permits (however referred to) are required for VENDOR's or any subcontractors' installation of MIUs.

E. Changes to the AMI Project Services.

1. Either Party may, from time to time, propose changes to the AMI Project Services in writing, in accordance with this Contract and the Statement of Work. Such changes may include modification of services and deliverables under the AMI Project Services, modification of AMI Project Schedule, the order or priority of particular services, and changes in the allocation of VENDOR or PMA resources to particular AMI Project Services ("Change(s)"). It is anticipated that such Changes may include modifications proposed due to technological innovations. The Parties will work in good faith to mutually agree in writing to implement the Change ("Change Order.") Neither Party will be obligated to comply with any Change or Change Order unless the Change is set forth in a Change Order executed by both Parties.

2. During the Term, VENDOR shall exercise good faith efforts to apprise PMA of new technology and other changes that may enable VENDOR to perform the AMI Project Services in a more cost-efficient manner and/or improve the effectiveness, flexibility, capabilities or efficiency of the AMI Project Services. VENDOR and PMA will jointly review and analyze the possible implementation of such improvements as Changes.
3. It is understood by PMA and VENDOR that the City may, at any time, make modifications and/or replacements to the Billing System and Work Order Management System. PMA shall keep VENDOR informed of such modifications and/or replacements and shall use good faith efforts to provide VENDOR with an opportunity to review such modifications and/or replacements in advance of implementation. VENDOR will have no obligation to modify the AMI Project Services to accommodate such a modification or replacement until the Parties execute a Change Order in accordance with Article III. Section E.1.
4. It is understood by PMA and VENDOR that the City may, at any time, replace the MDM and the customer portal systems. VENDOR will have no obligation to modify the AMI Project Services to accommodate such replacement until the Parties execute a Change Order in accordance with Article III. Section E.1.
5. Any modifications to the AMI System necessary to enable VENDOR to comply with Applicable Laws shall be made by VENDOR at its own cost and expense if such changes in Applicable Laws are generally applicable to VENDOR's business and/or its products; however, if such changes are unique to PMA, the City, or the Commonwealth of Pennsylvania, the modifications shall be at PMA's cost and expense. PMA (on its own behalf and on behalf of the City) agrees to use its best efforts to support VENDOR's efforts in obtaining an exemption from any Applicable Laws promulgated by the City which adversely affect VENDOR's ability to perform in accordance with the Contract and Statement of Work.

F. Changes in MILs or DSLs.

1. During the Term, PMA shall inform VENDOR of any changes in the total number of DSLs or MILs. PMA shall have the right to increase or decrease the total number of DSLs or MILs. PMA may purchase and install MIUs at additional locations. In the event that PMA no longer requires AMI Project Services at an MIL, PMA may remove the MIU installed at such MIL and shall notify VENDOR of such removal. PMA, at its sole option, may reinstall the MIU and/or cause them to be reinstalled at a new location or otherwise dispose of the MIU.
2. If an MIU is removed by PMA and subsequently reinstalled by PMA, PMA will verify that the MIU is properly functioning following re-installation and shall use the MIU test procedures provided in the Statement of Work.

- G. VENDOR's Reports. VENDOR shall prepare and submit to PMA written reports in accordance with the Statement of Work, or as mutually agreed to by the Parties.
- H. Personnel and Qualifications.
1. All personnel used by the Parties or their respective contractors or subcontractors in the performance of the AMI Project Services shall be qualified for the performance of the work, by training, licenses, or certifications as required by this Contract and the Applicable Laws, necessary to perform their assigned tasks.
 2. As permitted by Applicable Law, all MITs shall be subject to a drug and alcohol-free policy as established by the Parties for the AMI Project Services.
 3. PMA may designate a WDA to work with VENDOR to identify, recruit and train qualified MITs. VENDOR shall coordinate with the designated WDA for the hiring of MITs and shall promptly report any concerns to PMA about the performance of the MITs. VENDOR will be excused from performing any obligations under this Contract that are impeded by a WDA designated by PMA only to the extent that the WDA materially impedes VENDOR's ability to perform.
- I. VENDOR's Senior Account Manager. VENDOR will assign a qualified Senior Account Manager, who shall be the primary contact with PMA for the AMI Project Services and will coordinate with the City's representatives regarding the performance of the AMI Project Services. PMA shall be kept fully informed of project commitments and schedules by the Senior Account Manager. VENDOR shall promptly inform PMA of proposed and anticipated changes in the assignment of the Senior Account Manager. PMA shall have the right to review the qualifications and suitability of any proposed new or substitute Senior Account Manager prior to assignment.
- J. Subcontractors. It is understood that VENDOR has proposed the services of specific subcontractors to perform certain work under this Contract. In the event that it is necessary to replace a previously designated subcontractor, VENDOR shall promptly inform PMA in writing of the proposed changes in the designation of the subcontractors and the proposed new subcontractors, and shall request PMA's approval of such changes. If such changes involve minority, women, or disabled business enterprise (M/W/DSBE) subcontractors, VENDOR shall immediately inform the City and request approval from the City's Office of Economic Opportunity.
- K. Economic Opportunity Plan. This Contract is subject to and VENDOR must comply with the Economic Opportunity Plan ("EOP") requirements as described in the Philadelphia Code Section 17-1603(1). The EOP for this Contract is attached to this Contract as Exhibit F. For clarity, the Parties and the City agree that Best and Good Faith Efforts (as defined in the

EOP) are rebuttably presumed met under this Contract and the EOP when VENDOR meets the commitments outlined in this Section K.

1. VENDOR will utilize the following M/W/DSBE firms as subcontractors under this Contract for the Turnkey Installation in the percentages specified:

<u>FIRM</u>	<u>W/MBE</u>	<u>Percentage</u>	<u>Type of Work</u>
PRWT	MBE	17.5%	MIU installation
Torres Credit Services	MBE	4.1%	MIU installation
Urban Harvest	MBE	2.6%	Network installation
Black IPO	MBE	3.0%	Project management
Probitas Tech	MBE	3.0%	MIU retrofit
Etinoff	WBE	5.0%	MIU installation

**ARTICLE IV
TURNKEY INSTALLATION**

- A. Network DCUs Installation. During the Turnkey Installation Term, VENDOR shall install the DCUs in accordance with Article II. Section A., the Statement of Work and AMI Project Schedule.
- B. AMI System Hardware and Software. During the Turnkey Installation Term, VENDOR shall install and/or provide the AMI System hardware and software in accordance with Article III. Section B. and the Statement of Work.
- C. MIU Retrofit.
 1. VENDOR shall retrofit the MIUs with the registers for the existing Badger meters or other Meters. VENDOR shall perform the retrofit activity at VENDOR’s facility located in Uniontown, PA.
 2. PMA shall cause the City to provide a stock of no less than 20,000 registers to VENDOR on or around the Effective Date and in accordance with the Statement of Work. At VENDOR’s request, PMA shall cause the City to provide an additional stock of up to 20,000 of the registers to VENDOR. As a credit against Compensation, VENDOR will pay PMA the actual price City paid for the additional stock of registers without markup.
 3. During the O&M Services Term, if PMA or City intends to purchase any registers that are substantially similar to the registers that remain in the Seed Stock during the O&M Services Term, PMA or City will purchase from VENDOR any registers that remain in the Seed Stock before purchasing any substantially similar registers from a party other than VENDOR. For each register that PMA or City purchases from

VENDOR under this Section C.3, PMA or City will pay VENDOR the actual price that VENDOR paid for the register without markup.

D. MIU Installation.

1. During the Turnkey Installation Term, following the Network Acceptance, VENDOR shall install MIUs in accordance with Article II. Section A., the Statement of Work and AMI Project Schedule. VENDOR shall have a warehouse and installation staging facility located in Philadelphia.
2. Scheduling of Installations. VENDOR shall be responsible for scheduling of installations at the DSLs.

E. System Integration. During the Turnkey Installation Term, VENDOR shall develop and implement all system integration required for the AMI System in accordance with Article III. Section B. and the Statement of Work.

F. Ownership of Turnkey Installation.

1. Ownership of Network. Title to and ownership of each DCU and each other appurtenant components of the Network will pass to PMA upon PMA's inspection and VENDOR's demonstration of the DCU's and the other component's functionality in accordance with the Network Acceptance Test Plan in the Statement of Work for each such DCU or other component. For purposes of this Section F.1 and Article VI. Section C, VENDOR will be deemed to have demonstrated the functionality, and PMA will be deemed to have accepted the DCU or other component, if PMA fails to inspect the DCU or component within 15 days of installation or fails to reasonably accept the DCU or component within 15 days of the date VENDOR addresses any PMA objection to the DCU or component. Risk of loss will also pass to PMA upon PMA's acceptance of each DCU or component.
2. Ownership of MIUs. Title to and ownership of MIUs will pass to PMA upon installation. Risk of loss will also pass to PMA upon installation.

G. Completion of Routes.

1. VENDOR shall complete the installation of MIUs on Routes to a level of 80% of all DSLs on each Route (VENDOR-installed MIUs and Fortuitous Installations combined). PMA or City will provide VENDOR with seven (7) Routes prior to the MIU Installation Commencement Date. The Routes provided prior to MIU Installation Commencement Date will include at least 60,000 DSLs. PMA will provide VENDOR with an additional Route after VENDOR has completed installation of 80% of DSLs on each initial or additional Route. Thereafter, VENDOR may continue to install MIUs in a Route for a period not to exceed 150 days from the MIU Installation Commencement Date or the date the additional Route was provided

- to the VENDOR by PMA. After the 150 day period, VENDOR may request an extension to continue installations, stating reasons that VENDOR believes it will be successful in installing additional MIUs in the Route. PMA shall reasonably approve such extensions.
2. Each additional Route will be contiguous and adjacent to a Route previously provided to VENDOR. If VENDOR reasonably believes that the Routes provided to VENDOR prevent VENDOR from meeting any Installation Benchmark or Guaranteed Installation, PMA or City will provide VENDOR with additional Routes.

H. Guaranteed Installations.

1. During the Turnkey Installation Term, VENDOR shall install MIUs at no fewer than the lesser of: (i) 416,000 DSLs; or (ii) 85% of the DSLs provided to VENDOR for installation (“Guaranteed Installation”). For purposes of calculating those MIUs installed by VENDOR pursuant to this Section and Article IX, Section B., Fortuitous Installations shall be deemed installed by VENDOR. PMA has no obligation to install MIUs at DSLs. Notwithstanding that VENDOR has achieved the Guaranteed Installation, VENDOR shall continue to use good faith efforts to install as many additional MIUs as possible in excess of the Guaranteed Installation during the Turnkey Installation Term.
2. VENDOR shall meet the following Installation Benchmarks for VENDOR-installed MIUs:
 - i. 50,000 MIUs within six (6) months of the MIU Installation Commencement Date;
 - ii. 190,000 MIUs within fourteen (14) months of the MIU Installation Commencement Date; and
 - iii. 270,000 MIUs within twenty (20) months of the MIU Installation Commencement Date.

If VENDOR does not meet the Installation Benchmarks, VENDOR shall notify PMA of the failure and shall within fifteen (15) days of such breach, provide PMA with a plan for improving installation performance to a minimum VENDOR installation rate of 14,000 MIUs per month. PMA will reasonably accept the plan, require revisions to the plan or reject the plan if it does not reasonably support an installation rate of 14,000 MIUs per month. If PMA accepts the plan, VENDOR shall have 60 days from VENDOR’s receipt of plan acceptance by PMA to demonstrate that the plan has resulted in a VENDOR installation rate of at least 14,000 MIUs per month. It will be an Event of Default if PMA reasonably rejects the plan or the VENDOR fails to demonstrate installation performance at a rate of at least 14,000 MIUs per month.

3. In the event that VENDOR fails to meet the Guaranteed Installation during the Turnkey Installation Term and VENDOR is not otherwise in default of the Contract,

- the Turnkey Installation Term will be extended for an additional period not to exceed twelve (12) months.
4. If there has not been a Force Majeure Event and VENDOR fails to meet the Guaranteed Installation, VENDOR shall be subject to a delay credit of ONE HUNDRED THOUSAND DOLLARS (\$100,000) per month for each additional month for the first three months beyond the Turnkey Installation Term that VENDOR has not met the Guaranteed Installation and TWO HUNDRED THOUSAND DOLLARS (\$200,000) for any additional months beyond three months after the Turnkey Installation Term that VENDOR has not met the Guaranteed Installation; except that the total delay credits will not exceed NINE HUNDRED THOUSAND DOLLARS (\$900,000).
- I. AMI System Software Acceptance.
1. Prior to or simultaneously with Network Acceptance, PMA shall accept the software implementation and integration described in the Statement of Work (“Software Implementation”) upon VENDOR’s demonstration to PMA that VENDOR has completed the Software Implementation in accordance with the applicable Network Acceptance criteria and procedures in the Statement of Work.
 2. Upon PMA’s acceptance of Software Implementation, PMA shall issue a certificate of acceptance to VENDOR indicating that acceptance of the Software Implementation has occurred.
- J. AMI System Turnkey Installation Acceptance.
1. Subject to the provisions of Article IX. Section B., PMA shall accept the Turnkey Installation upon VENDOR’s demonstration to PMA that:
 - i. VENDOR has completed the Turnkey Installation in accordance with the AMI System Acceptance criteria as set forth in the Statement of Work; and
 - ii. The AMI System is operating in accordance with both the AMI System Acceptance criteria and the Performance Guarantees, including the provisions of Article VII. Sections A and C.
 2. Upon AMI System Acceptance, PMA shall issue a certificate of acceptance to VENDOR indicating that AMI System Acceptance has occurred.
- K. Installation Warranty. For one year after installation, VENDOR warrants that its installation of each MIU will be completed in accordance with the MIU Installation Procedure set forth in the Statement of Work.
- L. Public Outreach and Marketing. As described in the Statement of Work, City and VENDOR shall be responsible for public outreach and other marketing efforts to facilitate the Turnkey Installation and for implementation of the public outreach and marketing plan contained in the Statement of Work. All additional public outreach and marketing efforts by VENDOR

are subject to timely approval by City. City shall coordinate with VENDOR to maximize the effectiveness of the public outreach and marketing efforts as set forth in the Statement of Work.

M. Installation Procedure. Installation of the Network DCUs and MIUs shall be performed in accordance with the Statement of Work.

N. Equipment, Training and Supervision.

1. In accordance with the Statement of Work, VENDOR shall be responsible for providing all Equipment, vehicles, training and supervision of its employees and subcontractors necessary for the installation of the MIUs.

2. In accordance with the Statement of Work, VENDOR shall be responsible for providing Equipment and training for qualified City installers.

O. Good Workmanship and Use of Care. VENDOR shall, in the installation of the MIUs, exercise reasonable care upon entry onto the customer's premises and use reasonable efforts to protect the customer and the customer's premises from any harm related to VENDOR's activities under this Contract.

P. Inspection. In addition to the provision titled "Inspection" in Article XII. Section G., VENDOR shall permit PMA or its representatives subject to written confidentiality obligations in accordance with Article XI. Section M., at PMA's sole expense, to inspect all aspects of the AMI Project and monitor the progress of the Turnkey Installation, provided that such inspection shall not obstruct VENDOR's performance of the AMI Project Services.

Q. Liens and Encumbrances. Before commencement of work related to this Contract or commencement of services by any particular subcontractor, VENDOR shall file in the Office of the Prothonotary of the Court of Common Pleas of Philadelphia effective waivers of mechanics' and materialmen's liens, on behalf of itself and any and all contractors and subcontractors, in form reasonably satisfactory to PMA. Further, VENDOR shall, in addition, include effective waivers of mechanics' liens in all contracts with its contractors and materialmen, and shall require that such waivers are included in all contracts between any contractor and its subcontractors and require in any such contracts the execution by each subcontractor and materialman of a release of mechanics' liens, in recordable form, upon final payment. VENDOR shall indemnify PMA and City for any injury or expenses, including reasonable fees and expenses of attorneys incurred by PMA or City, due to the filing of any such lien related to VENDOR's or its subcontractors' performance under this Contract or VENDOR's failure to have such lien discharged.

**ARTICLE V
OPERATIONS & MAINTENANCE SERVICES**

A. Scope of Services.

1. VENDOR shall provide the AMI Project Services for the Term in accordance with the performance standards required by this Contract and the Statement of Work.
2. VENDOR shall provide all AMI System modifications and replacements as explicitly required by this Contract and the Statement of Work during the Term.

B. Collection and Delivery of Meter Data.

1. VENDOR shall provide Meter Data at least on a daily basis for all MILs by Route, in accordance with this Contract and the Statement of Work. Notwithstanding the foregoing, VENDOR shall not be responsible for: (i) providing accurate Meter Data for Tamper Locations, (ii) Meter Data from MILs that have been referred to PMA for service calls which have not been completed, or (iii) inability to provide Meter Data due to a Force Majeure Event in accordance with Article IX. Section I.
2. VENDOR shall be responsible for all costs and expenses related to the collection and delivery of Meter Data to the PMA as required under this Contract.

C. Data by Route.

1. VENDOR shall collect and deliver Meter Data on a monthly basis for each Route during the designated period of time that said Meter Data can be accepted into the Billing System, in accordance with the Statement of Work.
2. In the event that the Billing System is modified with respect to the Route or an equivalent, VENDOR shall provide Meter Data as requested in accordance with the requirements of the modified Billing System and in accordance with Article III. Section E.3.

D. Missed Meter Data Report.

1. VENDOR shall issue a Missed Meter Data Report for each Route.
2. VENDOR shall review the Missed Meter Data Report every Business Day. On a frequency determined by PMA, VENDOR shall provide PMA with the Missed Meter Data Report.
3. PMA may also determine that certain Missed Meter Data Locations require investigation.

E. Response to Missed Meter Data Report.

1. Upon request by VENDOR, PMA shall be responsible for the initial investigation of, including a first service call to, the Missed Meter Data Location. PMA shall be responsible for up to two hundred (200) Missed Meter Data Location first service calls that have been requested by VENDOR for each Billing Month.

- i. In the event that the number of required Missed Meter Data Location first service calls necessitated by Missed Meter Data, excluding those caused by actions of a third party at the MIL or due to meter malfunction, exceeds two hundred (200) in any Billing Month, VENDOR shall, at PMA's sole option, be required to make all additional service calls and shall report its investigation findings to PMA.
 - ii. VENDOR shall issue a credit of THIRTY DOLLARS (\$30.00) to PMA for each service call above the first 200 Missed Meter Data Location service calls that was required by Missed Meter Data (excluding actions of a third party at the MIL or meter malfunctions) within sixty (60) days of the completion of VENDOR's failure analysis, and such credit may be applied against PMA payment to VENDOR for monthly O&M Service fees.
 - iii. Notwithstanding the foregoing, should PMA require VENDOR to make additional service calls and in the event that VENDOR shall determine that the Missed Meter Data Location status is caused by Force Majeure, actions of a third party at the MIL, or due to meter malfunction, PMA shall reimburse VENDOR THIRTY DOLLARS (\$30.00) for each service call made by VENDOR.

2. PMA shall direct the City to make a preliminary determination of the Missed Meter Data status.
 - i. If City determines that the Missed Meter Data status was caused by Force Majeure or the actions of a third party at the MIL, PMA shall replace the MIU at its own cost and expense.
 - ii. If City determines that the MIU at a Missed Meter Data Location is functioning properly, PMA shall refer the Missed Meter Data Location to VENDOR for failure analysis.
 - iii. If City determines that the Missed Meter Data status was caused by a malfunction of the MIU, City may replace the MIU, and shall return the MIU to VENDOR for failure analysis. If VENDOR confirms an MIU failure, VENDOR shall be responsible in accordance with MIU Maintenance under Section G. below.

3. As set forth in the Statement of Work, VENDOR shall supply PMA with an adequate inventory of MIUs to be used by PMA to replace malfunctioning MIUs. Title and risk of loss of the MIUs held in PMA inventory shall transfer to PMA upon shipment. In accordance with this Contract, VENDOR shall repair/replace any MIUs that cause Missed Meter Data status. In the event that VENDOR disputes that the Missed Meter Data status was caused by a malfunction of the MIUs, VENDOR shall issue an investigation report to PMA identifying the cause of the Missed Meter Data within

- thirty (30) days of the referral or return of an MIU by PMA to VENDOR for failure analysis. PMA shall have the right to review and dispute VENDOR's failure analysis findings. Notwithstanding the foregoing, VENDOR shall not be responsible for reimbursement to PMA for service calls: (i) due to Tamper status, (ii) due to a Force Majeure Event in accordance with Article IX. Section I. or (iii) due to a meter malfunction.
- F. Network Maintenance. VENDOR shall operate and maintain the Network, including preventative maintenance, software upgrades, repair and replacement of failed equipment, and installation of additional DCUs as required for the AMI System to perform in accordance with this Contract and Statement of Work during the Term.
- G. MIU Maintenance.
1. Except as provided in Section G.2. below, VENDOR shall maintain, repair and replace MIUs as required for the AMI System to perform in accordance with this Contract and Statement of Work during the Term.
 2. PMA shall be responsible for repair or replacement of MIUs that are lost or damaged through the negligence or willful acts of any person, except VENDOR, its contractors, subcontractors, consultants, employees or agents.
- H. AMI System Software Maintenance. VENDOR shall operate and maintain all AMI System Software as required for the AMI System to perform in accordance with this Contract and Statement of Work during the Term.
- I. Performance Standards. VENDOR shall provide all O&M Services in accordance with this Contract and shall satisfy the Performance Guarantees set forth in Article VII.

ARTICLE VI COMPENSATION AND PAYMENTS

- A. Compensation and Payments.
1. PMA shall compensate VENDOR for AMI Project Services in accordance with the provisions of this Article VI. Such payments, at the rates specified in this Contract and the Rate Sheet, attached as Exhibit G, shall be referred to as "Compensation."
 2. Except as explicitly set forth in this Contract, PMA shall not have the right to offset any payment due to VENDOR as Compensation. The Parties will resolve any dispute regarding Compensation in accordance with Article X (Dispute Resolution).
- B. Compensation for AMI System Software. Except for Compensation described in Section F.4 in this Article VI, upon Network Acceptance by PMA in accordance with the Network

Acceptance Test Plan in the Statement of Work, PMA shall pay VENDOR all Compensation set forth in the Rate Sheet related to setup and implementation of AMI System Software Services.

C. Compensation for Turnkey Installation of Network.

1. Upon PMA inspection and VENDOR demonstration of DCU functionality in accordance with the Network Acceptance Test Plan in the Statement of Work (“Provisional Acceptance of DCUs”), VENDOR may invoice and PMA shall issue payment to VENDOR in an amount equal to 100% of the Compensation set forth in the Rate Sheet.
2. In the event VENDOR needs to add more DCUs than as provided in the Statement of Work to meet performance standards, VENDOR shall be responsible for all additional costs; except PMA shall be responsible for any additional costs resulting from (i) an expansion of the City’s service outside of the current geographical territory or (ii) any network equipment damage caused by a Force Majeure event.

D. Compensation for Turnkey Installation of MIUs. Upon AMI System Acceptance, PMA shall pay to VENDOR the following sums, less any payments made to VENDOR pursuant to Section E (Provisional Acceptance Payments for Turnkey Installation of MIUs) below:

1. For VENDOR-installed MIUs, for each MIL from which Meter Data has been successfully delivered to the Billing System Interface:
 - i. if the MIU is a retrofitted MIU (described as a “510MP SmartPoint” in the Rate Sheet) (“*Retrofitted MIU*”): ONE HUNDRED THIRTY-ONE DOLLARS AND EIGHTY-TWO CENTS (\$131.82);
 - ii. if the MIU is a single port MIU and described as a “510M SmartPoint – Wired Unit” in the Rate Sheet (“*510M MIU*”): ONE HUNDRED TWENTY-FIVE DOLLARS AND FIFTY CENTS (\$125.50); and
 - iii. if the MIU is a single port MIU and described as a “520M SmartPoint – Wired Unit” in the Rate Sheet (“*520M MIU*”): ONE HUNDRED THIRTY DOLLARS AND FIFTY CENTS (\$130.50).
2. For all City-installed MIUs, including Fortuitous Installations, for each MIL from which Meter Data has been successfully delivered to the Billing System Interface:
 - i. if the MIU is a Retrofitted MIU: FIFTY-EIGHT DOLLARS AND THIRTY-TWO CENTS (\$58.32);
 - ii. if the MIU is a 510M MIU: FIFTY-TWO DOLLARS (\$52.00); and
 - iii. if the MIU is a 520M MIU: FIFTY-SEVEN DOLLARS (\$57.00).
 - iv. Notwithstanding the foregoing, in the event that the VENDOR-installed MIUs and the Fortuitous Installations of MIUs together do not meet the Guaranteed Installation during the Turnkey Installation Term or any extension Turnkey

Installation Term, PMA shall receive a credit of TEN DOLLARS (\$10.00) for each City-installed MIU in excess of 15% of the Installation Total.

E. Provisional Acceptance Payments for Turnkey Installation of MIUs.

1. Prior to System Acceptance by PMA, PMA shall make payments to VENDOR upon VENDOR's demonstration of successful installations by VENDOR of MIUs for each Route in accordance with the subsections E.1.i, ii, and iii below, which together shall constitute provisional acceptance of a Route ("Provisional Acceptance of a Route"):
 - i. VENDOR has installed MIUs at no fewer than 50% of DSLs for the Route;
 - ii. The Route meets the Guaranteed Accuracy performance standard set forth in Article VII. Section A. and the Statement of Work; and
 - iii. VENDOR has successfully provided provisional Meter Data for the Route to the Billing System Interface.

MIUs installed in a Route after Provisional Acceptance of a Route may be submitted for payment with invoices in accordance with Article VI. Section F.

2. Upon demonstration of the criteria set forth in Section E.1.i., ii., and iii. above, PMA shall issue payment to VENDOR of:
 - i. for each VENDOR-installed MIU in the Route for which there has been Provisional Acceptance of a Route:
 - a) if the MIU is a Retrofitted MIU: ONE HUNDRED TWENTY FIVE DOLLARS AND NINETY NINE CENTS (\$125.99)
 - b) if the MIU is a 510M MIU: ONE HUNDRED NINETEEN DOLLARS AND SIXTY-SEVEN CENTS (\$119.67); and
 - c) if the MIU is a 520M MIU: ONE HUNDRED TWENTY-FOUR DOLLARS AND SIXTY-SEVEN CENTS (\$124.67).
 - ii. for each City-installed MIU, including Fortuitous Installations, in a Route for which there has been Provisional Acceptance of a Route:
 - a) if the MIU is a Retrofitted MIU: FIFTY TWO DOLLARS AND FIFTY CENTS (\$52.50);
 - b) if the MIU is a 510M MIU: FORTY-SIX DOLLARS AND SEVENTEEN CENTS (\$46.17); and
 - c) if the MIU is a 520M MIU: FIFTY-ONE DOLLARS AND SEVENTEEN CENTS (\$51.17).
3. Upon the installation by VENDOR of 208,000 MIUs within 15 months of the MIU Installation Commencement Date, and provided that the Performance Guarantees of Article VII. Section A. are achieved, PMA shall issue payment to the VENDOR of SIX HUNDRED FIVE THOUSAND TWO HUNDRED EIGHTY DOLLARS (\$605,280) for the VENDOR-installed MIUs and TWO DOLLARS AND NINETY ONE CENTS (\$2.92) for each City-installed MIU, including Fortuitous Installations. Thereafter the payment for each MIU will be as follows:

- i. for each VENDOR-installed MIU in a Route for which there has been Provisional Acceptance of a Route:
 - a) if the MIU is a Retrofitted MIU: ONE HUNDRED TWENTY EIGHT DOLLARS AND NINETY CENTS (\$128.90);
 - b) if the MIU is a 510M MIU: ONE HUNDRED TWENTY-TWO DOLLARS AND FIFTY-EIGHT CENTS (\$122.58); and
 - c) if the MIU is a 520M MIU: ONE HUNDRED TWENTY-SEVEN DOLLARS AND FIFTY-EIGHT CENTS (\$127.58).
 - ii. for each City-installed MIU, including Fortuitous Installations, for which there has been Provisional Acceptance of a Route:
 - a) if the MIU is a Retrofitted MIU: FIFTY FIVE DOLLARS AND FORTY ONE CENTS (\$55.41);
 - b) if the MIU is a 510M MIU: FORTY-NINE DOLLARS AND EIGHT CENTS (\$49.08); and
 - c) if the MIU is a 520M MIU: FIFTY-FOUR DOLLARS AND EIGHT CENTS (\$54.08).
4. Upon AMI System Acceptance by PMA, PMA shall issue payments to VENDOR for any remaining Compensation due to VENDOR in accordance with the compensation for MIUs in Article VI. Sections D.1 and. D.2.

F. Turnkey Installation Invoices.

1. Mobilization Cost. Following the Effective Date, VENDOR may submit an invoice for payment for mobilization costs in an amount not to exceed THREE MILLION, US DOLLARS (\$3,000,000.00) (“Mobilization Payment”). The Mobilization Payment shall be for actual costs related to AMI Project Services. Commencing on the MIU Installation Commencement Date, PMA shall be entitled to offset not more than 10% or ONE HUNDRED TWENTY FIVE THOUSAND DOLLARS (\$125,000.00), whichever is lesser, in each payment due to VENDOR for Provisional Acceptance of a Route(s) until PMA has fully offset the total amount of the Mobilization Payments made to VENDOR. VENDOR and PMA acknowledge that the Mobilization Payment shall be deemed advance Compensation payments to VENDOR, and PMA shall be entitled to seek reimbursement of all such Mobilization Payments that are not offset by payments due to VENDOR.
2. On or after the Effective Date, VENDOR may submit invoices to PMA for costs related to the Performance and Payment Bond.
3. VENDOR may submit Turnkey Installation invoices for the DCU installations upon Provisional Acceptance of DCUs no more frequently than monthly.
4. Turnkey Installation Software invoice. Except for AMI System Software Services set forth under the heading “Hosted Services” in the Rate Sheet, VENDOR may submit

- invoices for AMI System Software Services (including invoices for all related implementation services), in accordance with the Rate Sheet, monthly in arrears for the AMI System Software Services rendered in the preceding month.
5. Except as set forth in Section F.4., VENDOR may submit Turnkey Installation invoices for Project Management Services, in accordance with the Rate Sheet, monthly in arrears for Project Management Services rendered in the preceding month.
 6. In accordance with Article VI. Section E., upon Provisional Acceptance of a Route, VENDOR may submit an invoice for the actual number of MIUs at the MILs for each Route. Invoices for MIUs for Routes that have already met Provisional Acceptance of a Route may be submitted at the same time or separately, but no more frequently than twice monthly. Such Turnkey Installation invoice(s) shall provide the following information for each MIL: the Route, the Route number, the serial numbers of each MIU and the date of the installation.
 7. VENDOR shall submit to PMA all Turnkey Installation invoice(s) no later than one hundred and twenty (120) days after the termination of the Turnkey Installation Term.
 8. Within forty-five (45) days of its receipt of a Turnkey Installation invoice, PMA shall cause VENDOR to be paid the amount set forth in such Turnkey Installation invoice ("Turnkey Installation Fee Due Date").
 9. PMA has the right to object in good faith to a Turnkey Installation invoice within thirty (30) days of receipt thereof. In the event that PMA objects to a Turnkey Installation invoice, PMA shall pay the amount not in dispute and VENDOR and PMA shall undertake in good faith to resolve the dispute concerning the Turnkey Installation invoice.
 10. If PMA and VENDOR cannot agree as to the disputed amount within a thirty (30) day period beginning on the date that PMA objects to the Turnkey Installation invoice, the matter shall be submitted for resolution pursuant to Article X.
 11. In the event PMA fails to pay VENDOR in accordance with this Section F., VENDOR may suspend its performance under this Contract. Notwithstanding the foregoing, VENDOR may only exercise its right of suspension after the expiration of thirty (30) days after the Turnkey Installation Fee Due Date, provided further, that VENDOR has provided PMA no less than five (5) Business Days prior written notice of its intent to suspend and the amount in arrears due from PMA is greater than TWO MILLION FIVE HUNDRED THOUSAND DOLLARS (\$2,500,000.00). If VENDOR suspends installation pursuant to this Section, all time periods and milestones relating to the Turnkey Installation shall be extended equitably.

G. Compensation for O&M Services.

1. Subject to the provisions of subsection 2. and 3. below, PMA shall pay VENDOR in accordance with the Rate Sheet attached as Exhibit G. Invoicing and payment for such O&M Services shall be in accordance with Section G.4. below.

- Notwithstanding the foregoing, such payments shall not accrue sooner than Provisional Acceptance of the Route for which O&M Services have occurred.
2. Notwithstanding the provisions of subsection 1. above, in the event that the average of the Small Meter Data Delivery Success Rate and the Large Meter Data Delivery Success Rate for any Billing Month is less than 99%, PMA shall pay the amount of the Compensation set forth in the Schedule of Meter Data Delivery Success Rate Reduced Fees, attached as Exhibit H.
 3. Notwithstanding the provisions of subsection 1. and 2. above, in the event VENDOR fails to demonstrate Guaranteed Accuracy in accordance with Article VII. Section A., PMA shall not be required to compensate VENDOR for any Meter Data after such Event of Default and until such default has been fully cured for failure to achieve Guaranteed Accuracy. Notwithstanding the foregoing, PMA shall compensate VENDOR for such Meter Data that VENDOR is able to verify as accurate to PMA's satisfaction.
 4. O&M Service Fee Billing Statement.
 - i. For each Billing Month VENDOR shall render a Service Fee Billing Statement to PMA no earlier than the first day of the next Billing Month, which shall set forth the amount of the O&M Service fee to be paid to VENDOR. Charges shall be submitted only for Meter Data actually delivered to the Billing System Interface.
 - ii. VENDOR shall set forth in each Service Fee Billing Statement the total number of Meter Data that has been provided for the Billing Month.
 - iii. PMA shall have the right to object to a Service Fee Billing Statement within thirty (30) days of receipt thereof. In the event that PMA objects to a Service Fee Billing Statement, PMA shall pay the amount not in dispute and VENDOR and PMA shall undertake in good faith to resolve the dispute concerning the Service Fee Billing Statement. If PMA and VENDOR cannot agree as to the disputed amount within a thirty (30) day period, the matter shall be submitted for resolution pursuant to Article X.
 - iv. In the event that adjustments to a Service Fee Billing Statement are required, and the total amount, as adjusted, due from PMA or VENDOR for the period of inaccuracy varies from the total amount due as previously computed, and payment of the previously computed amount has been made, the difference in the amounts shall be reflected as adjustments in subsequent payments within two (2) Billing Months after PMA is notified of the adjustments.
 - v. Not later than sixty (60) days after its receipt of a Service Fee Billing Statement, PMA shall cause VENDOR to be paid the amount set forth in such Service Fee Billing Statement ("Service Fee Due Date"). In the event PMA fails to pay VENDOR in accordance with this Section G., VENDOR may suspend its performance under this Contract. Notwithstanding the foregoing,

VENDOR may only exercise its right of suspension after the expiration of thirty (30) days after the Service Fee Due Date, and further provided VENDOR has provided PMA no less than five (5) Business Days prior written notice of its intent to suspend and the amount in arrears due from PMA is greater than TWO HUNDRED AND FIFTY THOUSAND DOLLARS (\$250,000.00) for O&M Services.

5. No more than once during each year of the O&M Services Term, VENDOR may submit an invoice to PMA for costs related to the O&M Services Term Bond.
- H. Compensation for Additional MIUs. Any purchases of MIUs by PMA during the Term additional to those provided in the Turnkey Installation Term shall be in accordance with the Rate Sheet for MIUs attached as Exhibit G. Invoicing and payment for such additional MIUs shall be in accordance with Section G.4.
- I. Compensation for Equipment Upon Termination. Upon termination of this Contract (except for an Event of Default by PMA), PMA shall have the option to purchase, under terms mutually agreed by the Parties, all or any of the equipment that (1) is unique and specific to PMA, (2) is then in use in the AMI System or then in use by VENDOR for the provision of AMI Project Services, and (3) VENDOR has the right to sell to PMA. The purchase price for the aforesaid equipment shall be the fair market value as determined by an independent appraiser appointed by the Parties.
- J. Compensation for AMR to AMI Transition Meter Reading. PMA shall make payments to VENDOR for the AMR to AMI transition meter reading services in accordance with the Rate Sheet attached as Exhibit G.
- K. Compensation for Meters.
1. PMA shall make payments to VENDOR to compensate VENDOR for the VENDOR's provision of Meters to PMA.
 2. Upon receipt of a Meter lot delivered by VENDOR to PMA, PMA will test the Meter lot for accuracy. VENDOR will invoice for each Meter lot upon shipment to PMA. PMA will then make payment to VENDOR for the amount of the invoice within sixty (60) days of its receipt of such invoice.
 3. Notwithstanding the foregoing, PMA has the right to object to such invoice within thirty (30) days of receipt. In the event that PMA objects to such invoice, PMA shall pay the amount not in dispute, and VENDOR and PMA shall undertake in good faith to resolve the dispute. If PMA and VENDOR cannot agree as to the disputed amount within a thirty (30) day period, the matter shall be submitted for resolution pursuant to Article X.

- L. PMA Payments. Payment shall be made after VENDOR's timely submission of invoices to PMA, in the number, form and content described in this Contract, accompanied by such additional supporting data and documentation as the PMA may reasonably require. All payments to VENDOR shall be on checks drawn on PMA's accounts, or in a form mutually acceptable to the Parties.
- M. Credit to PMA. Upon successful completion of System Acceptance Test, VENDOR shall issue PMA a credit of TWO MILLION FIVE-HUNDRED THOUSAND DOLLARS (\$2,500,000.00) which PMA may apply toward monthly O&M Service Fees as follows: the lesser of 10% or ONE HUNDRED THOUSAND DOLLARS (\$100,000.00), of any monthly service invoice, until PMA has fully applied the total amount of the system acceptance test credit.

ARTICLE VII PERFORMANCE GUARANTEES

- A. Guaranteed Meter Data Delivery Success Rate and Guaranteed Accuracy.
1. VENDOR shall achieve a Meter Data Delivery Success Rate of not less than 99% separately for the Small Meter Data Delivery Success Rate and Large Meter Data Delivery Success Rate ("Guaranteed Meter Data Delivery Success Rate").
 2. VENDOR shall ensure that the MIUs at MILs meet Guaranteed Accuracy over the Term. "Guaranteed Accuracy" shall mean that 98.5% of the Meter Data from all MIUs at MILs shall provide 99.7% or better agreement with the corresponding quantity of Billing Units as registered on the meter. Notwithstanding the foregoing, for purposes of Section C.1., below, Guaranteed Accuracy shall mean that 98.5% of the Meter Data from all MIUs at MILs shall provide 99.7% or better agreement with the entire corresponding meter register output. Guaranteed Accuracy shall be determined by use of statistically significant and representative samples of the installed MIUs.
- B. Exceptions. Notwithstanding the foregoing, VENDOR shall not be responsible for meeting Performance Guarantees to the extent impeded by: (i) Tamper Locations, (ii) MILs that have been referred to PMA for service calls that have not been completed, (iii) from malfunctioning meters, or a (iv) a Force Majeure Event.
- C. Guaranteed Accuracy Verification.
1. During the Turnkey Installation Term, VENDOR shall sample, in accordance with the Sampling Protocol in the Statement of Work, certain MILs in order to demonstrate Guaranteed Accuracy for each Route prior to receiving Provisional Acceptance of a Route. In addition, during the Turnkey Installation Term, VENDOR shall conduct semi-annual audits of the entire AMI System as installed to demonstrate

Guaranteed Accuracy in accordance with the Statement of Work. If the semi-annual audits do not demonstrate Guaranteed Accuracy, PMA may at its sole option suspend provisional acceptance of subsequent Routes until the Guaranteed Accuracy is demonstrated.

2. During the O&M Services Term:
 - i. PMA shall conduct a routine sampling program based on the sampling of MILs visited by City or PMA customer service representatives on routine service calls, and as set forth in the Statement of Work.
 - ii. VENDOR shall conduct a routine Guaranteed Accuracy verification program utilizing the MIUs installed at VENDOR's facility.
 - iii. PMA shall provide sampling results to VENDOR every six (6) months, or more frequently if a greater frequency is indicated as necessary by the sampling results.
 - iv. PMA may require that VENDOR initiate a sampling program to verify Guaranteed Accuracy in the event that: (i) the PMA sampling does not demonstrate Guaranteed Accuracy, in which event PMA shall provide the results to VENDOR; (ii) VENDOR's Guaranteed Accuracy verification program does not yield results indicating Guaranteed Accuracy; or (iii) PMA receives a significant number of Small Meter customer complaints regarding the accuracy of bills generated from the Meter Data.
 - v. Upon PMA's reasonable request, VENDOR shall sample a statistically significant and representative sample of the MILs in accordance with the Sampling Protocol. VENDOR shall notify PMA of such results.
3. If any VENDOR sampling program yields results that do not reflect Guaranteed Accuracy, VENDOR shall notify the Surety Company, City and PMA of such results within five (5) days of the completion of such sampling.
4. During the O&M Services Term, if VENDOR fails to demonstrate Guaranteed Accuracy after PMA requests that VENDOR initiate a sampling program in accordance with Section C.2.iv or sample MILs in accordance with Section C.2.v, such failure(s) shall be an Event of Default and PMA shall be entitled to avail itself of the provisions of Article IX. Section D.

D. Surety for Performance Guarantees. VENDOR shall procure and maintain in full force and effect, covering certain Events of Default to secure the full and faithful performance of the AMI System Services:

1. During the Turnkey Installation Term: Performance and Payment Bond in the amount of TWENTY-FIVE MILLION DOLLARS (\$25,000,000) in substantially the form of Exhibit I and in accordance with the Contract.

2. Commencing upon expiration of the Turnkey Installation Term, and ending following the expiration of the Term: the O&M Services Term Bond shall be TEN MILLION DOLLARS (\$10,000,000) in substantially the form of Exhibit J.
3. The Performance and Payment Bond and the O&M Services Term Bond shall be issued by a surety company duly authorized and licensed to do business in the Commonwealth of Pennsylvania and approved by PMA. PMA acknowledges that it may not draw on the Performance and Payment Bond and/or the O&M Services Term Bond where the sole Event of Default by VENDOR are those Events of Default described in Article III. Section C or Article IX. Sections E.2, E.3, or E.4.
4. If for any reason the O&M Services Term Bond is terminated, VENDOR shall have the right to substitute the Irrevocable Letter of Credit, or the Escrow Deposit, each as provided in Article IX. Section E.1.

ARTICLE VIII WARRANTY

A. Warranty.

1. VENDOR warrants for the Term that the AMI System will function in accordance with the requirements of this Contract and the Statement of Work.
2. VENDOR shall provide the Meter Warranty as a direct warranty obligation to PMA and the City.
3. In the event that this Contract is terminated prior to the expiration of the Term or the parties change the scope of the O&M Services, VENDOR's sole warranty to PMA shall be that for the periods set forth below, the MIUs, DCUs and Licensed Software shall be free from defects in material and workmanship and shall meet the applicable technical specifications:
 - MIUs – Except when used with an Ally Meter, twenty (20) years from date of Provisional Acceptance of Route as detailed on MIU Warranty, attached as Exhibit K.
 - Network DCUs – One year from AMI System Acceptance Date.
 - Licensed software – One year from AMI System Acceptance Date.

B. Warranty Obligations.

1. In addition to all other responsibilities and obligations of VENDOR set forth in this Contract, VENDOR agrees that it shall have the following warranty obligations during the Term:
 - i. VENDOR will be required to perform all of its maintenance, repair and replacement obligations set forth in this Contract at the fees set forth in the Rate Sheet.

- ii. In the event of a failure of the AMI System to accurately collect and transmit Meter Data, VENDOR shall be responsible for a determination of the cause of failure in accordance with the Service Call Procedure, and the repair and/or replacement of such equipment or components of the AMI System.
- iii. If during the applicable warranty period it is determined that any equipment or components, including the DCUs, MIUs, and/or AMI System Software, fail to function as warranted, such equipment and components will be repaired or replaced free of charge to PMA.

2. *Intellectual Property Indemnification.*

- i. In the event of any claim, suit or action by any third party against the PMA alleging that the AMI System infringes upon or violates any patent, copyright, trade secret or other proprietary rights of any third party, the PMA shall promptly notify VENDOR in writing, and VENDOR shall defend such claim, suit or action at VENDOR's expense, and VENDOR shall indemnify the PMA against any direct loss, cost, damage, expense or liability arising out of such claim, suit or action (including, without limitation, reasonable litigation costs and counsel fees) whether or not such claim, suit or action is successful.
- ii. VENDOR shall have no liability hereunder if such claim is related to (1) any change, modification or alteration made to the AMI System by PMA or a third party without VENDOR's approval, (2) use of the AMI System in combination with any goods or services not provided by VENDOR hereunder without VENDOR's approval, (3) PMA's or City's failure to use the most recent version of VENDOR's software or to otherwise take any corrective action as reasonably directed by VENDOR, (4) compliance by VENDOR with any designs, specifications or instructions provided by PMA or City, or (5) any use of the AMI System other than in compliance with this Contract.

3. *Infringing AMI System.* If the AMI System is, or in VENDOR's reasonable judgment is likely to be, held to infringe or misappropriate Intellectual Property rights of a third party, VENDOR shall at its expense and option either: (1) procure the right for PMA to continue using the AMI System or (2) modify or replace the AMI System so that it becomes a non-infringing equivalent.

4. *Exclusive Remedy.* The foregoing remedies constitute the PMA's sole and exclusive remedies and VENDOR's entire liability with respect to infringement or misappropriation of proprietary rights including Intellectual Property rights. Notwithstanding the foregoing, VENDOR shall have no liability under Article VIII. Section B.2 (Intellectual Property Indemnification) or Article VIII. Section B.3 (Infringing AMI System) unless PMA cooperates with and assists VENDOR in any

- such proceedings, gives VENDOR written notice of any claim hereunder as promptly as practicable (but in any event within thirty (30) days of receiving it), and gives full authority to VENDOR to defend or settle the claim or suit. VENDOR will have no obligation to indemnify the PMA under any settlement made without its written consent.
5. Relationship with Indemnification Provision of the Standard City Terms. The indemnification requirements set forth in Article VIII. Sections B.2.- B.4. apply only to the specific subject matter thereof. With respect to any and all other VENDOR indemnification obligations, the requirements set forth in Article XII. Section B. shall apply.
 6. **THE WARRANTIES IN THIS ARTICLE VIII ARE THE ONLY WARRANTIES GIVEN WITH RESPECT TO THE AMI PROJECT SERVICES PROVIDED BY VENDOR UNDER THIS CONTRACT. VENDOR EXPRESSLY DISCLAIMS ANY AND ALL OTHER REPRESENTATIONS, WARRANTIES AND/OR CONDITIONS, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, REGARDING ANY MATTER IN CONNECTION WITH THIS CONTRACT, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, NON-INFRINGEMENT AND TITLE.**

ARTICLE IX DEFAULT, DAMAGES AND FORCE MAJEURE

- A. Failure to Comply with EOP Requirements.
 1. VENDOR's failure to comply with any of the EOP requirements shall be an Event of Default and PMA may exercise one or more of the remedies under EOP Section VI, the Remedies and Penalties for Non-Compliance.
 2. Further, if VENDOR fails to comply with the requirements of Article III. Section K of this Contract, PMA may, at its sole option, and subject to the notice and cure provisions set forth in Section E.5, declare such failure an Event of Default and PMA shall be entitled to all rights and remedies available under this Contract pursuant to Section F.
- B. Failure to Meet Installation Benchmarks.
 1. VENDOR's failure to install a minimum of 325,000 MIUs and meet the Provisional Acceptance of a Route standards for the MIUs within twenty-four (24) months of the MIU Installation Commencement Date ("Default Installation Benchmark") shall be an Event of Default under this Contract. Notwithstanding the foregoing, VENDOR's

- failure to install the requisite number of MIUs to meet the Default Installation Benchmark shall not constitute an Event of Default under this Contract, provided that VENDOR has installed 387,000 MIUs within twenty-six (26) months of the MIU Installation Commencement Date. For purposes of this Section, VENDOR shall be deemed to have installed the Fortuitous Installations.
2. If (1) VENDOR fails to meet the Installation Benchmarks as set forth in Article IV. Section H.2; and (2) PMA reasonably rejects the VENDOR's plan for improving installation performance to a minimum VENDOR installation rate of 14,000 MIUs per month or the VENDOR fails to demonstrate installation performance at a rate of at least 14,000 MIUs per month, the VENDOR shall be in default of this Contract.

C. Failure to Achieve Guaranteed Meter Data Delivery Success Rate.

1. In addition to the provisions of Article VI. Section G.2., in the event that the average of a Delivery Success Rate for three (3) consecutive Billing Months, on a rolling basis, is less than 95.0%, PMA, at its sole option, may declare such failure an Event of Default; provided, however, that VENDOR shall have three (3) Billing Months to improve performance. If the average of the Delivery Success Rate exceeds 95.0% for each Billing Month during the aforesaid three (3) month period, and VENDOR has maintained the same above a 95.0% Meter Data Delivery Success Rate for three (3) additional consecutive Billing Months in the subsequent six (6) month period and the average of the Delivery Success Rate does not fall below 95% during such six (6) month period, VENDOR shall have cured such default. If VENDOR fails to cure such default in accordance with the provisions of this Section, PMA may exercise all applicable remedies provided in Section F.
2. In addition to the provisions of Article VI. Section G.2., in the event that the average of a Delivery Success Rate for any Billing Month is less than 85.0%, PMA, at its sole option, may declare such failure an Event of Default; provided, however, that VENDOR shall have three (3) Billing Months to improve performance. If the average of the Delivery Success Rate exceeds 95.0% for each Billing Month during the aforesaid three (3) month period, and VENDOR has maintained it above a 95.0% Meter Data Delivery Success Rate for three (3) additional consecutive Billing Months in the subsequent six (6) month period and the average of the Delivery Success Rate does not fall below 90% during such six (6) month period, VENDOR shall have cured such default. If VENDOR fails to cure such default in accordance with the provisions of this Section, PMA may exercise all applicable remedies provided in Section F.

D. Failure to Achieve Guaranteed Accuracy.

1. VENDOR's failure to achieve the Guaranteed Accuracy in accordance with Article VII. shall be an Event of Default. Within thirty (30) days of any such failure,

VENDOR shall provide PMA with a plan for remediation of Guaranteed Accuracy within thirty (30) days. Upon review and in the event of approval of the remediation plan submitted by VENDOR to PMA, which approval shall be at PMA's reasonable discretion, VENDOR shall have a period of three (3) Billing Months after PMA's approval, or shall have such other longer period as mutually agreed to in writing, to achieve a Billing Month where the measured system accuracy returns to the Guaranteed Accuracy. Further, in the event that PMA reasonably disapproves VENDOR's remediation plan, VENDOR will provide a revised plan for remediation of Guaranteed Accuracy, which PMA may review and approve. In order to cure the default pursuant to the approved remediation plan, VENDOR must maintain Guaranteed Accuracy for three (3) consecutive Billing Months during the six (6) Billing Month period beginning immediately after the first Billing Month that the measured system accuracy returns to the Guaranteed Accuracy. If VENDOR fails to cure the default pursuant to an approved remediation plan, PMA may terminate this Contract and exercise all rights and remedies provided under this Contract pursuant to Section F.

2. If VENDOR fails to maintain Guaranteed Accuracy in accordance with Section D.1. or fails to submit to PMA a remediation plan in accordance with Section D.1. and the Statement of Work, PMA may terminate this Contract and exercise all rights and remedies provided under this Contract pursuant to Section F.

E. Other Events of Default by VENDOR. In addition to all other defaults defined as VENDOR's Events of Default under this Contract, each of the following shall constitute an Event of Default by VENDOR:

1. The failure of VENDOR to maintain the Performance and Payment Bond and/or the O&M Services Term Bond in the form and the amount required by this Contract, as set forth in Article VII. Section D. However, such failure shall not be an Event of Default if VENDOR provides, in lieu of the O&M Services Term Bond, the Irrevocable Letter of Credit or the Escrow Deposit, or, if, after VENDOR has used best efforts to provide the Irrevocable Letter of Credit or the Escrow Deposit, but VENDOR is unable, the Surety Company shall provide an Escrow Deposit in the amount of TEN MILLION DOLLARS (\$10,000,000.00) in accordance with the terms and conditions of the Performance and Payment Bond. If VENDOR elects to provide the Irrevocable Letter of Credit, the Irrevocable Letter(s) of Credit shall be in a form and substance reasonably acceptable to PMA consistent with the Performance and Payment Bond and the O&M Services Term Bond requirements, and shall be issued by a bank reasonably acceptable to PMA. VENDOR shall furnish or cause to be furnished a legal opinion acceptable to PMA stating that the Letter of Credit is legally enforceable. In the event VENDOR elects to provide the Escrow Deposit, or the Surety Company provides the Escrow Deposit in accordance with the terms and

conditions of the Performance and Payment Bond, such Escrow Deposit shall be placed in an interest-bearing escrow account for the benefit of VENDOR and PMA in accordance with an escrow agreement in form and substance satisfactory to PMA and VENDOR. The escrow agreement shall be executed by PMA, VENDOR and an escrow agent, and shall set forth that:

If VENDOR fails to perform any of its obligations under the Contract, including, without limitation, the provision of all AMI Project Services, and PMA has declared such failure an Event of Default, PMA shall be entitled to deliver to the Escrow Agent a signed certificate to the effect that there has occurred an uncured Event of Default on the part of VENDOR under the Contract, in which case PMA shall specify the amount of damages owing on account thereof. Upon receipt of such certificate, the Escrow Agent shall promptly (but in no event more than five (5) Business Days thereafter) notify VENDOR of PMA's delivery of the aforementioned certificate and shall provide VENDOR with a copy of such certificate. In the event that VENDOR disputes the certificate provided by PMA, VENDOR shall notify both the Escrow Agent and PMA, and provide a detailed description of its dispute within five (5) Business Days of Escrow Agent's notification of VENDOR and the matter shall be submitted for resolution pursuant to Article X.

In the event that PMA shall receive any Escrow Deposit proceeds, PMA hereby assigns and shall pay over such proceeds to City.

2. Bankruptcy and Insolvency

- i. Either VENDOR or Guarantor shall become insolvent, as such term is defined under Section 101 of the United States Bankruptcy Code, 11 U.S.C. § 101 et seq. (as the same may be amended from time to time) ("Bankruptcy Code") or similar law in any foreign jurisdiction; or shall fail to pay its debts generally as they mature; or shall seek the benefit of any present or future federal, state or foreign insolvency statute; or shall make a general assignment for the benefit of creditors, or shall file a voluntary petition in bankruptcy or a petition or answer seeking an arrangement of its indebtedness under the Bankruptcy Code or under any other law or statute of the United States or of any State thereof or any foreign jurisdiction, or consent to the appointment of a receiver, trustee, custodian, liquidator or other similar official, for any part of its property or for the operation, either temporarily or permanently, of its business or property; or an order for relief shall be entered by or against VENDOR or Guarantor under any chapter of the Bankruptcy Code or similar law in any foreign jurisdiction.

- ii. By order or decree of a court, either VENDOR or Guarantor shall be adjudged insolvent or bankrupt or an order shall be made approving a petition filed by any of its creditors or by any of its stockholders, seeking its reorganization, liquidation, or the readjustment of its indebtedness under the Bankruptcy Code or under any other law or statute of the United States or any State thereof or any foreign jurisdiction and such order or decree shall not be vacated within sixty (60) days of its issuance.
 - iii. A petition under any chapter of the Bankruptcy Code or an action under any federal or state or foreign insolvency law or statute shall be filed against VENDOR or Guarantor and shall not be dismissed within sixty (60) days after the filing thereof.
 - iv. By or pursuant to, or under authority of any legislative act, resolution or rule or any order or decree of any court or governmental board, agency or officer, a receiver, trustee, custodian, liquidator or other similar official shall take possession or control of all or substantially all of the property of VENDOR or Guarantor which shall not be discharged within sixty (60) days after such taking of possession or control.
 - v. The rights of VENDOR under this Contract shall be transferred to, pass to, or devolve upon, by operation of law or otherwise, any other person, firm, corporation or other entity, by, in connection with or as a result of any bankruptcy, insolvency, trusteeship, liquidations or other proceedings or occurrence described in any of this Section.
3. Either VENDOR or Guarantor shall become dissolved.
4. A violation of Applicable Law which results in a guilty plea, a plea of nolo contendere, or conviction of a felony offense, by VENDOR or Guarantor, or any of their respective directors, officers, partners or AMI Project Services management employees directly or indirectly relating to this Contract, and which materially impacts or threatens the ongoing performance of this Contract in accordance with its terms. In the event that such event threatens the performance of this Contract, the foregoing shall not be an Event of Default if VENDOR is able to provide PMA further assurances satisfactory to PMA of VENDOR's ability to perform its obligations.
5. Except as otherwise set forth in this Contract, including those provisions that independently establish notice and cure periods with respect to particular defaults by VENDOR, and subject to excuse of performance due to any Force Majeure Event, if VENDOR and Guarantor shall materially fail to keep, perform, fulfill, comply with or observe any promise, covenant, term, condition or any other provision of this

Contract for a period of sixty (60) days after written notice reasonably specifying such failure is given VENDOR by PMA; except that any such failure which can be remedied, but which cannot with due diligence be remedied within such sixty (60) day period, shall not constitute an Event of Default if corrective action is instituted by VENDOR within the applicable period and diligently pursued until the failure is remedied, so long as such applicable period does not exceed ninety (90) days (except as a specific cure or grace period is otherwise provided in this Contract). With respect to the EOP, the institution and success of any corrective action shall be subject to timely evaluation and approval of the Office of Economic Opportunity. The foregoing shall include any material falseness, inaccuracy or breach of any material representation or warranty of VENDOR contained in this Contract, or in any other document submitted to PMA pursuant to the express terms of this Contract, or any violation of Applicable Law.

F. PMA's Remedies for Default by VENDOR. The Parties agree that:

1. Upon the occurrence of the following Events of Default by VENDOR:
 - i. the failure of VENDOR to meet the Installation Benchmarks, as set forth in Article IV. Section H.2.;
 - ii. the failure of VENDOR to meet the Default Installation Benchmark, as set forth in Article IX. Section B. above;
 - iii. the failure of VENDOR, to timely and properly cure a breach under the provisions of Article IX. Sections C.1. and C.2. above; and/or
 - iv. the failure of VENDOR to achieve Guaranteed Accuracy, as set forth in Article IX. Section D. above,

and, with respect to i., ii., iii, and/or iv., above, all applicable cure periods have expired without VENDOR having effected such cure, PMA shall be entitled to terminate this Contract and may perform (or cause a third party to perform) any unperformed VENDOR obligations in this Contract, in whole or in part, including, without limitation, obtaining or paying for any required insurance or performing other acts capable of performance by PMA. VENDOR shall be liable to PMA for all sums paid by PMA and all expenses incurred by PMA (or a third party) pursuant to this Section, together with interest at the highest legal rate permitted in the Commonwealth of Pennsylvania thereon from the date the PMA or its agent incurs such costs.

2. Additional Remedies. Upon the occurrence of an Event of Default set forth in Section F.1, PMA may:
 - i. withhold payment of, or offset against, any funds payable to or for the benefit of VENDOR directly related to the Event of Default;
 - ii. collect, foreclose or realize upon any bond, collateral, security or insurance provided by or on behalf of VENDOR under this Contract to the extent directly related to the Event of Default; or
 - iii. exercise any other right PMA has at law, in equity, or under this Contract.
3. Termination. If this Contract is terminated, PMA shall issue a written termination notice which shall set forth the effective date of the termination.
4. PMA may exercise any or all of the remedies set forth in this Article IX. Section F. separately or in conjunction with such other remedies as PMA in its sole discretion shall determine. Except as set forth in this Contract, the rights and remedies of PMA as described in this Article IX and as described elsewhere in this Contract shall not be exclusive and are in addition to any other rights or remedies available to PMA under this Contract at law or in equity.
5. Upon all other Events of Default by VENDOR set forth herein and after all opportunities for cure have been exhausted, PMA shall have the right to terminate this Contract, and, with or without terminating this Contract, have the right to seek injunctive relief (including specific performance) in addition to all other remedies at law or in equity. Except as expressly set forth in this Contract, the rights and remedies of PMA in this Contract are distinct, separate and cumulative remedies and no one of them, whether or not exercised by PMA, shall be deemed in exclusion of any other, except to the extent that the damages awarded to PMA would provide duplicate damages. Further, PMA shall use its best efforts to mitigate its damages that may result from VENDOR's default.

G. Event of Default by PMA. Each of the following shall constitute an Event of Default by PMA:

1. The failure by PMA to pay any properly invoiced payment due to VENDOR within ninety (90) days after the due date.
2. PMA is dissolved or is otherwise in default of this Contract after applicable notice and cure periods have expired, and City does not agree to assume PMA's obligations under the City-PMA Agreement and this Contract by itself or through (a) any department of City, (b) any public utility company or private company that owns or operates City's water and/or sewer system, (c) any governmental authority created under state law, or (d) any other entity approved by VENDOR.

3. Bankruptcy and Insolvency
 - i. Both PMA and City shall become insolvent, as such term is defined under Section 101 of the United States Bankruptcy Code, 11 U.S.C. § 101 et seq. (as the same may be amended from time to time) ("Bankruptcy Code") or similar law in any foreign jurisdiction; or shall fail to pay its debts generally as they mature; or shall seek the benefit of any present or future federal, state or foreign insolvency statute; or shall make a general assignment for the benefit of creditors, or shall file a voluntary petition in bankruptcy or a petition or answer seeking an arrangement of its indebtedness under the Bankruptcy Code or under any other law or statute of the United States or of any State thereof or any foreign jurisdiction, or consent to the appointment of a receiver, trustee, custodian, liquidator or other similar official, for any part of its property or for the operation, either temporarily or permanently, of its business or property; or an order for relief shall be entered by or against both PMA and City under any chapter of the Bankruptcy Code or similar law in any foreign jurisdiction.
 - ii. By order or decree of a court, both PMA and City shall be adjudged insolvent or bankrupt or an order shall be made approving a petition filed by any of its creditors, seeking its reorganization, liquidation, or the readjustment of its indebtedness under the Bankruptcy Code or under any other law or statute of the United States or any State thereof or any foreign jurisdiction and such order or decree shall not be vacated within sixty (60) days of its issuance.
 - iii. A petition under any chapter of the Bankruptcy Code or an action under any federal or state or foreign insolvency law or statute shall be filed against both PMA and City and shall not be dismissed within sixty (60) days after the filing thereof.
 - iv. By or pursuant to, or under authority of any legislative act, resolution or rule or any order or decree of any court or governmental board, agency or officer, a receiver, trustee, custodian, liquidator or other similar official shall take possession or control of all or substantially all of the property of both PMA and City which shall not be discharged within sixty (60) days after such taking of possession or control.
 - v. The rights of both PMA and City under this Contract shall be transferred to, pass to, or devolve upon, by operation of law or otherwise, any other person, firm, corporation or other entity, by, in connection with or as a result of any bankruptcy, insolvency, trusteeship, liquidations or other proceedings or occurrence described in any of this Section.
4. Except as otherwise set forth in this Contract, and subject to excuse of performance due to any Force Majeure Event, if PMA fails to keep, perform, fulfill, comply with or observe any promise, covenant, term, condition or any other provision of this

Contract for a period of thirty (30) days after written notice reasonably specifying such failure is given PMA by VENDOR; provided, however, that any such failure which can be remedied, but which cannot with due diligence be remedied within such thirty (30) day period, shall not constitute an Event of Default if corrective action is instituted by PMA within the applicable period and diligently pursued until the failure is remedied, so long as such applicable period does not exceed ninety (90) days (except as a specific cure or grace period is otherwise provided in this Contract). The foregoing shall include any material falseness, inaccuracy or breach of any material representation or warranty of PMA contained in this Contract, or in any other document submitted to VENDOR pursuant to the express terms hereof, or any violation of law or regulation applicable to this Contract.

H. VENDOR's Remedies for Default by PMA.

1. To secure the performance of PMA's obligations under this Contract, City and PMA have entered into City-PMA Agreement on the Effective Date, pursuant to which City shall perform certain obligations required of PMA under this Contract.
2. In addition to the provisions of Section H.1. above, and subject to the provisions of Section H.3., upon the occurrence of an Event of Default by PMA, VENDOR may terminate this Contract and/or bring such suits at law or equity to recover its actual damages or seek equitable relief.
3. VENDOR may only exercise its right of termination for cause for PMA's nonpayment of Compensation for Turnkey Installation if:
 - i. An Event of Default has occurred; and
 - ii. VENDOR has provided PMA with prior written notice of its intention to exercise its termination rights at least five (5) Business Days in advance; and
 - iii. The amount in arrears due from PMA is (a) greater than FIVE HUNDRED THOUSAND DOLLARS (\$500,000.00) for O&M Services, or (b) greater than FIVE MILLION DOLLARS (\$5,000,000.00) for MIUs and/or the installation of the Network and MIUs.
4. The proper exercise of the right of termination shall be in addition to and not in substitution for, such other remedies, whether damages or otherwise.

I. Force Majeure.

1. Except as expressly set forth in this Contract, neither VENDOR nor PMA shall be excused or relieved from any act or responsibility of performance under the terms of this Contract except for the following Force Majeure Events which prevent VENDOR or PMA from performing under this Contract:
 - i. An Act of God;
 - ii. A state of declared war or insurrection;

- iii. A labor strike, but as to VENDOR, only those labor strikes that substantially interrupt the supply of materials and equipment needed to install or operate the AMI System, and those labor strikes against VENDOR which VENDOR has used good faith efforts to resolve expeditiously; or
 - iv. Illegal or unauthorized radio frequency interference; or
 - v. Any conditions (excluding costs) which are beyond the control of the Party claiming the Force Majeure Event and, as to each Party, without the negligence of the Party or the Party's agents, employees, contractors, subcontractors or suppliers; provided, however, that the Party claiming the Force Majeure Event shall exhaust every reasonable remedy to correct the condition and promptly report to the other Party in writing the circumstances which justify non-performance.
2. Upon the occurrence of a Force Majeure Event which prevents VENDOR or PMA from performing its obligations under this Contract, the non-performing Party shall notify the other Party as soon as is reasonably practicable regarding the Force Majeure Event and shall diligently endeavor to eliminate the cause and/or effects of the Force Majeure Event. During the pendency of such Force Majeure Event, both Parties shall be excused from such performance under this Contract prevented by the Force Majeure Event.
 3. Upon the occurrence of a Force Majeure Event, the AMI Project Schedule and any performance milestones shall be extended for the duration of the Force Majeure Event or such other longer period as may be mutually agreed upon by the Parties.

J. Waiver.

1. At any time prior to termination of this Contract, any Party, may to the extent legally allowed:
 - i. extend the time for the performance of any of the obligations or the acts of the other Party;
 - ii. waive any inaccuracies in the representations and/or warranties made to such Party contained in this Contract or in any document delivered pursuant to this Contract; and/or
 - iii. waive compliance with any of the covenants, agreements, or conditions for the benefit of such Party contained in this Contract.
2. Any agreement on the part of a Party to any such extension or waiver shall be valid only if set forth in an instrument in writing signed on behalf of such Party by the Party's duly authorized representative. The failure of either Party at any time or times to require performance of any provision of this Contract shall in no manner affect such party's right at a later time to enforce the same. No waiver by either Party of any condition or of the breach of any representation and/or warranty, covenant or agreement contained in this Contract, whether by conduct or otherwise, in any one or

more instances, and no action taken pursuant to this Contract, including, without limitation, any investigation by or on behalf of any Party shall be deemed to be or construed as a further or continuing waiver of any such condition or breach, or as a waiver of any condition or breach of any other representation and/or warranty, covenant or agreement.

ARTICLE X DISPUTE RESOLUTION

In the event a dispute arises between the Parties regarding the application or interpretation of any provision of this Contract, the aggrieved Party shall promptly give notice in writing to the other Party invoking the provisions of this Article and the Parties shall negotiate in good faith and attempt to resolve such dispute. If the Parties fail to resolve the dispute within thirty (30) days after delivery of such notice, each Party shall have the right to require, by written notice to the other Parties containing a brief description of the dispute, that each Party nominate and have a senior officer of its management meet with the other Parties' nominated senior officers at a City office or at any other mutually agreed location, within fifteen (15) business days of such request, in order to attempt to resolve the dispute.

Should the Parties be unable to resolve the dispute to their mutual satisfaction within fifteen (15) days after such meeting, then, if the Parties in their respective discretion so agree, the Parties may submit to non-binding mediation on terms to be mutually agreed, in which event any applicable statute of limitations shall be tolled. The mediation shall be conducted in the City of Philadelphia. Each Party shall pay its own expenses of mediation. The fees of, and authorized expenses incurred by, the Mediator shall be equally divided between the Parties. The Mediator shall be a professional engineer, attorney or other professional mutually acceptable to the Parties who has no prior, current, or on-going relationship to either Party. The Mediator shall have full discretion as to the conduct of the mediation. Each party shall participate in the Mediator's program to resolve the dispute until and unless the Parties reach agreement with respect to the disputed matter or one Party determines in its sole discretion that its interests are not being served by the mediation.

In the event that the Parties do not agree to proceed to such mediation or in the event and to the extent such dispute remains unresolved following any such mediation, each Party shall have the right to pursue any and all remedies available to it hereunder (subject to any applicable limitations of liability expressly set forth in this Contract). **TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE PARTIES AGREE TO A BENCH TRIAL AND THAT THERE SHALL BE NO JURY IN ANY DISPUTE BETWEEN THE PARTIES.**

**ARTICLE XI
MISCELLANEOUS**

A. Notices.

1. All notices, demands, requests, waivers, consents, approvals and other communications that are required or may be given under this Contract shall be in writing and shall be deemed to have been duly made (a) when received or refused if delivered by hand; (b) on the next business day if delivered by a nationally recognized overnight courier service (*e.g.*, Federal Express or United Parcel Service); (c) on the date confirmed for receipt by facsimile if delivered by facsimile; and (d) upon receipt or refusal of delivery if sent by certified or registered United States mail, return receipt requested. All such communications shall be addressed as follows:

PMA:

Philadelphia Municipal Authority
1515 Arch Street, 9th Floor
Philadelphia, PA 19102
Attention: Executive Director
Phone: 215-557-9380
lorna.gallman@phila.gov

With a copy to:

PWD:

Gary Gehringer
Philadelphia Water Department
1101 Market Street, 6th Floor
Philadelphia, PA 19107
gary.gehringer@phila.gov
Phone: 215-906-3785

Attention: Deputy Commissioner of Operations
Philadelphia Water Department
1101 Market Street, 5th Floor
Philadelphia, PA 19107

Law:

Attention: Divisional Deputy City Solicitor
1101 Market Street, 5th Floor
Philadelphia, PA 19107

VENDOR:

Sensus USA Inc.
 637 Davis Drive
 Morrisville, North Carolina 27560
 Attention: Jeff Woody
 Phone: 919-424-8932
 Email: Jeff.Woody@xyleminc.com

With a copy to:

Sensus USA Inc.
 637 Davis Drive
 Morrisville, NC 27560 USA
 Attention: VP & General Counsel
 legal@xyleminc.com
 Facsimile: 919-845-4036

2. Changes in the respective addresses to which such communications may be directed may be made from time to time by any party by notice to the other party.

B. Intellectual Property Rights.

1. Software and Materials. No Intellectual Property is assigned to PMA or City hereunder. Excluding PMA Data, VENDOR shall own or continue to own all right, title, and interest in and to the Intellectual Property associated with the AMI Project Services, including the AMI System and the AMI System Software Services, and related documentation, including any derivations and/or derivative works (the "VENDOR IP"). To the extent, if any, that any ownership interest in and to such VENDOR IP does not automatically vest in VENDOR by virtue of this Contract or otherwise, and instead vests in PMA or City, PMA, for itself and for the City, agrees to grant and assign and hereby does grant and assign to VENDOR all right, title, and interest that PMA or the City may have in and to such VENDOR IP. PMA, for itself and the City, agrees not to reverse engineer any VENDOR products purchased or provided hereunder.
2. PMA Data. Notwithstanding the prior paragraph, as between PMA, the City, and VENDOR, PMA remains the owner of all right, title or interest in or to any PMA Data. "PMA Data" means (i) any End User data values captured by the AMI System Software Services or AMI System in connection with this Contract (including meter readings, interval data, sensor data, and alarm data) ("Captured PMA Data") and (ii) all Intellectual Property associated with the Captured PMA Data. For clarity, PMA Data does not include (1) Network configuration information collected by the

MIUs, AMI System Software Services, or AMI System, or (2) payload data, data related to Network throughput or communications channels, or diagnostic algorithms collected or used by the AMI System Software Services or AMI System, all of which ((1) and (2)) will be governed by Article XI. Section B.1.

- i. To avoid doubt: (i) VENDOR may aggregate and anonymize the Captured PMA Data in connection with data of other VENDOR customers for use by VENDOR (the “Aggregated and Anonymous Data”), and VENDOR shall own all right, title and interest in and to such Aggregated and Anonymous Data; and (ii) any VENDOR IP used by VENDOR to create Aggregated and Anonymous Data shall remain the Intellectual Property of VENDOR.
3. Consent to Use of PMA Data. PMA hereby irrevocably grants to VENDOR a royalty-free, non-exclusive, irrevocable right and license to access, store, and use PMA Data and any other data or information provided to VENDOR, to (1) perform the AMI Project Services and other VENDOR obligations in this Contract; (2) analyze and improve the AMI Project Services; or (3) analyze and improve any VENDOR equipment or software VENDOR will treat Captured PMA Data as Confidential Information in accordance with Article XI. Section M (Confidentiality).
4. Access to PMA Data. Upon PMA’s written request, VENDOR shall provide PMA with access to PMA Data through an application programming interface (API) as mutually agreed on by VENDOR and PMA.

C. Limitation of Liability.

1. Scope. This limitation of liability shall not apply to VENDOR’s indemnification obligations for claims of (i) intellectual property infringement, (ii) damage to property or (iii) bodily injury (including death). Nothing herein shall waive or amend any defense or immunity that PMA, the City, its officers, agents or employees may have under the Pennsylvania Political Subdivision Tort Claims Act, 42 PA.C.S.A. 8541 et. Seq. The limitations on liability set forth in this Contract are fundamental inducements to the Parties entering into this Contract.
2. Consequential and Other Damages.
 - i. **Neither Party shall be liable to the other for any damages other than direct damages. Neither Party shall be liable for: (a) any indirect, incidental, special or consequential damages; or (b) any diminished revenue or lost profits, irrespective of whether such lost revenue or profits is categorized as direct damages or otherwise.**
 - ii. **In addition, VENDOR shall not be liable for (a) damages to meters or MIUs arising from main case or bottom plate breakage caused by freezing temperatures, water hammer conditions, or excessive water pressure; nor (b) damages arising from equipment striking a meter and damaging the meter in any way, or over-range capacity usage.**

3. Aggregate Liability of VENDOR. **VENDOR's aggregate liability to PMA or the City in any and all causes of action arising from its negotiation, performance, breach, default or termination of the Contract shall not exceed \$70,000,000 (SEVENTY MILLION DOLLARS). This is so whether the causes of action are in contract, under statute or otherwise.**
- D. Effect of PMA and City Approvals. Except for those written approvals required and granted pursuant to this Contract or under the Statement of Work, VENDOR shall not rely on any review or comment by PMA or City not directed at VENDOR. Except as expressly required by this Contract or the Statement of Work or as addressed to VENDOR, neither the review by or comments of PMA or City, nor the failure by PMA or City to review or comment upon any matter, shall relieve VENDOR of its obligations under the Contract or impose any liability upon PMA or City.
- E. City as Third Party Beneficiary. The parties acknowledge that the City is an intended third party beneficiary of this Contract. Provided however, that the City shall have no rights or remedies available to it to a greater extent than those available to PMA under this Contract, and any exercise of such rights and remedies is subject to all limitations applicable to PMA as set forth in this Contract.
- F. Binding Effect. The Parties bind themselves and their successors and assigns for the faithful performance of this Contract.
- G. Severability and Survival.
1. In the event that any provision of this Contract shall, for any reason, be determined to be invalid, illegal or unenforceable in any respect, the Parties shall negotiate in good faith and agree as to such amendments, modifications or supplements of or to this Contract, that to the maximum extent practicable in light of such determination, implement and give effect to the intentions of the Parties as reflected herein, and the other provisions of this Contract shall, as so amended, modified or supplemented, or otherwise affected by such action, remain in full force and effect.
 2. Any and all provisions set forth in this Contract which, by its or their nature, would reasonably be expected to be performed or survive after the termination of this Contract shall survive and be enforceable after such termination. Any and all liabilities, actual or contingent, which shall have arisen in connection with this Contract, shall survive any termination of this Contract. Any express statement of survival contained in any Section shall not be construed to affect the survival of any other Section, which shall be determined pursuant to this Section.

- H. Further Assurances. VENDOR and PMA covenant to cooperate with one another in all reasonable respects necessary to consummate the transactions contemplated by this Contract and each will take all reasonable actions within its authority to secure cooperation of its officers, agents and other third parties.
- I. No Joint Venture. The parties do not intend to create, and nothing contained in this Contract shall be construed as creating, a joint venture arrangement or partnership or association between PMA and VENDOR. Nothing contained in this Contract is intended to create or establish any relationship other than that specifically set forth herein, and nothing herein shall be construed to make VENDOR the representative or agent of PMA for any purpose whatsoever.
- J. Counterparts. This Contract may be executed in multiple counterparts, each of which shall be deemed an original, but all of which taken together shall constitute but one and the same instrument.
- K. Entire Agreement; Order of Precedence; Amendments.
1. This Contract (together with any exhibits, schedules and attachments to the Contract), contain all of the terms and conditions agreed upon by the Parties, and no other contract, document or agreement, oral or otherwise, regarding the subject matter of this Contract shall be deemed to exist or to bind any Party or to vary any of the terms contained in this Contract.
 2. In the event of a conflict or inconsistency between the terms of this Contract and any term, condition or provision contained in any exhibits, schedules and attachments to the Contract, (including without limitation, any proposal of VENDOR), the terms of this Contract shall control.
 3. This Contract, including any Exhibits and Schedules attached, may be revised, amended or modified only by a writing executed by the Parties.
- L. Exhibits/Schedules. All Exhibits and Schedules attached to this Contract are hereby incorporated and made a part of this Contract.
- M. Confidentiality.
1. "Confidential Information" of a Party means any information and documentation of that Party, whether disclosed to or accessed by the other Party in connection with this Contract both before and after the Effective Date, that (1) derives economic value, actual or potential, from not being generally known to the public; and (2) is the subject of efforts to maintain its secrecy; including negotiations related to this Contract, all technical information about either Party's products or services that the Party takes steps to maintain as confidential or secret, PMA Data, pricing

- information, marketing and marketing plans, AMI System architecture and design, AMI System software, other business and financial information of either Party, and all trade secrets of either Party; subject in each case to the exceptions set forth in this Section and subject to Article XI. Section M.4 (Right-to-Know Law). “Confidential Information” does not include information that (i) is independently developed by the recipient without using the disclosing Party’s Confidential Information, as demonstrated by the recipient’s written records, (ii) is or becomes publicly known (other than through unauthorized disclosure), (iii) is disclosed by the owner of such information to a third party free of any obligation of confidentiality, (iv) is already known by the recipient at the time of disclosure, as demonstrated by the recipient’s written records, and the recipient has no obligation of confidentiality other than pursuant to this Contract or any confidentiality agreements between PMA and VENDOR entered into before the Effective Date or (v) is rightfully received by a Party free of any obligation of confidentiality.
2. Use and Disclosure. Neither Party will disclose or allow the disclosure of the other Party’s Confidential Information to, or use the other Party’s Confidential Information for the benefit of, any third party without the other Party’s prior written consent. All Confidential Information relating to a Party will be protected against unauthorized use or disclosure by the other Party to the same extent and with at least the same degree of care as such Party protects its own confidential or proprietary information of like kind and import, but in no event using less than a reasonable degree of care. Each Party may disclose the other Party’s Confidential Information to its officers, agents, subcontractors and employees only to the extent not prohibited by Applicable Law and only as necessary to perform or receive the AMI Project Services. Each Party may disclose the other Party’s Confidential Information to its affiliates, consultants, advisors, lawyers and accountants that are subject to reasonable confidentiality obligations.
 3. Required Disclosure. If a Party is requested or required by any governmental authority to disclose any of the other Party’s Confidential Information, such Party may only disclose the requested Confidential Information if the Party provides prompt notice of such disclosure and, if requested by the other Party, provides reasonable assistance in obtaining an appropriate protective order or other similar relief.
 4. Right-to-Know Law. The Parties acknowledge that PMA and the City are subject to the Pennsylvania Right-to-Know Law (the “Act”), 65 P.S. §§ 67.101-67.3104, as the Act may be amended from time to time. PMA will notify VENDOR of its or City’s receipt of a request for or need to disclose any VENDOR Confidential Information. Thereafter, PMA will use reasonable efforts to consult with VENDOR regarding the response to any such request or need prior to disclosing any such information and, to the extent reasonably practicable, will give VENDOR the opportunity to identify information that VENDOR believes to be confidential proprietary information, a

- trade secret, or otherwise exempt from access under the Act. Notwithstanding anything to the contrary contained in this Contract, nothing in this Contract shall supersede, modify, or diminish in any respect whatsoever any of PMA and City's rights, obligations, and defenses under the Act, nor will PMA or City be held liable for any disclosure of records or information that PMA and City reasonably determine to disclose under the Act.
5. Rights in Confidential Information. Nothing contained in the Parties' obligations with respect to Confidential Information will be construed as obligating a Party to disclose its Confidential Information to the other Party, or as granting to or conferring on a Party, expressly or impliedly, any rights or license to the Confidential Information of the other Party, and any such obligation or grant will only be as provided by the other provisions of this Contract.
6. Return of Confidential Information. Upon expiration or termination of this Contract, each Party will (1) promptly return to the other Party all copies of the other Party's Confidential Information in its possession or control or (2) as requested by the other Party, permanently erase or destroy copies of the other Party's Confidential Information in its possession or control.
- N. Public Use of Logos. Without the other Party's prior written consent, each Party may not use the other Party's name or logo in marketing materials, on websites, in press releases, case studies, web-based testimonials, sales-related literature, technical and sales presentations, or in other promotional or public-facing activities, except as required by Applicable Law.

ARTICLE XII STANDARD CITY TERMS

A. INSURANCE.

The VENDOR shall procure and maintain in full force and effect, the types and limits of insurance specified below. All insurance, except professional liability and cyber liability insurance, shall be written on an "occurrence" basis and not a "claims-made" basis. In no event shall work be performed until evidence of insurance required by this Article XII. Section.A has been furnished. The insurance shall provide for thirty (30) days' prior written notice to be given to the City in the event coverage is cancelled or non-renewed; however, ten (10) days' written notice will be provided if the insurance is cancelled due to non-payment of the premium. VENDOR shall provide notice to the City within thirty (30) days in the event that there is a material change in the coverage. Also, except for workers' compensation and professional liability insurance, the City, its officers, employees, and agents shall be named as additional insureds in connection with this Contract. In addition, an endorsement is required stating that the

coverage afforded the City, its officers, employees, and agents, as additional insureds, will be primary to any other coverage available to them.

Coverage Requirements

- (A) Workers' Compensation and Employers' Liability
- (1) Workers' Compensation Statutory Limits
 - (2) Employers' Liability: \$1,000,000 Each Accident – Bodily Injury by Accident; \$1,000,000 Each Employee- Bodily Injury by Disease; and \$1,000,000 Policy Limit – Bodily Injury by Disease
 - (3) Other states insurance including Pennsylvania
- (B) General Liability Insurance
- (1) Limit of Liability: \$1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability: \$1,000,000 advertising injury; \$2,000,000 general aggregate and \$2,000,000 aggregate for products and completed operations.
 - (2) Coverage: premises operations; personal injury and property damage liability; products and completed operations; independent contractors, employees and volunteers as additional insureds; cross liability; broad form property damage (including completed operations), no exclusions pertaining to explosion, collapse, underground (“XCU”) coverage.
- (C) Automobile Liability Insurance
- (1) Limit of Liability: \$1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability.
 - (2) Coverage: Owned, non-owned, and hired vehicles.
- (D) Professional Liability Insurance.
- (1) Limit of Liability: \$2,000,000.
 - (2) Coverage: Errors and omissions.
 - (3) Professional Liability Insurance may be written on a claims-made basis provided that coverage for occurrences arising out of the performance of the services required under the Contract shall be maintained in full force and effect under the Policy or “tail” coverage for a period of at least two (2) years after expiration of this Contract.
- (E) Cyber Liability Insurance.
- (1) Limit of Liability: \$5,000,000 Per Claim/Aggregate.
 - (2) Coverage: Information security and privacy liability that arise from the Contract, including but not limited to: data while in transit or in the possession of any third

- parties hired by the VENDOR (such as data back-up services); loss of, damage to or destruction of data arising from an unauthorized access; or malicious code, viruses, worms or malware; business income and extra expense as a result of the inability to access website due to a cyber attack or unauthorized access; Privacy Notification Expense Coverage (including Credit Monitoring Expense).
- (3) PMA and the City, and their respective officers, employees and agents shall be named as additional insureds.
- (4) Insurance may be written on a claims-made basis provided that any retroactive date applicable to coverage under the policy precedes the Effective Date; and that continuous coverage will be maintained or an Extended Discovery Period will be purchased for a period of at least two (2) years after expiration or termination of this Agreement.

(F) Excess Insurance. Umbrella and Excess Liability with limits of liability totaling \$10,000,000 per occurrence and \$20,000,000 aggregate when combined with insurance required under Insurance Sections (B) and (C) above.

Additional Insureds. VENDOR shall require that all of its contractors, subcontractors and consultants obtain and maintain, at their respective cost and expense, the appropriate types and amounts of insurance covering the work and their performance of services, naming the City as an additional insured in conformance with the requirements above.

Certificates of Insurance. Certificates of insurance evidencing the required coverages must specifically reference this Contract and shall be submitted to the City, the City of Philadelphia's Water Department and Risk Management Division at least ten (10) days before initiation of any work and promptly, upon binding of the renewal, after each insurance renewal date. The ten (10) day requirement for advance documentation of coverage may be waived in situations where such waiver benefits the City, but under no circumstances shall VENDOR actually commence services or begin work (or continue work, in the case of insurance renewal) without providing the required evidence of insurance. The City reserves the right to require VENDOR to furnish written responses from its authorized insurance carrier representatives to all inquiries made pertaining to the insurance required under this Contract at any time upon ten (10) days written notice to VENDOR.

No Limitation Liability. The insurance requirements set forth herein shall in no way be intended to limit, modify or reduce VENDOR's indemnification obligations or limit VENDOR's liability to the limits of the policies of insurance required hereunder.

B. INDEMNIFICATION

1. VENDOR shall indemnify, defend and hold harmless PMA and the City, its officers, employees and agents from and against any and all losses, costs (including, but not limited to, litigation and settlement costs and counsel fees), claims, suits, actions, damages, liabilities and expenses resulting from or arising out of any third party claim (1) relating to VENDOR's negligence in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment; (2) relating to VENDOR's failure to pay subcontractors and suppliers; or (3) relating to VENDOR's failure to comply with any Applicable Law. This obligation to indemnify, defend and hold harmless PMA and the City, its officers, employees and agents shall survive the termination of the Contract.

2. If any third-party claim is commenced against PMA or the City under Section B.1 of this Article XII (the "Indemnified Party"), the Indemnified Party will provide the VENDOR with notice as promptly as practicable. An Indemnified Party's delay or failure to so notify VENDOR will relieve the VENDOR of its indemnification obligations to the extent that the VENDOR suffers actual prejudice by such delay or failure. The VENDOR will promptly assume and diligently pursue the defense and settlement of such claim at its sole cost and expense. The Indemnified Party will cooperate, at the cost of the VENDOR, in all reasonable respects with the VENDOR and its attorneys in the investigation and defense of such claim and of any appeal arising from the claim. The Indemnified Party may, at its own cost and expense, participate, through its attorneys or otherwise, in such investigation and defense of such claim and any appeal arising therefrom. No settlement of a claim that involves a remedy other than the payment of money by the VENDOR will be entered into without the consent of the Indemnified Party. So long as the VENDOR timely assumes, and diligently pursues, the defense of any such claim, the VENDOR will not be liable to the Indemnified Party for any legal expenses incurred thereafter by such Indemnified Party in connection with the defense of that claim. If the VENDOR fails to timely assume, or ceases to diligently pursue, such defense, the Indemnified Party may defend or settle the claim in such manner as it may deem appropriate at the cost of the VENDOR.

C. ASSIGNMENT

Each Party shall not assign or otherwise transfer the Contract or any part of the Contract, or any right to any monies to be paid under the Contract, or delegate performance of the Contract, without obtaining the prior written consent of the other Party; which consent will not be unreasonably withheld, conditioned, or delayed; except that VENDOR may assign or otherwise transfer its rights and obligations under this Contract to a VENDOR affiliate without PMA's or City's consent if such affiliate has the same federal tax ID as VENDOR. VENDOR will give PMA at least 30 days' prior written notice if such an assignment or transfer to its affiliate occurs. In no case shall the City's consent to the assignment of any monies to be paid under the Contract relieve the VENDOR from faithful performance of any of its obligations under the Contract or

change any of the terms and conditions of the Contract. Any purported assignment in violation of this provision shall be of no effect and void.

D. TAX EXEMPTION

The City of Philadelphia represents that it is exempt from the payment of any federal excise or transportation taxes and any Pennsylvania sales tax. The price bid must be net, exclusive of taxes. However, when under established trade practice any federal excise tax is included in list prices, VENDOR may quote the list price and shall show separately the amount of the federal tax, either as a flat sum or as a percentage of the list price, which shall be deducted by the City. In the event VENDOR pays any sales or use tax, and PMA reimburses VENDOR for the sales or use tax, VENDOR hereby assigns to City, or City's agent, all of its rights, title and interest in any such sales or use tax resulting from the purchase of any articles furnished in connection with the Contract, and VENDOR, unless directed by the City, shall not file a claim for any sales or use tax refund subject to this assignment. VENDOR authorizes the City, in City's name or the name of VENDOR, to file a claim for refund of any sales or use tax subject to this assignment.

E. TAX INDEBTEDNESS

The City of Philadelphia does not wish to do business with tax delinquents or other businesses indebted to the City. In furtherance of this policy, the following certifications have been developed and shall form a part of the Contract.

1. VENDOR's Certification of Non-Indebtedness. VENDOR hereby certifies and represents that VENDOR and VENDOR's parent(s) and subsidiary(ies) are not currently indebted to the City and will not at any time during the Term be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District), water bills, sewer bills, liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available to the City at law or in equity, VENDOR acknowledges that any breach or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to VENDOR and, if such breach or failure is not resolved to the City's reasonable satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments.

2. Subcontractor's Certification of Non-Indebtedness. VENDOR shall require all VENDOR subcontractors performing work in connection with the contract, including suppliers providing goods or materials, to be bound by the following provision, and VENDOR shall cooperate fully with the City in exercising the rights and remedies described below or otherwise available at law or in equity: "Subcontractor hereby certifies and represents that subcontractor and subcontractor's parent(s) and subsidiary(ies) are not currently indebted to the City of

Philadelphia (“City”) and will not at any time during the term of VENDOR’s contract with the City, including any extensions or renewals thereof, be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District of Philadelphia), water bills, sewer bills, liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available at law or in equity, subcontractor acknowledges that any breach of or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to subcontractor for services rendered in connection with the contract and, if such breach or failure is not resolved to the City’s satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments otherwise due to subcontractor.”

F. TAX REQUIREMENTS

Any person or entity who is awarded a contract by the City and/or School District of Philadelphia, is subject to Philadelphia’s business tax ordinances and regulations. The City Solicitor has determined that anyone who is awarded a contract by the City has entered into a contract within the City, and the subsequent delivery of goods into the City or performance of services within the City constitutes doing business in the City and subjects the VENDOR to, including but not limited to, one or more of the following taxes:

- a. Business Privilege Tax
- b. Net Profits Tax
- c. City Wage Tax

The VENDOR, if not already paying the aforesaid taxes, is required to apply to the Department of Revenue, 1401 John F. Kennedy Blvd., Public Service Concourse, Municipal Services Building, Philadelphia, PA 19102 for a tax identification number and to file appropriate business tax returns as provided by law. Questions should be directed to the Business and Earnings Tax Unit at (215) 686-6600.

G. AUDITS, INSPECTION RIGHTS, RECORDS

Audits.

From time to time during the Term and for a period of five (5) years after termination of this Contract, the City may audit materials reasonably related to VENDOR’s performance under this Contract, including but not limited to its billings and invoices. If so requested, VENDOR shall submit to the requesting party all vouchers or invoices presented for payment pursuant to this Contract, all canceled check, work papers, books, records, and accounts upon which the vouchers or invoices are based, and any and all documentation and justification in support of expenditures or fees incurred pursuant to this Contract. All books, invoices, vouchers, records, reports, canceled checks and other materials shall be subject to periodic review and audit in the City of Philadelphia. Notwithstanding the foregoing VENDOR shall not be required to maintain such

documentation in excess of five (5) years from the expiration or termination of this Contract. Notwithstanding the foregoing, VENDOR has no obligation to disclose its costs in connection with an audit or request for disclosure under this Section G.

Independent Audits.

If reasonably requested by the City, VENDOR shall submit an independent audit report prepared and certified by a Certified Public Accountant (CPA) acceptable to the City. The independent audit report shall be prepared in accordance with the following requirements:

- a. VENDOR shall ensure that a final audit of the financial transactions relating to this Contract shall be performed in compliance with all requirements of the City of Philadelphia Subrecipient Audit Guide, which will be incorporated into this Contract by reference. This audit shall verify that all invoiced fees are actual, authorized and eligible for reimbursement in accordance with this Contract's requirements.
- b. VENDOR shall agree to make full and prompt restitution to City of such amounts of money which results from audit exceptions due to VENDOR's performance and/or noncompliance with Applicable Laws and this Contract, including, without limitation, the City of Philadelphia Contract Cost Principles and Guidelines.
- c. The City reserves the right to disallow fees paid by VENDOR for audit services under this Contract if the final audit report is not submitted in the manner and time frame prescribed in this Section or if subsequent reviews of audit work papers discloses material deficiencies in required performance.
- d. VENDOR shall submit all audit documentation, as described above, pertaining to this Contract no later than four (4) months after the end of the Term, unless a different time is approved, in writing, by the responsible official. VENDOR's failure to submit the audit documentation in the time required shall be a basis for withholding processing of invoices for payment until VENDOR submits the audit documentation.

Such independent audit shall be at the City's sole cost and expense, unless the result of such audit demonstrates VENDOR's material noncompliance with its performance obligations under this Contract.

Inspection. All services and materials provided under this Contract shall be subject to inspection and review by the City and state and federal representatives in each case who are subject to written confidentiality obligations in accordance with Article XI. Section M. VENDOR shall cooperate with all inspections and reviews conducted in accordance with the provisions of this Contract. Such inspection and review of VENDOR's rendering of services and materials, including without limitation, programs and facilities, shall be in the sole discretion of the inspecting or reviewing entity. Such inspection or review may include, without limitation, meetings with consumers, review of staffing ratios and job descriptions, verification of account

accuracy, and meetings with any staff members who are either directly or indirectly involved in providing services and materials under this Contract.

Availability of Records. VENDOR shall make available, within the City at reasonable times during the term of this Contract, all records reasonably pertaining to VENDOR's or any of its subcontractors' performance under this Contract for the purpose of inspection, audit, or reproduction by any authorized City representative, or the Pennsylvania Auditor General, and any other federal, state or City auditors.

Retention of Records. VENDOR shall retain all records, books of account and documentation pertaining to this Contract for a rolling period of five (5) years from the date of VENDOR's receipt of final payment from PMA for any invoice for services compensated under this Contract; however, if any litigation, claim, or audit is commenced prior to expiration of said five (5) year period, then the records shall be retained until all litigation, claims, or audit findings have been completely terminated or resolved, without right of further appeal, or if Applicable Law requires a longer period, then the records shall be retained for such longer period.

H. COMPLIANCE WITH LAWS

All goods and services and all documents and other materials furnished under the Contract shall, at the time of delivery, conform with all applicable federal, state and local laws, statutes and ordinances and the applicable rules, regulations, methods and procedures of all governmental boards, bureaus, offices, commissions and other agencies. Each Party shall maintain during the Term all licenses, and authorizations required by any applicable federal, state or local law or regulation to fulfill the Party's obligations under this Contract.

I. NONDISCRIMINATION

A. This Contract is entered into under the terms of the Charter, the Fair Practices Ordinance (Chapter 9-1100 of the Code) and the Mayor's Executive Order No. 04-86 (the "Executive Order"), as they may be amended from time to time, and in performing this Contract, VENDOR shall not discriminate or permit discrimination against any individual because of race, color, religion, ancestry or national origin, sex, gender identity, sexual orientation, age or disability. Nor shall VENDOR discriminate or permit discrimination against individuals in employment, housing and real property practices, and/or public accommodation practices whether by direct or indirect practice of exclusion, distinction, restriction, segregation, limitation, refusal, denial, differentiation or preference in the treatment of a person on the basis of actual or perceived race, ethnicity, color, sex, sexual orientation, gender identity, religion, national origin, ancestry, age, disability, marital status, source of income, familial status, genetic information or domestic or sexual violence victim status, Human Immunodeficiency Virus (HIV) infection, or engage in any other act or practice made unlawful under the Charter, Chapter 9-1100, the Executive Order, or

under the nondiscrimination laws of the United States or the Commonwealth of Pennsylvania. In the event of any breach of these provisions, the City may, in addition to any other rights or remedies available under this Contract, at law or in equity, suspend or terminate this Contract forthwith.

B. In accordance with Chapter 17-400 of The Philadelphia Code, VENDOR agrees that its payment or reimbursement of membership fees or other expenses associated with participation by its employees in an exclusionary private organization, insofar as such participation confers an employment advantage or constitutes or results in discrimination with regard to hiring, tenure of employment, promotions, terms, privileges or conditions of employment on the basis of race, color, sex, sexual orientation, religion, national origin or ancestry, shall constitute an event of default under the contract and shall entitle the City to all rights and remedies as provided herein or otherwise available to the City at law or in equity. VENDOR agrees to include the immediately preceding sentence, with appropriate adjustments for the identity of the parties, in all subcontracts which are entered into pursuant to the Contract. VENDOR further agrees to cooperate with the Commission on Human Relations of the City of Philadelphia in any manner which the said Commission deems reasonable and necessary for the Commission to carry out its responsibilities under Chapter 17-400 of the Philadelphia Code. Failure to so cooperate shall constitute an event of default under the Contract entitling the City to all rights and remedies as provided herein or otherwise available to the City at law or in equity.

J. PHILADELPHIA 21ST CENTURY MINIMUM WAGE AND BENEFITS STANDARD

VENDOR is a “Service Contractor” in that by virtue of entering into this Contract, VENDOR has entered into a “Service Contract,” as those terms are defined in Section 17-1302 of the Code and Mayoral Executive Order 03-14, entitled, “Policy Regarding Minimum Wage and Benefits to be Provided by City Contractors and Subcontractors,” which supplements Chapter 17-1300 of the Code, entitled “Philadelphia 21st Century Minimum Wage and Benefits Standard.” Additionally, any subcontract between VENDOR and a subcontractor to perform work related to this Contract is a “Service Contract” and such subcontractors are also “Service Contractors” for purposes of Chapter 17-1300 and the Executive Order. (Chapter 17-1300 is accessible at <http://www.amlegal.com/library/pa/philadelphia.shtml> and Executive Order 03-14 is accessible at <http://www.phila.gov/ExecutiveOrders/Executive%20Orders/EO%2003-14.pdf>.) If VENDOR or any subcontractor is also an “Employer,” as that term is defined in Section 17-1302 (more than 5 employees), and as the term “Employer” is further described in Section 17-1303 of the Code, absent a waiver, VENDOR shall provide, and cause any such subcontractors to provide their covered “employees” (who, for purposes of this Section J, are persons who perform work for a covered Employer that arises directly out of a Service Contract with the City), with the minimum wage standard and minimum benefits standard stated in Chapter 17-1300 of the Code and Executive Order 03-14. A summary of the current requirements is as follows:

Minimum Wage

(1) As of January 1, 2016 and during each year thereafter, provide their covered employees with an hourly wage, excluding benefits, that is no less than the result of multiplying \$12 by the then current CPI Multiplier as annually adjusted.

(2) For purposes of determining the minimum hourly wage required under (1) above, the CPI Multiplier is an annual calculation made by the City's Director of Finance to take effect as of January 1 of each year. The CPI Multiplier is calculated by dividing the most recently published Consumer Price Index for all Urban Consumers (CPI-U) All Items Index, Philadelphia, Pennsylvania, as of January 1st of each year, by the most recently published CPI-U as of January 1, 2015. The then current minimum hourly wage applicable to City contractors and subcontractors will be posted on the City's web site.

Minimum Benefits

(1) to the extent VENDOR (or its subcontractor under subcontract) provides health benefits to any of its employees, provide each full-time, non-temporary, non-seasonal covered employee with health benefits at least as valuable as the least valuable health benefits that are provided to any other full-time employees of the VENDOR (or its subcontractor); and

(2) provide to each full-time, non-temporary, non-seasonal covered employee at least the minimum number of earned sick leave days required by Code Section 17-1305(2).

If covered, absent a waiver, VENDOR shall promptly provide to the City all documents and information as the City may require verifying its and its subcontractors' compliance with the requirements of Chapter 17-1300 and Executive Order 03-14. VENDOR and its subcontractors shall notify each affected employee what wages are required to be paid pursuant to Chapter 17-1300 and Executive Order 03-14.

Absent a waiver, a VENDOR subject to Chapter 17-1300 and Executive Order 03-14 shall comply with all their requirements as they exist on the date when the VENDOR enters into contract with the City or when such contract is amended. Absent a waiver, VENDOR shall also be responsible for the compliance of its subcontractors with the requirements of Chapter 17-1300 and Executive Order 03-14. VENDOR shall take such steps as are necessary to notify its subcontractors of these requirements, including, without limitation, incorporating these requirements, with appropriate adjustments for the identity of the parties, in its subcontracts with such subcontractors. A VENDOR or any of VENDOR's subcontractors subject to Chapter 17-1300 and the Executive

Order that fail to comply with their provisions may, after notice and hearing before the City's Director of Finance or such other officer or agency designated by the Mayor, be suspended from receiving financial assistance from the City or from bidding on and/or participating in future City contracts, whether as a prime contractor or a subcontractor, for up to three (3) years. Furthermore, the City Council may, by resolution adopted after a public hearing, determine that there are reasonable grounds to believe that an employer subject to Chapter 17-1300 has failed to comply with its provisions, and that if such failure is established, then debarment would be an appropriate remedy for such failure. A copy of any such adopted resolution shall be forwarded to the City's Director of Finance, or such other officer or agency designated by the Mayor, who shall without undue delay provide appropriate notice and opportunity for hearing, and after such hearing, make a final determination as to whether there has been a violation of Chapter 17-1300, and whether debarment, as provided by Chapter 17-1300, should be imposed. Such debarment shall be in addition to any of the other sanctions or remedies set forth in Chapter 17-1300 or any contract with the City. The debarment procedure by City Council resolution shall be in addition to any other procedure for debarment or suspension from City contracts established under Chapter 17-1300.

The VENDOR's failure to comply, or the failure of VENDOR's subcontractors to comply with the requirements of Chapter 17-1300 or Executive Order 03-14 shall constitute a substantial breach of this Contract entitling the City to certain rights and remedies provided in this Contract or otherwise available at law or in equity.

The City's Office of Labor Standards may grant a partial or total waiver of Chapter 17-1300 based on specific stipulated reasons elaborated in Section 17-1304 of the Code. An overview offering guidance on the applicability of, and requirements placed on City contractors and their first tier subcontractors by Chapter 17-1300 of the Code and Executive Order 03-14 is available on the City's website (at <https://secure.phila.gov/eContract/> under the "About" link) (see "Minimum Wage and Equal Benefits Ordinances Impacting Some City Contractors").

K. EQUAL BENEFITS ORDINANCE

Unless VENDOR is a government agency, this is a "Service Contract" as that term is defined in Section 17-1901(4) of the Code. If the Service Contract is in an amount in excess of \$250,000, then pursuant to Chapter 17-1900 of the Code, VENDOR shall, for any of its employees who reside in the City, or any of its employees who are non-residents subject to City wage tax under Section 19-1502(1)(b) of the Code, extend the same employment benefits the VENDOR extends to spouses of its employees to life partners of such employees. VENDOR certifies that (i) it is in compliance with the requirements of Chapter 17-1900, (ii) its employees have been notified of the employment benefits available to life partners pursuant to Chapter 17-1900, and (iii) such employment benefits are currently, or will be made available within the time required by Section

17-1902(2), or that the VENDOR does not provide employment benefits to the spouses of married employees.

VENDOR acknowledges and agrees that the following terms are included in this Contract:

(1) VENDOR shall notify its employees of the employment benefits available to life partners pursuant to Chapter 17-1900 of the Code.

(2) Noncompliance by the VENDOR with the requirements of Chapter 17-1900 of the Code shall be a material breach of this Contract.

(3) Discrimination or retaliation by the VENDOR against any employee on account of having claimed a violation of Chapter 17-1900 shall be a material breach of this Contract.

(4) In addition to any other rights and remedies available to the City pursuant to this Contract at law or in equity, a material breach of this Contract related to Chapter 17-1900 may result in the suspension or debarment of VENDOR from participating in City contracts for up to three (3) years.

An overview offering guidance on the applicability of, and requirements placed on City contractors by Chapter 17-1900 of the Code is available on the City's website (at <https://secure.phila.gov/eContract/> under the "About" link) (see "Minimum Wage and Equal Benefits Ordinances Impacting Some City Contractors").

L. ETHICS REQUIREMENTS

To preserve the integrity of City employees and maintain public confidence in the competitive contracting system, the City intends to vigorously enforce the various ethics laws as they relate to City employees in the bidding and execution of City contracts. Such laws are in three categories:

1. City Employee Interest in City Contracts. In accordance with Section 10-102 of the Philadelphia Home Rule Charter, no proposal shall be accepted from, or contract awarded to, any City employee or official, or any firm in which a City employee or official has a direct or indirect financial interest. All VENDORS are required to disclose any current City employees or officials who are employees or officials of the VENDOR's firm, or who otherwise would have a financial interest in the contract.

2. Conflict of Interest. Both the State Ethics Act and the City Ethics Code prohibit a public employee from using his/her public office or any confidential information gained thereby to obtain financial gain for himself/herself a member of his/her immediate family, or a business with which he/she or a member of his/her immediate family is associated. "Use of public office"

is avoided by the employee or official publicly disclosing the conflict and disqualifying himself/herself from official action in the matter, as provided in the Philadelphia Code Section 20-608.

3. Executive Order 10-16: Gifts.

(a) Pursuant to Executive Order 10-16, no City officer or employee in the Executive and Administrative Branch may accept or receive a gift of any monetary value from a person who, at the time or within 12 months preceding the time a gift is received, (1) is seeking, or has sought, official action from that officer or employee; or (2) has operations or activities regulated by that officer's or employee's department, agency, office, board or commission, or, in the case of members of the Mayor's Cabinet, has operations or activities that are regulated by any department, agency, office, board or commission within the Executive and Administrative branch; or (3) has a financial or other substantial interest in acts or omissions taken by that officer or employee, which the officer or employee is able to affect through official action.

(b) VENDOR understands and agrees that if it offers anything of value to a City official or employee under circumstances where the receipt of such item would violate the provisions of this Executive Order, VENDOR shall be subject to sanctions with respect to future City contracts. Such sanctions may range from disqualification from participation in a particular contract to debarment, or loss of financial assistance, depending on the nature of the violation.

M. RELATIONSHIP WITH THE CITY

Neither VENDOR's personnel nor any subcontractor personnel shall be employees of the City. VENDOR shall notify the City of any VENDOR personnel or any subcontractor personnel who have any employment or other contractual relationship or agency relationship with the City after VENDOR becomes aware of such a relationship.

N. INDEPENDENT CONTRACTOR

VENDOR is an independent contractor and shall not in any way or for any purpose be deemed or intended to be an employee or agent of the City. Neither VENDOR nor its agents, employees or subcontractors shall in any way represent that they are acting as employees, officials or agents of the City.

O. ENTITIES DOING BUSINESS IN NORTHERN IRELAND, IRAN OR SUDAN

1. In accordance with Section 17-104 of the Philadelphia Code, VENDOR by execution of its proposal certifies and represents that (i) VENDOR (including any parent, subsidiary, exclusive distributor, or company affiliated with VENDOR) does not have, and will not have at any time during the term of the contract, any investments, licenses, franchises, management agreements or operations in Northern Ireland, and (ii) no product to be provided to the City under the contract will originate in Northern Ireland, unless VENDOR has implemented the fair employment principles embodied in the MacBride Principles.

2. In accordance with Section 17-104 of the Philadelphia Code, VENDOR by execution of its proposal certifies and represents that (i) VENDOR does not do business in Iran or Sudan, and (ii) no products to be provided to the City under the contract were manufactured by an entity doing business in Iran or Sudan, unless a federal override with respect to Iran or Sudan, as applicable, is in place or unless an exclusion from disqualification applies.

3. In the performance of the contract, VENDOR agrees that it will not utilize any suppliers or subcontractors at any tier (i) who have (or whose parent, subsidiary, or exclusive distributor of VENDOR affiliate have) any investments, licenses, franchises, management agreements or operations in Northern Ireland or (ii) who will provide products originating in Northern Ireland unless said supplier or subcontractor has implemented the fair employment principles embodied in the MacBride Principles or (iii) who do business in Iran or Sudan or who will provide products manufactured by an entity doing business in Iran or Sudan, unless a federal override with respect to Iran or Sudan, as applicable, is in place or unless an exclusion from disqualification applies. VENDOR further agrees to include these provisions in all subcontracts and supply agreements which are entered into in connection with the performance of the contract with the City.

4. VENDOR agrees to cooperate with the City's Director of Finance in any manner which the said Director deems reasonable and necessary to carry out the Director's responsibilities under Section 17-104 of the Philadelphia Code. VENDOR expressly understands and agrees that any false certification or representation in connection with these provisions and/or any failure to comply with these provisions shall constitute a substantial breach of contract with the City entitling the City to all rights and remedies provided in this bid or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or at equity.

P. BUSINESS, CORPORATE AND SLAVERY ERA INSURANCE DISCLOSURE

In accordance with Section 17-104 of the Philadelphia Code, the VENDOR, after award of the contract, will complete an affidavit certifying and representing that the VENDOR (including any parent company, subsidiary, exclusive distributor or company affiliated with VENDOR) has searched any and all records of the VENDOR or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit. The VENDOR expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of the contract entitling the City to all rights and remedies provided in the contract or otherwise available in law (including, but not limited to, Section 17-104 of The Philadelphia Code) or equity and the

contract will be deemed voidable. In addition, it is understood that false certification or representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

Q. CHAPTER 17-1800 OF THE PHILADELPHIA CODE: PHILADELPHIA RE-ENTRY EMPLOYMENT PROGRAM FOR RETURNING CITIZENS

VENDOR agrees to identify potential job opportunities that may be available for “Returning Citizens,” as that term is defined in Code Section 19-2604(9), based on the matrix of job titles and work categories developed by the Personnel Director of the City of Philadelphia under Section 20-1702(2) of the Code and to report to the City on VENDOR’s employment practices and experience with respect to the hiring of Returning Citizens including (i) a monthly tally of Returning Citizens hired and currently working, or an explanation as to why no Returning Citizens have been hired; and (ii) an explanation as to why any Returning Citizen who applied for employment was refused employment.

VENDOR furthermore agrees to cooperate with the City in addressing the goal of securing employment for Returning Citizens. VENDOR agrees that if VENDOR fails to comply with the requirements of this paragraph, the City may withhold any payments due under the contract until the VENDOR achieves full compliance. VENDOR agrees to require any subcontractor it uses (regardless of the value of the subcontract) to comply with and be bound by the provisions of this paragraph as if the subcontractor were the VENDOR.

R. GOVERNING LAW

This Contract shall be deemed to have been made in Philadelphia, Pennsylvania. This Contract and all disputes arising under this Contract shall be governed, interpreted, construed and determined in accordance with the laws of the Commonwealth of Pennsylvania, without giving effect to principles of Pennsylvania law concerning conflicts of laws.

S. FORUM SELECTION CLAUSE; CONSENT TO JURISDICTION

The parties irrevocably consent and agree that any lawsuit, action, claim, or legal proceeding involving, directly or indirectly, any matter arising out of or related to this Contract, or the relationship created or evidenced thereby, shall be brought exclusively in the United States District Court for the Eastern District of Pennsylvania or the Court of Common Pleas of Philadelphia County. It is the express intent of the parties that jurisdiction over any lawsuit, action, claim, or legal proceeding shall lie exclusively in either of these two (2) forums. The parties further irrevocably consent and agree not to raise any objection to any lawsuit, action, claim, or legal proceeding which is brought in either of these two (2) forums on grounds of venue or *forum non conveniens*, and the parties expressly consent to the jurisdiction and venue of these two (2) forums.

* * * * *

Signature Page to Follow

* * * * *

IN WITNESS WHEREOF, the Parties have executed the Advanced Metering Infrastructure Service Contract as of the date written herein below, through their duly authorized representatives.

Philadelphia Municipal Authority

By: _____

Name: _____

Title: _____

Date: _____

Sensus USA, Inc.

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT A
ORDINANCE



City of Philadelphia

City Council
Chief Clerk's Office
402 City Hall
Philadelphia, PA 19107

BILL NO. 180972

Introduced November 1, 2018

Councilmember Johnson

**Referred to the
Committee on Transportation and Public Utilities**

AN ORDINANCE

Authorizing the Water Commissioner, the Revenue Commissioner, and the Procurement Commissioner, on behalf of the City of Philadelphia (“City”), to enter into an Intergovernmental Agreement with the Philadelphia Municipal Authority (“Authority”), pursuant to which the City will assume certain obligations under a contract the Authority will enter into with Sensus USA Inc. (“Sensus”) to provide, install, maintain and operate facilities and equipment for the automated collection and delivery of water usage data to the Revenue Department or other designated City department, all under certain terms and conditions.

WHEREAS, the Authority, by Bill No. 970352 (approved July 1, 1997), is authorized to acquire, maintain and operate facilities and equipment for the automated collection and delivery of water usage data from water and sewer customers to the Department of Revenue or other designated City department; and

WHEREAS, the Water, Revenue, and Procurement Departments have requested that the Authority undertake a project (the “Project”) to provide, maintain and operate facilities and equipment for the automated collection and delivery of water usage data to the Revenue Department or other designated City department (the “AMI System”), and

WHEREAS, Sensus has been selected through a competitive process to undertake the Project and to provide, maintain and operate the AMI System; and

WHEREAS, the Project will require the Authority to enter into a contract with Sensus for the purchase, installation, operation and maintenance of the AMI System, and will require the City and the Authority to enter into an Intergovernmental Agreement pursuant to which the City will assume certain obligations under the Authority’s contract with Sensus; now, therefore

City of Philadelphia

BILL NO. 180972 continued

THE COUNCIL OF THE CITY OF PHILADELPHIA HEREBY ORDAINS:

SECTION 1. The Water Commissioner, the Revenue Commissioner, and the Procurement Commissioner, on behalf of the City, are hereby authorized to enter into an Intergovernmental Agreement with the Authority, pursuant to which the City will assume certain of Authority's obligations under a contract the Authority will enter into with Sensus to provide, install, maintain and operate facilities and equipment for the automated collection and delivery of water usage data to the Revenue Department or to other designated City department.

SECTION 2. The Intergovernmental Agreement authorized in Section 1 of this Ordinance shall be substantially in the form set forth in Exhibit "A" attached hereto.

SECTION 3. The authorization in Section 1 of this Ordinance is conditioned on the contract between the Authority and Sensus being substantially in the form set forth in Exhibit "B" attached hereto.

SECTION 4. The Economic Opportunity Plan for the Project, which will be an exhibit to the contract between the Authority and Sensus, is attached hereto as Exhibit "C."

SECTION 5. The Project Labor Agreement for the Project, which will be an exhibit to the contract between the Authority and Sensus, is attached hereto as Exhibit "D."

SECTION 6. The City Solicitor is hereby authorized to review and approve the agreements necessary to effectuate this Ordinance, and to impose such terms and conditions on them as the City Solicitor may deem necessary and proper to protect the interests of the City and to carry out the purpose of this Ordinance.

SECTION 7. The Chief Clerk of City Council shall keep all Exhibits to this Ordinance on file and make them available to the public for inspection and copying during regular office hours.

SECTION 8. This Ordinance shall take effect immediately.

[Note: Exhibits to this Bill are on file in the Office of the Chief Clerk.]

EXHIBIT B
CITY-PMA AGREEMENT

EXHIBIT B

INTERGOVERNMENTAL AMI AGREEMENT

THIS INTERGOVERNMENTAL AMI AGREEMENT (“Intergovernmental Agreement”) is dated as of _____ (“Effective Date”) by and between the City of Philadelphia (“City”) acting through its Water Department, Revenue Department and Procurement Department and the Philadelphia Municipal Authority, a body corporate and politic organized and existing under the laws of the Commonwealth of Pennsylvania (“Authority”).

RECITALS

WHEREAS, the Authority is a body corporate and politic organized under the provisions of the Pennsylvania Municipality Authorities Act of 1945 (the Act of May 2, 1945, P.L. 382, as amended) pursuant to ordinances of the Council of the City of Philadelphia; and

WHEREAS, the Authority, by Bill No. 970352 (approved July 1, 1997), is authorized to acquire, maintain and operate facilities and equipment for the automated collection and delivery of water usage data from water and sewer customers to the Department of Revenue or other designated City department; and

WHEREAS, the City, with the assistance of the Authority, desires to undertake a certain long-term advanced metering infrastructure (“AMI”) project consisting of the AMI System, meter interfacing unit installation and maintenance, network operations and maintenance, AMI System software services, AMR to AMI transition meter reading services, provision of meters, and other related additional services; and

WHEREAS, the Water Department has requested that the Authority enter into a contract (“AMI Contract”) with Sensus USA Inc., (“VENDOR”), for long-term AMI project services; and

WHEREAS, the Council of the City of Philadelphia enacted an ordinance, Bill No. _____, approved by the Mayor on _____ duly empowering the City and the Authority to enter this Intergovernmental AMI Agreement and Exhibits thereto; and

WHEREAS, by resolution dated _____, the Board of Directors of the Authority has authorized its Chairman, Vice-Chairman or its Executive Director to execute this Intergovernmental AMI Agreement; and

WHEREAS, the VENDOR and the Authority have entered into the AMI Contract, in the form attached hereto as Exhibit A, contemporaneously with this Intergovernmental AMI Agreement.

NOW, THEREFORE, in consideration of the mutual promises and agreements contained herein, the City and the Authority (collectively, the “Parties”) hereby agree as follows:

1. Definitions.

Capitalized terms used and not defined in this Intergovernmental AMI Agreement shall have the meanings ascribed to them in the AMI Contract.

2. Term.

The term of this Intergovernmental AMI Agreement shall commence on the Effective Date and shall terminate one day after the expiration or termination of the AMI Contract; provided that to the extent that any obligations of the Authority under the AMI Contract survive expiration or termination of the AMI Contract, the City’s corresponding obligations under this Intergovernmental Agreement shall remain in effect and be enforceable following such expiration or termination.

3. Obligations of the Authority.

(a) **Administrative Obligations.** Authority shall provide all required administrative services necessary to fulfill its obligations to the VENDOR and the City for the prompt and timely submission of any required representations and documents required under the AMI Contract.

(b) The Authority shall provide the City with copies of any notices received by the Authority from the VENDOR, unless the Authority shall have determined by reasonable means that the City received a copy of such notice directly from such party.

(c) The Authority shall provide the City with a copy of any notices received from any governmental authority with respect to the AMI project or transactions contemplated by this Intergovernmental AMI Agreement or the AMI Contract.

(d) The Authority shall not amend, modify, alter or otherwise change the AMI Contract, once fully executed, without the prior written consent of the City.

(f) The Authority shall not assign the AMI Contract once fully executed, without the prior written consent of the City.

(g) The Authority shall pay over to the City any payments due from the VENDOR with respect to the AMI Contract.

(h) The Authority shall provide the City with water meters as needed for the AMI project services.

(i) The Authority shall transfer all rights and ownership to the City of all AMI equipment and facilities, warranties, licenses or other materials required for AMI project services.

4. Obligations of the City

(a) With the exception of administrative obligations of the Authority set forth herein, the City hereby assumes and shall perform all other non-financial obligations specifically required of the Authority to the VENDOR under the AMI Contract. In addition, the City shall make timely payments to the Authority for all approved invoices submitted to the City.

(b) Wherever the AMI Contract states that the Authority shall respond, inspect, review, approve, provide data or undertake similar obligations for AMI project services, the City shall undertake such obligations.

(c) The City shall timely and promptly review all required representations and documents required under the AMI Contract.

5. Indemnification.

Subject to the provisions and limitations of this Section, the City hereby indemnifies and holds harmless the Authority and each member, officer, and employee of the Authority against any and all claims, losses, damages or liabilities, joint and several, to which the Authority or any member, officer or employee of the Authority may become subject, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of this Intergovernmental AMI Agreement or the AMI Contract, unless the losses, damages or liabilities arise from an adjudication of bad faith, fraud or deceit of the member, officer or employee of the Authority. In the event any claim is made or action brought against the Authority, or any member, officer, or employee of the Authority, the Authority may request that the City assume the defense of the claim and any action brought thereon and pay all reasonable expenses incurred therein; or the Authority may assume the defense of any such claim or action, provided, however, that counsel selected by the Authority shall be approved by the City, and further provided that the City may engage its own counsel to participate in the defense of any such action. The defense of any such claim shall include the taking of all actions necessary or appropriate thereto.

6. Payment to the Authority for Administrative and Legal Costs

(a) From time to time, but no more frequently than monthly, the Authority may submit invoices to the City for its reasonable administrative costs associated with this

Intergovernmental AMI Agreement and the AMI Contract. The Authority shall prepare and submit to the City a schedule of anticipated administrative fees.

(b) The City agrees to reimburse the Authority for its reasonable legal fees and other transaction costs associated with the execution of this Intergovernmental AMI Agreement and the AMI Contract.

7. Successor Authority.

In the event that the Authority ceases to exist or otherwise does not perform its obligations hereunder, or the City chooses to cause the Authority to assign the AMI Contract to another Authority, the City shall have the right to appoint and substitute a successor authority (“Successor Authority”) to succeed to the rights and assume the obligations of the Authority hereunder. The City’s right to appoint a Successor Authority shall be a continuing right and shall not be exhausted by the exercise thereof.

8. Limitation of Liability: Special Obligations of the Authority.

Notwithstanding anything contained in this Intergovernmental AMI Agreement to the contrary, the payment obligations of the Authority arising under this Intergovernmental AMI Agreement are special obligations of the Authority, payable solely from payments received from the City. The Authority will do all things lawfully within its power to obtain, maintain and properly request from the City and pursue funds from which the payments may be made.

9. Tort Claims Act.

Nothing in this Intergovernmental AMI Agreement or the AMI Contract shall waive or be construed to waive or amend, or be deemed to waive or amend, any immunity which the City or the Authority, or their officials, members, officers, agents, employees or representatives, may have under Title 42, Chapter 85 of the Pennsylvania Consolidated Statutes Annotated, as applicable, or other Applicable Law.

10. Effect of City Approval

Review, approval or acceptance by the Water Department of any documents submitted to the City by the Authority, the VENDOR or any other party under or in connection with this Intergovernmental AMI Agreement or the AMI Contract shall not constitute approval otherwise required under Applicable Law by any and all City of Philadelphia departments, boards or commissions, or by any other federal, state or local governmental authority having jurisdiction.

11. No Merger.

The rights and obligations of the Parties under this Intergovernmental AMI Agreement

shall remain in effect and shall not merge, even if the same Party holds rights of both Parties hereunder, unless such Party terminates this Intergovernmental AMI Agreement in writing.

12. Severability.

In the event that any of the provisions, or portions or applications thereof of this Intergovernmental AMI Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, the Parties shall negotiate an equitable adjustment in the provisions of this Intergovernmental AMI Agreement with a view toward effecting the purpose of this Intergovernmental AMI Agreement, and the validity and enforceability of the remaining provisions, or portions or applications thereof, shall not be affected thereby.

13. Notice.

Any notice required to be given by City to the Authority hereunder shall be in writing and shall be addressed to:

The Philadelphia Municipal Authority
1515 Arch Street, 9th Floor
Philadelphia, PA 19102
Attention: Executive Director

Any notice required to be given by the Authority to the City hereunder shall be in writing and shall be addressed to:

City of Philadelphia Water Department
1101 Market Street, 5th Floor
Philadelphia, PA 19107
Attention: Deputy Commissioner for Operations

All notices under this Section shall be delivered in person, sent via certified mail with a return receipt requested or sent via facsimile and shall be effective when received at the address specified above. The Parties hereto, by like notice in writing, may designate, from time to time, another address or facsimile number to which notices may be given pursuant to this Intergovernmental Agreement.

14. Entire Agreement.

This Intergovernmental AMI Agreement contains the entire agreement between the Parties hereto and supersedes any and all prior written and oral agreements, proposals, negotiations, understandings and representations pertaining to the subject matter hereof.

15. Amendments.

The parties acknowledge that from time to time the Intergovernmental AMI Agreement may require amendments to support the Parties interests and obligations under the AMI Contract. Such requests for amendment from either Party shall not be unreasonably denied or delayed. However, no amendments or modifications of this Intergovernmental AMI Agreement shall be valid unless evidenced in writing and signed by a duly authorized representative of the Party against which enforcement is sought.

16. No Third Party Rights.

The Parties hereby acknowledge the VENDOR is a third party beneficiary to this Intergovernmental AMI Agreement. Except with respect to the VENDOR as third party beneficiary, this Intergovernmental AMI Agreement and all rights hereunder are intended for the sole benefit of the Parties and shall not imply or create any rights on the part of, or obligations to, any other Person.

IN WITNESS WHEREOF, the Parties have executed this Intergovernmental AMI Agreement of the date first above written.

APPROVED AS TO FORM:
Marcel S. Pratt, City Solicitor

CITY OF PHILADELPHIA, acting
through its Water Department

By: _____
Ji Y. Jun
Deputy City Solicitor

By: _____
Debra A. McCarty
Commissioner

and its Revenue Department

By: _____
Frank Breslin
Commissioner

and its Procurement Department

By: _____
Trevor Day
Commissioner

**PHILADELPHIA MUNICIPAL
AUTHORITY**

By: _____
Lorna B. Gallman
Executive Director

EXHIBIT C
OPINION OF COUNSEL, COMPANY

Letterhead of Counsel to Company

[Date]

To: The Philadelphia Municipal Authority

RE: Advanced Metering Infrastructure Service Contract

Ladies and Gentlemen:

This opinion is being delivered to you pursuant to the requirements of the following agreements, each dated the date hereof (collectively, the “Transaction Documents”):

(a) Advanced Metering Infrastructure Service Contract, including its exhibits

As an officer of Xylem Inc., which is the sole shareholder of Sensus USA Inc. (“the Company”) and not in my personal capacity, and in connection with this opinion and on the behalf of the Company, I have examined such proceedings, documents, ordinances, statutes and decisions as I consider necessary for the basis of this opinion and I have made such inquiries of the Company personnel as I deemed necessary for such purpose with respect to the transactions contemplated by the Transaction Documents.

Based upon the foregoing, it is my opinion that:

1. The Company is a corporation validly existing and in good standing under the laws of the Delaware.
2. The Company has all power and lawful authority to execute, deliver and perform the transactions contemplated by the Transaction Documents.
3. The Transaction Documents are legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as such enforceability may be limited by bankruptcy, insolvency, receivership or other laws or equitable principles affecting the enforcement of creditors’ rights generally.
4. The signatory officers or employees of the Company have been authorized by its governing body to execute and deliver the Transaction Documents. The Transaction Documents and related agreements and the performance of the terms thereof and the consummation of the transactions contemplated thereby will not result in a breach of, or default under, any obligation, agreement, or condition contained in any loan, note,

deed of trust or any other material agreement of the Company or by which it or any of its properties may be bound, known to me.

5. To the best of my knowledge, after reasonable inquiry, no action, suit, proceeding or official investigation is pending or threatened by any person or entity against the Company that challenges the validity of the Transaction Documents or related agreements or seeks to enjoin, assess civil or criminal penalties against, assess civil damages against or obtain any judgment, order or consent decree against the Company with respect to the Transaction Documents or related agreements.

6. Except for consents, approvals or authorizations obtained or received previously and except for those permits and authorizations Company will obtain for installation of DCUs, no consents, approvals or authorizations are required for the Company to execute, deliver or perform its obligations under the Transaction Documents or related agreements.

This Opinion is limited in its scope to those items specified above and is rendered solely for your information and benefit in connection with the execution and delivery of the Transaction Documents and may not be relied upon by any other person for any other purpose.

Very truly yours,

Claudia Toussaint
Senior Vice President, General Counsel, and
Corporate Secretary of Xylem Inc.

EXHIBIT C.1
OPINION OF COUNSEL, PMA

Letterhead of PMA Counsel

To:

RE: Advanced Metering Infrastructure Service Contract

Ladies and Gentlemen:

This opinion is being delivered to you pursuant to the requirements of the following agreements, each dated the date hereof (collectively, the "Transaction Documents"):

- (a)
- (b)
- (c)

In connection with this opinion and on the behalf of the Authority, I have examined such proceedings, documents, ordinances, statutes and decisions as I consider necessary for the basis of this opinion and I have made such inquiries of the Authority personnel as I deemed necessary for such purpose with respect to the transactions contemplated by the Transaction Documents.

Based upon the foregoing, it is my opinion that:

1. The Authority is a body corporate and politic validly existing and in good standing under the Constitution and laws of the Commonwealth of Pennsylvania.
2. The Authority has all power and lawful authority to execute, deliver and perform the transactions contemplated by the Transaction Documents.
3. The Transaction Documents are legally valid and binding obligations of the Authority, enforceable against the Authority in accordance with their terms, except as such enforceability may be limited by bankruptcy, insolvency, receivership or other laws or equitable principles affecting the enforcement of creditors' rights generally.
4. The resolution of the Authority approving and authorizing the execution and delivery of the Transaction Documents was duly adopted at a meeting of the Authority on _____, which was called and held pursuant to the Authority's Articles of Incorporation, its Bylaws and the laws of the Commonwealth of Pennsylvania, at which a quorum was present and acting throughout, and such resolution remains in full force and effect on the date hereof. The Transaction Documents and related agreements

and the performance of the terms thereof and the consummation of the transactions contemplated thereby will not (a) conflict with or result in a breach of the Bylaws of the Authority, (b) conflict with or result in a violation of any law, administrative regulation, ordinance or, to the best of my knowledge after reasonable inquiry, any order of any court, administrative agency, arbitration panel or authority applicable to the Authority, or (c) result in a breach of, or default under, any obligation, agreement, or condition contained in any loan, note, deed of trust or any other material agreement of the Authority or by which it or any of its properties may be bound, known to me.

5. To the best of my knowledge, after reasonable inquiry, no action, suit, proceeding or official investigation is pending or threatened by any person or entity against the Authority that challenges the validity of the Transaction Documents or related agreements or seeks to enjoin, assess civil or criminal penalties against, assess civil damages against or obtain any judgment, order or consent decree against the Authority with respect to the Transaction Documents or related agreements.

6. Except for consents, approvals or authorizations obtained or received previously, no consents, approvals or authorizations are required for the Authority to execute, deliver or perform its obligations under the Transaction Documents or related agreements.

This Opinion is limited in its scope to those items specified above and is rendered solely for your information and benefit in connection with the execution and delivery of the Transaction Documents and may not be relied upon by any other person for any other purpose.

Very truly yours,

Counsel to the Philadelphia
Municipal Authority

EXHIBIT D
PROJECT LABOR AGREEMENT

PHILADELPHIA WATER DEPARTMENT

Advanced Metering Infrastructure Project

PHILADELPHIA PUBLIC PROJECTS LABOR AGREEMENT

THIS CITY OF PHILADELPHIA PUBLIC PROJECT LABOR AGREEMENT (hereinafter the “Agreement”) is entered into by and between:

(hereinafter the “Signatory Contractor(s)”), their successors or assigns, and the Philadelphia Construction and Building Trades Council, the International Brotherhood of Electrical Workers (IBEW), Local #98 and the Plumbers Local Union No. 690 (hereinafter the “Unions(s)”) with respect to City of Philadelphia (“City”) Advanced Metering Infrastructure (“AMI”) project referred to herein as the “Project.”

WHEREAS the City has determined that the Project, and in particular, the installation of new AMI meter reading devices, is an appropriate project for a Project Labor Agreement; and

WHEREAS the Signatory Contractor has been selected by the City as the party responsible for the oversight and implementation of the Project including the hiring of the workforce for the installation of AMI meter reading devices either directly or through subcontractors;

NOW, THEREFORE, the Signatory Contractor(s) and the Unions, intending to be legally bound, enter into this Agreement.

ARTICLE I - DEFINITIONS

Section 1. The term “City” shall mean the City of Philadelphia, including its departments, agencies, officials, employees and agents.

Section 2. The term “Contractor” shall include the Signatory Contractors, all contractors and subcontractors of whatever tier engaged in work within the scope of this Agreement.

Section 3. The term “craft” as applied to employees and workers shall mean those skills, crafts and trades of workers represented by the Union(s) as defined herein.

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Section 4. The term “Party” shall mean either Signatory Contractor or a Union.

Section 5. The term “Project” refers to the Project as more fully described in Article III, Section 2.

Section 6. Masculine or Feminine Gender. The use of words denoting the masculine or feminine gender in this Agreement shall be construed as including both genders.

Section 7. The term “AMI Installation Technician” shall mean a person employed by the Contractor for the purpose of installing water meter reading devices in residential, commercial and other locations in accordance with protocols established by contract between the City and the Contractor and policies developed by the Contractor for the efficient implementation of the Project.

ARTICLE II - PURPOSE

Section 1. As provided in Mayor’s Executive Order No. 8-15, the City has a compelling interest in carrying out the Project at the lowest reasonable cost, highest level of efficiency, and the highest degree of quality.

Section 2. The City has determined that certain major projects can best be carried out through the use of Project Labor Agreements, which ensure that labor disputes are resolved without disruptions resulting from strikes, lockouts or slowdowns and which provide for enforceable guarantees that the projects will be carried out in an orderly and timely manner without strikes, lockouts or slowdowns and ~~with provisions protecting the wages, hours, working conditions and safety of those workers whose skills~~ are required to complete such projects. Project Labor Agreements can provide the City with cost savings and efficiencies through project-specific adjustments to collective bargaining agreements that allow for project-specific appropriate hours of work, length of workday and workweek, overtime, starting times, breaks, shift work, crew apprentice ratios, holidays, dispute resolution and management rights, as have been mutually determined and agreed to by the City and the Union(s).

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Section 3. The City can best accomplish these goals by permitting the use of Project Labor Agreements, on a project by project basis, through which the City has determined, based on thorough investigation, analysis and justification, that the use of a Project Labor Agreement will benefit and enhance the interest of the City from a cost, efficiency, quality, timeliness and/or safety standpoint.

Section 4. The City and the Unions have determined that Project Labor Agreements can provide a framework for meeting long term goals of the City, the Union(s) and Contractors for increasing the opportunities for minorities and women to have successful careers in the construction trades.

Section 5. The City has determined that it can best accomplish all these goals by requiring for projects for which it determines the requirement is appropriate that the Contractors agree to enter into a Project Labor Agreement with the Union(s) prior to the award of the contract. The Project Labor

Agreement shall require such Contractors as well as all subcontractors, assignees or transferees to abide by an agreement setting forth the wages, hours and working conditions of the workers employed on such projects.

Section 6. The Parties to this Agreement recognize that it is essential that the work on the Project covered by this Agreement be done in an efficient and economical manner in order to secure optimum productivity and to eliminate any delays in the work. In recognition of the needs of the Project covered by this Agreement, and to maintain a spirit of harmony, labor-management peace, and stability during the term of this Agreement, the Parties agree to establish effective methods for the settlement of all misunderstandings, disputes or grievances which may arise under this Agreement.

Section 7. The Union(s) and the Contractors, their assigns, subcontractors and transferees agree to abide by the terms and conditions contained in this Agreement with respect to the performance of the work by the Contractors of the Project covered by this Agreement. This Agreement represents the complete understanding of the Parties, and it is further understood that no Contractor is required to sign any other agreement as a condition of performing work within the scope of this Agreement. No practice,

understanding or agreement between a Contractor and a Union Party which is not explicitly set forth in this Agreement and the Schedules hereto shall be binding on any other Party.

ARTICLE III - SCOPE OF THE AGREEMENT

Section 1. Scope of Agreement. This Agreement shall apply and is limited to all construction work under the direction of the Contractors and performed by those Contractors of whatever tier which have contracts awarded for such work on and after the effective date of this Agreement, for the City, for the Project defined in Section 2 below.

Section 2. Covered Projects. The Project covered by this Agreement is generally described as the Advanced Metering Infrastructure Project. The Agreement covers AMI Installation Technicians as ~~required by the City of the Contractor(s) in residential, commercial and other facilities and such other~~ duties as the Contractor(s) shall assign to AMI Installation Technicians.

Section 3. Award of Project Contracts.

(a) The City has the absolute right to select any qualified respondent to the AMI request for proposals for the award of contracts on this Project without reference to the existence or non-existence of any agreements between such respondent and any Party to this Agreement provided, however, only that such respondent is ready, willing and able to execute and comply with this Agreement, which it shall do should it be designated the successful respondent.

(b) It is agreed that all direct subcontractors of Contractors, of whatever tier, who have been awarded contracts for work covered by this Agreement on or after the effective date of this Agreement shall be required to accept and be bound by the terms and conditions of this Project Labor Agreement.

Section 4. Contract Administration.

(a) This Agreement is intended to provide close cooperation between management and labor. At the request of the City or a Party to this Agreement, a Project Relations Committee (as further

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described in Section 4 (c)), shall be formed and shall monitor compliance with this Agreement by all Contractors which, through their execution of this Agreement, together with their subcontractors or transferees, have become bound hereto. The Project Relations Committee shall monitor compliance with this Agreement by all Union(s) which, through their execution of this Agreement have become bound hereto.

(b) The provisions of this Agreement, including Collective Bargaining Agreements which are listed on and collectively designated as Schedule A, shall apply to the Project covered by this Agreement, notwithstanding the provisions of Local or International Agreements which may conflict or differ from the terms of this Agreement. Where a subject covered by the provisions of this Project Labor Agreement, including but not limited to, Schedule D Project Specific Conditions, is also covered by any of the Collective Bargaining Agreements in Schedule A, the provisions of this Agreement shall prevail.

(c) When established, the Project Relations Committee shall be composed of a representative of the City, representatives of each Signatory Contractor, and representatives of the Unions engaged in labor on the Project. The Philadelphia Area Labor Management Committee shall appoint one representative who will act as facilitator and staff to the Committee. The Project Relations Committee shall operate under the Philadelphia Area Labor-Management Built-Rite process.

(d) The Project Relations Committee shall meet as required.

(e) The purpose of this Project Relations Committee is as follows:

(1) To improve communications between representatives of labor and management and engender cooperative and harmonious relations between labor and management performing work under this Agreement.

(2) Provide workers and Contractors with opportunities to study and explore new and innovative joint approaches to achieving organizational effectiveness.

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- (3) Provide a forum for open and honest discussion of problems confronting labor and management, and of eliminating potential problems.
 - (4) Study and explore ways of increasing productivity of both labor and management, and of eliminating potential problems.
 - (5) Enhance the involvement of workers in making decisions that affect their working lives, and to improve the quality of work life for the employees.
 - (6) Expand and improve working relationships between workers and managers.
 - (7) Identify conflicts between labor and management before they arise as disputes, and promptly assist in fairly resolving disputes when they do arise.
 - (8) Seek to maintain a productive dialogue.
-
- (9) Pursue, achieve and document the implementation of all aspects of Schedule C, pertaining to increasing employment opportunities for women and minorities.
 - (10) Support the Contractor(s) in meeting general obligations and specific project goals for local hiring and for worker diversity as may be part of the Economic Opportunity Plan or the Project and as further described in Schedule E.

Section 5. Binding Effect. This Agreement and Schedules, including but not limited to Schedules A, B, C, D and E, attached hereto shall only be binding on the signatory Parties hereto and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such Party.

Section 6. Limitations. Nothing contained herein shall be construed to prohibit, restrict or interfere with the performance of any other operation, work or function of the Contractors or be associated with the development of the Project, or with the ongoing operations of the City.

Section 7. Exclusions. Items specifically excluded from the scope of this Agreement include, but are not limited to, the following:

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(a) Work of non-manual employees, including but not limited to, superintendents, supervisors, staff engineers, surveyors (except where expressly covered by a Collective Bargaining Agreement in Schedule A), inspectors, quality control personnel, quality assurance personnel, timekeepers, mail carriers, clerks and office workers, including messengers, guards, emergency medical and first aid technicians and other professional, engineering, administrative, supervisory and management employees.

(b) Equipment and machinery owned or controlled and operated by the City.

(c) All off-site handling of materials, equipment or machinery and all deliveries to and from the Project site except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(d) All employees of the City.

(e) Any work performed on or near, or leading to or into, the Project site by state, county, city or other governmental bodies, or their Contractors; or by public utilities or their Contractors and/or by the City, or its contractors, for work which is expressly not part of the Project covered by this Agreement.

(f) Off-site maintenance on leased equipment and on-site supervision of such work except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(g) Off-site warranty functions and warranty work and on-site supervision of such work except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(h) Exploratory geophysical testing, except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(i) Laboratory or specialty testing or inspections or monitoring activities not ordinarily done by the crafts.

(j) Other work which may occur from time to time.

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Section 8. Applicability of Agreement. Nothing contained herein shall be construed to prohibit or restrict the City or its employees from performing work covered by this Agreement. As areas and systems of a Project are inspected, tested and accepted by the City, the Agreement shall not have further force or effect on such items or areas.

Section 9. Termination, Delay or Suspension of Project. It is understood that the City, in accordance with its agreement(s) with the Signatory Contractor(s), may terminate, delay and or suspend any or all portions of the Project at any time.

Section 10. Contractor and Union(s) Liability. It is understood and agreed that the liability of any Contractor and the liability of separate Union(s) under this Agreement shall be several and not joint. The Union(s) agree that this Agreement does not have the effect of creating any joint employment status between or among the City and any Contractor.

ARTICLE IV - UNION RECOGNITION AND EMPLOYMENT

Section 1. Union Recognition. The Contractor recognizes the Union(s) as the sole and exclusive bargaining representatives of all craft employees working on the Project within the scope of this Agreement.

Section 2. Competency. The Contractor shall have the right to determine the competence of all employees, the right to determine the number of employees required and have the sole responsibility for selecting the employees to be laid-off consistent with this Agreement regardless of membership or non-membership in the Union(s).

Section 3. Union Security. It shall be a condition of employment that all employees of Contractor covered by this Agreement who are members of the Union(s) in good standing on the effective date of this Agreement or on the date of execution of this Agreement, whichever is later, shall remain members in good standing and those who are not members on the effective date shall, on the eighth (8th)

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day following employment, become and remain members in good standing in the Union(s) for the term of this Agreement.

Section 4. Selection of Foremen. The selection of craft foremen and/or general foremen and the number of foremen required shall be entirely the responsibility of the Contractor. All foremen shall take orders exclusively from the designated Contractor representatives. Craft foremen shall be designated as working foremen by the Contractor, except when the Contractor determines that it is not possible for a particular foreman to be working foreman.

Section 58. Seniority. Individual seniority shall not be recognized or applied to employees working on the Project.

ARTICLE V - UNION REPRESENTATION

Section 1. Access to Project Site. Authorized and designated representatives of the Union(s) shall have access to the Project staging site, consistent with rules, regulations and policies as have been established for site security and safety and through established Contractor procedures, for the purpose of transacting business in connection with the job. Such representatives shall be subject to security clearances and may require authorized escorts to enter secure areas of the Project. Such representatives shall not interfere with the work of employees or cause unnecessary loss of time by the employees.

Section 2. Stewards. Stewards shall be appointed consistent with the appropriate Collective Bargaining Agreement as included in Schedule A.

Section 3. Non-interference. On work where City personnel or personnel of other contractors not signatory to this Agreement may be working in close proximity of the Project activities, the Union(s) agree that the Union's representatives, stewards and individual workers will not interfere with the City's personnel or the personnel of other contractors not signatory to this Agreement or with the work which is being performed by the City's personnel or personnel of other contractors not signatory to this Agreement.

ARTICLE VI - MANAGEMENT RIGHTS

Section 1. Management Rights. The Contractor retains full and exclusive authority for the management of its operation consistent with this Project Labor Agreement and the collective bargaining agreements included in Schedule A. The Contractors retain the right to (i) plan, direct and control the workforce and the operation of all of his work, including the hiring, promotion, demotion, transfer, layoff, suspension, discipline or discharge for just cause of its employees; (ii) select foremen, determine the size and make-up of each crew; (iii) assign and schedule work; (iv) promulgate work rules; (v) regulate the use of all equipment and other property of the Contractors, decide the amount of equipment to be used, the number of employees needed; and (vi) regulate overtime work, the determination of when it shall be worked, and the number and identity of employees engaged for such work. No rules, customs or practices which limit or restrict productivity, efficiency or the individual and/or joint working efforts of employees shall be permitted or observed. The Contractors may utilize any methods or techniques of construction.

Section 2. Choice of Materials. There shall be no limitation or restriction upon the Contractors' choice of materials or design.. It is recognized that other personnel having special talents or qualifications may participate in the installation consistent with Schedule A, including, but not limited to check-off or testing of specialized or unusual equipment or facilities.

ARTICLE VII - HOURS OF WORK, OVERTIME, SHIFTS AND HOLIDAYS

Section 1. Hours of Work, Overtime, Shifts and Holidays shall be governed by the Collective Bargaining Agreements included in Schedule A, except as provided in Schedule D Project Specific Conditions and otherwise mutually agreed to by the Parties.

Section 2. Where modifications to the Collective Bargaining Agreements or the provisions of Schedule D Project Specific Conditions are in the best interest of a project, such departure may be requested by the Contractors, Union(s) and the City. Such departures shall be requested utilizing the Project Relations Committee and shall be approved by mutual consent.

ARTICLE VIII - WORKING CONDITIONS

Section 1. Job Site Conditions. All Project working conditions, including rest periods, coffee breaks and work practices, shall be as determined by the Contractors.

Section 2. Project Rules. The Contractors shall establish such other reasonable Project rules as each Contractor deems appropriate. All rules and regulations shall be observed by Union employees who, by virtue of their Union membership and coverage under an appropriate Collective Bargaining Agreement, are made subject to such rules.

ARTICLE IX - APPRENTICES

Section 1. The meter device installers hired under this Agreement shall be considered ~~craftsmen and craftswomen in training as members of their respective Unions. While not part of the~~ formal apprenticeship programs of the Unions, AMI Installation Technicians shall be Union members in good standing.

**ARTICLE X – EMPLOYMENT OPPORTUNITIES FOR PHILADELPHIA RESIDENTS,
MINORITIES AND WOMEN**

Section 1. Employment Opportunities For Philadelphia Residents. The parties recognize that the size and scope of the Project covered by this Agreement, the number of craftsmen and others expected to be employed in order to complete the work in a timely fashion, and the extended period of time during which the construction will be underway should provide significant employment opportunities for qualified residents of the City of Philadelphia. The Parties further recognize that the Economic Opportunity Plan for the Project includes specific local hiring goals for the Contractor as well as those established in Schedule C.

Section 2. Opportunities for Women and Minorities. The Parties agree that increasing participation by women and minorities employees on the Project is a desirable goal. Accordingly, the

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Parties shall undertake the activities identified in Schedule C to support the City, Union(s) and Contractor objectives of increased opportunities for participation in the Union(s) and for actual work performed. Additional responsibilities of the Contractor under the Economic Opportunity Plan related to diversity may be described and required in Schedule E.

ARTICLE XI - SAFETY, PROTECTION OF PERSON AND PROPERTY

Section 1. Safe Working Conditions. In accordance with the requirements of the Occupational Safety and Health Act, it shall be the exclusive responsibility of each Contractor to ensure safe working conditions for its employees and their compliance with any safety rules contained herein or established by the Contractors, provided however, it is understood that the employees have an obligation as set forth in Section 2 below.

Section 2. Safe Performance of Work. Employees must use diligent care to perform their work in a safe manner and to protect themselves, other persons and the property of the Contractors or the City. Failure to do so will be grounds for discipline, including discharge.

Section 3. Safety, Security and Visitor Rules. Employees covered by the terms of this Agreement shall at all times while in the employ of the Contractors be bound by the safety, security and rules as established by the City and/or the Contractors and in accordance with applicable State and Federal safety and health statutes and regulations. These rules will be published and posted in conspicuous places at the Project staging site.

ARTICLE XII - NO DISCRIMINATION

Section 1. No Discrimination. The Contractors and Union(s) agree that they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or age in any manner prohibited by law or regulation. It is recognized that special procedures may be established by joint agreement of the parties to this Agreement and governmental

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agencies for the training and employment of persons who have not previously qualified to be employed on construction projects of the type covered by this Agreement. The parties to this Agreement will make all good faith efforts to assist in the proper implementation of such orders, regulations or agreements for the benefit of the population within the jurisdiction of the City of Philadelphia.

Section 2. Complaints. Any complaints regarding application of the provisions of Section 1 should be brought to the immediate attention of the involved Contractors for consideration and resolution.

ARTICLE XIII - WORK STOPPAGES AND LOCKOUTS

Section 1. There shall be no strike, picketing, work stoppages, slowdowns, sickouts or other disruptive activity for any reason by the Union(s) or employees against any Contractor covered under this Agreement, and there shall be no lockouts by the Contractors. Failure of any of the Union(s) or any employee to cross any picket line established by any Union, signatory or non-signatory, or any other organization, at or in proximity to the Project site is a violation of this Article.

Section 2. The Contractors may discharge any employee violating Section 1 above,. The Contractors and the Union(s) shall take all steps necessary to obtain compliance with this Article and neither shall be held liable for conduct for which it is not responsible.

ARTICLE XIV - DISPUTES AND GRIEVANCES

Section 1. Agreement Interpretation. It is specifically agreed that in the event any disputes arise out of the interpretation or application of this Agreement the same shall be settled by the Project Relations Committee. All disputes arising out of Contractor-employee issues shall be governed by Section 2 of this Article. No such grievance shall be recognized unless called to the attention of the Contractor within seven (7) calendar days after the alleged violation was committed.

Section 2. Unless otherwise provided for in Schedule D Project Specific Conditions, it is specifically agreed that in the event any disputes arise between the Contractors and Union employees that do not involve the interpretation or application of this Agreement, and/or questions of jurisdiction of work,

the same shall be settled by means of the grievance procedures currently set forth in the local Collective Bargaining Agreements set forth in Schedule A.

ARTICLE XV - JURISDICTIONAL DISPUTES

Section 1. There will be no strikes, no work stoppages or slowdowns, or other interferences with the work because of jurisdictional disputes. Pending the resolution of the dispute, the work shall continue uninterrupted as assigned by the Contractors.

ARTICLE XVI - SAVINGS AND REPARABILITY

Section 1. It is not the intention of either the Contractors or the Union parties to violate any laws governing the subject matter of this Agreement. The parties hereto agree that in the event any provisions of the Agreement are finally held or determined to be illegal or void as being in contravention of any applicable law, the remainder of the Agreement shall remain in full force and effect unless the part or parts so found to be void are wholly inseparable from the remaining portions of this Agreement. Further, the Contractors and Union(s) agree that if and when any and all provisions of this Agreement are finally held or determined to be illegal or void by Court of competent jurisdiction, the parties will promptly enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the requirements of any applicable law and the intent of the parties hereto.

Section 2. This Article shall not be construed to waive the prohibitions of Article XIII, and if the parties are unable to resolve their differences, the matter shall be referred to arbitration for resolution as provided for in the grievance-arbitration procedure of Article XIV.

ARTICLE XVII - DURATION OF THE AGREEMENT

Section 1. This Agreement shall be effective upon execution by the parties and shall continue in effect for the duration of the Project as described in Article III hereof. Section 2. Each Collective Bargaining Agreement contained in Schedule A hereof attached to this Agreement shall continue in full force and effect until the Contractor(s) or Union(s) who are Parties to such Agreement notify the City of

PHILADELPHIA WATER DEPARTMENT
Automatic Meter Infrastructure Project

the mutually agreed upon changes in those provisions of such Agreements which are applicable to this Project, and the effective date thereof, which shall then become the effective date under this Agreement. Unless otherwise provided in this Agreement, increases to wages and benefit payments from the effective date each new or amended Collective Bargaining Agreement shall be due and owing upon notification to the Contractors and the City of such increases. The Parties agree that any provisions negotiated into any Collective Bargaining Agreement contained in Schedule A hereof will not apply to work on Project if such provisions are less favorable to the Contractors than those uniformly required of Contractors for work normally covered by such an agreement; nor shall any provision be recognized or applied on any Project if it may reasonably be construed to apply exclusively to work covered by this Agreement.

Section 3. The Union(s) shall provide notice to all Contractors that are Parties to this

Agreement who are not signatory to collective bargaining agreements with the Unions of any changes in the Schedule A. Collective Bargaining Agreements and/or changes to rates for wages and benefits. Such changes shall not be effective as to the Contractors who are not signatory to the Collective Bargaining Agreements until such notice has been given.

Section 4. In the renegotiation of any of the Collective Bargaining Agreements contained in Schedule A hereof, the Union(s) Party to this Agreement agree that there will be no strikes, work stoppages, sympathy strikes, picketing, slowdowns or other disruptive activity affecting the Project

covered by this Agreement because of or related to the renegotiation of any such Collective Bargaining Agreement contained in Schedule A hereof, nor shall there be any lockout on this Project affecting the Union(s) Party to this Agreement during the course of such negotiations.

Section 5. Any disagreement between the parties over the incorporation into any Collective Bargaining Agreement contained in Schedule A hereof of such provisions agreed upon in the renegotiation of any such Collective Bargaining Agreement as is contained in Schedule A shall be referred to Article XIV hereof for resolution.

**PHILADELPHIA WATER DEPARTMENT
Automatic Meter Infrastructure Project**

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and effective as of the day and year above written.

FOR THE UNION(S):

FOR THE CONTRACTOR(S):



IBEW Local 98

Signatory Contractor


Date 2/9/17

Date _____



Plumbers Local No. 690

Date _____



Philadelphia Construction and Building
Trades Council

Date _____

SCHEDULE A

COLLECTIVE BARGAINING AGREEMENTS

The Collective Bargaining Agreements, described in Article III, Section 4(b) of this Agreement,
are:

1. Agreement that the Mechanical Contractors of Eastern Pennsylvania with the Plumbers Union Local No. 690; and
 2. Agreement between the Philadelphia Division of the Penn-Del-Jersey chapter, NECA and Local Union 98 International Brotherhood of Electricians.
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SCHEDULE B

RESERVED

SCHEDULE C

**INCREASING OPPORTUNITIES FOR WOMEN AND MINORITIES
IN THE BUILDING TRADES UNION(S) AND PUBLIC WORKS PROJECTS**

Consistent with the Mayor’s Advisory on Construction Industry Diversity Report and Recommendations, the City of Philadelphia, the Union(s) and Contractors shall undertake the following activities:

Section 1. City Activities.

(a) The City shall collect, tabulate and analyze data, including certified payrolls, related to the participation of male minorities, women and Philadelphia residents in City and City-funded construction projects.

(b) The City shall establish goals for employment of Philadelphia residents in City and City-funded construction projects. For City residents, the goal for employment in the Project shall be:

Philadelphia Residents: One Hundred (100) percent of all AMI Installation Technician employment hours.

(c) The City shall establish goals for workforce diversity in City and City-funded construction projects. The current goals are based on the March 2009 Report of the Mayor’s Advisory Commission on Construction Industry Diversity (Commission Report). For male minorities and women the goals for

employment in the Project shall be:

Male Minority: Thirty two (32) percent of all construction employment hours

Women: Seven (7) percent of all construction employment hours

(d) The City shall assist the Union(s) in undertaking activities which would benefit from City participation and support.

PHILADELPHIA WATER DEPARTMENT
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(e) The City shall establish and support a standing Advisory Commission on Construction Industry Diversity. The City shall invite union leaders, large and small contractors, contractor associations, project owners and community leaders to participate.

(f) The City shall designate a City agency for the receipt and redress of complaints from the public about the opportunities for employment on City-funded construction projects.

Section 2. Union Activities.

(a) The Union(s) shall collect demographic data on participation in the Project. The Union(s) shall provide that information to the City on monthly basis while the Project Labor Agreement is in effect.

(b) The Union(s) shall set participation goals that will significantly increase participation of minority males and women. Such goals shall be consistent with the Commission Report and such

Commission updates as may be issued.

(c) The Union(s) shall establish goals for participation of in apprenticeship programs for minority males and women. Such goals shall be consistent with the Commission Report and such Commission updates as may be issued.

(d) The Union(s) shall actively recruit minority males and women for apprenticeship positions. Outreach efforts must be appropriate for reaching minority males and women and consistent with the goals the Union(s) have established for membership of the Union(s).

(e) The Union(s) shall evaluate alternatives to apprenticeship recruitment for adding minority males and women to membership.

(f) The Union(s) shall each identify a representative who shall be responsible for reporting on each Union's progress in improving opportunities for minority males and women.

Section 3. Contractor Activities.

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(a) The Contractors shall support the City and Union efforts to increase the participation of minority males and women in the Project through apprenticeship programs and other initiatives.

(b) The Contractors shall use their best efforts to add minority males and women to their permanent or steady workforces. The Contractors shall provide workforce demographic information to the City in advance of project commencement.

(c) The Contractors shall ensure a work environment that is free from discrimination and supportive of greater participation of minority males and women in the Project.

(d) The Contractors shall use their best efforts to meet or exceed the goals established for minority males and women participation in Section 1 of this Schedule C.

(e) The Contractors shall provide monthly updates to the City, including but not limited to payroll reports, for the requirements of this Section 3.

Section 4. Third Party Monitoring

(a) In the event that the City determines that the Agreement and the goals for participation in the Project by Philadelphia residents, male minorities and women would benefit from monitoring by a qualified third party (“Monitor”), the monitoring shall be performed by the City of Philadelphia Office of Economic Opportunity or office designated in writing by the City. The Contractors and Union(s) shall provide information and access to the Monitor consistent with the requirements of this Schedule C and the

Agreement.

(b) The costs of monitoring by the Monitor shall be shared equally by the Parties.

SCHEDULE D

PROJECT SPECIFIC CONDITIONS

Project specific conditions agreed upon by the Union(s) and the City supersede the provisions established in Schedule A Collective Bargaining Agreements only as to the Project.

1. **Union Membership:** Upon commencement of employment with the Contractor (including any subcontractor) the AMI Installation Technicians shall be referred to either Plumbers Local No. 690 or to IBEW Local #98 on an alternating basis for membership. Both Unions recognize the AMI Installation Technician's work as labor experience that is consistent with the apprenticeship training for their respective Unions and the experience as beneficial for the development of apprenticeship skills in their Unions.
2. **Worker Diversity:** The Contractor shall use its best efforts to recruit and retain an ethnically and racially diverse workforce of men and women who meet the Contractor's qualifications for safe and efficient installations. The Contractor will work with the City and Philadelphia-based workforce development organizations to identify qualified candidates.

3. **Wages and Benefits:**

Hourly rate is \$21.27.

Combined benefits contribution to the AMI Installation Technician's Union is \$17.40 per hour worked.

4. **Incentive Pay:** The Contractor may develop an incentive pay program for installations that exceed the expected performance during a work day. Such performance pay shall be in addition to wages and shall not impact the combined benefits payments to the Unions. (E.g., In the City's 1997 AMR installation contract with ITRON an incentive for installation of both a water meter and reading device was provided for installations in excess of 14 per 8 hour day. The AMI Project does not require setting the meter and each installation is expected to take less time at the installation site.)

-
5. **Work Schedule:** The work schedule for the Project shall be the sole responsibility of the Contractor. Consistent with the need to schedule appointments with residential property owners or their tenants, work days may include Saturdays and Sundays at no overtime premium. A work day shall consist of eight (8) hours, starting no earlier than 6:00 AM and ending no later than 9:00 PM, with a ½ hour unpaid lunch break. Overtime at the rate of 1.5 X the hourly wage shall be paid for hours of work exceeding 40 hours in a week (Monday to Sunday).

SCHEDULE E

ECONOMIC OPPORTUNITY PLAN

City of Philadelphia
Economic Opportunity Plan

COMMERCIAL AGREEMENT
BETWEEN
THE PHILADELPHIA DIVISION
OF THE
PENN-DEL-JERSEY CHAPTER, NECA
AND
LOCAL UNION 98



INTERNATIONAL BROTHERHOOD
OF
ELECTRICAL WORKERS
PHILADELPHIA, PENNSYLVANIA

BUSINESS OFFICE
1701 SPRING GARDEN STREET
PHILADELPHIA, PA 19130
PHONE: (215) 563-5592
FAX: (215) 561-2168

FINANCIAL OFFICE
1719 SPRING GARDEN STREET
PHILADELPHIA, PA 19130
PHONE: (215) 563-8991
FAX: (215) 563-9149

ELECTRICAL INSIDE WIRING DIVISION

**UNION MEETINGS
FOURTH TUESDAY OF EVERY MONTH
1719 SPRING GARDEN STREET
7:00 PM**

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COMMERCIAL AGREEMENT

Agreement by and between the Philadelphia Division of the Penn-Del-Jersey Chapter, NECA, and Local Union 98 of the International Brotherhood of Electrical Workers.

It shall apply to all firms who sign a Letter of Assent to be bound by the terms of this Agreement.

As used hereinafter in this Agreement, the term "Chapter" shall mean the Philadelphia Division of the Penn-Del-Jersey Chapter, NECA and the term "Union" shall mean Local Union 98 of the International Brotherhood of Electrical Workers.

The term "Employer" shall mean an individual firm who has been recognized by an assent to this Agreement.

BASIC PRINCIPLES

The Employers and the Union have a common and sympathetic interest in the Electrical Industry. Therefore, a working system and harmonious relations are necessary to improve the relationship between the Employer, the Union, and the Public. Progress in the industry demands a mutuality of confidence between the Employer and the Union. All will benefit by continuous peace and by adjusting any differences by rational, common sense methods. Now, therefore, in consideration of the mutual promises and Agreement herein contained, the parties hereto agree as follows:

The parties to this Agreement agree not to discriminate against any member because of race, creed, color, sex, religion, age, or national origin.

ARTICLE I

EFFECTIVE DATE - CHANGES - TERM OF THE AGREEMENT

Section 1.01 This **four (4) year** Agreement shall take effect **April 29, 2013** and shall remain in effect until **April 29, 2017** unless specifically provided for herein. It shall continue in effect from year to year thereafter, from May 1st through April 20th of each year, unless changed or terminated in the way later provided herein.

Section 1.02 (a) Either party or an employer withdrawing representation from the Chapter or not represented by the Chapter, desiring to change or terminate this Agreement, must provide written notification at least 90 days prior to the expiration date of the Agreement or any anniversary date occurring thereafter.

(b) Whenever notice is given for changes, the nature of the changes desired must be specified in the notice, or no later than the first negotiating meeting unless mutually agreed otherwise.

(c) The existing provisions of the Agreement, including this Article, shall remain in full force and effect until a conclusion is reached in the matter of proposed changes.

(d) In the event that either party, or an Employer withdrawing representation from the Chapter or not represented by the Chapter, has given a timely notice of proposed changes and an agreement has not been reached by the expiration date or by any subsequent anniversary date to renew, modify, or extend this Agreement, or to submit the unresolved issues to the Council on Industrial Relations, for the Electrical Contracting Industry (CIR) either party or such an employer, may serve the other a ten (10) day written notice terminating this Agreement. The terms and conditions of this Agreement shall remain in full force and effect until the expiration of the ten (10) day period.

(e) By mutual agreement only, the Chapter, or an Employer withdrawing representation from the Chapter or not represented by the Chapter, may jointly with the Union, submit the unresolved issues to the Council on Industrial Relations for the Electrical Contracting Industry for adjudication. Such unresolved issues shall be submitted no later than the next regular meeting of the Council following the expiration date of this Agreement or any subsequent anniversary date. The Council's decisions shall be final and binding.

(f) When a case has been submitted to the Council, it shall be the responsibility of the negotiating committee to continue to meet weekly in an effort to reach a settlement on the local level prior to the meeting of the Council.

(g) Notice of a desire to terminate this Agreement shall be handled in the same manner as a proposed change.

Section 1.03 This Agreement shall be subject to change or supplement at any time by mutual consent of the parties hereto. Any such change or supplement agreed upon shall be reduced to writing, signed by the parties hereto, and submitted to the International Office of the IBEW for approval, the same as this Agreement.

Section 1.04 During the term of this Agreement, there shall be no stoppage of work either by strike or lockout because of any proposed changes in this Agreement or dispute over matters relating to this Agreement. All such matters must be handled as stated herein.

Section 1.05 There shall be a Labor-Management Committee of three (3) representing the Union and three (3) representing the Employers. It shall meet regularly at such stated times as it may decide. However, it shall also meet within forty-eight (48) hours when notice is given by either party. It shall select its own Chairman and Secretary. The Local Union shall select the Union representatives and the Chapter shall select the management representatives.

Section 1.06 All grievances or questions in dispute shall be adjusted by the duly authorized representatives of each of the parties to this Agreement. In the event that these two are unable to adjust any matter within forty-eight (48) hours, they shall refer the same to the Labor-Management Committee.

Section 1.07 All matters coming before the Labor-Management Committee shall be decided by a majority vote. Four (4) members of the Committee, two (2) from each of the parties hereto, shall be a quorum for the transaction of business, but each party shall have the right to cast the full vote of its membership and it shall be counted as though all were present and voting.

Section 1.08 Should the Labor-Management Committee fail to agree or to adjust any matter; such shall then be referred to the Council on Industrial Relations for the Electrical Contracting Industry for adjudication. The council's decisions shall be final and binding.

Section 1.09 When any matter in dispute has been referred to conciliation or arbitration for adjustment, the provisions and conditions prevailing prior to the time such matters arose shall not be changed or abrogated until agreement has been reached or a ruling has been made.

ARTICLE II

EMPLOYERS' REQUIREMENTS AND RIGHTS

Section 2.01 (a) No member of Local Union 98, while he remains a member of such Local and subject to employment by Employers operating under this Agreement shall himself become a contractor for the performance of any electrical work.

(b) Journeyman electricians or apprentices shall not work for Employers who are not parties to this Agreement or a separate Agreement containing the same terms as this Agreement. This does not apply to work performed under the terms of International Agreements or to regular maintenance work, or to an authorized salting program.

Section 2.02

(a) It is agreed that an Employer is a person, firm or corporation employing at least (1) journeyman continuously, who contracts to perform electrical work, or who has a bona-fide department for maintenance of an electrical installation.

(b) Maintains a permanent place of business with a business telephone, both open to the public during regular business hours. This place of business shall not be part of a domestic establishment.

(c) Maintains a financial status suitable to meet all anticipated payroll requirements, including withheld Municipal, State and Federal taxes.

(d) Every Employer who employs at least one (1) member of the Union shall be obligated to provide a surety bond, with an acceptable surety company, authorized to do business in Pennsylvania on a form furnished by the Local Union in accordance with the following scale in the amount of fifty thousand dollars (\$50,000.00), such bond to be used for the purpose of guaranteeing proper payment of all wages that may be due and owing to members employed under the collective bargaining agreement and to guarantee proper payment of all contributions due and owing to the Union (for dues and assessments), the Welfare Fund, the Pension Fund, the Deferred Income Fund, the Vacation Fund, the N.E.B.F. the Political Action Fund, the Market Recovery Fund and any other amount required by this labor contract to be submitted as an employer contribution (or dues check off amount) to the Union, with a copy to the Association, and an additional copy shall be forwarded to the Administrator of the Local 98 Benefit Fund(s).

The amount(s) of the surety bond referenced in the preceding paragraph shall be increased automatically and all affected Employers shall automatically and immediately increase the level of the surety bond, in the following circumstances:

(1) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of fifty thousand dollars (\$50,000) but not more than one hundred thousand dollars (\$100,000) for a month, the employer shall increase the amount of its surety bond to the sum of one hundred twenty-five thousand dollars (\$125,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below fifty thousand dollars (\$50,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds, and its members, the employer may reduce the amount of its surety bond to fifty thousand dollars (\$50,000).

(2) When an Employer's monthly contribution obligations(s), in the Aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of one hundred thousand dollars (\$100,000) but not more than one hundred fifty thousand dollars (\$150,000) for a month, the employer shall increase the amount of its surety bond to the sum of two hundred fifty thousand dollars (\$250,000). When the Employer's monthly contribution obligations, in the aggregate, drop below one hundred thousand dollars (\$100,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d) or 2.02(d) (1) above.

(3) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of one hundred fifty thousand dollars (\$150,000) but not more than two hundred thousand dollars (\$200,000) for a month, the Employer shall increase the amount of its surety bond to the sum of three hundred seventy-five thousand dollars (\$375,000). When the Employer's monthly contribution obligations, in the aggregate, drop below one hundred fifty thousand dollars (\$150,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d) (1), or 2.02(d) (2) above.

(4) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of two hundred thousand dollars (\$200,000) but not more than three hundred thousand dollars (\$300,000) for a month, the Employer shall increase the amount of its surety bond to the sum of five hundred thousand dollars (\$500,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below two hundred thousand dollars (\$200,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d) (1), 2.02(d) (2) or 2.02(d) (3) above.

(5) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of three hundred thousand dollars (\$300,000) but not more than five hundred thousand dollars (\$500,000) for a month, the Employer shall increase the amount of its surety bond to the sum of seven hundred fifty thousand dollars (\$750,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below three hundred thousand dollars (\$300,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d)(1), 2.02(d)(2), 2.02(d)(3) or 2.02(d)(4) above.

(6) When an Employer's monthly contribution obligation(s), in the Aggregate, to the various Local 98 Employee Benefit Funds referenced in this labor agreement exceeds a level of five hundred thousand dollars (\$500,000) but not more than eight hundred thousand dollars (\$800,000) for a month, the Employer shall increase the amount of its surety bond to the sum of one million two hundred fifty thousand dollars (\$1,250,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below five hundred thousand dollars (\$500,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d)(1), 2.02(d)(2), 2.02(d)(3), 2.02(d)(4) or 2.02(d)(5) above.

(7) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of eight hundred thousand dollars (\$800,000) for a month, the Employer shall increase the amount of its surety bond to the sum of one and seven tenths times the monthly obligation. When the Employer's monthly contribution obligation(s), in the aggregate, drop below eight hundred thousand dollars (\$800,000) per month for two consecutive months and if the Employer is current on all financial obligations to the

Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d)(1), 2.02(d)(2), 2.02(d)(3), 2.02(d)(4), 2.02(d)(5) or 2.02(d)(6) above.

(e) All employers who fail to post a bond will appear before the Labor Management Committee before further manpower is permitted.

Section 2.03

(a) All Employees who are members of the Union on the effective date of this Agreement shall be required to remain members of the Union as a condition of employment during the term of this Agreement. New Employees shall be required to become and remain members of the Union as condition of employment from and after the eighth (8th) day following the dates of their employment, or the effective date of this Agreement whichever is later. This shall not apply to seasonal help.

(b) The Employer agrees that the Union has the right to discipline its members for violation of its laws, rules, and agreements.

(c) The Employer agrees to notify the Business Manager of the Union on forms furnished by the Union, of the receipt of all contracts secured within its jurisdiction.

(d) The Employer agrees to furnish monthly to the Union reports listing the names of the members of the Union employed, number of hours of employment, and the gross earnings of each. In the event no members of the Union are employed in any month, reports shall be filed stating that fact. These reports shall be made available to the Labor-Management Committee.

(e) It shall not be a violation of this Agreement, and it shall not be cause for discharge or any other disciplinary action by the Employer against any Employee, for an Employee to refuse to cross a lawfully established primary picket line, whether at the premises of another Employer or the Employee's own Employer.

(f) Any employee exercising such right shall carefully put away all tools, materials, equipment, or any other property of the Employer in a safe manner. Each Employee will be responsible for any loss to the Employer for neglect in carrying out this provision, but only when a safe place is provided for by the Employer.

(g) The Local Union is a part of the International Brotherhood of Electrical Workers, and any violation or annulment by an individual Employer of the approved Agreement of this or any other Local Union of the IBEW, other than violations of paragraph 2 of this Section, will be sufficient cause for the cancellation of this Agreement by the Local Union after a finding has been made by the International President of the Union that such a violation or annulment has occurred.

The subletting, assigning or transfer by an individual Employer of any work in connection with electrical work to any person, firm or corporation not recognizing the IBEW or one of its local unions as the collective bargaining representative of his Employees on any electrical work in the jurisdiction of this or any other local union to be performed at the site of the construction, alteration, painting, or repair of a building, structure or other work, will be deemed a material breach of this Agreement.

All charges of violations of paragraph 2 of this Section shall be considered as dispute and shall be processed in accordance with the provisions of this Agreement covering the procedure for the handling of grievances and the final and binding resolution of disputes.

(h) In order to protect and preserve, for the Employees covered by this Agreement, all work heretofore performed by them, and in order to prevent any device or subterfuge to avoid the protection and preservation of such work, it is hereby agreed as follows: If and when the Employer shall perform any on-site construction work of the type covered by this Agreement, under its own name or under the name of another as a corporation, company, partnership, or any other business entity, including a joint venture, wherein the Employer, through its officers, directors, partners or stock holders, exercise either directly or indirectly, management, control or majority ownership, the terms and conditions of this Agreement shall be applicable to all such work. All charges or violations of this Section shall be considered as a dispute and shall be processed in accordance with the provisions of this Agreement covering the procedure for the handling of grievances and the final and binding resolution of disputes.

(1) As a remedy for violations of this Section, the Labor Management Committee, the Council on Industrial Relations for the Electrical Contracting Industry, and/or an independent arbitrator, as the case may be, are empowered, in their discretion and at the request of the Union, to require an Employer to (1) pay to affected employees covered by this Agreement, including registered applicants for employment, the equivalent of wages lost by such employees as a result of the violations; and (2) pay into the affected joint trust funds established under this Agreement any delinquent contributions to such funds which have resulted from the violations. Provision for this remedy herein does not make such remedy the exclusive remedy available to the Union for violations of this Section nor does it make the same or other remedies unavailable to the Union for violations of other Sections or other Articles of this Agreement.

(2) If as a result of violations of this Section, it is necessary for the Union and/or the Trustees of the joint trust funds to institute court action to enforce an award rendered in accordance with subsection (1) above, or to defend an action which seeks to vacate such award, the Employer shall pay any accountants' and attorneys' fees incurred by the Union and/or Fund Trustees, plus cost of the litigation, which have resulted from the bringing of such court action.

(i) The Employer agrees to furnish all equipment necessary to safely perform work within the jurisdiction of the electrical workers.

Section 2.04

(a) There shall be a Safety Committee of three (3) representing the Union and three (3) representing the Employer. It shall meet regularly at such stated times as it may decide, or within forty-eight (48) hours when notice is given by either party. It shall select its own Chairman and Secretary.

(b) All disagreements, or claims of violation of the Safety Rules which cannot be adjusted between the duly authorized representatives of the Union and Employer, shall be referred to this Committee for decision by majority vote.

(c) In the event the Committee is unable to render a decision by majority vote, or for any reason adjust the matter in dispute, it shall be referred to the Labor-Management Committee.

(d) The Employer agrees to and shall comply with all applicable provisions of the Safety Rules as forth in a separate document or documents are hereby incorporated as part of this Agreement as if they were herein set forth at length.

(e) It is the Employer's exclusive responsibility to insure the safety of its Employees and their compliance with these Safety Rules and Standards.

(f) A joint committee will be established by the parties to implement a mutually acceptable OSHA training program.

(g) By January 1, 2008, all journeymen should complete the OSHA 10 hour course and all foremen should complete the OSHA 30 hour course. In addition, the Local 98/NECA Safety Committee will develop an identification "Smart Card" card for all members of the Local establishing the qualifications and credentials of the member including whether the member is part of the drug-free testing program, has received his or her OSHA 10 and 30 hour card, is trained in the requirements of NFPA-70E and other training certifications as developed by the Safety Committee in conjunction with the JATC.

Section 2.05 (a) The Employer shall provide a separate suitable place on all jobs for keeping or storing of Employees' clothing, and shall be held responsible for the loss of these by fire.

(b) The Employer shall provide a separate suitable place on all jobs for keeping or storing of Employees' tools, and shall be held responsible for the loss of these by fire or theft up to a maximum of \$400.00.

Section 2.06 The Union agrees that if, during the life of this Agreement, it grants to any other Employer in the Electrical Contracting Industry on work covered by this Agreement, any better terms or conditions than those set forth in this Agreement, such better terms or conditions shall be made available to the Employer under this Agreement and the Union shall immediately notify the Employer of any such concessions.

Section 2.07 The Union understands the Employer is responsible to perform the work required by the owner. The Employer shall, therefore, have no restrictions except those specifically provided for in the Collective Bargaining Agreement in planning, directing and controlling the operation of all his work, in deciding the number and kind of Employees to properly perform the work, in hiring and laying off Employees, in transferring Employees from job to job within the Local Union's geographical jurisdiction, in determining the need and number as well as the person who will act as Foreman, in requiring all Employees to observe the Employer's and/or owner's rules and regulations not inconsistent with this Agreement, in requiring all Employees to observe all safety regulations, and in discharging Employees for proper cause.

Section 2.08 The Employer agrees that, if it has not previously done so, it will recognize the Union as the exclusive collective bargaining agent for all employees performing electrical work within the jurisdiction of the Union on all present and future job sites, if and when a majority of the Employer's employees authorize the Union to represent them in collective bargaining.

Section 2.09 An Employer signatory to a collective bargaining agreement or to a letter of assent to an agreement with another IBEW Local Union, who signs an assent to this Agreement, may bring up to four bargaining unit employees employed in that Local Union's jurisdiction into this Local's jurisdiction and up to two bargaining unit employees per job from that Local's jurisdiction to this Local's jurisdiction for specialty or service and maintenance work. All charges of violations of this section shall be considered as a dispute and shall be processed in accordance with the provisions of this agreement for the handling of grievances with the exception that any decision of a local labor-management committee that may be contrary to the intent of the parties to the National Agreement on Employee Portability, upon recommendation of either or both the appropriate IBEW International Vice President or NECA Regional Executive Director, is subject to review, modification, or rescission by the Council on Industrial Relations.

Section 2.10 The Employer agrees to participate in Prevailing Wage Surveys.

ARTICLE III

CONTRIBUTIONS & PAYROLL DEDUCTIONS

N.E.B.F. - NATIONAL ELECTRICAL BENEFIT FUND (CONTRIBUTION)

Section 3.01 It is agreed that in accord with the Employees Benefit Agreement of the National Electrical Benefit Fund ("NEBF"), as entered into between the National Electrical Contractors Association and the International Brotherhood of Electrical Workers on September 3, 1946, as amended, and now delineated as the Restated Employees Benefit Agreement and Trust, that unless authorized otherwise by the NEBF the individual Employer will forward monthly to the NEBF's designated local collection agent an amount equal to 3% of the gross monthly labor payroll paid to, or accrued by, the employees in this bargaining unit, and a completed payroll report prescribed by the NEBF. The payment shall be made by check or draft and shall constitute a debt due and owing to the NEBF on the last day of each calendar month, which may be recovered by suit initiated by the NEBF or its assignee. The payment and the payroll report shall be mailed to reach the office of the appropriate local collection agent not later than fifteen (15) calendar days following the end of each calendar month.

The individual Employer hereby accepts, and agrees to be bound by, the Restated Employees Benefit Agreement and Trust.

An individual Employer who fails to remit as provided above shall be additionally subject to having his agreement terminated upon seventy-two (72) hours' notice in writing being served by the Union, provided the individual Employer fails to show satisfactory proof that the required payments have been paid to the appropriate local collection agent.

The failure of an individual Employer to comply with the applicable provisions of the Restated Employees Benefit Agreement and Trust shall also constitute a breach of this Agreement.

N.E.I.F. - NATIONAL ELECTRICAL INDUSTRY FUND (CONTRIBUTION)

Section 3.02 Each individual Employer shall contribute an amount not to exceed one percent (1%), nor less than .2 of 1% of the productive electrical payroll as determined by each Local Chapter and approved by the Trustees, with the following exclusions:

1. Twenty-five percent (25%) of all productive electrical payrolls in excess of 75,000 man-hours paid for electrical work in any one Chapter area during any one calendar year, but not exceeding 150,000 man-hours.
2. One hundred percent (100%) of all productive electrical payroll in excess of 150,000 man-hours paid for electrical work in any one Chapter area during any one calendar year.

(Productive electrical payroll is defined as the total wages (including overtime) paid with respect to all hours worked by all classes of electrical labor for which a rate is established in the prevailing labor area where the business is transacted.)

Payment shall be forwarded monthly to the National Electrical Industry Fund in a form and manner prescribed by the Trustees no later than fifteen (15) calendar days following the last day of the month in which the labor was performed. Failure to do so will be considered a breach of this Agreement on the part of the individual Employer.

Gross Labor Payroll As used herein, the parties agree that, effective August 1, 2010, the term "Gross Labor Payroll" is defined as wages paid to bargaining unit employees for work performed under the Collective Bargaining Agreement (CBA) at the wage rate required by the CBA but excludes the value of non-cash fringe benefits; bona fide contributions made by the Employer to:

- (a) a trust fund established under §302(c) of the Taft-Hartley Act; or
- (b) a separate entity or IRS-qualified fund which provides retirement benefits or medical benefits; or
- (c) bona fide bonuses of an extraordinary nature (i.e., lump sum year end bonuses, not ordinarily paid as part of a regular payroll period);
- (d) any form of monetary allowance to the extent that said allowance is not paid in order to avoid any obligation to pay the CBA wage rate and/or avoid the payment of Local Union employee benefit funds.

It is understood and agreed that the term "Gross Labor Payroll" includes holiday pay, vacation pay, and wages paid over the rate required by the CBA (over scale), and any payment classified as sick pay. It is also understood that lump sum year-end bonuses, monetary allowances and expense reimbursements are subject to audit by the IBEW Local Union 98/NECA Delinquency Committee so employers must maintain proper documentation.

LOCAL LABOR MANAGEMENT COOPERATION COMMITTEE (LMCC)

Section 3.02 (a) The parties agree to participate in a Labor-Management Cooperation Fund, under authority of Section 6(b) of the Labor Management Cooperation Act of 1978, 29 U.S.C. 175(a) and Section 302(c)(9) of the Labor Management Relations Act, 29 U.S.C. 186(c)(9). The purposes of this Fund include the following:

1. To improve communications between representatives of Labor and Management;
2. To provide workers and employers with opportunities to study and explore new and innovative joint approaches to achieving organizational effectiveness;
3. To assist workers and employers in solving problems of mutual concern not susceptible to resolution within the collective bargaining process;
4. To study and explore ways of eliminating potential problems which reduce the competitiveness and inhibit the economic development of the electrical construction industry;
5. To sponsor programs which improve job security, enhance economic and community development, and promote the general welfare of the community and industry;
6. To engage in research and development programs concerning various aspects of the industry, including, but not limited to, new technologies, occupational safety and health, labor relations, and new methods of improved production;
7. To engage in public education and other programs to expand the economic development of the electrical construction industry;
8. To enhance the involvement of workers in making decisions that affect their working lives; and,
9. To engage in any other lawful activities incidental or related to the accomplishment of these purposes and goals.

(b) The fund shall function in accordance with, and as provided in, it's Agreement and Declaration of Trust and any amendments thereto and any other of its governing documents. Each Employer hereby accepts, agrees to be bound by, and shall be entitled to participate in the LMCC, as provided in said Agreement and Declaration of Trust

(c) Each employer shall contribute one point thirty-five percent (1.35%) per hour worked. Payment shall be forwarded monthly, in a form and manner prescribed by the Trustees, no later the last day of the month following the month in which the labor was performed. The Penn-Del-Jersey Chapter, NECA, or its designee, shall be the collection agent for this Fund.

(d) If an Employer fails to make the required contributions to the Fund, the Trustees shall have the right to take whatever steps are necessary to secure compliance. In the event the Employer is in default, the Employer shall be liable for a sum equal to 15% of the delinquent payment, but not less than the sum of twenty dollars (\$20), for each month payment of contributions is delinquent to the Fund, such amount being liquidated damages, and not a penalty, reflecting the reasonable damages incurred by the Fund due to the delinquency of the payments. Such amount shall be added to and become a part of the contributions due and payable, and the whole amount due shall bear interest at the rate of ten percent (10%) per annum until paid. The Employer shall also be liable for all costs of collecting the payment together with attorneys' fees.

LOCAL UNION 98 HEALTH & WELFARE PLAN (CONTRIBUTION)

Section 3.03 Effective 12:01 A.M. April 29, 2013, the Employer agrees to and shall comply with all applicable provisions of the Trust Agreement, establishing the International Brotherhood of Electrical Workers, Local Union 98 Health and Welfare Fund, entered into December 15, 1953, as amended. The Trust Agreement provides for the payment of contributions monthly into the Trust Fund, which shall be known as the International Brotherhood of Electrical Workers, Local Union 98 Health and Welfare Fund, an amount equal to the amount specified in Appendix "A" (wage sheet).

LOCAL UNION 98 PENSION PLAN (CONTRIBUTION)

Section 3.04 (a) The Employer agrees to and shall comply with all applicable provisions of the Trust Agreement, establishing the Local Union 98, IBEW Pension Fund entered into September 1, 1961, as amended.

(b) The Local Union 98 Pension Plan shall be jointly administered by an equal number of individual Trustees appointed by the Employer and an equal number of individual Trustees appointed by the Union.

(c) Effective 12:01 A.M. April 29, 2013, the Employer agrees to contribute for all Employees covered under the terms of this Agreement, an amount equal to fourteen percent (14%) of his gross labor payroll paid to Employees in the bargaining unit represented by the Union under this Agreement.

LOCAL UNION 98 PROFIT SHARING PLAN

Section 3.05 (a) The Employer agrees to and shall comply with all applicable provision of the Trust Agreement, establishing the Local Union 98, IBEW Deferred Income Plan entered into July 4, 1983.

(b) The Local Union 98 Deferred Income Plan shall be jointly administered by an equal number of individual Trustees appointed by the Employer and an equal number of individual Trustees appointed by the Union.

(c) Effective 12:01 A.M. April 29, 2013, the Employer agrees to contribute for all Employees covered under the terms of this Agreement, an amount equal to fifteen and a half percent (15.5%) of his gross labor payroll paid to Employees in the bargaining unit represented by the Union under this Agreement.

APPRENTICE TRAINING FUND (CONTRIBUTION)

Section 3.06 (a) Effective 12:01 A.M. April 29, 2013, all Employers subject to the terms of this Agreement shall contribute two-percent (2%) of their gross labor payroll for the purpose of maintaining the Apprenticeship and Training Program.

WORKING DUES (PAYROLL DEDUCTION)

Section 3.07 The Employer agrees to deduct and forward to the Financial Secretary of the Local Union upon receipt of a voluntary written authorization - the additional working dues from the pay of each IBEW member. The amount to be deducted shall be the amount specified in the approved Local Union By-Laws. Such amount shall be certified to the Employer by the Local Union upon request by the Employer.

The Union agrees to save the Employer harmless from any action growing out of these deductions, commenced by any Employee, and assumes full responsibility for the disposition of the funds deducted once they have been received by the Union.

LOCAL UNION 98 VACATION PLAN (PAYROLL DEDUCTION)

Section 3.08 (a) Each Employer shall withhold from the net wages due each of its employees covered by the Collective Bargaining Agreement a sum equal to 5.41% of said employee's gross wages. Such deduction shall be contributed by the Employer as set forth below.

(b) The wage deductions shall be forwarded to a bank or other financial institution designated by mutual agreement of Local Union 98 and NECA, for deposit in Vacation Fund accounts, titled in the name of each employee. Local Union 98 shall be the Administrator of this Vacation Fund and, as such, shall have full power to contract with the selected bank or financial institution receiving the wage deductions, maintain records and take any and all appropriate action to enforce this agreement and protect the employee assets maintained in such accounts. Local Union 98 shall not, however, have title to such funds or, other than the powers set forth above, maintain any discretionary control over the assets of the vacation fund accounts. Employers bound by this Agreement shall also be bound by any reasonable rules and regulations adopted by the Union concerning reporting, collection and delinquency procedures, including, but not limited to, a requirement that delinquent employers pay liquidated damage penalties, interest, audit fees (if required) and reasonable counsel fees and costs necessitated by collection proceedings. The powers of administration and other duties and responsibilities set forth in this provision shall not, in any manner, be construed as allowing Local Union 98 to exercise any right, title or interest in or to any of the Vacation Fund accounts which shall, at all times, be titled and maintained in the name of each individual member for whom a contribution has been submitted by the Employer.

(c) Each Employer shall, simultaneously with the transmittal of its contributions, transmit to the bank a report form setting forth, inter alia, each employee's Social Security number, name, the individual employee's gross the total of all employees' gross earnings, in addition to any other information that may, by rule, regulation or request, be required by the bank or by the Local Union.

Section 3.09 (a) It is agreed that failure to pay wages, and/or other fringe benefits, without exception, as provided for in this Agreement by an individual Employer will be sufficient cause to having the temporary removal of electricians from such individual Employer, after receiving seventy-two (72) hours notice, in writing, by the Union, provided the individual Employer fails to show satisfactory proof that the required payments have been paid to the Local Employees' Benefit Board and the Local Union Benefit Funds.

(b) Contributions to the Local Union 98 Deferred Income Plan, Local Union 98 Health & Welfare Plan, Local Union 98 Pension Fund, Apprentice Training Fund, and deduction for the Local Union 98 Vacation Plan, shall be made in accordance with the applicable Trust document. All such contributions, as well as the working dues deduction, shall be sent to the designated depository. These payments must be received by or bear a U.S. Postal Service postmark the last day of the month following the month in which there was covered employment (the "due date"). All contributions or

payments not received as stated herein shall be deemed delinquent and this delinquency shall result in the imposition of a ten percent (10%) penalty of the total contribution as well as interest at the I.R.S. rates, or portion thereof, of the total contribution until payment has been received.

(c) Employers participating in the Automated Funds Collection Procedure prescribed by the Joint Funds Trustees are required to submit all necessary data in the prescribed manner no later than the eight (8th) day of the month following the month in which the work was performed. Payment must be made in the prescribed manner no later than five days after the due date.

Section 3.10 The following procedures will apply in the event of a delinquency:

1. Contributions and deductions must be paid or post-marked by the U.S. Postal Service by the last day of the month following the month in which there was covered employment (the "due date"). Reports must be completed and returned each month regardless of whether there was covered hours of employment.

2. Any contributions and deductions not paid or post-marked after the last day of the month following the month in which the labor was performed (the "due date") are delinquent and shall be subject to the interest and damages provisions of 3.10 of the NECA Agreement.

In addition:

(a) Any shortages on a report, plus interest and liquidated damages owed, must be paid by or postmarked by the U.S. Postal Service by the last day of the month immediately following the receipt of the shortage notification or they shall be deemed delinquent and subject to the provisions below.

(b) Interest and liquidated damages assessments must be paid or postmarked by the U.S. Postal Service by the last day of the month immediately following the receipt of the assessment or they shall be deemed delinquent and subject to the provisions below.

3. Any employer who has not paid any delinquent contributions or deductions by the third day of the month following the month in which they were due shall be subject to any or all of the following actions:

(a) A lawsuit shall be immediately instituted in federal court or other appropriate forum. In any such action, the Employer shall be liable for the unpaid contributions and deductions, as well as the interest, liquidated damages and attorneys fees and costs. Notwithstanding anything herein to the contrary, neither the Funds nor any other entity due contributions or payments hereunder shall be required to exhaust any contractual remedies under Section 1.06 of this Agreement before instituting such a lawsuit.

(b) The employees shall be subject to removal unless the delinquent contributions and deductions are paid or a settlement agreeable to the Committee has been reached.

(c) Once the employer is deemed delinquent under these procedures, it shall pay contributions and deductions on a weekly basis, and shall continue until such time as the Committee determines that weekly payments are no longer necessary.

Section 3.11 With employee authorization, the Employer may voluntarily make a payroll deduction to be paid to Tru Mark Financial Credit Union.

Section 3.12 If any Employer working under this Agreement either as a Prime Contractor, a Subcontractor, or as Subcontractor at any level ceases work on that project because of failure on the part of the Owner, Owner's Agent, Construction Manager, Prime Contractor, or Subcontractor to pay monies due for properly submitted progress payments and/or payments for completed work and/or payments for approved changes and/or payment for work

performed under notice to proceed order when such payments are due, then upon request of the affected Contractor and upon application to the Labor Management Committee, the Labor Management Committee may determine that the Union is free, and not in violation of this Agreement, to not furnish Workmen to the Owner, Owner's Agent, Prime Contractor, Subcontractor or any other Contractor for the purpose of completing that work at issue when not being paid; and the purpose of this provision is to protect the ability of the Employer to properly pay the base wages and benefits due for labor expended on that project.

Section 3.13 In the event that the amount or assets recovered from a delinquent employer is insufficient to satisfy the obligation of the delinquent employer to all of the entities that have combined to seek recovery from the employer, the available funds/assets of the delinquent employer that are recovered by means of judgment, garnishment, settlement or other device shall be allocated among the various parties and/or entities in the following priority order:

First Priority – Unpaid wage claims (including Credit Union deductions);

Second Priority – Amounts owed by the Employer for payroll deductions for Vacation pay;

Third Priority – Amounts owed by the Employer to the Profit Sharing/Deferred Income Plan;

Fourth Priority – Amounts owed by the Employer to the: a) Union through payroll deduction; b) LMCC/Administrative Fund; 3) NEIF; and 4) Apprenticeship & Training Fund. Such amounts, if less than sufficient to make each of these entities whole, shall be allocated on a pro-rate basis;

Fifth Priority – Amounts owed by the Employer to the: a) Pension Fund; b) Welfare Fund; and c) NEBF. Such amounts, if less than sufficient to make each of these entities whole, shall be allocated on a pro-rate basis.

NECA ADMINISTRATIVE FUND

Section 3.14 Each Employer covered by this Agreement shall contribute to the Penn-Del-Jersey Chapter, NECA Administrative Fund (1/2) of (1%) of their gross payroll for all work covered by this Agreement. The Fund shall be administrated solely by the Penn-Del-Jersey Chapter, NECA Administration Fund and shall be used to pay for management's costs of the labor contract Administration Fund and shall be used to pay for management's costs of the labor contract administrative including negotiations, disputes and grievance representation, and for other administrative functions and expenses required of management, including services on fringe benefit funds.

Further, from time to time is shall be utilized for promotion of the electrical contracting industry and the enhancement of labor relations in the Philadelphia area.

No part of the funds collected under this trust shall be used for any purpose which is held to be in conflict with the interests of the International Brotherhood of Electrical Workers and its Local Unions.

Payment shall be forwarded monthly to the designated depository in a form and manner prescribed by the trustees, no later than thirty (30) calendar days following the last day of the month in which the labor was performed. Failure to do so will be considered a breach of this Agreement by the individual Employer.

Enforcement for delinquent payments to the Fund shall be the sole responsibility of the Fund or the Employers and not the Local Union.

ARTICLE IV

WAGES AND HOURS

- Section 4.01 (a) Eight hours shall be the daily working period, starting between the hours of 7:00 A.M. and 8:00 A.M., with a thirty minute lunch period. All hours worked during the daily working period are paid at normal rates.
- (b) Five days shall be the regular work week, Mondays to Fridays, inclusive. The work week starts between the hours of 7:00 A.M. and 8:00 A.M. Monday.

OVERTIME, HOLIDAYS

- Section 4.02 (a) Work performed on New Year's, Memorial, Independence, Labor, Thanksgiving, and Christmas Day shall be paid for at rates double those stated in Section 4.04(a). Holidays falling on a Sunday will be celebrated on Monday.
- (b) Election Day shall be included and subject to the terms of Section 4.02(a) when notification has been given by either party to the Labor Management Committee. The Labor Management Committee will notify the employers and members of the Union in a timely manner and in any case, no less than one week in advance. Four - 10 hour days may be worked in exchange for Election Day.
- (c) Hours worked, either prior to, or after the daily working period, Monday through Friday shall be paid at one and one-half (1-1/2) times the hourly rate*. All hours worked on Saturdays shall be paid at one and one-half (1-1/2) times the hourly rate*. All hours worked on Sundays and holidays shall be paid at two (2) times the hourly rate*, until 7:00 AM on Monday Morning. Shifts may begin on a Sunday at shift rates.

* As stated in Section 4.04(a).

- (d) Unless a continuous eight hour rest period is provided after overtime stops, overtime rates shall apply to all time worked after overtime starts, except as provided for in paragraph (e) of this Section.
- (e) If a man works past midnight, the eight (8) hour rest period shall not be required on a one (1)-time basis for the duration of the job.
- (f) Overtime will be allowed to be worked for tie-ins, cut-overs, emergency shutdowns, and repairs when specifically called for by the project documents and, the Business Manager will be notified of all such overtime. All other overtime must be cleared by the Business Manager.

SHIFTS

- Section 4.03 (a) When so elected by the contractor, multiple shifts of at least five (5) days duration may be worked.
- (b) When two (2) or three (3) shifts are worked: The first shift (day shift) shall be worked between the hours of 7:00 A.M. and 4:30 P.M. Workmen on the day shift shall receive eight (8) hours pay at the regular hourly rate for eight (8) hours work.

(c) The second shift (swing shift) shall be worked between the hours of 3:30 P.M. and 12:30 A.M. Workman on the "swing shift" shall receive eight (8) hours pay at the regular hourly rate plus ten percent (10%) for seven and one-half (7 ½) hours work.

(d) The third shift (graveyard shift) shall be worked within the hours of 11:30 A.M. and 8:00 A.M. Workmen on the "graveyard shift" shall receive eight (8) hours pay at the regular hourly rate plus fifteen percent (15%) for seven (7) hours work.

(e) A lunch period of thirty (30) minutes shall be allowed on each shift. All overtime work required after the completion of a regular shift shall be paid at one and one-half times the "shift" hourly rate.

(f) There shall be no pyramiding of overtime rates and double the straight time rate shall be maximum compensation for an hour worked. There shall be no requirement for a day shift when either the second or third shift is worked.

Section 4.04

(a) The rates of wages for the hours and days stated in Section 4.01 (a) and (b) during the effective period of this Agreement shall be as hereinafter stated: (See Appendix "A")

(b) The Foreman's wage rates shall be as follows:

1. Foreman

On each job where two (2) to nine (9) men are employed for four (4) consecutive days, one of them shall be designated by the Employer as FOREMAN, and shall receive a minimum of \$2.00 more than the journeyman's rate.

2. General Foreman

On each job where ten (10) to twenty-two (22) men are employed for four (4) consecutive days, one of them shall be designated by the Employer as GENERAL FOREMAN, and shall receive a minimum of \$3.50 more than the journeyman's rate.

3. Project Foreman

On each job where twenty-three (23) or more men are employed for four (4) consecutive days, one of them shall be designated by the Employer as PROJECT FOREMAN, and shall receive a minimum of \$5.00 more than the journeyman's rate.

After the rate is established for the job, it shall remain until the number of men triggering that rate decreases and remains below a classification for a period of four (4) consecutive days. The rate of that classification shall then apply.

4. Sub-Foreman

Where twelve (12) men are employed on a job for four (4) consecutive days, one of them shall be designated by the Employer as SUB-FOREMAN and shall receive a minimum of \$1.75 more than the journeyman's rate.

For each eleven (11) men above twelve (12) employed on a job for four (4) consecutive days, an additional SUB-FOREMAN shall be designated by the Employer, and shall receive a minimum of \$1.75 more than the journeyman's rate. The Sub-Foreman rate shall expire for a

journeyman when the number of men triggering this classification is reduced by six (6) or more men.

(c) No journeyman shall be appointed as a sub-foreman, foreman, and general foreman or project foreman unless he has successfully completed a foreman training course approved by the NJATC and administered jointly by Local Union 98 and the JATC. 98 Journeyman electricians who have been employed as foremen for a period of six months for an Employer performing work in the jurisdiction of Local Union 98 prior to May 1, 1997; will not be required to complete a foreman training course all others must complete a foreman-training course.

Section 4.05 (a) Each weekly payroll period shall terminate at 12 midnight Sunday, and wages shall be paid in U.S. Currency or by check drawn on a local bank with Employer identification on check stubs, however, not more than three (3) regular work days' wages may be withheld at any time.

(b) In the event that any Employer issues an uncollectible check, no further work shall be performed by members of the Union, until the sum involved has been made good, together with all added costs. Said Employer may be required to pay all wages due Employees in cash, cashier's check, or certified check.

Section 4.06 (a) At least thirty (30) minutes notice shall be given of discharge or layoff and all wages due shall be paid in full at that time. Waiting time for wages, either on regular pay day, or upon discharge or layoff, shall be paid for at rates double those stated in Section 4.04(a).

(b) In the event of a firing, the Employer may mail the payoff check to the union hall, no later than the end of the next business day.

Section 4.07 Initial period of employment shall consist of not less than four (4) consecutive hours.

Section 4.08 Unless Employees are instructed not to report for work at least two (2) hours prior to their regular designated starting time, and they so report, (except in cases where men report, when it should be obvious, by the exercise of reasonable judgment, that no work could be performed because of weather conditions) they shall be paid not less than two (2) hours straight time wages, regardless of whether or not any work has been performed. They shall remain for the two (2) hours unless excused by a proper representative of the Employer.

Section 4.09 Work performed in the jurisdiction of another Local Union having higher wage rates shall be paid at the higher of the two rates, unless a waiver is granted by the Local Union 98 Business Manager.

Section 4.10 (a) No traveling time shall be paid for traveling, before or after working hours, to or from any job within the jurisdiction of the Union.

(b) When the Employee is required to travel from one job to another within the jurisdiction of the Union during working hours, the Employer shall pay full traveling time and all traveling expenses.

(c) When an Employee is employed outside the jurisdiction of the Union, at the request of the Employer, the Employer shall furnish or pay for all transportation and living expenses.

(d) When an Employee is employed outside the jurisdiction of the Union, at the request of the Employer, the Employer shall make all negotiated fringe benefits and deductions in accordance with the terms of the Agreement, the same as if the Employee is employed within the jurisdiction of the Union, except where Reciprocal Agreements exist.

Section 4.11 Employer may use direct deposit for employee's wages.

ARTICLE V

GENERAL

Section 5.01 No Employee shall use any automobile, motorcycle, or other vehicle in a manner considered to be unfair to other Employees or against the interests of the Union.

Section 5.02 Journeymen and apprentices shall, at all times, have a sufficient number of tools to properly perform any work on which they are employed.

Section 5.03 Employees shall be held responsible for the Employer's tools and equipment, providing the Employer furnishes a tool box with proper lock or other safe place for the storing of such tools or equipment, and allows a reasonable time for such care.

Section 5.04 Employees shall install all electrical work in accordance with Municipal rules and code requirements, also the contract specifications, and in a safe and workmanlike manner.

Section 5.05 All pulling of wire or cable shall be done by hand, by manually operated winch or by such power drive as is within the jurisdictional rights of the I.B.E.W.

Section 5.06 On all jobs requiring five (5) or more journeymen, in the event of a reduction in force, one (1) of every five (5) Journeymen fifty (50) years of age or over will remain on the job site.

Section 5.07 The inability of an Employee to safely perform his/her work functions due to the influence of drugs or alcohol shall be grounds for immediate dismissal from the shop and/or job site; and the Steward or Union shall be notified when such action is taken.

(a) The dangers and costs that alcohol and other chemical abuses can create in the electrical contracting industry in terms of safety and productivity are significant. The parties to this Agreement resolve to combat chemical abuse in any form and agree that, to be effective, programs to eliminate substance abuse and impairment should contain a strong rehabilitation component. The local parties recognize that the implementation of a drug and alcohol policy and program must be subject to all applicable federal, state and local laws and regulations. Such policies and programs must also be administered in accordance with accepted scientific principles, and must incorporate procedural safeguards to ensure fairness in application and protection of legitimate interests of privacy and confidentiality. To provide a drug-free workforce for the Electrical Construction Industry, each IBEW local union and NECA Chapter shall implement an area-wide Substance Abuse Testing Policy. The policy shall include minimum standards as required by the IBEW and NECA. Should any of the required minimum standards fail to comply with federal, state and/or local laws and regulations, they shall be modified by the local union and chapter to meet the requirements of those laws and regulations.

Section 5.08 Job Stewards shall be appointed by the Business Manager of the Union and must be a Local Union 98 Journeyman. When a steward has been appointed to a job he shall remain on such job until the next to last journeyman. Any reduction in force, which includes the Steward, shall be cleared with the Business Manager. The decision of the Business Manager may be appealed to the Labor-Management Committee.

Section 5.09 There shall be no restrictions on the use of catalog items. This does not preclude the performance of electrical work by bargaining unit persons in an Employer's shop facility under the terms of this Agreement.

TEMPORARY WIRING

- Section 5.10 (a) Temporary wiring shall be defined to include the installation and maintenance of all electrical work required or found necessary to be performed on any type of job under the scope jurisdiction of this Agreement and/or prevailing industry practices wherein electricity is being used for productive construction purposes, excluding cord and plug connected equipment and self contained powered lighting.
- (b) Electrical workers employed under the terms of this Agreement and employed by an electrical contractor, who is signatory to this Agreement, shall install and maintain all temporary wiring.
- (c) The installation and maintenance of temporary wiring shall, during all working hours, be the complete responsibility of the electrical workers employed under the terms of this Agreement.
- (d) Effective on all projects begun on or after April 28, 2003, where electric lighting, power and/or equipment is required for productive construction installation outside of normal working hours by workmen other than electricians, one (1) journeyman electrician shall be employed on the site to maintain that temporary. If the contractor hired to maintain that temporary wiring determines that the maintenance of the temporary does not require the full time attention of the journeyman, then the contractor may elect to assign that journeyman to perform productive work if available. If it is determined that no electrical contractor signatory to this Agreement has been hired or contracted with to maintain that temporary electrical after normal working hours, then for the purpose of life safety that temporary wiring shall be de-energized with the exception of temporary wiring for heating/air conditioning, job trailers, shanties, receptacles used for equipment charging, ingress/egress and security.
- (e) Under all project circumstances, temporary electric shall be left energized and in working condition past normal working hours for lighting, heating/air conditioning, job trailers and shanties, receptacles used for equipment charging, ingress/egress and security without the requirement for a journeyman electrician to be employed past normal working hours.

ARTICLE VI

STANDARD INSIDE APPRENTICESHIP & TRAINING LANGUAGE

Section 6.01 There shall be a local Joint Apprenticeship and Training Committee (JATC) consisting of a total of either 6 or 8 members who shall also serve as Trustees to the local apprenticeship and training trust. An equal number of members (3) shall be appointed, in writing, by the local chapter of the National Electrical Contractors Association (NECA) and the local union of the International Brotherhood of Electrical Workers (IBEW).

The local apprenticeship standards shall be in conformance with national guideline standards and industry policies to ensure that each apprentice has satisfactorily completed the NJATC required hours and course of study. All apprenticeship standards shall be registered with the NJATC before being submitted to the appropriate registration agency.

The JATC shall be responsible for the training of apprentices, journeymen, installers, technicians, and all others (unindentured, intermediate journeymen, etc.)

Section 6.02 All JATC member appointments, re-appointments and acceptance of appointments shall be in writing. Each member shall be appointed a 3 year term, unless being appointed for a lesser period of time to complete an unexpired term. The terms shall be staggered, with one (1) term from each side expiring each year. JATC members

shall complete their appointed term unless removed for cause by the party they represent or they voluntarily resign. All vacancies shall be filled immediately.

The JATC shall select from its membership, but not both from the same party, a Chairman and a Secretary who shall retain voting privileges. The JATC will maintain one (1) set of minutes for JATC committee meetings and a separate set of minutes for Trust meetings.

The JATC should meet on a monthly basis, and also upon the call of the Chairman.

Section 6.03 Any issue concerning an apprentice or an apprenticeship matter shall be referred to the JATC for its review, evaluation, and resolve; as per standards and policies. If the JATC deadlocks on any issue, the matter shall be referred to the Labor-Management Committee for resolution as outlined in Article I of this agreement; except for trust fund matters, which shall be resolved as stipulated in the local trust instrument.

Section 6.04 There shall be only one (1) JATC and one (1) local apprenticeship and training trust. The JATC may, however, establish joint subcommittees to meet specific needs, such as residential or telecommunication apprenticeship. The JATC may also establish a subcommittee to oversee an apprenticeship program within a specified area of the jurisdiction covered by this agreement.

All subcommittee members shall be appointed, in writing, by the party they represent. A subcommittee member may or may not be a member of the JATC.

Section 6.05 The JATC may select and employ a part-time or a full-time Training Director and other support staff, as it deems necessary. In considering the qualification, duties, and responsibilities of the Training Director, the JATC should review the Training Director's Job Description provided by the NJATC. All employees of the JATC shall serve at the pleasure and discretion of the JATC.

Section 6.06 To help ensure diversity of training, provide reasonable continuous employment opportunities, and comply with apprenticeship rules and regulations, the JATC, as the program sponsor, shall have full authority for issuing all job training assignments and for transferring apprentices from one employer to another. The employer shall cooperate in providing apprentices with needed work experiences. The local union referral office shall be notified, in writing, of all job training assignments. If the employer is unable to provide reasonable continuous employment for apprentices, the JATC is to be so notified.

Section 6.07 All apprentices shall enter the program through the JATC as provided for in the registered apprenticeship standards and selection procedures.

An apprentice may have their indenture canceled by the JATC at any time prior to completion as stipulated in the registered standards. Time worked and accumulated in apprenticeship shall not be considered for local union referral purposes until the apprentice has satisfied all conditions of apprenticeship. Individuals terminated from apprenticeship shall not be assigned to any job in any classification, or participate in any related training, unless they are reinstated in apprenticeship as per the standards, or they qualify through means other than apprenticeship, at some time in the future, but no sooner than two years after their class has completed apprenticeship, and they have gained related knowledge and job skills to warrant such classification.

Section 6.08 The JATC shall select and indenture a sufficient number of apprentices to meet local manpower needs. The JATC is authorized to indenture the number of apprentices necessary to meet the job site ratio as per Section 6.12.

Section 6.09 Though the JATC cannot guarantee any number of apprentices; if a qualified employer requests an apprentice, the JATC shall make every effort to honor the request. If unable to fill the request within ten (10)

working days, the JATC shall select and indenture the next available person from the active list of qualified applicants. An active list of qualified applicants shall be maintained by the JATC as per the selection procedures.

Section 6.10 To accommodate short-term needs when apprentices are unavailable, the JATC shall assign unindentured workers who meet the basic qualification for apprenticeship. Unindentured workers shall not remain employed if apprentices become available for OJT assignment. Unindentured workers shall be used to meet job site ratios except on wage and hour (prevailing wage) job sites.

Before being employed, the unindentured person must sign a letter of understanding with the JATC and the employer - agreeing that they are not to accumulate more than two thousand (2,000) hours as an unindentured, that they are subject to replacement by indentured apprentices and that they are not to work on wage and hour (prevailing wage) job sites.

Should an unindentured worker be selected for apprenticeship, the JATC will determine, as provided for in the apprenticeship standards, if some credit for hours worked as an unindentured will be applied toward the minimum OJT hours of apprenticeship.

The JATC may elect to offer voluntary related training to unindentured; such as Math Review, English, Safety, Orientation/Awareness, Introduction to OSHA, First-Aid and CPR. Participation shall be voluntary.

Section 6.11 The employer shall contribute to the local health and welfare plans and to the National Electrical Benefit Fund (NEBF) on behalf of all apprentices and unindentured. Contributions to other benefit plans may be addressed in other sections of this agreement.

Section 6.12 Each job site shall be allowed a ratio of 1 apprentice for every 3 Journeyman Wireman(man). The first person assigned to any job site shall be a Journeyman Wireman.

A job site is considered to be the physical location where employees report for their work assignments. The employer's shop (service center) is considered to be a separate, single job site. All other physical locations where workers report for work are each considered to be a single, separate job site.

Section 6.13 An apprentice is to be under the supervision of a Journeyman Wireman at all times. This does not imply that the apprentice must always be in sight of a Journeyman Wireman. Journeymen are not required to constantly watch the apprentice. Supervision will not be of a nature that prevents the development of responsibility and initiative. Work may be laid out by the employer's designated supervisor or journeyman based on their evaluation of the apprentice's skills and ability to perform the job tasks. Apprentices shall be permitted to perform job tasks in order to develop job skills and trade competencies. Journeymen are permitted to leave the immediate work area without being accompanied by the apprentice.

Apprentices who have satisfactorily completed the first four years of related classroom training using the NJATC curriculum and accumulated a minimum of 6,500 hours of OJT with satisfactory performance shall be permitted to work alone on any job site and receive work assignments in the same manner as a Journeyman Wireman.

An apprentice shall not be the first person assigned to a job site and apprentices shall not supervise the work of others.

Section 6.14 Upon satisfactory completion of apprenticeship, the JATC shall issue all graduating apprentices an appropriate diploma from the NJATC. The JATC shall encourage each graduating apprentice to apply for college credit through the NJATC. The JATC may also require each apprentice to acquire any electrical license required for journeymen to work in the jurisdiction covered by this Agreement.

Section 6.15 The parties to this Agreement shall be bound by the Local Joint Apprenticeship Training Trust Fund Agreement which shall conform to Section 302 of the Labor-Management Relations Act of 1947 as amended, ERISA, and other applicable regulations.

The Trustees authorized under this Trust Agreement are hereby empowered to determine the reasonable value of any facilities, materials, or services furnished by either party. All funds shall be handled and disbursed in accordance with the Trust Agreement.

Section 6.16 All Employers subject to the terms of this Agreement shall contribute the amount of funds specified by the parties signatory to the local apprenticeship and training trust agreement. The current rate of contribution is: 2%. (percent of the gross labor payroll). This sum shall be due the Trust Fund by the same date as is their payment to the NEBF under the terms of the Restated Employees Benefit Agreement and Trust.

ARTICLE VII

NATIONAL LABOR MANAGEMENT COOPERATION COMMITTEE

Section 7.01 The parties agree to participate in the NECA-IBEW National Labor-Management Cooperation Fund, under authority of Section 6(b) of the Labor Management Cooperation Act of 1978, 29 U.S.C. 175(a) and Section 302(c)(9) of the Labor Management Relations Act, 29 U.S.C. 186(c)(9). The purpose of this Fund includes the following:

1. to improve communication between representatives of labor and management;
2. to provide workers and employers with opportunities to study and explore new and innovative joint approaches to achieving organization effectiveness;
3. to assist workers and employers in solving problems of mutual concern not susceptible to resolution within the collective bargaining process;
4. to study and explore ways of eliminating potential problems which reduce the competitiveness and inhibit the economic development of the electrical construction industry;
5. to sponsor programs which improve job security, enhance economic and community development, and promote the general welfare of the community and the industry;
6. to encourage and support the initiation and operation of similarly constituted local labor-management cooperation committees;
7. to engage in research and development programs concerning various aspects of the industry, including, but not limited to, new technologies, occupational safety and health, labor relations, and new methods of improved production;
8. to engage in public education and other programs to expand the economic development of the electrical construction industry;
9. to enhance the involvement of workers in making decisions that affect their working lives; and
10. to engage in any other lawful activities incidental or related to the accomplishment of these purposes and goals.

Section 7.02 The Fund shall function in accordance with, and as provided in its Agreement and Declaration of Trust, and any amendments thereto and any other of its governing documents. Each Employer hereby accept, agrees to be bound by, and shall be entitled to participate in the NLMCC, as provided in said Agreement and Declaration of Trust.

Section 7.03 Each Employer shall contribute one cent (.01) per hour worked under this Agreement up to a maximum of 150,000 hours per year. Payments shall be forwarded monthly, in a form and manner prescribed by the Trustees, no later than fifteen (15) calendar days following the last day of the month in which the labor was performed. The Penn Del Jersey Chapter of NECA, or its designee, shall be the collection agent for this Fund.

Section 7.04 If an Employer fails to make the required contributions to the Fund, the Trustees shall have the right to take whatever steps are necessary to secure compliance. In the event the Employer is in default, the Employer shall be liable for a sum equal to 15% of the delinquent payment, but not less than the sum of twenty dollars (\$20), for each month payment of contributions is delinquent to the Fund, such amount being liquidated damages, and not a penalty, reelecting the reasonable damages incurred by the Fund due to the delinquency of the payments. Such amount shall be added to and become a part of the contributions due and payable, and the whole amount due shall bear interest at the rate of ten percent (10%) per annum until paid. The Employer shall also be liable for all costs of collecting the payment together with attorneys' fees.

ARTICLE VIII

PRODUCTIVITY, JOB ASSIGNMENT AND SCOPE FOR IBEW LOCAL 98 COMMERCIAL AGREEMENT

Section 8.01 The Employers and the Union are totally committed to improving productivity in unionized construction. The parties understand that owners and construction managers take into account, in the selection of contractors, the contractors' reputation in the field for productivity. It is further understood that the key to success of unionized construction is labor productivity.

The parties agree that every effort shall be made by the parties to insure the highest level of productivity and the expeditious performance of work assignments with the pledge of eight hours work for eight hours pay. Employees shall be at their workstation at the designated starting time and will not leave until the designated lunch break and/or quitting time. There shall be no unauthorized breaks, loafing and tardiness and unexcused absenteeism will not be tolerated.

The Employer recognizes that certain work, as described below, has been historically and customarily performed by Inside Electrical Workers of IBEW Local 98 (the "Traditional Inside Electrical Work"). To the extent the Employer controls the assignments of Traditional inside Electrical Work; it will perform the work with Inside Electrical Workers represented by Local 98 within its geographical jurisdiction. If the work is not part of the Employer's contract but is within the scope of Traditional inside Work, it will be performed by Inside Wiremen of the IBEW working for other contractors who are also signatory to this labor agreement. For purposes of this section, Traditional Electrical Work includes:

1. Coring of holes for raceways for electrical power or control and sound and communication devices, equipment, or fixtures.
2. Installing conduits, power cables or direct burial power cable inside the property line as defined by the Tariff for the purpose of electrical and communications work.
3. Installing of fire alarm, life safety, dictaphone, nurses call systems, operation room lights, patient monitoring equipment, X-ray equipment, CAT scan, MRI, and all electrical scanning equipment.

4. Handling of or loading or unloading of all appliances or equipment that are “all electric” including refrigerators, freezers, electric range, electric ovens, microwaves, non-ducted range hoods, mixers, blenders, television, video cassette recorders, lamp fixtures, DVD players.
5. The installation of all conduits, setting of all lights, electric light poles, including anchor bolts, wiring of all fixtures, fixture heads relating to all lighting for runways, taxiways at airports, parking lots and all lighting inside property lines.
6. The cutting and mechanical assembly of all electrical raceways, brackets, hangers, racks and any and all types of support beyond the building structure to be used to support and/or hold any wire, conduit, tray or any other electrical raceway or device and or equipment.
7. The lifting, setting and placement of all switchgear and sound equipment, electrical panels, electrical cabinets, motor control centers, transformers, speakers and their supports.
8. The installation of brackets to support or feed any electrically powered appliance (that doesn't have a mechanical connection) such as television and microwaves, and excluding structural support items inside of walls/ceilings. Such appliances will be unloaded, stored, and distributed by the IBEW.
9. Cutting of all existing (“existing” meaning installed at the project prior to the award of the Employer's contract) installed ceiling tile, sheetrock or other existing installed material for the installation of fixtures, appliances, electrical equipment, sound and communication equipment, projection equipment and projection screens of any type and including cutting floors.
10. The loading, unloading and handling of all computer equipment, wiring, conduit, and other raceways, connecting of computer power cables to branch circuit junction boxes and/or electrical panels, including the final placement of computers and all necessary connections for complete installation with the exception of the final placement of existing personal computer equipment by the owner's personnel.
11. All surface mounted plywood for backing for supports for all electrical powered and sound and communication equipment.
12. Offloading, handling and installation of electrical space and baseboard heaters and electrical controls and electrical components for HVAC systems.
13. The unloading and loading of any vehicle from which said games of chance, slot machines (manual or electrical) arrives or leaves said establishment.
14. The loading and unloading, uncrating or packaging, the movement and placement whether temporary or permanent, and all wiring and terminations, both electrical and data of any games of chance (e.g. slot machines, video poker machines, pinball, etc.) using electric or data transmissions will be done by IBEW Local Union 98.
15. Installation, mounting and wiring of all solar photovoltaic panels and inverters including all layout, panel supports, framing, grounding and bonding.
16. The loading and unloading, unpackaging, the placement and installation including all means of support, all wiring and terminations of all LED message boards and information boards of any kind.
17. The placement and installation including all supports, wiring, terminations of all electric signs attached to the structure inside and out.

The parties agree that the intent of these provisions is to state the scope of Traditional Inside Electrical Work presently being performed by the Inside Electrical Workers of IBEW Local 98; it is not an attempt to claim work that has not been historically and customarily performed by the inside Electrical Workers of IBEW Local 98.

Section 8.02 It is understood that the performance of traditional work will create trash, debris and the usual spoils during any construction project by every trade. While performing the electrical installation of an assigned task and prior to completing the task, it is typical to have debris such as wire clippings, wire stripping, cut off MC sheathing, plastic wraps, device boxes and associated literature, shipping wrap, foam and other shipping materials including wooden skids and reels, cardboard boxes and other specific and general trash attributable to the electrical installation. Upon request of the employer, the electrical worker is responsible to cleanup all of the above and place it as directed by the Employer. Repeated failure to “cleanup” and adhere to this will be grounds for removal from the project or shop.

Section 8.03 The parties agree to provide for adoption of the IBEW Code of Excellence Program as per the following language:

The Code of Excellence is a program designed to bring out the best in our construction members and demonstrates to our customer that IBEW members:

- Perform the highest quality and quantity of work
- Utilize their skills and abilities to the maximum
- Exercise safe and productive work practices

The Code of Excellence is not only about an IBEW job built right the first time, on schedule and under budget; it is also about pride in IBEW membership and craftsmanship and leaving a lasting impression of quality workmanship with the customer ... thus, prompting him to again employ the IBEW on future projects. The Code of Excellence program is also a means to build and project positive attitudes about who we are and the work we do ... on and off the job

Local Union training with respect to the Code of Excellence program may be facilitated by an International Representative but, regardless of delivery method or by whom, the Code of Excellence program training is to convey a strong message that IBEW construction members will:

Come to work on time, fit for duty and ready to work.

Obey recognized customer and employer work rules.

Demonstrate zero tolerance for alcohol and substance abuse.

Exercise proper safety, health and sanitation practices.

Own up to ‘8 for 8’ and be on the job unless otherwise allowed or authorized to leave.

Follow safe, reasonable and legitimate management directives.

Encourage respect for the customer’s rights and property, as well as for others.

Exercise the skills and abilities of the trade.

Care for tools and equipment provided by the employer.

Eliminate waste and other forms of property destruction, including graffiti.

Limit lunch and break times to allocated periods; adhere to established start and quit times.

Leave inappropriate behavior to those of lesser knowledge.

Employ the proper tool for the job and maintain personal tool responsibilities.

Not solicit funds or sell merchandise without the Business Manager’s approval.

Curtail idle time or pursuit of personal business during work hours, including cell phone use.

Expel job disruptions and refuse to engage in slowdowns or activities designed to extend the job or create overtime or any other conduct that would case the IBEW in a bad light.

INDIVIDUAL LETTER OF ASSENT-A

In signing this letter of assent, the undersigned firm does hereby authorize the Philadelphia Division, Penn-Del-Jersey Chapter, N.E.C.A. as its collective bargaining representative for all matters contained in or pertaining to the current and any subsequent approved Inside Commercial labor agreement between the Philadelphia Division, Penn-Del-Jersey Chapter, N.E.C.A. and Local Union 98, I.B.E.W. In doing so, the undersigned firm agrees to comply with, and be bound by, all of the terms and conditions contained in said current and subsequent approved labor agreements. This authorization, in compliance with the current approved labor agreement, shall become effective on the ____day of , 20__. It shall remain in effect until terminated by the undersigned Employer giving written notice to the Philadelphia Division, Penn-Del-Jersey Chapter, N.E.C.A. and to the Local Union at least one hundred fifty (150) days prior to the then current anniversary date of the applicable approved labor agreement.

The Employer agrees that if a majority of its Employees authorizes the Local Union to represent them in collective bargaining, the Employer will recognize the Local Union as the NLRA Section 9 (a) collective bargaining agent for all employees performing electrical construction work within the jurisdiction of the Local Union on all present and future jobsites.

In accordance with Orders issued by the United States District Court for the District of Maryland on October 10, 1980, in Civil Action HM-77-1302, if the undersigned Employer is not a member of the National Electrical Contractors Association, this letter of assent shall not bind the parties to any provision in the above-mentioned agreement requiring payment into the National Electrical Industry Fund, unless the above Orders of Court shall be stayed, reversed on appeal, or otherwise nullified.

SUBJECT TO THE APPROVAL OF THE INTERNATIONAL PRESIDENT - I.B.E.W.

Firm:

SIGNED FOR THE EMPLOYER

By:

Title:

Date:

SIGNED FOR LOCAL UNION 98, I.B.E.W.

By:

Title:

Date:

SEPARABILITY CLAUSE

Should any provision of this Agreement be declared illegal by any court of competent jurisdiction, such provisions shall immediately become null and void, leaving the remainder of the Agreement in full force and effect and the parties shall, thereupon, seek to negotiate substitute provisions where are in conformity with the applicable laws.

SIGNATURE PAGE

EFFECTIVE DATES: April 29, 2013 UNTIL April 30, 2017

Signed for:

Philadelphia Division of the
Penn-Del-Jersey Chapter,
N.E.C.A.

Jeffrey Scarpello
Robert Duff
Thomas Moore, Jr.
Bernie Schaffer

Signed for:

Local Union 98,
International Brotherhood of Electrical
Workers of Philadelphia, Pa

John J. Dougherty
Brian Burrows
Edward J. Coppinger
James Snyder

GEOGRAPHICAL JURISDICTIONAL LINES OF LOCAL UNION 98, IBEW

Bucks County:

In the area between the following lines.

1. Starting at the Delaware River and following the west limits of the Borough of Bristol, along the continuation of U.S. Highway 13 and under the Pennsylvania Railroad bridge to Route 09113, north on 09113 to Route 152, north along Route 152 to Hulmeville Road, east on Hulmeville Road to Route 344, north on Route 344 to the junction of Spurs 281 and 252, continue north on Spur 252 to Route 09028, west on 09028 to Route 152, north on 152 to TR 532, north on TR 532 to TR 113, north on TR 113 to TR 232 at Anchor Inn, northeast on TR 232 and continue northeast along Route 659 to Route 09060, west on 09060 to Route 402, north on 402 to the Borough line at the southwest corner of the Borough of New Hope. The Borough of New Hope is excluded.

2. Starting at the Delaware River and proceeding southwest along the Plumstead-Solebury and the Plumstead-Buckingham Township lines to Route 09064, northwest 09064 to U.S. Highway 611, south on 611 to the Spur of Route 270, northwest along the Spur to Route 397, southwest on 397 to Route 350, southeast on 350 to Route 395, southwest on 395 to Route 09069, southeast on 09069 to Route 09041, southwest on 09041 to the Montgomery County line.

Delaware County:

That portion east of a line following State Highway 320 from Montgomery County to Marple, then along the Springfield Road to Saxer Avenue, along Saxer Avenue to Powell Road, along Powell Road to State Highway 420 and continuing in a straight line to the Delaware River.

Montgomery County:

That portion southeast of a line following Lower State Road from Bucks County southwest to the Bethlehem Pike (U.S. Highway 309), south on Bethlehem Pike to the Penllyn Pike, Southwest on the Penllyn and Blue Bell Pikes to the Wissahickon Creek, southeast on the Wissahickon Creek to Butler Pike to North Lane near Conshohocken Borough, southeast on North Lane near to the Schuylkill River and continuing southeast in a line to Spring Mill Road and southwest on Spring Mill Road to Delaware County.

Philadelphia County:

In its entirety.

BUILD UNION

BUY AMERICAN

OFFICERS OF IBEW LOCAL UNION 98

Business Manager

John J. Dougherty

President

Brian Burrows

Vice-President

Tim Browne

Recording Secretary

Michael Mascuilli

Financial Secretary

Francis Walsh

Treasurer

Todd Neilson

Executive Board

Edward Coppinger

Jim Foy

Robert Gormley

Nick Gummel

Steven Wolfe

Examining Board

Kirk Henon

Robert Thompson

Joseph Bledsoe

www.ibew98.org

AGREEMENT

DATED MAY 1, 2013

between

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

and

**PLUMBERS LOCAL UNION NO. 690
of the
UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
COVERING PHILADELPHIA, BUCKS, CHESTER,
DELAWARE AND MONTGOMERY COUNTIES**

**EFFECTIVE
MAY 1, 2013 UNTIL APRIL 30, 2016**

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THIS AGREEMENT, made and effective this 1st day of May 2013, and amended and restated effective this 1st day of May, 2013 by and between MECHANICAL CONTRACTORS ASSOCIATION OF EASTERN PENNSYLVANIA, INC. (hereinafter called "EMPLOYERS' ASSOCIATION"), party of the first part, and LOCAL UNION No. 690 of the UNITED ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF THE PLUMBING AND PIPE FITTING INDUSTRY OF THE UNITED STATES AND CANADA (hereinafter called "LOCAL UNION"), party of the second part, for the purpose of securing at all times a sufficiency of skilled journeymen at fair wage rates, thereby preventing waste and unnecessary expense, annoyance, or delay and for the advancement of the interests of EMPLOYERS' ASSOCIATION and LOCAL UNION.

WITNESSETH:

ARTICLE I

SECTION 1

Term of Agreement

This Agreement, as amended and restated, shall remain in full force and effect from May 1, 2013 until April 30, 2016, and shall be automatically renewed from year to year thereafter unless either party shall give notice in writing to the other party not less than one hundred and twenty (120) days before the expiration of the term hereof, or the expiration of any such yearly extension of the terms hereof, of intention to terminate this Agreement or to request changes in the terms and conditions hereof. The basic changes requested shall be set forth in said written notice.

SECTION 2

Geographic Jurisdiction

The territorial jurisdiction of LOCAL UNION for the purposes of this agreement shall be Philadelphia, Bucks, Chester, Delaware and Montgomery Counties.

SECTION 3

Work Jurisdiction

This Agreement shall apply to and cover all employees of an Employer employed to perform or performing plumbing, heating and piping work as listed hereinafter within the geographical jurisdiction set forth in Section 2 above:

1. All piping for plumbing, water, waste, floor drains, drain gates, supply, leader, soil pipe, grease traps, sewage and vent lines.
2. All piping for water filters, water softeners, water meters and the setting of same.
3. All cold, hot and circulating water lines, piping for house pumps, cellar drainers, ejectors, house tanks, pressure tanks, swimming pools, ornamental pools, display fountains, drinking fountains, aquariums, amusement and water parks, plumbing fixtures and appliances, and the handling and setting of the above mentioned equipment.
4. All water services from mains to buildings, including water meters and water meter foundations.
5. All water mains from whatever source, including branches and fire hydrants, etc.
6. All down spouts and drainage areas, soil pipe, catch basins, manholes, drains, gravel basins, storm water sewers, septic tanks, cesspools, water storage tanks, etc.
 - (a) All sewers and storm drains out to the curb of property lines to be installed by journeymen plumbers.
7. All liquid soap piping, liquid soap tanks, soap valves, and equipment in bath and washrooms, shower stalls, etc.
8. All bathroom, toilet room and shower room accessories, i.e., as towel

- racks, paper holders, glass shelves, hooks, mirrors, cabinets, etc.
9. All lawn sprinkler work, including piping, fittings and lawn sprinkler heads.
10. All sheet lead lining for X-ray rooms, fountains, swimming pools or shower stalls, tanks, or vats for all purposes and for roof flashings in connection with the pipefitting industry.
11. All fire stand pipes, fire pumps, pressure and storage tanks, valves, hose racks, fire hose cabinets and accessories, and all piping for sprinkler work of every description.
12. All block tin coils, carbonic gas piping, for soda fountains and bars, etc.
13. All piping for railing work, and racks of every description, whether screwed or welded.
14. All piping for pneumatic vacuum cleaning systems of every description.
15. All piping for hydraulic, vacuum pneumatic air, water, steam, oil or gas, used in connection with railway cars, railway motor cars and railway locomotives.
16. All marine piping, and all piping used in connection with ship building and ship yards.
17. All power plant piping of every description.
18. The handling, assembling, and erecting of all economizers, superheaters, regardless of the mode or method of making joints, hangers, and erection of same.
19. All internal and external piping on boilers, heaters, tanks, and evaporators, water legs, water backs, and water grates, boiler compound equipment, etc.
20. All soot blowers and soot collecting piping systems.
21. The setting, erecting and piping, for all smoke consuming and smoke washing and regulating devices.
22. The setting, erecting and piping of instruments, measuring devices, thermostatic controls, gauge boards, and other controls used in connection with power, heating, refrigeration, air conditioning, manufacturing, mining and industrial work.
23. The setting and erecting of all boiler feeder water heaters, filters, water softeners, purifiers, condensate equipment, pumps, condensers, coolers, and all piping for same in power houses, distributing and boosting stations, refrigeration, bottling, distilling, and brewing plants, heating, ventilating and air-conditioning systems.
24. All piping for artificial gases, natural gases, and holders and equipment for same, chemicals, minerals and byproducts and refining of same, for any and all purposes.
25. The setting and erecting of all under-feed stokers, fuel burners, and piping, including gas, oil, power fuel, hot and cold air piping, and all accessories and parts of burners and stokers, etc.
26. All ash collecting and conveyer piping systems, including all air washing and dust collecting piping and equipment, accessories and appurtenances and regulating devices, etc.
27. The setting and erection of all oil heaters, oil coolers, storage and distribution tanks, transfer pumps, and mixing devices, and all piping thereto of every description.
28. The setting, erecting and piping of all cooling units, pumps, reclaiming systems, and appurtenances, in connection with transformers, and piping to switches of every description.
29. All fire extinguishing systems, and piping whether by water, steam, gas, or chemical fire alarm piping, and control tubing, etc.
30. All piping for sterilizing, chemical treatment, deodorizing, and all cleaning systems of every description, and laundries for all purposes.
31. All piping for oil or gasoline tanks, gravity and pressure lubricating and greasing systems, air and hydraulic lifts, etc.
32. All piping for power, or heating purposes, either by water, air, steam, gas, oil, chemicals, or any other method.
33. All piping, setting and hanging of all units and fixtures for air-conditioning, cooling, heating, roof cooling, refrigerating, ice making, humidifying, dehumidifying, dehydrating, by any method, and the charging and testing, servicing of all work after completion.
34. All pneumatic tube work, and all piping for carrying systems by

- vacuum, compressed air, steam, water, or any other method.
35. All piping to stoves, fire grates, blast and heating furnaces, ovens, dryers, heaters, oil burners, stokers and boilers and cooking utensils, etc. of every description.
 36. All piping in connection with central distributing filtration treatment stations, boosting stations, waste and sewage disposal plants, central chlorination, chemical treatment, waste water treatment, sewerage treatment and water treatment work; and all underground supply lines to cooling wells, suction basins, filter basins, settling basins, aeration basins, steam piping, steam condensate piping and process piping.
 37. All process piping for refining, manufacturing, industrial and shipping purposes, of every character and description.
 38. All air piping of every description.
 39. All temporary piping of every description in connection with building and construction work, excavating and underground construction.
 40. The laying out and coring of all holes, chases and channels, the setting and erection of bolts, inserts, stands, brackets, supports, sleeves, thimbles, hangers, conduits, and boxes, used in connection with the pipefitting industry.
 41. The handling and setting of boilers, setting of fronts, setting of soot blowers, and attaching of all boiler trimmings.
 42. All pipe transportation lines for gas, oil, gasoline, fluids and liquids, water aqueducts, and water lines, and booster stations of every description.
 43. All acetylene and arc welding, brazing, lead burning, soldered and wiped joints, caulked joints, expanded joints, rolled joints, or any other mode or method of making joints in connection with the pipefitting industry.
 44. Laying out, cutting, bending, and fabricating of all pipe work of every description, by whatever mode or method.
 45. All methods of stress relieving of all pipe joints made by every mode or method.
 46. The assembling and erecting of tanks used for mechanical manufacturing or industrial purposes, to be assembled with bolts, packed or welded joints.
 47. The handling of all materials in connection with the foregoing work as well as the handling and using of all tools and equipment that may be necessary for the erection and installation of all work and materials used in the pipefitting industry.
 48. The operation, maintenance, repairing, servicing and dismantling of all work installed by Employers in the Bargaining Unit. The initial protection and the first cleaning only, of all plumbing fixtures will be the work of the Union.
 49. All piping for cataracts, cascades, i.e. (artificial water falls), make-up water fountains, captured waters, water towers, cooling towers, and spray ponds, used for industrial manufacturing, commercial, or for any other purposes.
 50. Piping herein specified means pipe made from metals, tile, glass, rubber, plastics, wood, or any other kind of material or product manufactured into pipe, usable in the pipefitting industry, regardless of size or shapes.
 - (a) The rigging, leveling and setting of all fixtures, boilers assembled, compressors and any other equipment used in connection with the piping or pipefitting industry. The rigging, placing of hangers necessary to support same.
 51. And as demonstrated by custom, any other work as fits within the trade-line jurisdiction of the United Association.
 52. Installation of all pipe whether in the ground or above the ground used for drainage, waste, water lines, including industrial waste and acids and other usage including deliverance of solids and liquids.
 53. The installation, repair and maintenance of all hydraulic heating and/or cooling units, however energized.
 54. It is mutually agreed that the operation, maintenance, repair and protection of all tools and equipment used by the journeymen is the work of the United Association. It is the intention that the journeymen shall have complete control of their own equipment. The equipment referred to in this section shall include, but not be limited to, welding machines and accessories, regardless of the source of power, pipe threading and cut-off machines, winches, hoists, A-frames, stiff-leg derricks, cherry-pickers, back hoes, front end loaders, fork lifts, ditch witches, hydraulic and aerial platforms, winch trucks, job trucks, homelite generators, pumps, electric drills, transit levels, laser beams, where in connection with performing of United Association Pipe Work.
 55. All backing, regardless of material, for bathroom fixtures and accessories, heating accessories shall be installed by journeymen.
 56. When lifting devices are required in conjunction with the work of employees in this unit, a rigging crew of such employees shall be assigned by the Employer to man the rig. The size of the crew shall be determined by agreement between the Employer and the Business Manager or Agent of the Union.
 57. Geothermal Systems.
 58. Radon Piping Systems.
 59. Fire Stopping of pipe or fixture penetration sleeves.
 60. All appliances and fixtures related to the plumbing industry such as washers, dryers, refrigerators, gas ranges, garbage disposals, dish washers and all related appliances, including the unloading, handling, distribution and installation of such appliances.
 61. Manning and maintaining all electrical machines and equipment required for the execution of the work provided in this Article.
 62. Handling, placing, erection, and maintenance of all heating, cooling, and air conditioning equipment regardless of the source of heat or energy.
 63. All work performed in a UA Fabrication shop including piping, support steel, hangers and components.
 64. All handling of tools, piping, parts and components and materials, including unloading, warehousing to distribution of the work covered by this Agreement.
 65. Perform all hand and power rigging of all piping and piping components, including all hand signals and communication to the Equipment Operator when a crane or material lifting equipment is utilized.
 66. Perform all layout and framing of equipment foundations within the mechanical contractor's scope, including but not limited to pumps, compressors, boilers and any h.v.a.c. or process piping associated with the work covered by this Agreement.
 67. Cryogenic vent piping off of "MRI" magnetic resonance imaging machine.
 68. Installation of support steel for mechanical equipment whether temporary or permanent.
 69. Methane gas-all piping for landfills, whether venting or extracting.
 70. Install all VESDA piping.
 71. Install all medical gas piping and related equipment and supports.
 72. All patent scaffold up to 14 feet or 2 1/2 sections.
 73. Vent piping off of condensing furnace.
 74. The installation, maintenance, modification and testing of all power plant piping of every description. This includes all boiler and turbine piping systems and associated components, valves, controls, instruments, pipe supports and pipe hangers.
 75. The installation, maintenance and modification of any "green building system" piping and piping systems, including all components, controls, hangers and supports.
 76. Installation of all pneumatic and vacuum conveyor systems.

ARTICLE II

SECTION 1

Regular Days and Hours of Work

Eight (8) hours shall constitute a day's work, Monday to Friday, inclusive. However, no journeymen plumbers and apprentices shall work or be permitted to work in excess of forty (40) hours in any one (1) week, or eight (8) hours

in any twenty-four (24) hour period, except in an emergency wherein lives or property are in danger. No journeymen plumbers and apprentices will be permitted to make in excess of forty (40) hours in any one (1) week while other journeymen plumbers and apprentices are unemployed. By mutual consent of the Employer and the Union, the starting and quitting time of a normal established work day of eight (8) hours may be set or changed for any or all Employees between the hours of 7:00 A.M. And 4:30 P.M. on any given project. During the regular work period, the Employees shall be granted an unpaid lunch period of thirty (30) minutes - time by mutual agreement between Employer and Union. At the start of the shift, the journeymen plumbers and apprentices must be out of the trailer, ready to go to work.

SECTION 2

Overtime

Any work performed by employees between 4:30 P.M. and 7:00 a.m. And between 12 noon and 12:30 p.m. and Saturday shall be paid for at one and one-half (1 1/2) times the straight time rate. Any work performed in excess of twelve (12) hours work continuously, Sundays, New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (for purposes of this Agreement when any one of the aforementioned holidays falls on Sunday, the following Monday shall be observed as the holiday) shall be paid for at the rate of double (2) the straight time rate commencing at the time the employees report for work by direction of employer, excluding shift work, which is covered by Article II, Section 3 and maintenance work covered by Article II, Section 6. Employees shall be allowed sufficient time before quitting time for collection of tools and equipment and for putting them away. On special occasions or emergencies when a hoist or rig is available for use by the employer only during the normal lunch period, then at the option of the employer, those employees whose services may be needed in connection with the use of the hoist or rig may be required to work between 12 noon and 12:30 p.m. with pay at the straight time rate, if such employees are granted a lunch period immediately before or after the regularly scheduled lunch period.

SECTION 3

Shift Work

In order to be considered as shift work, work must be performed by Employees on at least two (2) consecutive eight (8) hour shifts within one (1) day. Shifts shall be from 12:00 midnight to 8:00 A.M., 8:00 A.M. to 4:00 P.M. to 12:00 midnight. Shift work must run for a minimum of one hundred twenty (120) hours when three (3) shifts are worked, and eighty (80) hours when two (2) shifts are worked. However, shift work shall not apply to Saturday, which shall be at one and one-half times (1-1/2x), and Sunday, or holidays (on holidays hereinbefore set forth) work, which shall be at double (2) the straight time rate. Shift work will be paid for at the rate of straight time plus fifteen percent (15%) of the straight time rate of hourly pay except the shift between 8:00 A.M. to 4:00 P.M., which shall be paid for at straight time.

Single Shift Off Normal Hours

In existing facilities, and when requested by the customer, the Employer, with the consent of the Union, which shall not be unreasonably withheld, may elect to work a single "non-standard" working hour shift, for a minimum of five (5) consecutive work days, to be paid for at the rate of straight time plus fifteen percent (15%). The shift may be worked wholly or partially outside of the normal 7:00 A.M. thru 4:30 P.M. work hours and will be guaranteed for a minimum of forty (40) hours each for the entire crew.

Eight Hours Work for Eight Hours Pay

There are no paid lunch periods except when working three (3) consecutive shifts within one twenty-four (24) hour day. When working three (3) shifts,

the shift will consist of seven and one-half (7-1/2) hours worked and one half (1/2) hour for lunch, for eight (8) hours pay.

SECTION 4

Four Tens

In lieu of the traditional five (5) day, eight (8) hour per day work week, the Employer, with the consent of the Union, which shall not be unreasonably withheld, may elect to work a four (4) day, ten (10) hour per day work week. The work week will commence on Monday unless otherwise agreed upon. The first two (2) hours worked in excess of ten (10) will be paid for at the rate of time plus one-half (1-1/2x) and all hours thereafter will be paid for at the rate of double time (2x). The first twelve (12) hours worked on Friday and Saturday will be paid for at the rate of time plus one-half (1-1/2x) and all hours thereafter will be paid for at the rate of double time (2x). All hours worked on Sundays and holidays will be paid for at the rate of double time (2x).

It is the intention of this agreement to provide competitive opportunities for the industry without eroding the traditional five (5) day work week.

SECTION 5

Reporting Pay

(A) Any journeyman plumber reporting to work at the regular starting time shall receive two (2) hours pay at the prevailing rate of wages unless he has been notified previously not to report to work.

(B) Any journeyman plumber who reports to work and for whom work is provided shall receive no less than four (4) hours pay, and if more than four (4) hours are worked in any one (1) day and no further work is provided, he shall be paid for not less than eight (8) hours worked.

(C) However, on any day where rain, snow, or inclement weather at the job site does not permit the job to progress satisfactorily, the journeyman plumber shall be paid for all time worked, but in no event shall he be paid less than a minimum of two (2) hours, unless the journeyman plumber has been directed not to report for work. It is the joint understanding of the parties hereto that the meaning of this clause, that is, Section 5(c) immediately preceding, is as follows:

(1) If a journeyman plumber reports to work on any day and he is put to work by the Employer, and the weather conditions do not change appreciably for the worse within the two (2) hours from starting time, then he shall be entitled to continue to work and be paid for the time worked, but not less than four (4) hours.

(2) If a journeyman plumber reports to work on any day and he is put to work by the Employer, and the weather conditions do change appreciably for the worse within two (2) hours from the starting time, then he shall be paid for the time worked, but no less than two (2) hours. If under these conditions, the journeyman plumber is not notified to discontinue work within said two (2) hours, then he shall be paid for four (4) hours.

SECTION 6

Maintenance, Repair Work and Emergency Breakdowns

It is agreed that maintenance, repair work and emergency breakdowns are defined to mean repairs to, or the replacement of all or any part of work which is under the jurisdiction of LOCAL UNION in existing buildings presently in use, but shall not include new buildings under construction or renovation of, or additions to existing buildings. The rate of pay for overtime for the work defined above shall be one and one-half times (1-1/2x) the hourly rate, except on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day and on such days as the above mentioned holidays are observed, on which mentioned holidays the rate for said work shall continue at double (2) the hourly rate.

ARTICLE III

SECTION 1

Straight Time Rates of Pay

Commencing May 1, 2013, straight time for journeymen plumbers shall be paid at the rate of Forty-Four Dollars and Fifty-Three Cents (\$44.53).

Commencing May 1, 2014, the journeyman plumber's hourly rate shall be increased by Two Dollars and Zero Cents (\$2.00) The Union shall have the option of applying such increase or portions of such increase to fringe benefits including the Pension Plan, the Supplemental Retirement Plan, and the Health Plan.

Commencing May 1, 2015, the journeyman plumber's hourly rate shall be increased by One Dollar and Ninety-Five Cents (\$1.95) The Union shall have the option of applying such increase or portions of such increase to fringe benefits including the Pension Plan, the Supplemental Retirement Plan, and the Health Plan.

SECTION 2

Foremen's Rates of Pay

(A) On construction jobs or operations where at least two (2) and no more than five (5) journeymen plumbers are employed at a single location, one (1) journeyman plumber shall be designated as Foreman. The rate of pay which such Foreman shall receive shall be a minimum of seven percent (7%) over and above the journeyman plumber's rate of pay.

When a construction job or operation starts, which will employ six (6) or more journeymen plumbers, the Foreman shall receive a minimum of ten percent (10%) over and above the journeyman plumber's rate of pay. Such rate of pay for the Foreman shall begin when the second (2nd) journeyman plumber is employed. When more than ten (10) journeymen plumbers are employed, an additional Foreman shall be designated, and one (1) additional Foreman shall be designated for each additional ten (10) journeymen plumbers employed thereafter and shall receive ten percent (10%) over and above the journeyman plumber's rate of pay. When a construction job or operation starts, which will employ more than ten (10) journeymen plumbers, the first Foreman shall receive a minimum of fifteen percent (15%) over and above the journeyman plumber's rate of pay.

(B) On a construction job or operation where two (2) or more Foremen are required and a maximum of one hundred (100) journeymen plumbers are employed, one (1) journeyman plumber shall be designated as General Foreman who shall receive a minimum of fifteen percent (15%) over and above the journeyman plumber's rate of pay.

On a job or operation where one hundred and one (101) or more journeymen plumbers are employed, the General Foreman shall receive a minimum of twenty percent (20%) over and above the journeyman plumber's rate of pay.

In the event it is reasonably anticipated at the time of the commencement of a construction project or operation that twenty-five (25) or more journeymen plumbers will be employed, a General Foreman shall be designated at the time of the commencement of construction. However, unforeseen peaks or changes on smaller construction projects shall not entitle any Employee to retroactive pay.

(C) Area Foremen, if utilized, shall be paid at a minimum of twelve percent (12%) over and above the journeyman plumber's rate of pay.

SECTION 3

Apprentices' Rates of Pay

The total package for apprentices (i.e., hourly wages, plus contribution to the Pension Plan, Supplemental Retirement Plan, Health Plan, and Apprenticeship Training Plan) for each period of advancement can be found in Appendix "D".

In the event of a lay off, the Employer, on a per shop basis, shall first layoff

any First, Second or Third Period apprentice before laying off any Fourth through Tenth Period apprentice.

All apprentices shall be guaranteed a forty (40) hour week except where the apprentices fail to report for work, provided that:

(1) In any work week in which a holiday shall fall or is observed during the period from Monday through Friday, the guarantee for that week shall be reduced by eight (8) hours for each such holiday, and

(2) Apprentices irrespective of when indentured shall not be entitled to be paid any wages for time spent by them in attending school during the entire period of their apprenticeship training.

SECTION 4

Apprentice Training Program

The apprenticeship training program shall be reasonably increased in the number of apprentices to be enrolled in each new class commencing after the effective date of the within Collective Bargaining Agreement.

A five-year (5) Apprenticeship Training Program has been established and will be maintained by the Joint Apprenticeship Committee.

SECTION 5

Pay for Travel Time

Journeymen plumbers sent out of the jurisdiction of LOCAL UNION (which for the purposes of this Agreement shall include the Counties of Berks, Bucks, Chester, Delaware, Lehigh, Montgomery, Northampton and Philadelphia, and the southeasterly portions of Carbon and Lebanon Counties in the Commonwealth of Pennsylvania, which represent the territorial jurisdiction of LOCAL UNION) shall receive all suitable Board and Traveling expenses. Journeymen plumbers while traveling shall receive wages of straight time, not to exceed eight (8) hours in any twenty-four (24) hour period.

SECTION 6

Time for Paying Wages

Weekly wages shall be paid not later than the scheduled quitting time on the regular pay day of each week. Upon layoff or discharge, Employee is to receive wages in full not later than thirty (30) minutes prior to the scheduled quitting time on the day of layoff or discharge. Waiting time for wages either on regular pay day or discharge or layoff shall be paid for at double time (2x) rate. Where checks are used, pay day will be no later than Thursday of each week. The Employer shall provide facilities for cashing of checks without cost to the Employee by the Todd System or a similar system.

SECTION 7

Transportation Expenses

Within the territorial jurisdiction of LOCAL UNION (as hereinbefore defined in Section 5) there shall be no transportation expenses paid to or from job sites.

SECTION 8

Power Plant

The parties agree that the first new power generation plant to be constructed in the Reading and Lehigh Valley Districts will be worked at the full Philadelphia wage and fringe benefit rate.

SECTION 9

Protection for Prevailing Rate (Davis Bacon And Pennsylvania) Work

Should the wage determination for a specific project not reflect the LU 690 agreed upon CBA rates in effect at that time, it will be the employer's responsibility to notify LU 690, in writing, of this discrepancy prior to submitting a bid for the project. LU 690 agrees to recognize the wage determination for that specific project, provided proper written notification has been provided by the contractor.

ARTICLE IV

SECTION 1

Efficiency of Operations

Inasmuch as greater efficiency in all lines of work is necessary, LOCAL UNION shall encourage its journeymen plumbers and apprentices in every way to accomplish results. There shall be no restrictions as to the amount of work journeymen plumbers and apprentices shall do, nor shall there be any restrictions as to the use of labor saving machinery for the installation of any work; provided that the aforesaid machinery meets with the approval of the Conference Committee. It is agreed that there shall be, at no time, more than one (1) apprentice with any journeyman plumber for any work, whatsoever it may be.

SECTION 2

Apprentices

Members of the EMPLOYERS' ASSOCIATION agree to employ as apprentices only those who are approved by the Joint Apprenticeship Committee and who are qualified under the standards registered with the State Apprenticeship Council. Each Employer may hire one (1) apprentice where one (1) journeyman is employed steadily and one (1) additional apprentice for every additional three (3) journeymen employed steadily. The apprentice shall be at all times under the supervision of a journeyman plumber. At no time shall more than one (1) apprentice be assigned to a journeyman. It is the intention of the parties that this Section 2 shall be construed as vesting jurisdiction in the Joint Apprenticeship Committee over all apprentices, regardless of whether a particular apprentice is or is not affiliated with the LOCAL UNION.

SECTION 3

Safety; Tools and Equipment

Members of the EMPLOYERS' ASSOCIATION agree to maintain safe working equipment to satisfactorily meet all requirements of laws, rules and regulations applicable thereto, and both Employer and Employee shall comply with all of the provisions of the Occupational Safety and Health Act and with the rules and regulations promulgated thereunder.

To further promote the safety of the Employees at the job site, no journeyman nor apprentice shall be required to work alone at locations which are mutually considered to be hazardous by the Employer or his representative (superintendent or foreman) and the Business Manager of the LOCAL UNION.

It is the intent of the parties to this Agreement to provide a safe work environment for all employees. Employer will provide hard hats, eye shields, hearing protection, face shields, burning goggles, welding gloves and/or other safety devices as may be required by law, local ordinance or at their discretion to reduce industrial accidents. Employees shall supply hard-soled footwear or steel-toed footwear, as necessary, and gloves.

In the event Journeymen plumbers or apprentices need to receive inoculations or other health treatments as a result of being exposed to

chemicals or infectious agents at an assigned worksite, the Employer shall be obligated to pay for all necessary inoculations or other medical treatment costs caused by worksite exposure, plus the travel costs and time spent receiving treatments during normal working hours.

Employer shall be obliged to furnish suitable raincoats, caps and/or boots, if necessary, during inclement weather in the event the Employer requires journeymen and/or apprentices to work during such weather.

Journeymen plumbers and apprentices shall be responsible for the reasonable care of tools and equipment and for willful negligence in the performance of their work. All complaints or charges with respect thereto shall be made by the particular Employer to the Conference Committee. Should such journeyman plumber or apprentice cited to appear before said Conference Committee in connection therewith be adjudged not guilty of the charge, then the Employer citing such journeyman plumber or apprentice shall pay him for the time lost in attending such hearing.

Local 690 will establish a ten (10) hour OSHA approved safety training course. Cost of the course will be paid by the Apprentice Fund. All Local 690 members will be strongly encouraged to complete this training by April 30, 2005, the end of this contract period. Journeymen plumbers and apprentices employed by contractors who establish their own ten (10) hour OSHA approved training course will receive straight time pay by the contractor.

ARTICLE V

Change Room

Employer shall furnish a suitable change room or shanty at the job site, and said change room or shanty shall be heated during the cold weather. Employer shall furnish drinking water for the Employees in the change room or shanty and on the job site. Water, hand cleaner and towels, or a method to dry wash hands shall be provided by the Employer.

ARTICLE VI

SECTION I

Fabrication of Pipe-Tools

Both parties agree that all pipe, for installation within the jurisdiction of LOCAL UNION, shall be fabricated by machine and with tools operated and handled by members of LOCAL UNION, and they shall be paid no less than the hourly wage rate for Journeyman and Apprentices as set forth in ARTICLE III, Section 1 of this Agreement. No Employee shall be permitted to furnish tools.

SECTION 2

Pipe Two Inches (2") and Under

Pipe two inches (2") and under shall be fabricated on the job by plumber mechanics to whom the work belongs. In cases where it is not practical to cut pipe on the job, it shall be discretionary with the Employer to have pipe two inches (2") and under fabricated elsewhere; provided, however, that permission is obtained by the Employer from the Business Manager of the LOCAL UNION.

SECTION 3

Responsibility for Work

It is further understood and agreed that the plumbing contractor shall be responsible for all piping and equipment which is part of the work of the United Association and shall be handled and set by journeymen plumbers and apprentices.

SECTION 4

Subletting of Work

No plumbing contractor shall be permitted to sublet work on any part of the plumbing system which is performed by members of the LOCAL UNION. Such work includes, but is not limited to, installation of accessories, backing boards, lead work, hole cutting, kitchen equipment, packing of sleeves, site work, coring, caulking fixtures, drain cleaning, cleaning of fixtures, and tub enclosures.

SECTION 5

Supplies

It is further agreed that plumbing contractor will at all times where possible receive supplies from such houses as are in contractual relationship with the United Association. Union shall supply a list of such companies from time to time.

ARTICLE VII

SECTION 1

Who May Use Tools

There shall be no restriction on the use of tools by the foreman employed by the Employer, but it is agreed that such foreman shall be a journeyman plumber. A superintendent to use the tools shall be a journeyman plumber.

SECTION 2

Safeguarding Work of Employees

Employer shall not work "with the tools" and agrees to employ at least one (1) journeyman plumber who shall be a member of LOCAL UNION, who need not be the same member, for the duration of the term of this Agreement in accordance with the provisions of ARTICLE XVII hereof.

SECTION 3

Work Preservation

The Employer agrees that no evasion of the terms, requirements, and provisions of this Agreement will take place. If and when Employer shall perform any work of the type covered by this Agreement within the jurisdictional territory of Union, under its own name or under the name of another, as a corporation, company, partnership, or any other business entity, including a joint venture, wherein the Employer through its officers, directors, partners, or stockholders, exercise control of labor policies of such other entity, the terms and conditions of this Agreement shall be applicable to all such work.

This clause shall only be applicable to job site work as that term is used in the construction industry proviso to Section 8 (e) of the National Labor Relations Act. This clause will not be applicable to non-jobsite work.

Notwithstanding anything herein contained to the contrary, in the event there is a determination by the National Labor Relations Board (N.L.R.B.) (or its counsel) or by a court of competent jurisdiction that the aforesaid provisions are illegal, unlawful, or in violation of the provisions of the National Labor Relations Act, upon such determination the aforesaid provisions shall be void and of no effect.

Inasmuch as the Union has submitted proof that a majority of the Employers' Employees have authorized the Union to represent them in collective bargaining with the Employer and the Employer is satisfied that the Union represents a majority of its Employees in the bargaining unit described herein, the Employer recognizes the Union as the exclusive

Section 9(a) collective bargaining agent for all of its journeymen plumbers and apprentices on all present and future job sites within the jurisdiction of the Union, unless and until such time as the Union loses its status as the Employees' exclusive representative as a result of an N.L.R.B. Election.

ARTICLE VIII

SECTION 1

Union Membership

The EMPLOYERS' ASSOCIATION recognizes LOCAL UNION as the sole and exclusive collective bargaining representative of all its journeymen plumbers and apprentices who shall become and remain members of LOCAL UNION in good standing seven (7) days after the date of their employment, or seven (7) days after the effective date of this Agreement, whichever is the later, and, upon becoming members, they shall maintain their membership in good standing in order to continue in employment. LOCAL UNION agrees, at the request of EMPLOYERS' ASSOCIATION, to furnish competent plumbers and apprentices to the Employers in accordance with the provisions of ARTICLE XVII hereof.

SECTION 2

Local Union Autonomy

The LOCAL UNION shall at all times have full autonomous jurisdiction over its own membership. However, it is understood and agreed that working rules of LOCAL UNION cannot be made to conflict with this Agreement and that this Agreement governs.

SECTION 3

Union's Rights of Visitation

The EMPLOYERS' ASSOCIATION agrees that representatives of the United Association shall be permitted to visit all jobs being done by journeymen plumbers and apprentices represented by LOCAL UNION.

SECTION 4

Employer Reporting Requirements

All employers signatory to this Agreement shall report to the LOCAL UNION the name and address of all plumbing jobs contracted for in excess of \$5,000.00. Repeated failure to report plumbing jobs in excess of \$5,000.00 may result in a Steward being placed with the non-reporting Employer by the LOCAL UNION.

ARTICLE IX

SECTION 1

Employer Payments for Fringe Benefits

(A) The parties hereto agree that commencing May 1, 2013, every Employer, under the terms of this Collective Bargaining Agreement, employing journeymen plumbers and apprentices represented by LOCAL UNION, shall contribute the following sums per hour for the hours compensated (contributions shall be double (2x) or one and one-half (1-1/2x) the regular rate per hour for each hour of overtime worked, in accordance with ARTICLE II, Sections 1 through 6, and one (1) plus fifteen percent (15%) times the regular rate per hour for each hour of shift work worked, including reporting time, which shall be compensated for, by all journeymen plumbers and apprentices employed by said respective Employers, which shall be paid by checks to the order of Wells Fargo Bank or to such successor

of said company as the Trustees of the below-listed Plans may from time to time designate (hereinafter called "Depository") as the Depository for said contribution, and shall be mailed to The Industry Fund Building, 2791 Southampton Road, Philadelphia, PA 19154. Said contributions shall be in such sums and shall be allocated as follows:

Commencing May 1, 2013

Journeyman:

Health Plan.....	\$ 13.69
Health Plan - Eligibility Maintenance	\$ 0.50
Pension Plan - Regular Contribution	\$ 10.07
Supplemental Retirement Plan.....	\$ 4.00
Apprentice Training Plan	\$0.90
UA Training Fund.....	\$ 0.00
Industry Fund.....	\$ 0.27
Scholarship.....	\$ 0.05
Total.....	\$ 29.48

Apprentices:

For apprentice Wage Rates and Fringe Benefits, see Appendix "D"

In accordance with ARTICLE III, Section 1, the Union shall have the option of applying such portion or portions of the wage increase provided for on May 1, 2013, to fringe benefits, including the Pension Plan, the Supplemental Retirement Plan, and the Health Plan, or such other Plan as might be created from time to time.

Effective May 1, 2013, Employer contributions to the Industry Fund may be increased each year at the option of the EMPLOYERS' ASSOCIATION.

At any time on or after May 1, 2013, upon the mutual agreement of the parties, this Agreement may be reopened for the sole purpose of increasing the hourly contributions to the Health Fund and/or the Pension Fund, should the Trustees of such Plan agree that such increase is necessary.

(B) The Union may designate work otherwise covered by this Agreement as targeted work. As part of this designation, the Union may enter into an agreement that provides that the contribution to the Health Plan and/or the Pension Plan is lower than the hourly rate stated above. The Agreement may eliminate the hourly contribution to the Health Plan and/or the Pension Plan for such targeted work.

The parties to this agreement acknowledge that pursuant to the authority given to the Trustees in the Trust Agreement establishing the Health Plan, the Trustees may determine that employees performing targeted work at the lower hourly contribution rates than stated in (a) may receive reduced benefits or no benefits.

Each employer signatory to this Agreement will pay to the Health Plan an additional contribution of \$.50 per hour for each hour of work covered by this agreement for Eligibility Maintenance. The Eligibility Maintenance contribution will first be used by the Trustees of the Health Plan to supplement the benefits of employees working on targeted work at hourly contributions rates lower than stated in (a) to insure, to the extent it is financially feasible, that such employees will not lose health benefits or receive benefits because of the lower contribution rate. The Eligibility Maintenance contribution may also be used, in the discretion of the Trustees after they have provided for the maintenance of benefits of employees working on targeted jobs, to maintain benefits and eligibility for other employees.

SECTION 2

Vacation Plan

Commencing May 1, 2013, every Employer under the terms of this Collective Bargaining Agreement and every other mechanical contractor in contractual relationship with LOCAL UNION and/or employing journeymen plumbers and apprentices represented by LOCAL UNION shall withhold out of the net wages (gross wages less usual payroll deductions) of each journeyman plumber employed by it the sum of Two Dollars and Zero Cents (\$2.00) and of each apprentice employed by it the sum of Fifty Cents (\$.50) per hour for the hours compensated (withholding for Vacation Plan shall be

double (2) or one and one-half (1-1/2) the regular rate per hour for each hour of overtime worked in accordance with ARTICLE II, Section 2 and 5 and one (1) plus fifteen percent (15%) times the regular rate per hour for each hour of shift work worked), including reporting time which shall be compensated for and shall pay over such amounts so collected by checks to the order of Wachovia Bank, which shall be the Depository of said Vacation Plan, and shall be mailed to The Industry Fund Building, 2791 Southampton Road, Philadelphia, PA 19154.

SECTION 3

Dues Check-Off Authorization

Every Employer shall deduct from the net wages of those Employees who so authorize them by written assignment or signed "Dues Check-Off Authorization" filed with the LOCAL UNION, two point fifty-two percent (2.52%) of total package (gross wages plus fringe benefit package) representing the LOCAL UNION membership dues, and/or such other dues and assessments as may be approved by the membership from time to time, for each such Employee. All monies so deducted shall be paid by each Employer to LOCAL UNION, in accordance with the provisions of Sections 4 and 5 of this ARTICLE IX. It is understood and agreed that no deduction shall be made from any wages earned by an Employee prior to certification by the LOCAL UNION to the EMPLOYERS' ASSOCIATION of the aforesaid written assignment or signed "Dues Check-Off Authorization."

SECTION 4

**Plumbers Local Union 690 Political Action Plan
and
Plumbers Local Union 690 Social Plan**

Every Employer shall deduct Forty-Seven Cents (\$.47) per hour from the net wages of those Journeyman Employees and Thirty-Two Cents (\$.32) per hour from the net wages of those Apprentices who execute a "Voluntary Contribution Agreement and Check-Off Authorization for Plumbers Local Union 690 Political Action Plan" card representing voluntary contributions of the Employee to the Plumbers Local Union 690 Political Action Plan.

Every Employer shall deduct Fifty Cents (\$.50) per hour from the net wages of those Journeyman Employees and Forty Cents (\$.40) per hour from the net wages of those Apprentices who execute a "Voluntary Contribution Agreement and Check-Off Authorization for Plumbers Local Union 690 Social Plan" card representing voluntary contributions of the Employee to the Plumbers Local Union 690 Social Plan.

All monies so deducted shall be paid by the Employer, respectively, to the Plumbers Local Union 690 Political Action Plan, and to the Plumbers Local Union 690 Social Plan, in accordance with the provisions of Sections 5 and 6 of this ARTICLE IX. It is understood and agreed that such Employee contributions are voluntary, that participation in either of the said Plans is not a term or condition of employment, that an Employee may revoke such authorization at any time upon written notice thereof, and that no deductions shall be made from any wages earned by an Employee prior to certification by the LOCAL UNION of the aforesaid written authorization, or after receipt by the Employer of a written notice from an Employee revoking the aforesaid written authorization/check-off.

SECTION 5

Due Dates of Payments and Reports

The contributions and payments to be made in accordance with Sections 1, 2, 3, and 4 of ARTICLE IX shall be made by Employer on or before the tenth (10th) working day following the end of each calendar month. Employer shall, within ten (10) working days from the end of each calendar month, transmit to the Industry Fund Building a report containing:

(A) The names and Social Security numbers of persons to whom this Agreement is applicable, who have been in the employ of Employer during such calendar month.

(B) The number of hours during said calendar month for which compensation (including compensation for reporting and waiting time) was payable.

(C) Such other information as said respective Boards of Trustees and/or Plans may reasonably require for the proper administration thereof.

In the event no person to whom this Agreement is applicable has worked for an Employer in that calendar month, a report so stating must be forwarded by such Employer to the Industry Fund Building within the aforesaid ten (10) working day period following the end of such month.

SECTION 6

Delinquency in Making Payment or Report

(A) In the event the contribution and payments provide for in Section 1, 2, 3, and 4 of this ARTICLE IX are not paid by the 15th day following the end of each calendar month, and/or in the event the report provided for in Section 5 of this ARTICLE IX is not transmitted to the Industry Fund, the Employer shall be considered as a "delinquent". If the 15th falls on a weekend or holiday, the contributions and report are due the 1st working day past the 15th. The "delinquent" Employer shall be subject to a late payment charge from the date when reporting and/or payment thereof was due to the date when payment is made. Such charge may be set from time to time by the Trustees regarding payment and contributions and payments pursuant to Sections 1 and 2 or by the Union regarding contributions and payments pursuant to Sections 3 and 4 of the ARTICLE IX. Each Employer shall be bound and governed by any Rules and Regulations or Procedures adopted by any Board of Trustees or Fringe Benefits Plans to which contributions are due and owing under this Agreement.

In addition to any interest, financial penalty, fines or assessments, a delinquent Employer shall also be responsible for payment of all costs of the collection process, including, but not limited to, audit fees, counsel fees and costs. If a lawsuit needs to be filed to collect any amounts due the Benefit Plans, the Employer shall also be responsible for liquidated damages in the amount of twenty percent (20%) of the contributions due at the time the lawsuit is filed, plus interest, costs and attorney's fees associated with the collection of delinquent contributions. Such charges and expenses shall be paid to that entity to whom such contributions or payments are owed. In addition, LOCAL UNION shall, at its option, treat such failure to satisfy a delinquency as a breach of contract and should it exercise its option to remove its members from the job of such delinquent Employer, then the Employer shall be liable to pay unto any Employee so removed an amount equal to the wages lost by such Employee by reason of said Employer's breach of the within Agreement. However, in the event LOCAL UNION shall furnish its members to an Employer or Employers who have violated ARTICLE XII hereof, by not having furnished a bond in the appropriate amount with a corporate surety as provided therein, then Local Union shall be liable for the payment to all Plans of the contributions of such Employer or Employers to the extent of such Employer's or Employers' delinquencies.

(B) Regardless of whether any contributions or payments are owed pursuant to ARTICLE IX, Section 4, in the event no report is received within thirty (30) working days after the date of written notice, by Certified Mail, Return Receipt Requested, to the Employer of its failure to file such report, there shall be a penalty of Fifty Dollars (\$50.00) per week thereafter that said report is delinquent; said penalty payments to be shared equally between the Pension Plan and Health and Welfare Plan.

SECTION 7

Administration of Plans

The Health Plan shall be administered by a Board of eight (8) Trustees, four (4) to be appointed by the LOCAL UNION and four (4) to be appointed

by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc., one (1) by the Plumbing and Heating Contractors Association, and one (1) by the Plumbing and Heating Supply House Employer Association). The Pension Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by the contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc., and one (1) by the Plumbing and Heating Contractors Association). The Supplemental Retirement Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by the contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania Inc. and one (1) by the Plumbing and Heating Contractors Association and one (1) by the Plumbing and Heating Supply House Employers Association). The Apprenticeship Training Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc. and one (1) by the Plumbing and Heating Contractors Association). The Vacation Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc. and one (1) by the Plumbing and Heating Contractors Association). Once it receives approval from the IRS, the Scholarship Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc. and one (1) by the Plumbing and Heating Contractors Association). The LOCAL UNION shall not participate in any way in the administration of the Industry Fund or in disbursements therefrom. The Pension, Health, Supplemental Retirement, Apprenticeship Training, Vacation and Scholarship Plans shall be governed under and subject to the terms and provisions of appropriate written trust agreements and/or written plan documents.

ARTICLE X

SECTION 1

Rules Governing Apprenticeship and Training

The Employer agrees to cooperate with the LOCAL UNION for the practical training of apprentices for the plumbing and piping industry.

SECTION 2

Powers of Apprenticeship Committee

The Joint Apprenticeship Committee shall at all times have full autonomous jurisdiction over matters of the Apprenticeship Training by or through such rules, regulations and requirements or representatives as may by agreement or action be established.

SECTION 3

Actions of Apprentice Committee Not Subject to Arbitration

The actions of the Joint Apprenticeship Committee and any agreement and plans for Apprentice Training shall not be subject to the provisions of ARTICLE XXIII, Section 1.

ARTICLE XI

SECTION 1

Limitations on Use of Industry Fund's Assets

There presently exists an Industry Fund administered by EMPLOYERS' ASSOCIATION. The parties hereto agree that no part of said Fund, and no part of the contributions as set forth in ARTICLE IX, Section 1 (Industry Fund) hereof, shall be used for advertising, propaganda, or other purposes opposed to the interests of LOCAL UNION.

SECTION 2

Purposes of Industry Fund

It is further expressly understood and agreed that said Industry Fund shall be applied in payment of the operating costs of EMPLOYERS' ASSOCIATION, including, but not limited to, the expense of conducting public relations, public education as applied to the plumbing, heating, piping and air conditioning industry, costs and expenses connected with the promotion of stability of relations between labor and management, Employers' costs of collective bargaining on an industry-wide basis, Employers' costs of Employers' representatives in the adjustment of grievances and in arbitration, Employers' share of the fees of arbitrators, Employers' costs of their representatives in the administration of the various funds and committees as in this Agreement are set forth and in comparable undertakings engaged in from time to time.

SECTION 3

Employer and Employee Interest in Fund

Although designated a "contribution" in ARTICLE IX of this Agreement, it is expressly understood and agreed that said sum payable to said Industry Fund is not intended to be and is not a contribution to the Employees and no Employee or Employer has any proprietary interest in said Industry Fund.

ARTICLE XII

Bonds to Assure Payments

Each Employer agrees to immediately furnish a bond with a financially responsible corporate surety guaranteeing the payment by it of the contributions to the Plans and payment of the Dues Check-Off and Plumbers Local Union 690 Political Action Plan Check-Off, and Plumbers Local Union 690 Social Plan Check-Off, as provided in ARTICLE IX hereof. The amount of such bond shall be based upon the total number of hours worked, during the prior calendar year, by all of the journeymen plumbers and apprentices employed by said Employer as set forth below.

Annual Hours Worked by Collectively Bargained Employees in Prior Calendar Year	Amount of Bond Required
0 - 4,500	\$25,000
4,501 - 9,000	\$50,000
9,001 - 14,000	\$75,000
14,001 - 18,500	\$100,000
18,501 - 46,000	\$250,000
46,001 - 92,500	\$500,000
92,501 - 140,000	\$750,000
140,001 and above	\$1,000,000

After the end of each calendar year, each Employer shall calculate the total number of hours worked by journeymen plumbers and apprentices for that year and, for the following year, shall furnish a bond with corporate surety in the appropriate dollar amount required by the schedule set forth above.

However, should the Employer's average hours per month for three (3) consecutive months reach a level that on an annualized basis would place the Employer in a higher bond amount category, then the Employer must furnish a bond appropriate for the higher bond amount. The bond shall be pro-rated among the Plans and the Dues Check-Off and the Plumbers Local Union 690 Political Action Plan Check-Off, and the Plumbers Local Union 690 Social Plan Check-Off, mentioned in Sections 1, 2, 3 and 4 of ARTICLE IX hereof.

If any Employer covered by this Agreement on a project as a Prime or Sub-Contractor is forced to cease work on that project due to the failure on the part of the Owner, Prime Contractor, or Sub-Contractor, to pay monies due for properly submitted progress payments and/or payments for completed work and/or payments for approved changes and/or payments for work done under a notice to proceed order when such payments are due, then the Union is free, and not in violation of this Agreement, to not furnish workers to the Owner, Prime Contractor, Sub-Contractor, or other Contractor for purposes of completing that work. The purpose of this provision is to protect the ability of the Employer to properly pay wage and benefit contributions owed to the bargaining unit employees working under this Agreement.

ARTICLE XIII

Employees' Use of Vehicles

Employees are not permitted to use vehicles of any description unless such vehicles are supplied and maintained by the Employer, either before or during or after working hours for the purpose of transporting tools or materials for the conducting of any working activities. The prohibition applies whether or not the Employer is reimbursed by the Employer.

ARTICLE XIV

SECTION 1

Promotion of Better Workmanship/Standard for Excellence

It is further agreed that the advancement of better Journeymen Plumbers and Apprentices and better workmanship is to be promoted at all times, and that all parties will work together in an effort to see that all legal acts, laws, rules and regulations, or awarding authorities' specifications are complied with. In addition to the foregoing, the LOCAL UNION, the EMPLOYER'S ASSOCIATION and all signatory Employers agree that they have reviewed and adopted, as part of this Agreement, the "Standard for Excellence" adopted and issued by the United Association. The parties further agree that the provisions set forth in the Standard for Excellence shall be part of this Agreement and that all parties shall adhere to its terms and promote its goals.

SECTION 2

Conference Committee

This committee shall meet at least semi-annually and shall be comprised of 2 members from the MCA of Eastern Pennsylvania, 2 members of the Plumbing Contractors UAC Local 690 and 4 members of Local 690. The Committee may make such recommendations to the EMPLOYERS' ASSOCIATION and the LOCAL UNION as they deem desirable but shall not be authorized to effect any change in this Agreement or in customary working conditions.

SECTION 3

Committee to Study Ways of Increasing Employment

Promptly after the execution of this Agreement, the LOCAL UNION and the EMPLOYERS' ASSOCIATION will each appoint an equal number of their respective members (such number to be determined by mutual agreement) to serve as a committee to carry on a study for the purpose of devising methods to increase opportunities of employment, as well as to increase the volume of work available to Employers, and to recruit Employees that will meet the needs of the piping industry. The Committee will make periodic reports to the EMPLOYERS' ASSOCIATION and to the LOCAL UNION of its findings and recommendations.

The above-mentioned Committee shall meet at such time and place as shall be mutually agreed upon.

The Committee shall not have any authority to effect any change in this Agreement or in customary working conditions, nor shall any of the Committee's recommendations be binding upon the parties hereto, except upon mutual written agreement of the EMPLOYERS' ASSOCIATION and the LOCAL UNION.

LOCAL UNION and EMPLOYERS ASSOCIATION agree to a formal strategic planning process. A committee will meet a minimum of twice a year to develop a program that will increase market share for employers and employees of this agreement.

ARTICLE XV

Shop Steward

On all jobs where journeymen plumbers are employed, the Business Manager or his duly designated agent shall appoint a shop steward and, at the time of such appointment, give the Employer written notice of such appointment of a shop steward or successor.

Where there is reason to believe the CBA is not being followed, the Union shall have the right to place a Steward on any project anticipated to employ 5 or more members of Local 690 or if the Union has assigned market recovery funds to the project. The Steward shall be the last employee to be discharged except for the job Foreman and an Apprentice.

There shall be no restrictions as to the amount of work such shop steward shall perform nor shall his duties as steward interfere with his work unreasonably. However, a shop steward shall have the right, during working time and with no loss of pay, to spend reasonable time adjusting grievances including time to meet with Employees and supervisors, after notifying his immediate supervisor of his intent.

Failure on the part of a shop steward, in the opinion of the Employer, to perform a reasonable day's work, may, at the option of the Employer, result in his dismissal or removal from the job and a successor appointed. It is understood that such dismissal or removal shall not take place without mutual agreement between the Employer, the Business Manager of the LOCAL UNION, or his duly appointed agent.

Shop stewards shall not participate in matters related to the referral, hiring, layoff, or discharge of Employees except that the Employer shall request each new Employee to report to the shop steward. The shop steward will make sure that the Employee has received the job rules and the safety rules. The shop stewards shall be informed of all layoffs, transfers, discharges, and shall make sure Employees are properly paid.

Shop stewards shall assist any Employee receiving a serious injury on the job or becoming sick. If necessary, the shop steward shall report this information to the foreman and the LOCAL UNION at once.

Shop stewards shall have no authority whatsoever to call, order, or create a strike, work stoppage, or slowdown. He shall report all serious matters to the LOCAL UNION office.

ARTICLE XVI

Connection to Pipe, Fixture or Appliance

Journeymen plumbers and apprentices shall not be required to connect up to or with any pipe or fixture or appliance that is in connection with the plumbing system unless such material has been purchased by or furnished by the plumbing contractor doing the installation.

ARTICLE XVII

SECTION 1

Sources of Employees Other Than Apprentices

(A) Subject to the other provisions of this ARTICLE XVII, Employer may obtain Employees other than apprentices either by hiring persons applying directly to Employer, or by soliciting persons to come into its employ by any means other than advertising, or by requesting LOCAL UNION to refer applicants for employment to Employer, or by all of such methods; provided, however, when hiring new plumber journeymen employees, Employer will request Union to refer applicants for employment, not to exceed a requirement of fifty percent (50%) of such newly hired journeymen employees. (This proviso will not affect Employer's free movement of his Employees throughout his entire company's work-force.) When re-hiring previous Employees within forty-five (45) days of lay-off, Employer need not request referrals from Union, provided the Employee was employed for a minimum of ten (10) consecutive working days and that the requirements of Section 2 of this ARTICLE XVII shall be met.

(B) Subject to the other provisions of this ARTICLE XVII, every Employee or prospective Employee to whom this Agreement is applicable, other than an apprentice, may seek and obtain employment either by direct communication to or from Employer, or by requesting LOCAL UNION to refer him to Employer seeking Employees, or by both such methods.

SECTION 2

Employer Reporting Requirements

(A) The hiring of apprentices shall be governed by the rules and regulations, as amended from time to time, of the Joint Apprenticeship Committee.

(B) In order to make possible the effectuation of the provisions of this ARTICLE XVII, every Employer subject to this Agreement shall, twenty-four (24) hours prior to employment of any newly hired Employee, notify the local business agent of the Union of the names of the Employees, the Employer, and the location of the job.

SECTION 3

Registration with LOCAL UNION Required

In order to be entitled to any rights or benefits under this ARTICLE XVII, an Employee must have registered at the LOCAL UNION Office as unemployed, upon such form of application as may uniformly be required of all Employees seeking employment. All rights under this ARTICLE XVII shall begin as of the date of such registration and shall be forfeited if the applicant makes a material misstatement in his or her application.

SECTION 4

Order of Referral

(A) Employer desiring the LOCAL UNION to supply him with Employees must give LOCAL UNION, whenever possible, forty-eight (48) hours notice

and the number of men he desires, the location of the job and of the probable duration of the job, it being understood that Employer will incur no obligation to guarantee such duration.

(B) The LOCAL UNION will refer applicants for employment to an Employer in the chronological order in which they become unemployed so that an applicant who is unemployed for the longest period and who is ready, willing, and able to accept employment shall be referred before any applicant who is unemployed for a shorter period of time.

SECTION 5

Registrant's Right to Refuse Referrals

Employee shall have the right to refuse two (2) consecutive referrals to work without losing his or her position on the list. However, upon a third (3rd) consecutive refusal to accept a referral to work, said Employee shall be placed on the list as if the Employee had registered as unemployed on the date of such third (3rd) consecutive refusal.

SECTION 6

Referred Employees Working Less Than Thirty Days

If an Employee, after being referred to work, is employed for less than fourteen (14) calendar days, such Employee shall retain his or her position on the list as if he or she had not been referred to work.

SECTION 7

Applicants Who Cannot Be Reached

An Employee will not lose his or her position on the list if he or she cannot be reached when employment is available and efforts to reach him are unsuccessful.

SECTION 8

No Discrimination in Referrals

There will be no discrimination in the effectuation of the provisions of this ARTICLE XVII between members and non-members of this LOCAL UNION.

SECTION 9

Posting Copies of This Article

Employer and LOCAL UNION shall post a copy of this ARTICLE XVII in places where notices to Employees and applicants for employment are customarily posted.

SECTION 10

Union Sole Administrator

The LOCAL UNION agrees that it shall be the sole administrator of the hiring hall arrangement and shall not be considered to act as the agent of the Employer, and thereby the LOCAL UNION assumes responsibility for any violations of the law committed by it in connection with its administration of the hiring hall arrangement. The Employer assumes responsibility for any violations of the law committed by Employer in connection with hiring or severance of employment.

ARTICLE XVIII

Affirmative Action Program

The parties hereto agree that the existing Affirmative Action Program between said parties is incorporated herein by reference thereto and made a part hereof.

ARTICLE XIX

Drug-Free Workplace Rules

Both parties agree to comply with the Anti-Drug Abuse Act of 1988 and related State and local regulations and to strive for drug-free work-sites within their jurisdictions. The parties have agreed that a new drug testing policy will be negotiated and made effective May 1, 2003. The new policy will permit drug tests only if required by the owner after an on-the-job accident or when reasonable cause exists. There will be no pre-employment drug testing under the policy. The parties will attempt to structure a policy that will avoid repetitious testing among signatory contractors.

ARTICLE XX

"Most Favored Nation Clause"

LOCAL UNION agrees that should it enter into any collective bargaining agreement with any other Employer during the effective period of this Agreement containing terms or conditions, including wages, (the rate of which shall be related to that specified for each of the Districts set forth in ARTICLE III hereof), or contributions, more favorable or advantageous to such Employer than those provided herein, then Employer members of Mechanical Contractors Association of Eastern Pennsylvania, Inc. and Employer members of Plumbing and Heating Contractors Association in the respective Districts, may at its or their option, elect to substitute any or all of such more favorable conditions for those provided herein.

ARTICLE XXI

Compliance with Existing Laws

It is not the intention of the parties to this Agreement to violate any existing Federal, State, or municipal law or regulations. However, should any article, section, paragraph, sentence or clause of the within Agreement be held to be illegal or in contravention or violation of any existing law by a court of competent jurisdiction, such part or parts shall immediately be held to be inoperative under this Agreement. All other provisions hereof shall continue to remain in full force and effect for the duration of this Agreement.

ARTICLE XXII

Memoranda of Agreement

The parties hereto agree that Appendix A, B and C shall be incorporated by reference herein and made a part of this Agreement.

ARTICLE XXIII

SECTION 1

Adjustment and Arbitration of Disputes

It is mutually agreed that all disputes of any nature whatsoever which may arise between the parties hereto, or their respective individual members, shall be submitted to the Joint Arbitration Board, which shall consist of three (3) members of EMPLOYERS' ASSOCIATION and three (3) members of LOCAL UNION. Each side shall be entitled to cast three (3) votes on any issue before the Board even though less than three (3) members shall be present and voting on behalf of either EMPLOYERS' ASSOCIATION or LOCAL UNION.

Majority decisions of this Board shall be final and binding on all of the parties hereto. In the event that the Joint Arbitration Board is unable to reach a decision in the matter under consideration within five (5) days after the first scheduled meeting, which meeting shall be held within the period provided in Section 2 of this ARTICLE XXIII, then the Joint Arbitration Board shall, within twenty-four (24) hours thereafter, request the American Arbitration Association to submit a Panel List containing the names of ten (10) arbitrators from which one (1) arbitrator shall be selected. The American Arbitration Association shall submit said list of ten (10) arbitrators within forty-eight (48) hours after being notified so to do by the Joint Arbitration Board. The decision of the arbitrator so selected shall be binding and final on all of the parties hereto and in the event the issue determined involves the payment of wages or the rate of wages paid, it shall be retroactive to the date on which the matter was first submitted to the Joint Arbitration Board.

The Joint Arbitration Board shall select the arbitrator above referred to in both cases from the Panel List of ten (10) members submitted by the American Arbitration Association within five (5) days after the Panel List is submitted. In the event that the Joint Arbitration Board is unable to select

an arbitrator from the Panel List who will be mutually acceptable within five (5) days after the receipt thereof, the American Arbitration Association shall within twenty-four (24) hours thereafter be requested to submit a Second-Panel List containing the names of ten (10) additional arbitrators, from which one (1) is to be selected. The American Arbitration Association shall submit the Second-Panel List within forty-eight (48) hours after being requested so to do. In the event that the parties cannot mutually agree upon the arbitrator to be selected from the Second Panel List within five (5) days after it is received, then, within twenty-four (24) hours thereafter, the American Arbitration Association shall be requested to designate an arbitrator and the person so designated shall be acceptable by the parties hereto. The American Arbitration Association shall designate such arbitrator within forty-eight (48) hours after being requested so to do. The arbitrator, whether he or she be selected by the Joint Arbitration Board or designated by the American Arbitration Association, shall, within forty-eight (48) hours after his or her selection or designation, schedule a hearing which is to be held within but no later than one (1) week thereafter; the arbitrator shall conduct the hearing and the arbitration proceedings in accordance with the prevailing rules of the American Arbitration Association and he or she shall make a final decision within fourteen (14) days after the date upon which the first (1st) hearing takes place.

SECTION 2

Meetings of the Board

Meetings of the Board shall be held within forty-eight (48) hours after either party hereto formally submits in writing any question to the Board for settlement.

SECTION 3

No Strikes or Lockouts

It is further understood and agreed that no dispute, whether jurisdictional or otherwise, shall result in any stoppage of work or lockout pending the terms of the aforesaid arbitration clause.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives on the day and year first above written.

**MECHANICAL CONTRACTORS
ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Peter Cimino *President*

Attest: Timothy J. Brink, *Executive Vice President*

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA,
LOCAL UNION NO. 690**

By: John Kane, *Business Manager*

APPENDIX A

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

AND

**LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, it is the earnest desire of the parties to this Memorandum of Agreement to provide to the Owner who uses the services of mechanical contractor members of the Association, the most economical heating, cooling, ventilating, and piping installation consistent with desired quality, and

WHEREAS, in today's modern building and construction complexes the mechanical systems constitute a significant portion of a total project, including the cost, and

WHEREAS, any given project, be it large or small, must necessarily involve the skills of such recognized craftsmen as plumbers performing under the auspices of responsible contractor management teams, and

WHEREAS, it is the avowed intent that the provisions of this Memorandum of Agreement shall apply to any job where any of the parties hereto are involved.

Now, the parties hereto, intending to be legally bound hereby, agree as follows:

1. There shall be no work stoppage due to unauthorized or illegal strikes, lockouts, disputes, or grievances.
2. The contractor shall have the responsibility to efficiently manage his portion of the job including the supplying of sufficient tools and equipment with which to carry out the needed installation and the scheduling of an adequate number of workmen to meet job requirements and conditions. The direction of the working force, the right to hire, to plan, direct, control, and schedule all operations, in cooperation with other trades and the specified requirements of the User, shall be the responsibility of the contractor, including the right to establish, eliminate, change, or introduce methods, machinery, or techniques to efficiently perform all tasks.
3. There shall be no limitations on the productivity of workmen or on full use of tools of the trade and construction equipment.
4. Every effort shall be made by the parties to insure the highest level of productivity and the expeditious performance of the work with the pledge

of "eight hours work for eight hours pay." Workmen shall be on the job at the designated starting time and will not leave until the designated quitting time. There shall be no organized breaks, loafing, excessive tardiness, and unexcused absenteeism will not be tolerated.

5. To insure a sufficient number of skilled craftsmen to meet the needs of the industry, the Parties will continue to expand and improve their presently recognized apprenticeship and journeymen training programs.

6. The project safety rules and regulations of the Occupational Safety & Health Act shall apply and be abided by during the construction of a project.

7. Sufficient numbers of journeymen and apprentices will be made available for a project in order that working of overtime will be unnecessary except under extraordinary circumstances. Shift work may be utilized in order to expedite the job and meet completion schedules.

8. It is understood that the User of construction services is concerned with the total project being completed and delivered on time without unnecessary or undue delay created by the involved contractors. Full cooperation and coordination of the efforts of all contractors, their workmen, and supervisory personnel is required.

9. Anything contained in the respective Collective Bargaining Agreements between the parties hereto to the contrary notwithstanding, the work day or shift work or type of job subject to coverage under a particular collective bargaining agreement as defined in the said respective Collective Bargaining Agreements may be changed during the term of said Collective Bargaining Agreements by mutual agreement between Employer and the Business Manager of LOCAL UNION to such work day or shift work or wage rate as shall be established as aforesaid on any given project on a job-by-job basis.

10. The requirements of the User with respect to security conditions, safety, maintenance of production, parking, and use of vehicles and other regulations will be upheld. The contractor will inform himself of such requirements and, in turn, inform his workforce.

11. Under no circumstances will there be a work stoppage or slow down as a result of a work assignment or jurisdictional dispute. Settlement of work assignments shall follow legal and contractual avenues established for such disputes.

Where conflict seems likely, pre-assignment conferences with the contractors and Business Representatives of the Unions shall be held well in advance of actual work performance for the purpose of making a positive determination if there is thought to be a difference of opinion.

Area practice, prior agreements and decisions of record shall be taken into account; however, in the event a unanimous agreement is not reached, the contractor who has responsibility for the performance and installation shall make a specific assignment.

12. Parties to this agreement shall not discriminate against any Employee because of race, color, religion, sex, national origin, or age. The parties will comply with established minority employment plans as required.

Signed and effective this 1st day of May, 2013

**MECHANICAL CONTRACTORS
ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By Timothy J. Brink, *Executive Vice President*

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA,
LOCAL UNION NO. 690**

By: John Kane, *Business Manager*

APPENDIX B

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

AND

**LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, the parties to this Memorandum of Agreement recognize that substance abuse by any Employee may seriously endanger other Employees as well as the public and adversely affect work performance in this very competitive industry; and

WHEREAS, the parties have agreed to adopt the following substance abuse policy subject to the terms and conditions hereinafter set forth.

NOW, THEREFORE, the parties hereto, intending to be legally bound hereby, agree as follows:

1. The parties hereby adopt the United Association National Pipe Line Substance Abuse policy, as the same was adopted by the Pipe Line Contractors Association and the United Association on May 1, 1990 (the "Policy"), for all work coming within the geographic and work jurisdiction of that certain Agreement of the parties made and effective the first day of May, 2013 (the "Agreement"), except as the Policy may be modified by the other terms of this Memorandum of Agreement as hereinafter set forth.

2. The Policy shall only be observed, with respect to Employees of an Employer covered by the Agreement, in the event such Employer is required by an owner, client, user, general contractor or by Federal or State law or regulation to establish its own substance abuse policy for a particular job and/or if such Employer elects to establish a substance abuse policy for a particular job. In no event shall this Memorandum of Agreement be construed to require an Employer covered by the Agreement to adopt the Policy on those jobs where it is not required.

3. The Policy shall not serve as the substance abuse policy on any job for which an Employer covered by the Agreement is required to adopt and observe the substance abuse policy established by an owner, client, user, general contractor or by Federal or State law or regulation, regardless of whether the same is more or less restrictive than the terms of the Policy.

4. In the event the Policy is amended or modified in any respect at any time in the future by the Pipe Line Contractors Association and United Association, the terms of any such amendment or modification shall not be deemed to be a part of the policy for purposes of this Memorandum of Agreement unless and until the Association and the Union mutually agree in writing to the terms of such amendment or modification, as confirmed by an amendment to this Memorandum of Agreement.

5. The parties additionally agree that the employer may perform Pre-

Hire drug and alcohol testing. The test, if conducted prior to the employee starting for the company, will require the employer to pay for the employee's time to take the test and the actual cost of the test. If the employee fails the test, the contractor will have no obligation to pay the employee the time to take the test. If the test is administered after the employee starts work for the employer, the test must be administered within one week of starting work for the employer. If the employee fails the test, the employee will be compensated (at the established hourly rate for wages and benefits) for all time spent performing covered work. If an employee tests positive, the employee will be referred to an appropriate drug and alcohol treatment program. The cost for the treatment program is not the responsibility of the contractor. After successful participation in the program, the employees will be eligible for referral and hiring.

6. For purposes of this Memorandum of Agreement, ARTICLE VI (DURATION) of the Policy hereby is eliminated.

7. The Policy shall remain in effect for a period of time to coincide with the term of the Agreement. The Association and the Union agree that either one may move annually to reopen the policy for purposes of modification or termination by mutual agreement by giving notice sixth (60) days prior to the anniversary date of the execution of the Agreement.

Except as expressly and specifically modified and amended above, the parties hereby ratify and confirm the terms and conditions of the Agreement.

Signed and effective this 1st day of May, 2013.
**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Timothy J. Brink, *Executive Vice President*

**PLUMBERS LOCAL UNION 690 OF THE UNITED
ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF
THE PLUMBING AND PIPE FITTING INDUSTRY OF THE
UNITED STATES AND CANADA**

By: John Kane, *Business Manager*

APPENDIX C

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

**AND
LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, the parties to this Memorandum of Agreement recognize that there may arise in few limited number of circumstances, situations where the Hours of Work may need to be adjusted due to the location of the jobsite or the type of work that needs to be performed.

NOW, THEREFORE, the parties hereto, intending to be legally bound hereby, agree as follows:

1. Article II, Section of the Agreement may be adjusted by mutual consent of the LOCAL UNION and the EMPLOYER to allow starting shifts

as early as 6:00 a.m. and ending shifts as late as 5:30 p.m. when the LOCAL UNION AGREES such changes are permitted.

Signed and effective this 1st day of May 2013.

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Timothy J. Brink, *Executive Vice President*

**PLUMBERS LOCAL UNION 690 OF THE UNITED
ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF
THE PLUMBING AND PIPE FITTING INDUSTRY OF THE
UNITED STATES AND CANADA**

By: John Kane, *Business Manager*

APPENDIX D

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

**AND
LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, the parties to this Memorandum of Agreement recognize that the following rates for apprentices will be in effect beginning May 1, 2013 and remain unchanged for the duration of the Agreement.

The following wage and benefit rate structure will apply to all First Period Apprentices currently enrolled as of May 1, 2013 and all future apprentices for the duration of the CBA (May 1, 2013 through April 30, 2016). The following rates will remain unchanged and unaffected by wage package increases called for in other sections of the CBA.

Philadelphia Area:

LU 690 Phila	Effective Date	Wage	H&W	Pension	S.R.P.	App. Fund	Ind Fund	Scholarship	Total
First	5/1/13	\$16.00	\$7.19	\$6.20	\$0.00	\$0.00	\$0.00	\$0.05	\$29.44
Second	8/1/13	\$16.00	\$7.19	\$6.20	\$0.00	\$0.00	\$0.00	\$0.05	\$29.44
Third	2/1/14	\$18.21	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$39.82
Fourth	8/1/14	\$18.21	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$39.82
Fifth	2/1/15	\$20.63	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$42.24
Sixth	8/1/15	\$20.63	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$42.24
Seventh	2/1/16	\$25.48	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$47.09
Eighth	8/1/16	\$25.48	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$47.09
Ninth	2/1/17	\$30.33	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$51.94
Tenth	8/1/17	\$30.33	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$51.94

The following wage and benefit rate structure will apply to all Apprentices currently enrolled as of May 1, 2013 with the exception of First Period Apprentices for the duration of the CBA (May 1, 2013 through April 30, 2016). The following rates will remain unchanged and unaffected by wage package increases called for in other sections of the CBA.

Philadelphia Area:

LU 690 Phila	Wage	H&W	Pension	S.R.P.	App. Fund	Ind Fund	Scholarship	Total
Second	\$18.39	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$40.89
Third	\$18.39	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$40.89
Fourth	\$20.21	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$42.71
Fifth	\$22.63	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$45.13
Sixth	\$24.46	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$46.96
Seventh	\$27.48	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$49.98
Eighth	\$29.29	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$51.79
Ninth	\$32.33	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$54.83
Tenth	\$37.18	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$59.68

Signed and effective this 1st day of May 2013.

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Timothy J. Brink, *Executive Vice President*

**PLUMBERS LOCAL UNION 690 OF THE UNITED
ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF
THE PLUMBING AND PIPE FITTING INDUSTRY OF THE
UNITED STATES AND CANADA**

By: John Kane, *Business Manager*

CONSENT AND APPROVAL STATEMENT
by
**EMPLOYERS NOT AFFILIATED WITH THE
MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

Date _____

I, or we, the undersigned Employer, subscribe to the terms and conditions in the foregoing Agreement.

Company: _____

By: _____

(Signature and Title)

PLUMBERS LOCAL UNION 690 (UA)

By: _____

(Signature and Title)

EXHIBIT E
STATEMENT OF WORK

EXHIBIT E
ADVANCED METERING INFRASTRUCTURE STATEMENT OF WORK

For

THE PHILADELPHIA MUNICIPAL AUTHORITY

AMI PROJECT SERVICES



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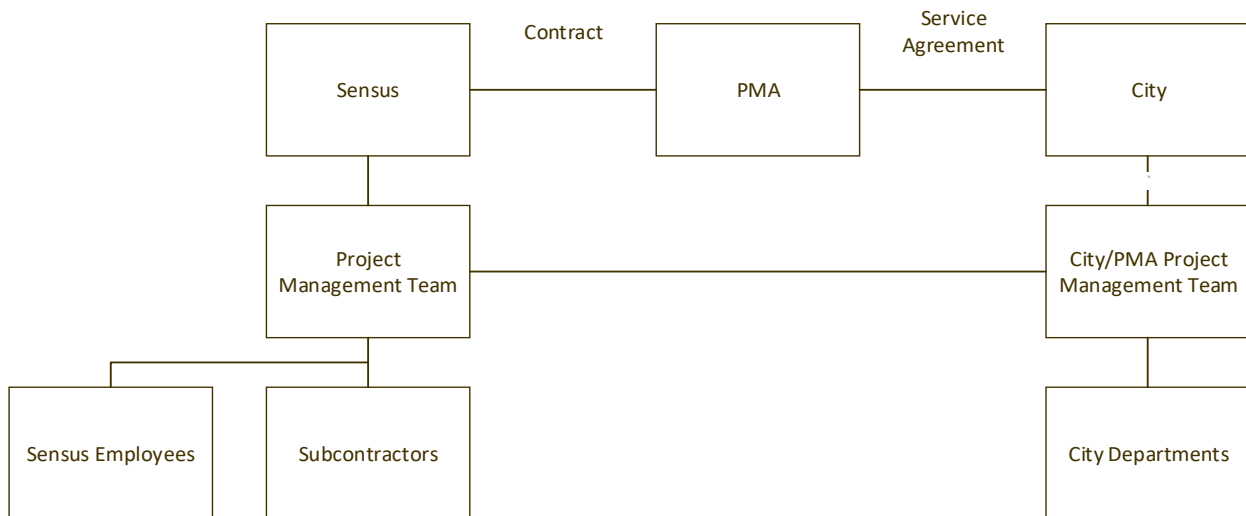
A. About the Document

In accordance with Article III. Section A.1. of the Contract, the purpose of this Statement of Work is to define the requirements for certain AMI Project Services for an Advanced Metering Infrastructure (AMI) System within the area governed by the City of Philadelphia (“City”) in support of the AMI Service Contract, dated [EFFECTIVE DATE] (the “Contract”) between Sensus USA Inc. (“VENDOR” or “Sensus”) and the Philadelphia Municipal Authority (“PMA” OR “Customer”). The City (pursuant to the City-PMA Agreement) is undertaking certain PMA obligations under the Contract for the successful implementation of the AMI System. Personnel from VENDOR, PMA and the City will form Project Management Teams.

This document defines the roles of VENDOR, PMA, and the City; delineates the agreed upon areas of responsibility, the implementation and installation services procedures during the Turnkey Installation Term and the O&M Services Term; and provides a clear understanding of the systems and service procedures to be implemented for contractual purposes. This Statement of Work is an exhibit to and a part of the Contract between VENDOR and PMA. Specific commercial terms relating to the Contract are detailed in the Contract. The Contract is the precedent document and controls over any conflicting statement or term in this Statement of Work. This Statement of Work may be updated, throughout the life of the project, as provided for by the Change control procedures set forth in Article III. Section E. of the Contract.

Capitalized terms in this Statement of Work have the meanings set forth in the Contract and in this Statement of Work. If a defined term in this Statement of Work is inconsistent with a defined term in the Contract, the defined term in this Statement of Work will take precedence.

The following figure shows potential paths for communication between various groups. This figure does not describe or imply any contractual privity or other legal or formal relationship between these groups.



B. Equipment and Software Being Provided

VENDOR will provide a fixed network radio-based AMI System to meet or exceed the performance characteristics specified herein, which include the following:



B.1. Equipment

B.1.1. 510 MP SmartPoint

Sensus 510MP SmartPoint (non-pit set application - Pulse)							
							
Features							
Industry-acceptable two watts broadcast power							
Configurable (directly or over the air)							
<ul style="list-style-type: none"> - Meter Reading Sample Rate (5 minutes, 15 minutes, 1 hour, 6 hours, 12 hours, 24 hours – typical is 1 hour Meter Reading Sample Rate) - Transmit Rate (15 minute to 84 hours – typical is 4 hour transmits) - Transmit Mode (Normal Mode, Boost Mode, mPass Mode) - Alarm parameters <ul style="list-style-type: none"> o Leak (minimum flow trigger and duration) o High Flow (minimum flow trigger for a 1 hour duration) - Read / Pulse Resolution - Units of Measure - Latitude / Longitude - Meter ID 							
Integrated Alarms							
<ul style="list-style-type: none"> - Tilt alarm: If SmartPoint is tilted 15° to 20° off from the installed axis. - Cut Wire/Meter Communications Failure - Low Battery Alarm (< 2.7 Volts) a minimum of six to 12 months' advance warning 							
With its migratable, two-way communication ability, the M-Series SmartPoint functions as a walk-by/drive-by endpoint, fixed base endpoint, or combination of the two.							
Stores up to 840 consumption intervals (35 days of hourly consumption), providing the utility with the ability to extract detailed usage profiles for consumer information and dispute resolution.							
Pulse-based interface – Badger RECORDALL Transmitting Registers (RTR): M25, M70, M120, and M170.							
<ul style="list-style-type: none"> - The 510MP will record the lowest pulse weight (for example, 1 pulse equates to 0.1 CF) 							
SmartPoint message channelization to allow for message priority / reliability.							
Over-the-air Commands (FlexNet network and auditing locally with field tools):							
<ul style="list-style-type: none"> - On-Demand read over the air with current accumulation of the pulses. 							
Reading message payload – up to 168 consumption intervals (based on value of intervals).							
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #4F81BD; color: white;">Delta Value</th> <th style="background-color: #4F81BD; color: white;">Number of Bits Used</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		Delta Value	Number of Bits Used	0	1	1	2
Delta Value	Number of Bits Used						
0	1						
1	2						



	2	3
	3	4
	4	5
	5	6
	6-37	12
	38 – 4133 or -1 - -4063 or a flag condition.	21

As the interval delta values are larger, the number intervals broadcast over the air diminishes.

Over-the-air firmware updates.

Operations

Receives input from the meter register and remotely sends data to a walk-by/drive-by or fixed base collection device. The SmartPoint 510MP migrates from walk-by/drive-by to fixed base by installing a Base Station.

In walk-by/drive-by mode, the SmartPoint 510MP collects data and awaits an activation signal from the Vehicle Gateway Basestation (VGB) or Hand-Held Device (HHD). Upon signal receipt, it transmits readings, the meter identification number and any alarms.

As a fixed-base endpoint, the SmartPoint 510MP interacts with one or more strategically placed Base Stations located in the utility service area. Top of the hour readings and other diagnostics are forwarded to the Regional Network Interface (RNI) at time of transmission.

Specifications


Service	Badger RTR Register mounted installation for non-pit set, non-submersible environments; SmartPoint interfaces to the FlexNet® communication network
Dimensions	Width: 4.75" Height: 6" Depth: 3"
Labeling	All Sensus water SmartPoints come with a unique eight-digit ID number. In addition, the unit is also identified with manufacturer name, model number, and time and date of manufacture.
Weight	2 lbs / 32 oz
Color	Black
Operating temperature	- 22° F to +160° F
Port Options	Single
Installation Environment	The 510MP is designed for side-of-home applications where it is not subject to submergence.
Broadcast Power	2 Watt
Frequency Range	900-960 MHz ³
Channels	9600 channels, in 6.25 kHz steps
Frequency Modulation	Proprietary narrow band modulation
Memory	Non-volatile memory
Power	Lithium thionyl chloride batteries with hybrid layer capacitor
Life Expectancy	20-year ⁴
Certifications	US: FCC CFR 47: Part 24D, Part 101C, Part 15 Licensed operation



Notes	<ul style="list-style-type: none">- 1 – Changing the Meter Reading Sample Rate to a shorter interval than 1 hour will impact battery life and void the battery warranty.- 2 – Changing the Transmit Rate to shorter intervals than 4 hours will impact battery and void the warranty.- 3 - Exact frequency is determine during coverage study- 4 - Battery life is dependent on variables such as Transmit Rate, Meter Reading Sample Rate, firmware downloads and level of interaction (on-demand reads, reconfiguring the SmartPoint over the air, etc.) with the SmartPoint
-------	---



B.1.2. 520M SmartPoint

Sensus 520M SmartPoint (pit set application)

Features
Industry-acceptable two watts broadcast power.
Configurable (directly or over the air)
<ul style="list-style-type: none"> - Meter Reading Sample Rate (5 minutes, 15 minutes, 1 hour, 6 hours, 12 hours, 24 hours – typical is 1 hour Meter Reading Sample Rate)¹ - Transmit Rate (15 minute to 84 hours – typical is 4 hour transmits)² - Transmit Mode (Normal Mode, Boost Mode, mPass Mode) - Alarm parameters <ul style="list-style-type: none"> o Leak (minimum flow trigger and duration) if not from Smart Meter Alarms o High Flow (minimum flow trigger for a 1 hour duration) if not from Smart Meter Alarms o Reverse Flow (maximum flow trigger and duration) if not from Smart Meter Alarms - Read Resolution - Units of Measure - Latitude / Longitude - Meter ID - ally Meter Parameters <ul style="list-style-type: none"> o Pressure alarm (low/high pressure thresholds / duration and persistence) o Temperature alarm (low/high temperature thresholds / duration and persistence) o Sensor (Pressure/Temperature) Sample Rate¹ o Sensor Data Transmit Rate²
Integrated Alarms
<ul style="list-style-type: none"> - Cut Wire/Meter Communications Failure - Low Battery Alarm (< 2.7 Volts) a minimum of six to 12 months' advance warning
With its migratable, two-way communication ability, the M-Series SmartPoint functions as a walk-by/drive-by endpoint, fixed base endpoint, or combination of the two.
Stores up to 840 consumption intervals (35 days of hourly consumption), providing the utility with the ability to extract detailed usage profiles for consumer information and dispute resolution.
Dual port design to connect multiple registers and ancillary devices (such as acoustic monitoring) to a single SmartPoint.
Encoder-based reading interface – TouchCoupler and 3-wire interface available.
Smart Meter (Sensus iPERL, ally, eRegister+) Alarms capable.
SmartPoint message channelization to allow for message priority / reliability.
Over-the-air Commands (FlexNet network and auditing locally with field tools):
<ul style="list-style-type: none"> - On-Demand read over the air providing current “under-the-glass” reading from the encoder. - ally Meter <ul style="list-style-type: none"> o Valve Control – Open, Close, Reduce o On-demand sensor readings
Reading message payload – up to 168 consumption intervals (based on value of intervals).



Delta Value	Number of Bits Used
0	1
1	2
2	3
3	4
4	5
5	6
6-37	12
38 – 4133 or -1 - -4063 or a flag condition.	21

As the interval delta values are larger, the number intervals broadcast over the air diminishes.

Reading message payload – up to 168 consumption intervals (based on value of intervals).

Over-the-air firmware updates.

Operations

Receives input from the meter register and remotely sends data to a walk-by/drive-by or fixed base collection device. The SmartPoint 520M migrates from walk-by/drive-by to fixed base by installing a Base Station.

In walk-by/drive-by mode, the SmartPoint 520M collects data and awaits an activation signal from the Vehicle Gateway Basestation (VGB) or Hand-Held Device (HHD). Upon signal receipt, it transmits readings, the meter identification number and any alarms.

As a fixed-base endpoint, the SmartPoint 520M interacts with one or more strategically placed Base Stations located in the utility service area. Top of the hour readings and other diagnostics are forwarded to the Regional Network Interface (RNI) at time of transmission.

Specifications


Service	Pit set installation interfacing the utility meter to the Sensus FlexNet system. Unit requires 1.75” diameter hole in pit lid; fits pit lid thicknesses up to 1.75”
Dimensions	Width: 4.43” Height: 5.09” Depth: 3”
Labeling	All Sensus water SmartPoints come with a unique eight-digit ID number. In addition, the unit is also identified with manufacturer name, model number, and time and date of manufacture.
Weight	1.0 lbs / 16.0 oz
Color	Black
Operating temperature	- 22° F to +185° F
Port Options	Single and dual / TouchCoupler only, wired only
Installation Environment	100% condensing, water submersible
Broadcast Power	2 Watt
Frequency Range	900-950 MHz ³
Channels	8000 channels, in 6.25 kHz steps
Frequency Modulation	Proprietary narrow band modulation
Memory	Non-volatile memory
Power	Lithium thionyl chloride batteries with hybrid layer capacitor
Life Expectancy	20-year ⁴
Certifications	US: FCC CFR 47: Part 24D, Part 101C, Part 15 Licensed operation



Notes	<ul style="list-style-type: none">- 1 – Changing the Meter Reading Sample Rate to a shorter interval than 1 hour will impact battery life and void the battery warranty.- 2 – Changing the Transmit Rate to shorter intervals than 4 hours will impact battery and void the warranty.- 3 - Exact frequency is determine during coverage study- 4 - Battery life is dependent on variables such as Transmit Rate, Meter Reading Sample Rate, firmware downloads and level of interaction (on-demand reads, reconfiguring the SmartPoint over the air, etc.) with the SmartPoint
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B.1.3. 510M

Sensus 510M SmartPoint (non-pit set application)

Features
Industry-acceptable two watts broadcast power.
Configurable (directly or over the air)
<ul style="list-style-type: none"> - Meter Reading Sample Rate (5 minutes, 15 minutes, 1 hour, 6 hours, 12 hours, 24 hours – typical is 1 hour Meter Reading Sample Rate)¹ - Transmit Rate (± 15 minute to 84 hours – typical is 4 hour transmits)² - Transmit Mode (Normal Mode, Boost Mode, mPass Mode) - Alarm parameters <ul style="list-style-type: none"> o Leak (minimum flow trigger and duration) if not from Smart Meter Alarms o High Flow (minimum flow trigger for a 1 hour duration) if not from Smart Meter Alarms o Reverse Flow (maximum flow trigger and duration) if not from Smart Meter Alarms - Read Resolution - Units of Measure - Latitude / Longitude - Meter ID - ally Meter Parameters <ul style="list-style-type: none"> o Pressure alarm (low/high pressure thresholds / duration and persistence) o Temperature alarm (low/high temperature thresholds / duration and persistence) o Sensor (Pressure/Temperature) Sample Rate¹ o Sensor Data Transmit Rate²
Integrated Tamper Alarms
<ul style="list-style-type: none"> - Cut Wire/Meter Communications Failure
With its migratable, two-way communication ability, the M-Series SmartPoint functions as a walk-by/drive-by endpoint, fixed base endpoint, or combination of the two.
Stores up to 840 consumption intervals (35 days of hourly consumption), providing the utility with the ability to extract detailed usage profiles for consumer information and dispute resolution.
Dual port design to connect multiple registers and ancillary devices (such as acoustic monitoring) to a single SmartPoint.
Encoder-based reading interface – TouchCoupler and 3-wire interface available.
Smart Meter (Sensus iPERL, ally, eRegister+) Alarms capable.
SmartPoint message channelization to allow for message priority / reliability.
Over-the-air Commands (FlexNet network and auditing locally with field tools):
<ul style="list-style-type: none"> - On-Demand read over the air providing current “under-the-glass” reading from the encoder. - ally Meter <ul style="list-style-type: none"> o Valve Control – Open, Close, Reduce o On-demand sensor readings
Reading message payload – up to 168 consumption intervals (based on value of intervals).



Delta Value	Number of Bits Used
0	1
1	2
2	3
3	4
4	5
5	6
6-37	12
38 – 4133 or -1 - -4063 or a flag condition.	21

As the interval delta values are larger, the number intervals broadcast over the air diminishes.

Over-the-air firmware updates.

Operations

Receives input from the meter register and remotely sends data to a walk-by/drive-by or fixed base collection device. The SmartPoint 510M migrates from walk-by/drive-by to fixed base by installing a Base Station.

In walk-by/drive-by mode, the SmartPoint 510M collects data and awaits an activation signal from the Vehicle Gateway Basestation (VGB) or Hand-Held Device (HHD). Upon signal receipt, it transmits readings, the meter identification number and any alarms.

As a fixed-base endpoint, the SmartPoint 510M interacts with one or more strategically placed Base Stations located in the utility service area. Top of the hour readings and other diagnostics are instantly forwarded to the Regional Network Interface (RNI) at time of transmission.

As a fixed-base endpoint, the SmartPoint 510M interacts with one or more strategically placed Base Stations located in the utility service area. Top of the hour readings and other diagnostics are forwarded to the Regional Network Interface (RNI) at time of transmission.

Specifications

Service	Wall mounted (non-pit/non-submersible) installation interfacing the utility meter to the Sensus FlexNet system.
Dimensions	Width: 5 9/16" Height: 5 1/2" Depth: 3"
Weight	1.13 lbs / 18.08 oz
Color	Tan
Operating temperature	- 22° F to +185° F
Port Options	Single and dual / TouchCoupler only, wired only
Installation Environment	The 510M is designed for side-of-home applications where it is not subject to submergence.
Broadcast Power	2 Watt
Frequency Range	900-950 MHz ³
Channels	8000 channels, in 6.25 kHz steps
Frequency Modulation	Proprietary narrow band modulation
Memory	Non-volatile memory
Power	Lithium thionyl chloride batteries with hybrid layer capacitor
Life Expectancy	20-year ⁴
Certifications	US: FCC CFR 47: Part 24D, Part 101C, Part 15 Licensed operation



Notes	<ul style="list-style-type: none">- 1 – Changing the Meter Reading Sample Rate to a shorter interval than 1 hour will impact battery life and void the battery warranty.- 2 – Changing the Transmit Rate to shorter intervals than 4 hours will impact battery and void the warranty.- 3 - Exact frequency is determine during coverage study- 4 - Battery life is dependent on variables such as Transmit Rate, Meter Reading Sample Rate, firmware downloads and level of interaction (on-demand reads, reconfiguring the SmartPoint over the air, etc.) with the SmartPoint
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B.1.4. M400B FlexNet Base Station


Sensus M400B FlexNet Base Station	
Features	
200 kHz band of spectrum	
Real-time data continues during outages and emergencies	
GPS receiver for time synchronization	
Duplexer for single antenna transmit/receive	
Low noise amplifier (LNA)	
IP-addressable power supply with hot swap capability	
Battery charger	
8-hour battery backup	
All FlexNet Base Station cabinets meet or exceed UL 1449 surge protection	
Alarms and reporting capability	
Backhaul via Ethernet/IP	
Installed with standard-duty AC surge protectors and lightning arrestors on the antenna feed	
Data backup for extended failure of data link to host backend system 30 days and stores a minimum of 30 days of messages, reads, and alarms from all endpoints under its coverage (up to 50,000 endpoints)	
Heated battery for cold weather environments, In door out door compatibility	
Alarms (Base Station Low Battery, Power Fail, Open Door, Low AC Power) and reporting capability	
Applications	
Two-way Advanced Meter Infrastructure (AMI)	
Distribution Automation (DA)	
Demand Response (DR)	
Home Area Networks (HAN)	
Sensus VantagePoint® Lighting Control	
Operations	
Receives/processes incoming messages on all deployed RF channels (standard, priority, mPass)	
Manages two-way communications between SmartPoints and host backend system – transmits messages to SmartPoints as needed (Listen-after-talk or Middle-of-Minute SmartPoint window).	
Transmits a Middle-of-Minute tone for synchronization / time-sync to SmartPoints.	
If backhaul is available, messages received are immediately processed and forwarded the host backend system. Otherwise, data is stored in memory until backhaul is restored.	
Specifications	
Operating Spectrum	Licensed 900 MHz PCS/MAS
Transceiver	Single
Duplexing	Single transmit Eight receive channels - simultaneous/dedicated
Receive Bandwidth	200 KHz
Compatibility	Simple Network Management Protocol (SNMP)



Dimensions	Height: 22" Width: 22" Depth: 10.5"
Operating Temperature Range	-40° to +122° F
Voltage	120 VAC
NEMA Rating	4
Transmitter Power	+44 dBm nominal (with external PA)
Receiver Sensitivity	- Normal / mPass Mode: -122 dBm - Boost Mode: -132 dbm



B.1.5. Ally (5/8" – 1") Meter

Sensus ally (5/8" – 1") Meter	
	
Features	
Integrated unit that incorporates an electronic register, integral three-state ball valve, temperature sensor, pressure sensor, and a measuring device encased in an external housing.	
Shut-off valve has three states—open, closed, and reduced flow.	
All-electronic, programmable, 9-digit register, hermetically sealed with a tempered glass cover.	
Monitoring alarms such as leak detection, reverse flow, empty pipe, high flow, magnetic tampering, and multiple battery life levels as well as low / high pressure and temperature.	
Integral customer data logging of 120 days of hourly data.	
Integrated two-way communication for AMR and AMI.	
No moving parts – electromagnetic technology flow measurement.	
Zero-lead construction.	
Fire Service model is approved for use in fire protection, domestic water applications (3/4" and 1" only – no valve options).	
Reclaim service model is available for non-potable applications.	
Exceeds ANSI/AWWA Standard C-700 and C-710 for accuracy and pressure loss.	
NSF/ANSI Standard 61 Annex F and G compliant.	
ally can be installed horizontally, vertically or diagonally	
Smart Meter Alarms (extracted via Sensus SmartPoints):	
<ul style="list-style-type: none"> - Leak Detection - Constant Flow over a period of time (typically, 24 hours in duration). - Tamper Alarms: <ul style="list-style-type: none"> o Magnetic Tamper – induction of a large magnetic field to effect performance. o Reverse Flow – reverse flow for over a 5 minute period. o Empty Pipe – absence of water in the meter for greater than a 5 minute period. - Metrology / battery alarms – self-diagnostic alarms indicating potential performance issues with the meter. - Sensor Alarms – high/low pressure or temperature. 	
Programmable Units of Measure and Electronic reading output.	
Programmable Meter ID and Customer Text.	
Programmable Pressure / Temperature levels and duration alerts.	
Operations	
The ally meter has an operating range of 0.11 gpm (0.025 m ³ /hr) to 55 gpm (12.5 m ³ /hr)—it even starts to register flow as low as 0.03 gpm (0.007 m ³ /hr).	
Utilizes electromagnetic technology to measure flow – sampling over 4,000 times per second.	
Specifications	
Service	Sensing water flow and consumption; Measurement of potable and reclaimed water; Valve Control (Open, Closed, Reduced); Sensor (Pressure and Temperature) Monitoring
Starting Flow	5/8" (DN 15mm) size: 0.03 gpm (0.007 m ³ /h) 3/4" (DN 20mm) size: 0.03 gpm (0.007 m ³ /h) 1" (DN 25mm) size: 0.11 gpm (0.025 m ³ /h)



Low Flow Range ($\pm 3\%$)	<p>5/8" (DN 15mm) size: >0.11 gpm (0.025 m³/hr) to <0.18 gpm (0.041 m³/hr)</p> <p>3/4" (DN 20mm) size: >0.11 gpm (0.025 m³/hr) to <0.18 gpm (0.041 m³/hr)</p> <p>1" (DN 25mm) size: >0.3 gpm (0.068 m³/hr) to <0.4 gpm (0.09 m³/hr)</p>
Normal Water Operating Flow Range ($\pm 1.5\%$)	<p>5/8" (DN 15mm) size: 0.18 to 25 gpm (0.04 to 5.7 m³/hr)</p> <p>3/4" (DN 20mm) size: 0.18 to 35 gpm (0.04 to 8.0 m³/hr)</p> <p>1" (DN 25mm) size: 0.4 to 55 gpm (0.09 to 12.5 m³/hr)</p>
Maximum Operating Pressure	<p>5/8" and 3/4" size: 200 psi (13.8 bar)</p> <p>1" size: 175 psi (12.1 bar)</p>
Operating temperature	<p>Water operating temperature range of 33°F (0.56°C) -80°F (26.7°C)</p> <p>Operating air temperature range of -20°F (-28.9°C) to 150°F (65.6°C)</p>
Measurement Technology	Solid state electromagnetic flow
Register	Hermetically sealed, 9-digit programmable electronic register; AMR/AMI compatible; ally register programmable using the UniPro® communicator and FieldLogic™ software.
Materials	<p>External housing – Thermal plastic</p> <p>Flowtube – Polyphenylene sulfide alloy</p> <p>Electrode – Silver/silver chloride</p> <p>Register cover – Tempered glass</p> <p>Valve – Stainless steel</p>
Alarm Defaults	<p>Alarm Duration – 90 day</p> <p>Leak Duration before alarm is triggered – 24 hours</p> <p>Datalog Interval – 1 hour</p>



B.1.6. iPERL (5/8” – 1”) Meter


Sensus iPERL (5/8” – 1”) Meter	
Features	
Integrated register and measuring device, encased in an external housing. Above photo is a mock up. Sensus will work with City to develop a final solution.	
All-electronic, programmable, 9-digit register, hermetically sealed with a tempered glass cover.	
Interval data with ability to capture ~936 data points (39 days of hourly reads).	
Monitoring alarms such as leak detection, reverse flow, empty pipe, magnetic tampering and multiple battery life levels.	
Integrated two-way communication for AMR and AML.	
No moving parts – electromagnetic technology flow measurement.	
Zero-lead construction.	
Fire Service model is approved for use in fire protection, domestic water applications (3/4” and 1” only).	
Reclaim service model is available for non-potable applications.	
Exceeds ANSI/AWWA Standard C-700 and C-710 for accuracy and pressure loss.	
NSF/ANSI Standard 61 Annex F and G compliant.	
iPERL can be installed horizontally, vertically or diagonally	
Smart Meter Alarms (extracted via Sensus SmartPoints):	
<ul style="list-style-type: none"> - Leak Detection - Constant Flow over a period of time (typically, 24 hours in duration). - Tamper Alarms: <ul style="list-style-type: none"> o Magnetic Tamper – induction of a large magnetic field to effect performance. o Reverse Flow – reverse flow for over a 5 minute period. o Empty Pipe – absence of water in the meter for greater than a 5 minute period. - Metrology /battery alarms – self-diagnostic alarms indicating potential performance issues with the meter. 	
Programmable Units of Measure and Electronic reading output.	
Programmable Meter ID and Customer Text.	
Operations	
The iPERL meter has an operating range of 0.11 gpm (0.025 m ³ /hr) to 55 gpm (12.5 m ³ /hr)—it even starts to register flow as low as 0.03 gpm (0.007 m ³ /hr).	
Utilizes electromagnetic technology to measure flow – sampling over 4,000 times per second.	
Specifications	
Service	Sensing water flow and consumption; Measurement of potable and reclaimed water.
Starting Flow	5/8” (DN 15mm) size: 0.03 gpm (0.007 m ³ /h)



	<p>3/4" (DN 20mm) size: 0.03 gpm (0.007 m³/h) 1" (DN 25mm) size: 0.11 gpm (0.025 m³/h)</p>
Low Flow Range (±3%)	<p>5/8" (DN 15mm) size: >0.11 gpm (0.025 m³/hr) to <0.18 gpm (0.041 m³/hr) 3/4" (DN 20mm) size: >0.11 gpm (0.025 m³/hr) to <0.18 gpm (0.041 m³/hr) 1" (DN 25mm) size: >0.3 gpm (0.068 m³/hr) to <0.4 gpm (0.09 m³/hr)</p>
Normal Water Operating Flow Range (±1.5%)	<p>5/8" (DN 15mm) size: 0.18 to 25 gpm (0.04 to 5.7 m³/hr) 3/4" (DN 20mm) size: 0.18 to 35 gpm (0.04 to 8.0 m³/hr) 1" (DN 25mm) size: 0.4 to 55 gpm (0.09 to 12.5 m³/hr)</p>
Maximum Operating Pressure	<p>5/8" and 3/4" size: 200 psi (13.8 bar) 1" size: 175 psi (12.1 bar)</p>
Operating temperature	Water operating temperature range of 33°F (0.56°C) -80°F (26.7°C)
Measurement Technology	Solid state electromagnetic flow
Register	Hermetically sealed, 9-digit programmable electronic register; AMR/AMI compatible; iPERL register programmable using the UniPro® communicator and FieldLogic™ software.
Materials	<p>External housing – Thermal plastic Flowtube – Polyphenylene sulfide alloy Electrode – Silver/silver chloride Register cover – Tempered glass</p>
Alarm Defaults	<p>Alarm Duration – 90 day Leak Duration before alarm is triggered – 24 hours Datalog Interval – 1 hour</p>



B.1.7. CommandLink`

Sensus CommandLink	
	
Features	
Built-in antenna to interface with SmartPoint as well as FlexNet network.	
Bluetooth interface to standard handheld or personal computer / tablet (Bluetooth class 2).	
Rechargeable / field replaceable batteries (three AA size) - communication with up to 250 SmartPoints on a single charge.	
Field upgradeable firmware – via Bluetooth interface.	
Used for Programming/Configuring SmartPoints (water, electric, and gas), Smart Gateways.	
Utilized for auditing and on-demand reading retrieval from SmartPoints (water, electric, and gas) as well as Smart Gateways.	
In conjunction with an installation / route collection tool, the Sensus CommandLink can be used as a meter reading collection tool – limited range and throughput.	
Operations	
The Sensus CommandLink is the interface device between handheld installation tools, personal computers / tablets and Sensus SmartPoints (water, electric, and gas) and Smart Gateways.	
Utilizes Bluetooth (Class 2) and Sensus FlexNet protocol to communicate between the programming/auditing tools and the SmartPoints.	
The Sensus CommandLink can also be utilized (in conjunction with an installation / route collection tool) as a meter reading collection device with limited range and throughput. It sends an interrogation tone periodically to trigger the SmartPoints to respond on the Normal channel.	
Specifications	
Service	Interfaces with SmartPoints and FlexNet network.
Dimensions	Width: 4.7” Height: 2.37” Depth: 2.41”
Weight	1 lbs / 16 oz
Color	Blue
Bluetooth	Class 2
Operating temperature	- 20° F to +130° F
Environmental Standard	MIL-STD 810F
Certifications	US: FCC Part 15, FCC Part 15 Class B



B.2. Software

B.2.1. Regional Network Interface (RNI)


Features
End User GUI for monitoring and management of the host backend system.
Report generator and GUI for SmartPoint status and exceptions / alerts.
Managing commands for over the air: <ul style="list-style-type: none"> - Over the air configurations of SmartPoints and meters (where applicable) - On-demand query of the SmartPoint <ul style="list-style-type: none"> o Configuration o Current Reading Data (“under-the-glass”) o Data Points (Smart Gateway) - ally Meter <ul style="list-style-type: none"> o On-demand Sensor readings o Valve Control (Open, Close, Reduce)
CMEP and MultiSpeak interfaces for data export and on-demand features/functionality – Sensus Professional Services required.
Custom reporting - Professional Services required.
Virtual Machine utilization for server optimization.
LDAP-based authentication.
End User GUI to monitor network traffic (CommStats).
Operations
Decodes/manages messages being transmitted from the base station(s).
Performs audits / validation on messages themselves.
Generates reports and data to external systems.
Services: <ul style="list-style-type: none"> - Database server - Message Parser - Broker - FlexApp - Gateway - Network Controller - Postgres database - Web Server - Authorization - Sensus Data Platform (SDP)
Monitors network traffic and related data at each base station (CommStats)



Specifications	
Operating System	Red Hat Linux Enterprise Server Microsoft Windows Server
Database	Microsoft SQL Hadoop (Hortonworks) Postgres
Software	Java-based supporting SOAP and XML standards




B.2.2. SEW MDMS

Smart iQ Meter Data Analytics	
	
Features	
<p>City facing analytics portal and cloud hosted meter data platform. The Smart iQ Meter Data Analytics platform Version 1.9 including the following utility facing modules.</p> <ul style="list-style-type: none"> a. Water Use Analytics (Customer & Segments) b. Leakage Analytics c. High Usage Analytics d. Program Management e. Violation Management <p>Smart iQ Meter Data Validation and Exception Management Services</p> <p>The Smart iQ Meter Data Management configurations will include the following validation and exception management routines.</p> <ul style="list-style-type: none"> a. Negative read exception flag b. Missing interval extrapolation c. Multi register/channel aggregation (Bill reads) d. Unit of measure conversion <p>Alert Management and Tracking</p> <p>The Smart iQ Meter Data Analytics configurations will include the consumption of meter alerts from the Sensus Head End system for tracking and notifications. Data will be provided via CMEP or Multispeak.</p> <p>Extended data storage and analytics-as-a-service</p> <p>The Smart iQ platform shall include extended data storage option and data query access for the City personnel for reporting. The data access shall be made available upon request and the City shall request specific user licenses for the report design and view access. The datasets shall include:</p> <ul style="list-style-type: none"> a. Interval meter data with customer account association b. Leaks alerts c. Sensus meter alerts d. Customer notification 	
Specifications	
Operating System	Microsoft Windows Server
Database	Microsoft SQL Hadoop (Hortonworks)
Software	.Net Platform



B.2.3. SEW Customer Portal

Smart Customer Mobile (SCM) – Utility Customer Web Portal and Mobile Apps

Features
<p>The Smart Customer Mobile (SCM) platform shall include the following components:</p> <ol style="list-style-type: none"> 1. Smart Customer Mobile (SCM) - Customer Web Portal and Mobile Apps - Customer-facing web portal and mobile apps for Apple iOS and Google Android 2. SCM Utility Customer Service Portal – Utility-facing Customer Engagement Analytics, and Admin Portal for Utility staff 3. Utility Customer Personas Configuration in Customer Web Portal <ol style="list-style-type: none"> a. Residential Customer (Up to 3 guest users) b. Small Commercial Customer (Up to 3 guest users) <p>Smart Customer Mobile (SCM) - Customer Web Portal and Mobile Apps</p> <p>The SCM platform web portal and mobile apps include the following customer-facing modules:</p> <ol style="list-style-type: none"> 1. My Account 2. Usage 3. Billing 4. Notifications 5. Connect Me 6. Compare 7. Outage 8. Efficiency/Conservation 9. Service <p>SCM Utility Customer Service Portal</p> <p>The Utility facing Customer Service Web Portal capabilities will include the following utility facing modules.</p> <p><i>Customer Service and Administration</i></p> <ol style="list-style-type: none"> a. Dashboard b. Customer Engagement Analytics c. Administration d. CSR Workbench e. Outages <p>Integrated Notification Services</p> <p>The SCM platform shall include integrated notification services which can be enabled by the City for the purposes of customer alerts and notifications based on configurable workflow and decision trees.</p> <ol style="list-style-type: none"> a. SMS Text Messaging – Two-way b. IVR Outbound Dialer c. Email auto notifications d. Mobile Push Notifications <p>The scope for configuration of notifications/alert campaigns will be limited to the notifications stated in the table above.</p> <p>Payment Services</p>



The SCM platform shall include integrated payment services which can be enabled by the City for accepting customer bill payments in the SCM web portal and the mobile apps. Specifically, the payment services will include:

- a. Credit card and ACH payment methods
- b. Unauthenticated one time customer payment
- c. Recurring Autopay (due date)
- d. Customer fee and/or utility paid model

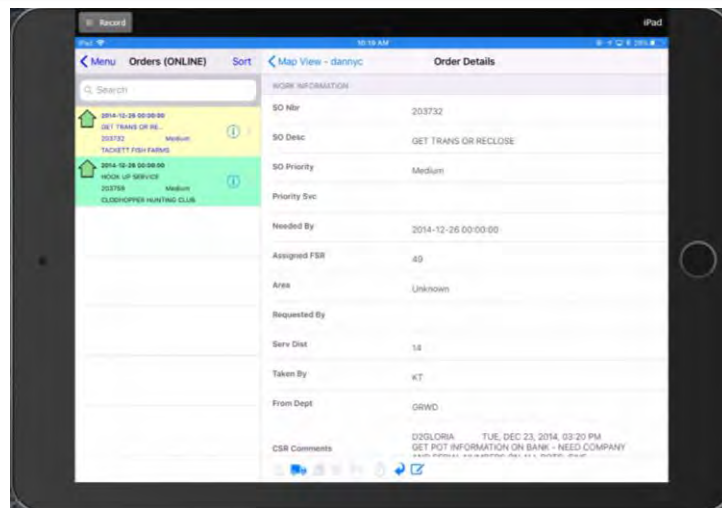
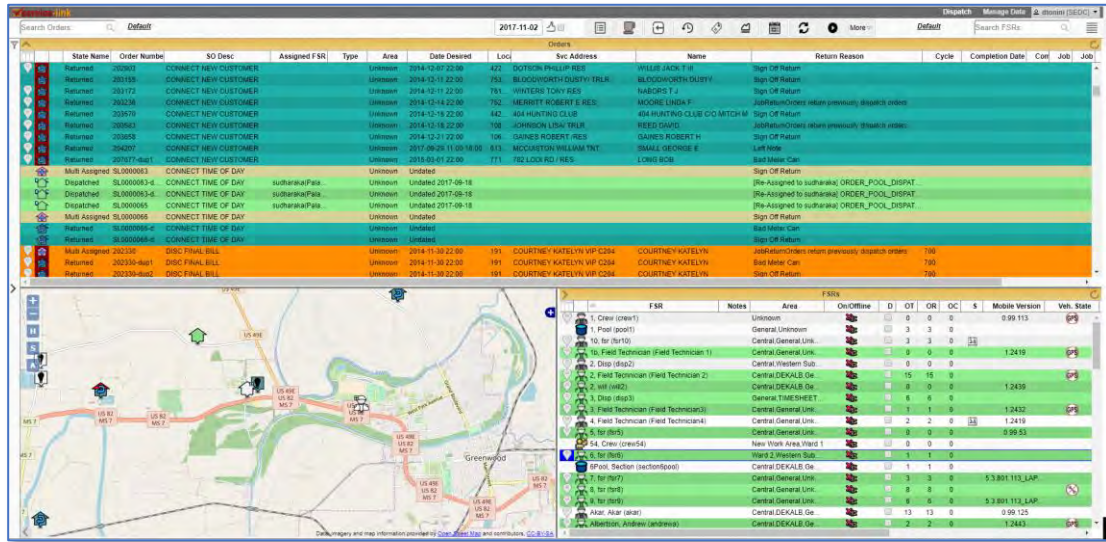
Specifications

Operating System	Microsoft Windows Server
Database	Microsoft SQL
Software	.Net Platform



B.2.4. Service Link Mobile Workforce

Service-Link Mobile Workforce Management Interface



Features

Service-Link™, a workforce automation solution, uses wireless, Internet-based mobile communications and field service dispatching solutions to help utilities manage mobile resource. Our rapid implementation approach helps make users productive more quickly, reaping the benefits of wireless communications and generating hard-dollar savings.

The Service-Link dispatching system provides automated dispatching and communications functions for the benefit of the work processes of dispatching environments. With every order and every field service representative's activity captured and presented in multiple screens, managers and dispatchers can track and analyze pertinent information so that service orders are processed in a timely manner and that customers receive service.



Many gas, electric and water utilities have gone from the longstanding inefficient paper process to a wireless and paperless real-time system to manager field employees and track field orders. With prompt access to information, dispatchers monitor the system to ensure that all technicians have balanced workloads. New work and emergency orders can be dispatched to the appropriate technicians. Field staff communicates securely with supervisors or dispatchers remotely.

The proposed Service-Link solution delivers the core functionality described in this proposal. Service-Link is also offering powerful modules to enable utilities to take advantage of the specific tools they require as part of their workforce management solution. These modules can be part of their workforce management solution. These modules can be incorporated in any combination as part of a seamless workforce management solution:

- Appointment Booking
- Automatic Vehicle Location (AVL)
- Street Level Routing
- Reports
- Auto Dispatching and Recommendations
- Meter Reading
- Inventory Tracking
- Location based view of crews, workers, assets and work
- Shift and Vacation Management
- Work Order Pools
- Real time monitoring
- Geo-fencing and Alerts
- Geocoding
- Configurable subscriptions to events
- Support for Android, Windows, and iOS devices
- Work Proximity Alerts
- GIS Overlays
- HTML 5 Client option
- Dashboards
- Scheduling Tool

Operations

Mobile Workforce Management provides real-time software to field short cycle work orders to field workers.

Dispatchers have ability to see status of orders and field workers in real-time and can perform dispatching and troubleshooting which will transmit to workers immediately.

Managers and supervisors can manage works, order types, wrench time, work areas, shift management. Reports can be generated from the data and used to manage resources and respond to customer needs.

Work can be scheduled, and optimized, filling Field Workers order list real time, daily, weekly, monthly etc.

Dashboards provide dispatchers and managers data at their fingertips, personalized to provide them with information regarding their workers.

Specifications

Operating System	Microsoft Windows Server
Database	Microsoft SQL / Oracle
Software	Java-based supporting SOAP and XML standards

B.2.5. Service Management App

Service Management Application- Sensus
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SENSUSANALYTICS **mcok WATER** david.vaughn@sensus.com | Logout

Accounts Management | Actions History

Actions 0 Accounts Selected

Acc Number Search: Show 10 entries

Acc Number	Device Number	Acc Name	Address	Valve State	Last Change	Last Change Request	Alarms
108871-90	NHAllySo24	GRATE JR PERRY A	509 BUCKBOARD LN				32
108871-90	SMAlySo22	GRATE JR PERRY A	509 BUCKBOARD LN	Closed	05/12/17 10:36		
125215-58560	cust146mv	U STORAGEOK.COM	N 2209 DOUGLAS BLVD				
22153-64	SMAlySo24	GARNOS VERLE R	708 BUCKBOARD LN	Closed	05/12/17 10:42		
22153-64	857desk3	GARNOS VERLE R	708 BUCKBOARD LN	Opened	05/12/17 09:12	Open	12
22159-106	79100623	BARNETT FRANKLIN D	11512 SURREY LN				
22161-104	79100619	PANNELL JOHN	11508 SURREY LN				
22163-102	NHAllySo21	DONER RICHARD E	801 BUCKBOARD LN	Closed	05/12/17 12:03	Open	12
22165-98	NHAllySo23	MATHIAS JEROME	701 BUCKBOARD LN	Opened	05/10/17 14:56	Reduce	13
22165-98	SMAlySo21	MATHIAS JEROME	701 BUCKBOARD LN	Closed	05/12/17 10:27		1

Showing 1 to 10 of 15 entries

SENSUSANALYTICS **mcok WATER** david.vaughn@sensus.com | Logout

Accounts Management | Actions History

Actions 3 Accounts Selected

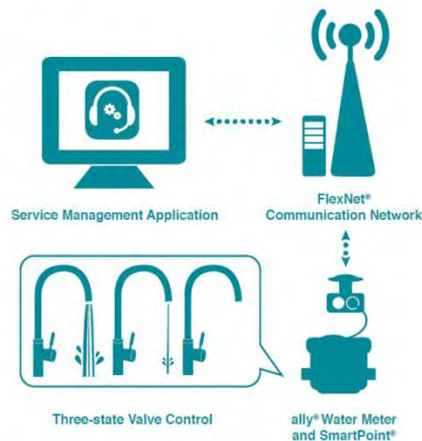
Actions Options

Action	Valid Values Options
Road Meter Request	<input type="radio"/> Open
Change Valve State	<input type="radio"/> Close
	<input type="radio"/> Reduce

Enabled Filters:
Remote Shutoff Valve true

Acc Number Search: Show 10 entries

Acc Number	Device Number	Acc Name	Address	Valve State	Last Change	Last Change Request	Alarms
108871-90	SMAlySo22	GRATE JR PERRY A	509 BUCKBOARD LN	Closed	05/12/17 10:36		
22153-64	857desk3	GARNOS VERLE R	708 BUCKBOARD LN	Opened	05/12/17 09:12	Open	12
22153-64	SMAlySo24	GARNOS VERLE R	708 BUCKBOARD LN	Closed	05/12/17 10:42		
22163-102	NHAllySo21	DONER RICHARD E	801 BUCKBOARD LN	Closed	05/12/17 12:03	Open	12
22165-98	SMAlySo21	MATHIAS JEROME	701 BUCKBOARD LN	Closed	05/12/17 10:27		1
22174-68	cust100DA	DAWKINS GERALD OR	205 BUCKBOARD LN	Opened	05/12/17 14:47	Close	40



Sensus remote shutoff application

Features



Service Management Application (SMA), is designed as a user interface for ally remote shutoff meters. Using the 2-way Flexnet radio infrastructure, SMA communicates to each ally meter and issues the command to change the valve state and receives a response when the operation is complete. Enabled by the real time 2 way communications this command and response happens promptly. SMA has further features such as Communication Status of ally meter, Import and Export of lists, integration with Customer Information Systems which enable integration into the utility’s customer service processes. When integrated into the utility’s Billing System, Work Order Management, and Customer Portal, SMA enables more than just shutoffs and reconnects and becomes a tool for increasing customer satisfaction by allowing the end user to view real time status of their meter and schedule shutoffs and reconnects at their convenience.

The proposed Service Management Application is designed to be part of a utility’s customer service and workforce management solution and when integrated into those systems offers the following features:

- Remote shutoff of ally meters with (3) valve states:
 - Closed
 - Reduced Flow
 - Open
- Flexnet 2-way communication enables feedback on status of commands in real time
- Shutoff individual service by meter ID
- Shutoff individual service by account information
- View Meter Alarms
- Filter, sort, and group by meter ID or account information
- Shutoff bulk services by meter ID or account information
- Cancel an individual or bulk shutoff
- Inform utility of bulk job expected timing with progress bar
- Inform utility of bulk job status via email
- Audit shutoff history by user ID, meter ID or account
- Audit/import/export data
- Integration with customer billing system
 - Import list of shutoffs by meter ID or account
 - Indicate shutoff status in CIS
 - Superior SMA User Experience with near real time account status (Hourly VFLEX Update)
- Integration with Work Order Management System
 - Export work list when site visit needed
- Integration with Customer Portals
 - Customer communication thru Customer Portal
 - Customer requested shutoffs or reconnects
 - Email notifications of status

Operations

Service Management Application provides real-time software to give utilities options when needing to shutoff or reconnect a customer’s water.

Customer Service Representatives have the ability to see status of orders in real-time and can perform troubleshooting immediately should a command fail to operate.

Dashboards provide Customer Service Representatives and Managers data at their fingertips, designed to provide them with the information needed to take care of their customers and system.

Specifications

Operating System	CentOs Linux
Database	MongoDB
Software	Java-based applications



C. Project Management Services

VENDOR will manage the installation of AMI equipment and register retrofits. VENDOR will be responsible for specifying installation methods; for training the installation service providers; for managing the installation performance, quality control, quality assurance, and overall performance of the AMI System.

C.1. Project Management Staff, Meetings, and Documentation

The VENDOR will provide Project Management and support staff, as required to deliver the City the AMI System as set forth in the Contract and this Statement of Work. The City will fully support VENDOR project management team by supplying usable office space to accommodate up to four (4) resources at Aramark Tower or other agreed upon area.

C.1.1. Project Documentation and Meetings

The following are general project management meeting and reporting requirements.

- a. VENDOR will act as the coordinator and facilitator of the deliverables in the scope of work and the project schedule.
- b. City and VENDOR Managers agree to review and comment on all necessary documents within ten (10) business days, unless a different time frame has been agreed upon in advance, in writing.
- c. VENDOR will manage project meetings, including preparing and providing meeting agendas and materials at least 24 hours prior to weekly meetings and 48 hours prior to monthly meetings. VENDOR will be responsible for providing meeting minutes following the conclusion of all scheduled meetings.
- d. VENDOR will create and maintain a document repository for access by the City. A copy of all VENDOR project documents shall be included in this location.
- e. VENDOR will prepare meeting minutes to be reviewed and approved by the City for all meetings. The minutes will contain descriptive comments, action items, and/or issues. The minutes will be provided to the City within three (3) business days following the meeting. City will approve, comment, or make changes to the minutes within three (3) business days of delivery; otherwise, meeting minutes will be considered accepted beginning on the conclusion of the third (3rd) business day.

C.1.1.1. Project Schedule

VENDOR will be responsible for the creation of a project schedule for VENDOR and City activities necessary during the project term.

VENDOR is responsible for maintaining and updating the project schedule(s). The project schedule is kept in Microsoft Project format.

City will have the responsibility to review, comment and accept the schedule(s).

The schedule will contain as a minimum the following information:

- a. Must be of sufficient detail to assure adequate planning has been done for proper execution of the work such that, in the reasonable judgment of the City Representative it provides an appropriate basis for monitoring progress.
- b. The sequence, duration, actual start and end dates of each activity
- c. Interdependences and critical path between activities
- d. Percentage of completion status of all activities.
- e. Resource allocations associated with each activity



Should VENDOR fall behind schedule by more than three (3) months at any time, VENDOR will develop a corrective action plan to be approved by the City. The plan must be submitted within ten (10) business days. City must approve/reject the plan within five (5) business days. If VENDOR falls behind in its Schedule by more than five (5) months, the dispute resolution process will be initiated.

C.1.1.2. Project Management Reporting

The VENDOR PM records each action item and issue into an internal, enterprise-wide Salesforce application, allowing others within VENDOR organization to see common issues and to help guide the PM to achieve timely resolution. VENDOR will provide project management reports as required in the SOW and as mutually agreed upon.

C.1.1.3. Project Management Meetings

VENDOR's Program Manager and other appropriate personnel will meet with The City's Project Management staff at least weekly from the issuance of a Notice to Proceed through AMI System Acceptance. VENDOR will schedule the meetings to review current project status, current schedule, action items, recovery plans, and other pertinent information.

VENDOR's Installation Manager and other personnel will meet with City Project Management staff at least weekly beginning one month prior to the start of the procedural pilot through the installation period.

VENDOR Program Manager will schedule monthly meetings with the City and VENDOR executive team. The meeting is kept at a high level to clearly communicate the project status, schedule, contract issues, and critical issues that need resolution.

VENDOR's Professional Services Manager will meet with the City Project Team at least weekly until the City system acceptance testing.

VENDOR's Contract Manager will meet with City personnel at least monthly to update them on progress against the installation schedule.

Meetings shall be held onsite unless mutually agreed upon.

C.2. Project Resources

C.2.1. General Requirements

All personnel used by VENDOR in the performance of AMI Project Services will be qualified by training, licenses, or certifications, as required by the Contract. VENDOR staff will provide onsite support until system acceptance. No one involved in critical activities at critical stages of the project, such as designing and testing system interfaces or performing system acceptance testing, will be reassigned to another project until these critical activities have been completed.

The City reserves the right to require VENDOR to retrain, reassign, or remove from the project any employee or subcontractor who fails to perform to professional standards.

C.2.1.1. Training and Inspection of Employees

All new MIU endpoint installers will go through a minimum of two-week paid on the job training (OJT). The training class features a blend of computer based training, classroom, and hands-on instruction led by experienced subject matter experts. First week is in the classroom and the second week is hands-on work in the warehouse on training stations performing meter installations, MIU installs, and wiring. Every new employee will get at least one-week minimum OJT with an experienced meter technician to illustrate their proficiency in the field under normal operating conditions before they are



released to work on their own. Prior to independent field work, each new employee’s performance will be reviewed and approved by the Training Director and/or End Point Deployment Manager.

C.2.1.2. Uniforms and Identification

VENDOR’s field personnel will wear easily recognizable uniforms containing the VENDOR’s name, as well as prominently displayed picture identification badges containing VENDOR’s name; employee name, title and signature; employee picture; and employee I.D. number at all times when performing project work.

VENDOR’s employees who are no longer employed by the VENDOR will be required to return their uniforms and identification cards immediately upon termination of employment, and the VENDOR will immediately notify the City of all such terminations and whether identification cards were received from terminated employee.

C.2.2. Organizational Overview Turnkey Installation Team

The following is a summary of the organizational structure during the Turnkey Installation Term.

C.2.2.1. Project Resources

VENDOR will deliver the project in accordance with the Statement of Work using the resources defined in the table below. The percentage of on-site time for each resource is identified next to the title. If the project requires additional time and there was no change order executed, VENDOR will provide the resources at no cost to the City.

Resource Chart*

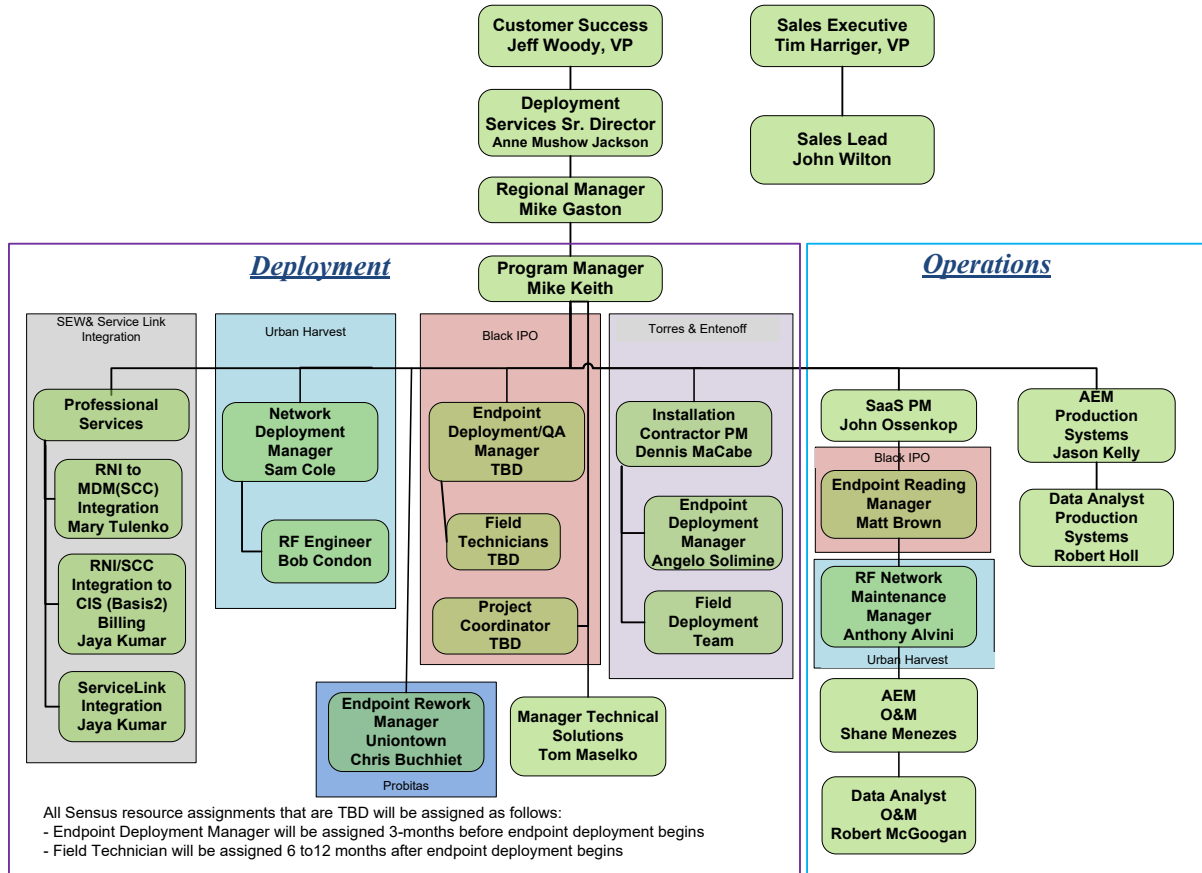
Resource	OnSite %	Totals	Year 2018				Year 2019				Year 2020			
			Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4
Program Manager	75%	5760	480	480	480	480	480	480	480	480	480	480	480	480
Network Deployment Manager	100%	1380	480	480	300	120	0	0	0	0	0	0	0	0
Endpoint Deployment Manager	100%	5300	100	400	480	480	480	480	480	480	480	480	480	480
Endpoint Rework Manager	0%	5760	480	480	480	480	480	480	480	480	480	480	480	480
Application Engineer	50%	5760	480	480	480	480	480	480	480	480	480	480	480	480
RF Network Analyst	50%	5080	120	160	480	480	480	480	480	480	480	480	480	480
RF Engineer	100%	2280	480	480	480	200	80	80	80	80	80	80	80	80
Field Technician #1	100%	4960	0	160	480	480	480	480	480	480	480	480	480	480
Field Technician #2	100%	4960	0	160	480	480	480	480	480	480	480	480	480	480
Sr Manager Technical Solution	100%	1152	96	96	96	96	96	96	96	96	96	96	96	96
Training	100%	96	24	24	0	24	0	0	24	0	0	0	0	0

Additional project responsibilities provide in the attachment.



C.2.2.2. Organization Chart

Sensus Deployment and Network Operations Team



Notwithstanding anything to the contrary, VENDOR may modify, with the written approval of PMA the roles, responsibilities, and persons set forth in the chart above and in this Statement of Work to meet VENDOR’s performance obligations under this Statement of Work and the Contract.

C.2.2.3. Contract Manager

VENDOR will designate a Contract Manager, who will have the authority to handle and resolve any disputes or contract issues with the City. Jeff Woody is designated as Contract Manager as part of his assigned position of VP Customer Success.

C.2.2.4. Program Manager

VENDOR will designate a Program Manager who will be responsible for overall onsite project delivery management as it relates to the VENDOR's deliverables and responsibilities to meet all project requirements.

The Program Manager will be onsite as required throughout the duration of the project, except for holidays and vacations, during which the VENDOR will provide a qualified substitute as appropriate. The City will approve the Program Manager or a change in the Program Manager.



C.2.2.5.Endpoint Rework Manager

VENDOR will designate an Endpoint Re-work Manager who is responsible for the planning, coordination and execution of the effort to retrofit the existing Badger / Itron water units with the Badger / Sensus radio units. This position will be responsible for managing a team of technicians who will retrofit the existing units. The manager will be responsible for resource planning, managing the inventory, testing, safety, quality and delivery of units to meet the deployment schedule. The manager will attend project review meetings and report status on the re-work effort.

C.2.2.6.Endpoint Deployment Manager

VENDOR will designate an Endpoint Deployment Manager, who will be responsible for managing the installation and project implementation on a day-to-day basis on behalf of the VENDOR. The Endpoint Deployment Manager will use reasonable efforts to ensure that installations are carried out in compliance with required procedures.

The Endpoint Deployment Manager will be onsite continuously throughout the duration of the project, except for holidays and vacations, during which the VENDOR will provide a qualified substitute. The City will approve the Endpoint Deployment Manager or a change in the Endpoint Deployment Manager. VENDOR will submit résumé(s) and references of candidate(s) for Endpoint Deployment Manager.

C.2.2.7.Field Technician

VENDOR will designate a Field Technician to Oversees the delivery and deployment of meters, registers and SmartPoint communication modules (MIUs). The Field Technician works closely with the meter and SmartPoint communication module contractor as well as Training Manager to reasonably ensure proper installation of meters, registers, and SmartPoint communication modules. Field Technicians provide site feedback to the Endpoint Deployment Manager.

C.2.2.8.Network Deployment Manager

VENDOR will designate a Network Deployment Manager who will be responsible for the RF Network design and propagation studies. The Network Deployment Manager will coordinate with all third parties to obtain any permits, update the RF Network designs, and supervise the field site survey process. The RF PM will also supervise installations and performance.

C.2.2.9.RF Engineer

VENDOR will designate an RF Engineer responsible for assisting in the interpretation and implementation of the RF network plan, overseeing and certifying network equipment installation work, performing and overseeing network equipment maintenance, and ensuring the overall system performance of the FlexNet system components including FlexNet Base Stations, and other network devices employing generally accepted commercial practices and processes. Inherent in these responsibilities is the overall systems optimization for network and metering components requiring field visits to various locations throughout the service area. The RF Engineer assigned to this project will be Bob Condon.

C.2.2.10. Application Engineering Manager

VENDOR will designate an Application Engineer Manager (AEM) for the complete delivery of all head end system integration activities including the development, testing, and deployment of the head end system.

**C.2.2.11. RF Network Analyst**

VENDOR will designate a RF Network Analyst who is responsible for investigation, troubleshooting and remediation of any issues related to decreased read rate success for the water systems. The RF Network Analyst works under the direction of the Project Manager

C.2.2.12. Training Instructors

The VENDOR will provide trained and experienced instructor(s). The VENDOR will provide resumes and any relevant certification of trainers for City approval.

C.2.2.13. Sr Manager of Technical Solutions

The Sr Manager of Technical Solutions will be the technical liaison between the City and the VENDOR and their subcontractors. The technical liaison will be on-site one (1) day per week or as required.

C.2.2.14. Installation Contractors

The VENDOR Program Manager will select and manage the Installation Contractors. The Installation Contractor will be proficient in the managing of warehouse facilities, managing field crews, hiring of capable installers that meet or exceed the required project guidelines for employment, scheduling crews on a daily basis, and able to contact and schedule installation appointments with the City's customer. All installation contractors will be trained by the VENDOR.

C.2.2.15. Delivery Director (Kevin Hwang, 25% Onsite) (SEW)

Responsible for executive oversight of overall delivery of the solution and provides guidance and direction to resolving technical and functional issues to drive project to completion.

Responsibilities include:

- Deliver project using the appropriate project management methodology
- Work with the City Project stakeholder teams to lead the Fit Gap workshops and ensure the product configurations are consistent with the City business processes and requirements.
- First point of escalation for the City team.

C.2.2.16. Project Manager (TBD, 50% Onsite) (SEW)

Responsible for ensuring the project team successfully delivers the project per schedule, scope, and budget. Coordinates approvals and communications as necessary. Responsible for business planning, customer interface, interaction with the City Project Manager, user acceptance testing, and overall customer communications.

Responsibilities include:

- Overall program delivery manager
- Coordinate roadmap review meetings between SEW and the City
- Facilitate and communicate the City's system and process impacts based on new product functionality
- Manage consolidated work list among local team
- First point of contact for the City teams
- Liaison among SEW delivery teams and the City teams

**C.2.2.17. Product Lead (Manoj Singh, Offsite) (SEW)**

Responsible for defining the overall solution, integration standards, application standards and providing direction to the development teams as needed.

Responsibilities include:

- End to end management of the product lifecycle from concept to phasing out of the product(s).
- To manage and communicate effectively with cross-functional teams.
- Development and execution of the product roadmap.
- Perform business analysis with subject matter experts and customers.
- Development of documentation to support the approval, design, development and launch of the product.
- Identification, specification and prioritization of features, functionality and capabilities.

C.2.2.18. Director Client Success (Hilary Hashim, Onsite for Specific Meetings) (SEW)

Responsible for operational role of Client Success Management that includes Post-implementation IT/Technical Support and Maintenance, User adoption, Customer engagement and Client retention

Responsibilities include:

- Involvement in the entire customer life cycle right from User Acceptance Testing (UAT) and throughout the duration of their subscription period.
- Responsible for identifying and quantifying the key factors for customer success and then ensuring SEW delivery around them.

C.2.2.19. Training Lead (TBD, Onsite for specific meetings) (SEW)

Responsible for leading the training and knowledge transfer work stream for the project and ensuring that quality training is provided to appropriate stakeholders.

Responsibilities include:

- Identifying and assessing current training needs based on the project scope
- Prepare training documentation as needed
- Responsible for delivery of training per scope

C.2.2.20. Business Analyst (TBD, Onsite for specific meetings) (SEW)

Responsible for documenting the fit gap requirements, and validation of those requirements in the final solution. Acts as a lead for all business process and documentation responsibilities.

Responsibilities include:

- Identifying and critically analyzing technical & functional requirements against the product features.
- Documenting business requirements to maintain traceability throughout project.
- Responsible for conducting fit-gap analysis at client site and design the business flow of utility applications
- Developing workflows, wireframes, and use case for utility projects. Advises project managers and teams on the best use of project management disciplines and approaches.

C.2.2.21. Product Quality Lead (TBD, Offsite) (SEW)

Responsible for overall Quality Assurance and Testing of the solution including integration, end to end, user acceptance, performance, and scalability testing.



Responsibilities include:

- Defining processes for test plan and several phases of testing cycle
- Use reasonable efforts to ensure that development tasks meet quality criteria through test planning, test execution, quality assurance and issue tracking.
- Reviewing status reports from team managers and taking appropriate actions accordingly.
- Understanding and defining areas to calculate the overall risk to the project.

C.2.2.22. CIS Lead (TBD, Offsite) (SEW)

Responsible for the design and integration of key customer portal features to City’s meter to cash processes.

Responsibilities include:

- Defining the billing, payments, and meter data analytics feature configurations consistent with City’s business processes
- Feature and workflow configuration of the customer portal platform
- Integration layer customizations as needed

C.2.2.23. Technical Integration Lead (TBD, Offsite) (SEW)

Responsible for the design, development and operations of the systems-to-system interfaces, dataflows, APIs, and integration middleware.

Responsibilities include:

- Defining the systems integration needed to deliver the forthcoming reengineering and platform change, including defining the interfaces needed, the integration technology needed, and the transitional steps needed to ensure continuity of the systems, data and business during the platforming.
- Defining the integration and dataflow architectures, and designing the APIs that can be a point of stability.

C.2.3. Organizational Overview O&M Term

The following is a summary of the organizational structure during the O&M term.

C.2.3.1. Project Resources

VENDOR will deliver the project in accordance with the Statement of Work using the resources defined in the table below. The percentage of on-site time for each resource is identified next to the title. If the project requires additional time and there was no change order executed, VENDOR will provide the resources at no cost to the City.

See Attachment F.5 for detailed responsibilities

Operation and Maintenance Role	On Site Presence (%)
Program Manager	40% or more as needed
Application Engineer (AE)	20% or more as needed
Application Support Engineer (ASE)	0%, but will be onsite as needed
RF Network Analyst (RFA)	0%, but will be on site as needed

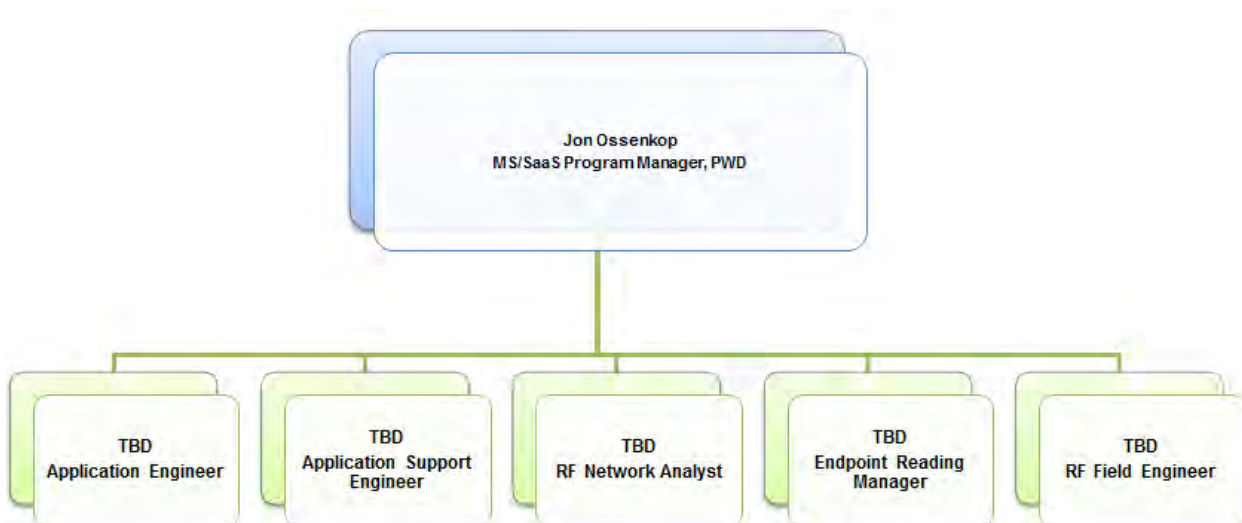


Endpoint Reading Manager	0%, but will be on site as needed
RF Field Engineer (RFE)	100%

C.2.3.2. Organizational Structure

Below is the organizational chart for the operations and maintenance staff

- PWD will have a dedicated Managed Service team, with a local presence. Managed Service takes over post system acceptance. Positions will be staffed during deployment and trained up prior to the start of the project to operations transition.
- Executive Sponsor: Jack Swearhart, VP, Managed Services
- Escalation: Ben Long, Manager, Solutions Services
- The Local Managed Services team will participate in all required PWD meetings
- Managed Services is designed to integrate and become a partner of the utility collaboratively working towards PWD’s goals.
- The local resources will be a dedicated POC to PWD, with an additional 24x7x365 contact line



C.2.3.3. MS/SaaS Program Manager,

The Managed Services / Software as a Service Manager will be responsible for using reasonable efforts to ensure the Operations and Management team successfully manages the ongoing project per schedule, scope, and budget. Coordinates approvals and communications as necessary. Responsible for business planning, customer interface, interaction with the City Project Manager, user acceptance testing, and overall customer communications.

C.2.3.4. Application Engineer

VENDOR will designate an Application Engineer (AE) for the O&M Services of all head end system integration activities including the development, testing, and deployment of the head end system. Conducts in depth database monitoring and analysis for RNI data streams and responsible for system



integrations and analysis for the FlexNet System. AE will work with and engage the development engineer to troubleshoot the system looking for configuration, hardware, firmware, and software issues.

The AE has the support of the operations team for technical issues that require additional guidance.

C.2.3.5. Application Support Engineer

VENDOR will designate an Application Support Engineer (ASE) to support the AEM for the delivery of head end system integration activities including the development, testing, and deployment of the head end system.

Applications Support Engineer will coordinate field activity, perform MS SQL and Oracle database data mining, data analysis, compiling reports and assisting with resolving technical problems within the RF network. ASE will provide the technical support & leadership in helping the Customer deploy wireless metering infrastructure and meters.

Monitor system hardware and software for proper delivery of data for customer operations as well as provide feedback to design and development engineering for product improvement. ASE will develop bash shell/Perl Scripting and be responsible for delivering a system solution that is optimized, reliable, and flexible.

C.2.3.6. RF Network Analyst

VENDOR will designate a RF Network Analyst who is responsible for investigation, troubleshooting and remediation of issues related to decreased read rate success for the water systems. The RF Network Analyst works under the direction of the Project Manager

C.2.3.7. Endpoint Reading Manager

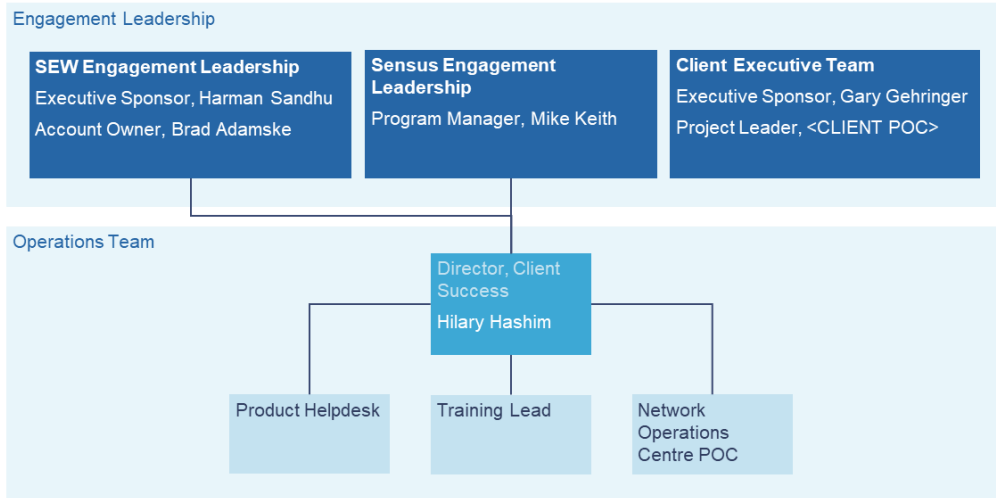
VENDOR will designate an Endpoint Reading Manager, who will be responsible for managing the RF network and related tuning activities on a day-to-day basis on behalf of the VENDOR. The Endpoint Reading Manager will use reasonable efforts to ensure that endpoint performance of the AMI System meets applicable Performance Guarantees and provide recommendations to achieve success on non-performant endpoints.

C.2.3.8. RF Field Engineer

VENDOR will designate an RF Engineer responsible for assisting in the interpretation and implementation of the RF network plan, overseeing and certifying network equipment installation work, performing and overseeing network equipment maintenance, and overseeing the overall system performance of the FlexNet system components including FlexNet Base Stations, and other network devices employing generally accepted commercial practices and processes. Inherent in these responsibilities is the overall systems optimization for network and metering components requiring field visits to various locations throughout the service area.

C.2.3.9. Software Maintenance (SEW)

SEW shall appoint a designated Client Success Director to coordinate support requirements during the O&M Services Term.



The support requests shall be handled per the terms set forth in Exhibit O (Technical Support) to the Contract.

During the O&M Services Term, the Client Success Director will be the primary point of contact for the Customer for customer support, helpdesk, and ongoing training related items. Customer will have three different teams to draw resources from: 1) Product Helpdesk which is the support desk for any customer support matters, 2) Training team that has trainers for SEW software who can provide remote or onsite training for Customer teams, and 3) the Network/Cloud Operations Center team that monitors the cloud infrastructure and coordinates the upgrades and other ongoing activities for the system.



D. Turnkey Installation Phase

This section of the Statement of Work provides the detailed description of the Turnkey Installation. Certain processes or portions of processes overlap in different phases. For that reason, and to allow ease of reading within the document, these will be included in the phase that is most applicable.

D.1. Phase #1 Project Planning, System Requirements and Design

Prior to the deployment of AMI software and hardware, the VENDOR and City will establish overall project governance, solution design documents, and an integrated project plan and schedule.

D.1.1. Project Management Documentation

VENDOR and the City will define the project team organization, review the project scope, and develop project management documents to achieve the City's project goals and requirements set forth in the Contract and this Statement of Work.

D.1.1.1. Project Plan

VENDOR will create the Project Plan for all VENDOR and City activities necessary to complete the project in accordance with the scope and project schedule. VENDOR will utilize Microsoft Project to track, manage, and report on the overall project.

City will review and reasonably approve the schedule before VENDOR can start work.

The VENDOR will show the schedule with a breakdown of work into activities and relationships to the extent required to effectively manage the work. The schedule will show the division of the work into activities and specify the progression from the Notice to Proceed (NTP) to AMI System Acceptance.

The schedule will contain, at a minimum, the following information:

- a. Adequate planning for proper execution of the work such that it provides an appropriate basis for monitoring progress.
- b. The sequence, duration, and actual start and end dates of each activity.
- c. Identification of interdependences and critical paths between activities.
- d. Percentage of completion for each activity.
- e. Resource allocations associated with each activity.
- f. The schedule must include the activities completed by subcontractors.

The City may at any time request a schedule narrative that provides additional information about the approach to an activity, and the activity's resource requirements and relationships.

D.1.1.2. Issue Management

VENDOR will create, manage, and update the issues register daily and will review with the City Project Manager during the weekly status meeting. The City has the right to review and dispute the register, per the agreement in Article X (Dispute Resolution) of the Contract.

D.1.1.3. Project Controls Manual (PCM)

VENDOR will prepare a detailed Project Control Manual (PCM) which will identify and define the processes and controls for deploying key elements of the Project. The PCM details processes and procedures used by the Project Team to manage the Project. The PCM will have, at a minimum, sections addressing elements listed below. VENDOR will use Microsoft Visio when possible to visualize the procedure.



- a. Invoicing
- b. Project Team Schedule
- c. Project Management, Tracking, Reporting
- d. Escalation/Dispute Management
- e. Document Management
- f. Status Reporting
- g. Facilities (Site and Data Center Access)
- h. PCM Modification Approval Process
- i. Customer Communications Approval Process
- j. Meter Access policies
- k. Site Survey (Network)
- l. Customer Appointments
- m. Call Center
- n. Call Center Training
- o. Customer Complaints and Claims
- p. Inventory Management
- q. Quality Assurance (Following Install) – MIU or network?
- r. Work Order Management Processes
- s. Exceptions
- t. Mitigation of “non-performing” MIUs
- u. Staffing
- v. Installer Credentials
- w. Employee Badges
- x. Uniforms and vehicle signage
- y. Network Quality Assurance
- z. Mitigation of network to maintain performance

D.1.1.4. Project Kickoff Meeting

After preliminary work has been completed on the project management materials, VENDOR will conduct a kickoff meeting to introduce teams and to review the project scope, proposed timeline, and City’s goals and business objectives.

After all roles and responsibilities are determined and the kickoff meeting complete, VENDOR will update the Project Plan to reflect any mutually agreed changes.

D.1.2. Meter Reading During AMR to AMI Transition

VENDOR will take over the existing AMR meter reading program on or before September 22, 2019.

VENDOR will provide meter reading services for all AMR accounts that have not been converted to AMI. VENDOR will provide a maximum of three meter reading resources and three vehicles to perform reading services until all accounts are converted to AMI. City will assist with acquiring equipment, planning routes, and transferring data to/from the billing system.

D.1.2.1. General Requirements

While providing AMR to AMI Transition Meter Reading Services, VENDOR will provide meter data collection services to meter reading routes at a monthly read performance rate of 99% of all AMR equipped meters.

VENDOR will operate the City’s existing AMR system until AMI System Acceptance.

VENDOR will read a meter reading route until 90% of AMR units are converted to AMI.



City personnel will opportunistically install AMI MIUs in areas which have been designated as accessible by the network.

City will authorize VENDOR to utilize its FCC Radio License to collect meter data from the City's existing AMR MIUs.

VENDOR will train contractors responsible for reading meters on how to use the current AMR system and equipment.

VENDOR will provide to the City an AMR Missed Meter Data report on a daily basis.

VENDOR is not responsible for special or off-cycle AMR meter readings.

VENDOR technician will alert the respective City field supervisor if they discover an AMR MIU or meter which has shown evidence of a tamper condition.

D.1.2.2. AMR Transition Plan

VENDOR will develop a transition activity plan, complete with pricing, resource, allotments, and milestone markers, intended to ensure a low-risk and well-defined conversion process that meets the minimum performance standards.

As part of the VENDOR developed transition plan, VENDOR shall provide a single resource for at least 3 months prior to operating the AMR system. This period of time will be utilized to compare the performance of VENDOR's AMR reading success rate with the existing service providers' reading success rate.

City will review and reasonably approve the transition plan.

D.1.2.3. Meter Reading Equipment

VENDOR will acquire and maintain all equipment reasonably necessary to read the City's AMR System.

D.1.2.4. AMR Billing Procedures

VENDOR will provide Meter Data on a monthly basis for all installed AMR MIUs by route during the transition period.

- a. City will provide a route schedule to VENDOR as part of the AMR transition plan.
- b. City will provide route read files via an MV-RS flat download file.
- c. VENDOR will collect and deliver Meter Data from all AMR MIUs.
- d. VENDOR will transfer an MV-RS upload file, inclusive of all Meter Data and missed Meter Data information, to the City within three (3) days of receiving the route file.

VENDOR will not be responsible for providing accurate Meter Data (i) for locations from which a signal has been received indicating tampering with any AMR MIU, (ii) from installed AMR MIUs that have been referred to the City for service calls which have not been completed.

D.1.2.5. File Transfer of Meter Data

File transfers of Meter Data will be performed via an SFTP site provided by the City. VENDOR will be responsible for all costs and expenses related to the collection and delivery of Meter Data to the City's Billing System Interface in the City's MVRS file structure.



D.1.3. Professional Services and Integration Planning Services

In accordance with the City's investment in Advanced Metering Infrastructure (AMI), VENDOR will engage their Professional Services team to develop an integrated project plan to address the needs of the City to integrate with all parties of their business.

D.1.3.1. General Requirements

The VENDOR's business architects will conduct a series of workshops designed to work with the City to diagram and document "as-is" and "to-be" business processes. Processes diagrams will be created in Visio or an alternative reasonably approved by the City. The business process review will also incorporate project drivers as identified by the City. Business process workshop will include the following but are not limited to:

- Managing AMI meters into and out of your FlexNet environment (Meter lifecycle)
 - Meter/Module Inventory
 - Meter/Module Deployment
 - Meter Provisioning
 - Meter/Module exchange scenario
 - Meter/Module removal and RMA
- Meter to Bill
 - Meter read data collection by the RNI and delivery the City systems
 - On Cycle Billing Process
 - Exception Process
 - Special Billing processes
 - Off Cycle Billing Process
 - Move In/Move Out
 - Delinquent Account Billing
 - Other City Billing Processes
 - Connect/Disconnect - future
 - Billing Inquiry (e.g.: High Bill complaint)
- Leak Detection
- Meter Alarm handling
- Operational procedures
 - Exception handling

VENDOR will identify potential gaps between solution technology and the City's business requirements. If there are gaps, VENDOR will propose a solution(s) for identified gaps for the City's review.

D.1.3.2. Requirement Gathering Meetings

VENDOR will organize and lead a series of consultative sessions with VENDOR's business architects and Subject Matter Experts (SMEs) and the City's stakeholders. The consultative session will use input from the business process workshops to drive requirement gatherings. These requirements will be documented in a Business Requirements Document (BRD)

VENDOR will schedule and manage design work shops to finalize the BRD.

VENDOR will provide an agenda and identify key personnel. The City will coordinate with identified personnel to support the work shop(s). VENDOR will provide a schedule of all meetings 30 days prior to commencing workshops. Additional meetings may be maybe necessary to fill in any absent information.



VENDOR will integrate these workshops with their subcontractors (ex: SEW) so as to only have one requirements gathering phase per topic area.

VENDOR will be responsible for documentation.

City will review documentation, provide high level comments, and provide final approval.

D.1.3.3. Business Requirements Document (BRD)

VENDOR will create a Business Requirements Document(s) (BRDs). The BRDs will document the business processes that the City will need to put in place to meet its business goals.

The BRD will contain the following elements:

- a. Business drivers identified by the project team.
- b. “As-is” and “to-be” business processes through narrative and flow charting.
- c. Identifying integration points, integration specifications, and solution designs.
- d. The creation of a testing plan, test scripts, and test cases.
- e. Defining project completion.
- f. Defining project success.
- g. Detailed and focused AMI roadmap for the City for both the short-term and long-term.

D.1.3.4. Technical Requirement Documents (TRD)

VENDOR will be responsible for the creation of a Technical Requirements Document(s). The TRD will document the overall interface design for the AMI implementation.

The TRD will contain the following elements:

- a. A review of implementing an Enterprise Service Bus (ESB) for integration of multiple systems.
- b. New and existing data flows needed between all the systems.
- c. Specific data needed and the frequency that the data is needed.

This document will be used as the basis for the following activities:

- a. Software development
- b. Developing test plans, test scripts, and test cases
- c. Determining project completion
- d. Assessing project success

D.1.3.5. SEW Software Planning and Design Activities

In conjunction with the activities described in this phase, the following activities will be led by SEW team for SCM and Smart iQ software implementation.

Phase #1 Planning & Design:

- a. Project Kick Off Meeting – Initial kick off meeting to identify key stakeholders, establish program governance, and agree preliminary project schedule and scope.
- b. Fit Gap Workshops - Fit Gap workshops are specifically designed workshops to review all requirements, business processes, City specific business rules and validations, as well as the user experience to align the SCM solution to the final desired solution.
- c. Requirements Sign Off/Finalization - Requirement sign off and finalization is the requirement review and approval activity which is key to solidifying the scope of work and providing a check point for the project team to validate the scope of work.
- d. Project Plan and Schedule Baseline - Project plan and schedule baseline is intended to be a review cycle for the project leadership team members to validate all scope items and schedule considerations are accounted for before commencing the next phase of the project.



D.2. Phase #2 Project Staging, System Integration, and Network Deployment

In this phase, VENDOR will complete all preparatory tasks reasonably required for the mass deployment of MIUs. This includes personnel training, initial system validation testing, the installation of an AMI network, and the integration, provisioning, and development of IT environments.

D.2.1. Project Staging

VENDOR and City will take the necessary steps to stage the deployment so as not to cause any unreasonable delays.

VENDOR will:

- a. Procure a warehouse facility within Philadelphia.
- b. Transfer appropriate project personnel to Philadelphia.
- c. Develop a high-quality installation workforce that will utilize local workers.
- d. Obtain necessary tools, uniforms, vehicles and other equipment from suppliers and have them delivered to the warehouse.

City will:

- a. Make available initial inventory seed stock of meter register MIU assemblies, ready for retrofit.

D.2.2. Network Design and Deployment

The complete AMI network will be designed and installed prior to mass installations.

D.2.2.1. Network Propagation Study

The VENDOR will be responsible for the design of the AMI network including the completion of propagation studies. The City will assist the VENDOR in determining sites which could be candidates for AMI network components.

Each updated propagation study will:

- a. Be designed for lowest cost of ownership.
- b. Account for the location of MIUs, 6 feet below grade directly on the meter. This assumption will be carried for all meter locations.
- c. Incorporate additional assets provided by the City that may be used for RF Network Equipment installations if not previously identified, i.e. communication pole, substations, offices, distribution line poles, meter locations (e.g. homes, meter vaults, other), etc.;
- d. Identify potential third party assets which may be used for RF Network Equipment installations which are acceptable to the City.
- e. Incorporate data and performance requirements of network devices (ex: MIUs).
- f. Complete network propagation studies in a timely manner, not to exceed 5 weeks.

D.2.2.2. Network Site Survey

The VENDOR will complete a network site assessment prior to the installation of any network equipment. The City will assist the VENDOR in site access. VENDOR will manage the planning and scheduling of network site surveys.

VENDOR will develop a Site Candidate Package (SCP) for each site. Each SCP will include:

- a. Site Evaluation Summary: Contains an overview of the technical information pertinent to preparing the site for the base station installation. Specific details such as the coax cable length,



the antenna location and height, power requirements, and backhaul method are specified in this section.

- b. Candidate Data Sheet: Contains the contact information for the site under review.
- c. Initial Zoning and Engineering Analysis: Information about the appropriate permit applications and fees required to submit the building application.
- d. Site Map Locator.
- e. Photo(s) of network site, before and after installation.
- f. Site Sketch: Initial sketch of the site, showing the location of the power, the pole, etc.
- g. Checklist: A document that tracks the completion of the different sections of the SCP report.

The City will review each site survey prior to providing authorization for the installation of a network device. The City may reject proposed network sites at its reasonable discretion.

D.2.2.3. Network Installation

The VENDOR will be responsible for certain aspects of the Network installation including:

- a. Receiving prior approval, by the City, of installation plans including device mountings, support system, cabling, etc. for each location. The City will review completed documentation within thirty (30) working days.
- b. Installation of all network components, including all hardware.
- c. All necessary site modifications, including providing power, as necessary.
- d. Ensuring that network installations do not interfere with access by City personnel to any part of the building.
- e. Using reasonable efforts to ensure the network devices do not compromise the integrity of any structures to which they are mounted.

D.2.2.4. Installation Documentation

The VENDOR will provide as-built packets to ensure appropriate documentation has been cataloged for every network installation. At a minimum, the VENDOR will provide the following summary information at the conclusion of each install:

- a. Site Location.
- b. Before and after Photo(s) of network site.
- c. Installation method.
- d. Equipment installation location(s).
- e. Proposed power source.
- f. Network equipment type and ID number.

D.2.2.5. Network Device Installation Acceptance

The City will inspect all network devices within 15 days of installation. Should the City fail to inspect the network device within 15 days of being notified of its installation, the City will accept and pay for the network device. However, such acceptance will not relieve the VENDOR of any responsibilities set forth in the Contract or this Statement of Work for curing defects in the installation or performance of the device. The City will be responsible for the cost associated with tamper repairs.

The Device will be accepted if:

- a. The device is properly passing all local MIU reads to the AMI System Monitoring software. The City will install up to 20 twenty - 510 MP MIUs within an agreed upon coverage area.
- b. The device is properly passing correct information about its own diagnostics to the AMI System Monitoring software.
- c. The device meets all installations requirements as detailed in the SOW.



- d. Installation documentation has been provided.

D.2.2.6. Fortuitous Installations

City personnel will opportunistically install AMI MIUs in areas which have been designated as accessible by the network.

D.2.2.7. Communication Failures

Once the Network build-out is complete, VENDOR will monitor the installation of all AMI MIUs and will be responsible for the investigation and resolution of all communication failures, including the installation of additional network equipment and all associated costs (subject to Article VI. Section C.2. of the Contract). The results of each investigation and a corrective action plan will be provided to the City in writing within 14 days. The VENDOR will implement the corrective action plan within 14 days of approval by the City.

D.2.3. AMI System Integration

The VENDOR will provide overall AMI Systems integration including project management and overall delivery of documented and working interfaces.

D.2.3.1. General Requirements

The VENDOR will, as part of system integration for each interface will:

- a. Identify the City personnel and resources, required to support integration and testing.
- b. Manage all requirements gathering, including planning workshops.
- c. Provide documentation of data definitions and all elements exchanged between all integrated systems.
- d. Complete a comprehensive test plan of each interface.
- e. Secure testing acceptance from the City.
- f. Deliver tested and configured code.

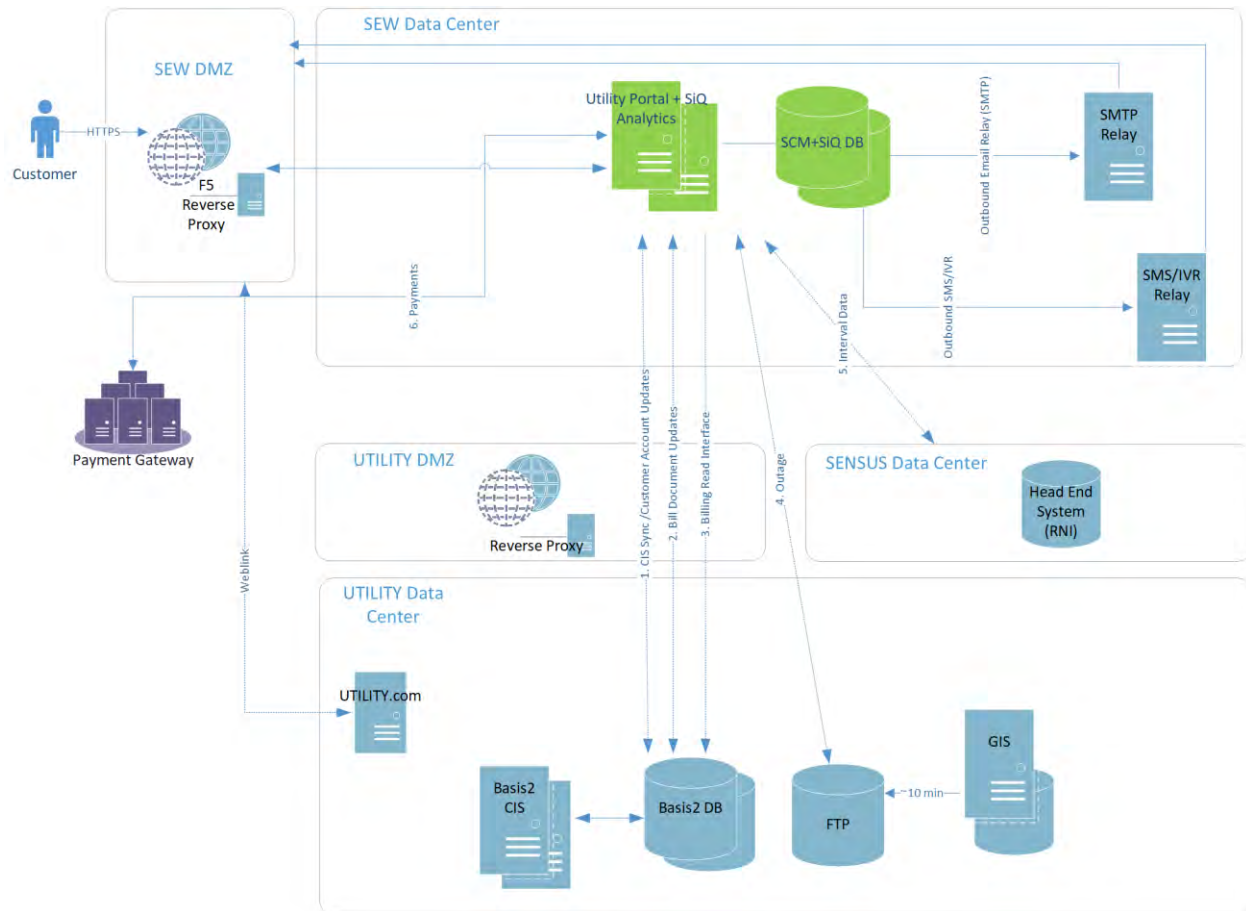
D.2.3.2. Required Interfaces

The VENDOR will integrate at least the following interfaces:

- a. AMI Head-end/ Control System to/from SEW Meter Data Management System (MDMS).
- b. SEW MDMS to/from the City's Basis2 and CIS databases.
- c. SEW MDMS Functionality within the City's Intranet.
- d. Customer Portal Integration w/ SEW Meter Data Management System (MDMS)
- e. Service Link (mobile data work management) and MIU Installation Integration.
- f. VENDOR work order management software to The City's work order database.

D.2.4. SEW Integration Details

SEW Customer Portal and MDMS: The scope of the project includes the system integrations stated in the section below. Customer agrees to ensure integration access with the City's systems identified in the diagram below prior to the completion of the planning phase. The diagram below shows the integration assumptions based on the preliminary discussions between the City and SEW and will be finalized during the Planning/Design phase of the project. Integration to City's source systems and data is dependent on access to said systems, including any API allowances as applicable.



D.2.4.1. CIS sync/customer account updates (Basis2 CIS to/from SEW SCM)

The SCM system will update the customer account profile information for presentation in customer web portal/apps. The data exchange shall be accomplished using a web service provided by the City for the SCM system to query a customer's account information. Alternatively the data transfer shall be accomplished using a secure file transfer protocol (SFTP) multiple times a day.

D.2.4.2. Bill Document Updates

The SCM system shall receive the billing data on daily basis for display of bill summary and PDF bill presentation. The City shall provide the daily bill run data using a secure file transfer protocol (SFTP).

D.2.4.3. Billing Read Interface (SEW MDMS to Basis2 CIS)

The SiQ system shall provide the register read data via an automated once a day secure file transfer protocol (SFTP). Additionally the SiQ system shall provide a MultiSpeak® compliant web service call to request and receive the latest available read. The default configuration will include individual register reads.

The SiQ system shall use the MV-RS file format. The MV-RS file will be created in the CIS and manually uploaded to an ftp/sftp site. The SiQ system will be configured to automatically update the file with reads and place it on the SFTP site for download back to the basis2 CIS. For net billed customers, the MV-RS file will contain records for both registers and the SiQ system will provide the information for each register. As default configuration, the SiQ system will not perform the activity to



calculate a net usage. The aggregation of meter registers can be configured as a customization upon City's request during the design phase of the project.

D.2.4.4. Outage

The SCM system shall receive service outage/interruption information via a high frequency secure file transfer protocol (SFTP).

D.2.4.5. Interval Meter Data (AMI Head-end/ Control System to/from SiQ Meter Data Management System (MDMS)).

The SiQ system will integrate with Sensus AMI Head End System (HES) to:

- a. Import of the current day's readings as well as older reads that were previously missed. Interval and register read data will be received from HES using a CMEP file format transferred by Sensus to the SiQ SFTP server.
- b. Import of meter event data from HES using a CMEP file format or MultiSpeak® methods if available. Specific alarms will be defined between Sensus, SES, and the City.
- c. The SiQ system will integrate with the HES to perform On-Demand reads using MultiSpeak® methods. The Sensus Service Management App will be used to perform Water Valve Management and the business processes for this functionality will be defined during the design workshops.

If CMEP files are used for providing meter data, the files are expected to be delivered daily by a pre-agreed time of the day. The HES may deliver files at multiple times during the day.

D.2.4.6. Payment Gateway –

The SCM customer web portal and the mobile apps shall be configured to allow customers to make payments for their utility accounts. If the City decides to utilize a third party vendor the payment, the SCM web portal and mobile apps shall provide one of the following two options:

- a. Web redirect to the third party vendor portal, or
- b. API based integration for customer to make payment from within the SCM portal/apps if the third party vendor provides web services for payment process. Alternatively, if the City utilizes the SEW payment services, the pre-built SCM web services shall be utilized to provide the seamless experience to the customer for making payments from the portal and mobile apps.

D.2.4.7. SEW Software Planning and Design Activities

In conjunction with the activities described in this phase, the following activities will be led by SEW team for SCM and Smart iQ software implementation.

- a. Configure/Integration - Product configuration and source system integration per mutually agreed business requirements defined in the Project Planning/Design phase.
- b. Environment Validation - Environment validation of integration points and environment deployment designed to ensure all integrations and systems are available for testing.
- c. Scalability Validation - Scalability and performance focused testing within SEW environment to validate the SCM® solution shall meet the projected volume.

D.2.5. Training

D.2.5.1. General Requirements

The following are general training requirements for VENDOR and the City:



- a. VENDOR will provide training to designated City staff and subcontractors prior to the commencement of the field readiness pilot.
- b. VENDOR training will use real data from the City's system and incorporate City use cases.
- c. The City's training will include processes which were identified in the Business Requirements Document (BRD). The VENDOR will have 30 days to develop training sessions based on the BRD.
- d. VENDOR and City will work together to schedule appropriate personnel for training. Training sessions will be a maximum of 15 participants unless otherwise agreed upon.
- e. VENDOR will develop a full training schedule prior to the first training session. VENDORs training schedule should include trainings provided by subcontractors (ex: MDMS or Work order System).
- f. VENDOR will distribute training evaluation forms
- g. VENDOR and City will work together to resolve any mutually agreed training gaps

D.2.5.2. Training Location and Equipment

All training will be performed at City offices and facilities, or in the field in City service territory. The City will make available its current resources which include a computer training room.

D.2.5.3. Training Curriculum and Materials

VENDOR will provide thorough training of City employees required to install, operate and maintain the AMI System and obtain data from it. VENDOR will provide the City with a detailed outline of the objective and content of each training session at least 2 weeks prior to the training session for review and approval. Training materials will be provided to each participant.

The training will include, but not be limited to, the following areas:

- a. AMI System Operation and Management
 - o Minimum of 25 City employees or agents.
- b. Meter Data Management System and Customer Portal
 - o Minimum of 50 City employees or agents.
- c. Field installation of MIUs
 - o Minimum of 30 City employees or agents.
- d. Network Operation and Management
 - o Minimum of 10 City employees or agents.
- e. Access to Meter Database(s)
 - o Minimum of 10 City employees or agents.

D.2.5.4. Training Curriculum Tests

VENDOR's training will include an evaluation of trainees intended to ensure that they have learned the course content and can perform all necessary functions on the system. VENDOR will notify the City of any employees who fail this evaluation, and will provide additional training as required. VENDOR will repeat a training session at no additional cost to the City if over fifty percent of the trainees in a subject have not attained the skills from the training session or fail the evaluation at the end of the training.

D.2.5.5. AMI System Documentation and Training Aids

VENDOR will provide all system documentation and manuals before the commencement of training of City employees and uploaded to the agreed upon document repository.

The VENDOR will provide hard copies and electronic copies of all standard manuals and customized (for the City) written procedures sufficient for complete operation and maintenance – including, but not limited to:



- a. Access to electronic learning tools (including software and video).
- b. Functional and technical specifications for all system components.
- c. MIU Installation, field diagnostics, and repair instructions.
- d. Network component(s) installation, diagnostics, and repair instructions.
- e. System operation, performance monitoring, maintenance, backup and recovery procedures.



D.3. Phase #3 Rollout for MIU Installations

During this Phase, full scale installation of MIUs will commence and continue until the installation targets are reached.

D.3.1. Field Readiness Pilot

Prior to the commencement of full-scale installation, and after the end-to-end system test, the VENDOR will install retrofit register/AMI MIU assemblies on approximately 400 meters initially following the agreed-to procedures, ramping up to 4000 within a single route.

D.3.1.1. General Requirements

- a. The VENDOR will utilize 6-7 crews to install 400MIUs per week.
- b. The VENDOR will monitor the entire system and pilot test criteria for any weak points that could cause a breakdown when full deployment begins.
- c. The VENDOR will continue installs until all system processes and procedures have been successfully tested or repaired and retested.
- d. If the system falters, the VENDOR may in its reasonable discretion or at the reasonable request of the City stop installs and begin troubleshooting the issue. VENDOR will continue with installations after the issue has been resolved.

D.3.1.2. Field Readiness Pilot Test Criteria

After the initial 400 units are installed and a period of no less than twenty (20) business days following it, the City and the VENDOR will evaluate at least the following procedures:

- a. Customer notifications
- b. Scheduling installations
- c. Installation accuracy
- d. Installation data management and transfer between the City's systems.
- e. Inspection process
- f. Meter reading performance over the AMI system
- g. Management of the transition of AMR ERTs to AMI Smartpoints, for example fortuitous installations post network acceptance.

VENDOR and the City will develop a test and acceptance plan covering these areas. The City may require the VENDOR to modify any procedures that it reasonably deems deficient or ineffective. No work will be started on other groups of MIUs until the acceptance of the field readiness pilot, which acceptance will not be unreasonably withheld, conditioned, or delayed.

D.3.1.3. Acceptance Criteria

If 4000 MIUs are installed and there are no Severity 1 or Severity 2 software issues or Network reading issues, then the City will issue a Notice to Proceed to Full Deployment within five (5) business days; except as set forth and subject to the Contract.

D.3.1.4. Acceptance Criteria

The field readiness testing should be jointly completed by a representative of PWD and Sensus utilizing the provided test plans. The following criteria are required for each interface:

- a. There are no Severity Level 1 or 2 errors.
- b. The AMI equipment and software meets the Technical Requirements, Business requirements and System Performance Specifications.



- c. A completed and successful test plan is provided for each test criteria.

If the FRT is successfully completed, the City will give written Notice to VENDOR within five (5) Business Days after the completion of the test. The City may provide notice earlier at its discretion; except as set forth and subject to the Contract.

D.3.1.5. Retesting Actions

In the event that the FRT is not successful or inconclusive, the following actions shall be taken until all functional acceptance criteria are met:

- a. RF Field Equipment (e.g., MIU or DCU) issue, the parties will work collaboratively to remedy the issue and repeat the FAT.
- b. Software for which The City is responsible, The City will correct the problem and repeat the FRT.
- c. Software for which VENDOR is responsible, VENDOR will correct the Severity Level 1 or Level 2 Error(s) and the FRT will be repeated.

The City may require the VENDOR to modify any procedures that it reasonably deems deficient or ineffective. No work will be started on other groups of MIUs until the acceptance of the field readiness pilot.

D.3.2. MIU Retrofit

D.3.2.1. General Requirements

VENDOR will supply all necessary gaskets, screws and connectors for a complete and fully functional retrofitted MIU.

D.3.2.2. MIU Retrofit Seed Stock and Inventory

The City will provide the VENDOR an initial 20,000 inventory of meter register/AMR MIU assemblies.

VENDOR will monitor this inventory daily to ensure that sufficient quantities of tested units are available in inventory so that there is no disruption in deployment activity. VENDOR will have operational and financial accountability for managing and tracking inventory.

D.3.2.3. MIU Retrofit Assembly and Testing Process

VENDOR will be responsible for retrofitting existing meter registers with new MIUs and assuring they are fully functional, ready-to-install assemblies. All assembly and testing should be completed at a separate facility prior to providing any retrofitted AMI MIUs to either the City or to VENDOR's subcontractor.

At a minimum, the VENDOR should complete the following during the MIU Retrofit assembly and testing process:

- a. Track and manage inventory records of the register assemblies.
- b. Remove old AMR MIU and properly dispose of unit.
- c. Test register for functionality by placing the register on a test fixture and rotating the register at least one cubic foot or at least one full rotation.
- d. All non-functioning registers will be quarantined for later review by the City prior to disposal. The quantity and cause (ex: cracked register) will be provided to the City as part of regular inventory reporting. The City will review the quarantined registers at a mutually agreed upon schedule.
- e. Clean register assembly with an industrial washer.



- f. Wire and assemble the register with a new MIU and associated hardware.
- g. Power on the MIU and program the initial read with the register read.
- h. Place MIU on a test fixture and rotate the register at least one cubic foot or at least one full rotation. Read MIU to verify functionality and that the MIU read matches the register read.
- i. Tag successfully tested inventory with starting reading, date, and employee identification number or similar mechanism.

D.3.2.4.MIU Retrofits Lot Acceptance

VENDOR will provide the City with the opportunity to perform a lot acceptance of MIU retrofits prior to field deployment. The City will perform the Lot Acceptance on MIU retrofits received during the prior working week or weekend on Monday or Tuesday of each week. If no formal Lot Acceptance is received by VENDOR, the lot under evaluation will be deemed to have achieved Lot Acceptance by the City for use by VENDOR. The lot acceptance testing will be completed within the City of Philadelphia.

D.3.3. Installation Procedures and Requirements

This section defines the installations procedures necessary to complete a work order.

D.3.3.1.Work Order Management Software

The City will utilize its existing mobile work orders system, Service Link, for City-performed installations. The VENDOR may choose to use a different work order system; however, it will still be required to provide information in the file format currently used by the City.

D.3.3.2.Installation Procedure

After Installer confirms they are at the correct meter, Installer will:

- a. Record all field data currently collected by The City in electronic handheld device, including existing register read.
- b. Photograph the existing meter register and AMR MIU, ensuring that the reading on the register and MIU number is clearly visible in the photograph. The installer may photograph existing site conditions prior to the start of installation.
- c. Install a replacement register/AMI MIU assembly on the meter base.
- d. Verify that the meter and register are functional by running water.
- e. Initialize the MIU.
- f. Confirm that the MIU is transmitting and that the signal from the MIU is being adequately received by the network.
- g. Record the new register reading in a handheld data collection unit.
- h. Install and document tamper seal.
- i. Photograph the new meter register and new MIU number, ensuring that the reading on the register is clearly visible in the photograph.

If an installer discovers a missing meter, disconnected meter, meter installed backward, non-registering meter, or leaking meter, the VENDOR will document this condition (including a photograph) and refer the installation to the City.If an installer discovers a damaged or missing MIU, the installer can proceed with the installation, so long the tamper type is documented and the meter is present, operable (no leaks etc.), and installed correctly. To prevent orphaned installations, installers will not perform work at any location without first receiving a complete and valid work order.

D.3.3.3.Information Provided to Installer

The VENDOR's work order issued to an installer will include, at a minimum:



- a. Address,
- b. Customer name
- c. Account number,
- d. Existing meter number,
- e. Existing MIU ID,
- f. Meter make, model, and size
- g. Existing tamper seal ID.
- h. Last meter reading
- i. Threshold around meter reading
- j. Phone number

The City will provide to VENDOR:

- a. Above information
- b. Notes on account, i.e. bad dog, etc
- c. At a mutually agreeable refresh rate.

D.3.3.4. Information Collected for Each Work Order

All information requested on the work order must be filled out for the installation to be considered complete and eligible for payment.

VENDOR will provide at least the following information and submit electronically for each completed work order:

- a. Account Number
- b. Address
- c. Completion Date
- d. Employee ID
- e. Meter Number and Type
- f. Old register reading and new register reading
- g. Existing MIU ID and new MIU ID
- h. Meter tamper seal ID
- i. Service Line type (copper, lead, galvanized or other).
- j. Whether a separate fire service line is present, and if so, the size of the fire service line
- k. Whether a backflow preventer is present
- l. Water availability, on or off (if the account has been shutoff)
- m. Property occupancy
- n. Other exceptions to completion
- o. Inspection sign-offs
- p. Tamper Code (ex: MIU missing)
- q. At least two (2) installation photographs
 - o One (1) photo of the found register reading and AMR MIU ID
 - o One (1) photo of the new register reading and AMI MIU ID
- r. GPS location captured by work order system at time of completion

VENDOR will be responsible for ensuring that all data transfers to and from City's systems are properly working before commencing any installations. The City desires read-only access to the VENDOR's database and reserves the right to audit the database upon reasonable notice and at a frequency and in a manner that does not unduly burden VENDOR.



D.3.3.5. Remote MIU Installation

VENDOR's system will not require the installation of remotely mounted MIUs in lieu of an integrally mounted AMI MIU (e.g., installations in floor joists above the meter). Exceptions to this installations requirement will be made on a case by case bases by the City. VENDOR will be responsible for any installation modifications.

D.3.3.6. Meter Changes

The VENDOR will not be responsible for replacing missing or broken meters. The City will handle all meter changes.

D.3.3.7. Commercial Accounts

The City will manage the installation of MIUs on commercial meters.

The VENDOR will integrate MIUs as detailed in the SOW attachment Meter Integration Plan.

D.3.3.8. Installation Acceptance

City will conditionally accept each installation upon:

- a. Electronic submission of completed installation and all required documentation, including photographs.
- b. Satisfactory inspection by the VENDOR and the City in the case of anomalies or meters that are part of the City's inspection sample.
- c. Confirmation that installation information has been correctly captured in the AMI control system database and/or the City's project management database for each customer premise.
- d. Confirmation that MIUs are meeting the network reading performance requirements.

If the City does not inspect the installation within ten (10) calendar days of being notified of the installation, then such installation will be deemed by the City to be accepted. However, if the City finds material discrepancies in the conditions of acceptance within twelve (12) months after the date it was notified of installation, the City will notify the VENDOR for corrective work which will be completed by the VENDOR at no cost to the City.

D.3.3.9. Quality Assurance

VENDOR will inspect fifty percent (50%) of all work completed by new hires for a period of five (5) working days from the date the installer begins work in the field ("Initial Period"). Audits of installations by new hires should occur within forty-eight (48) hours of the installation.

After the Initial Period, five percent (5%) of each installer's daily totals will be randomly audited. These audits will be performed within forty-eight (48) hours of the installations.

If an installer is found to have errors on 3% of their installations during any given month, the installer will be removed from the field and retrained. All work performed by that installer during the two (2) days prior to the installer being removed from the field will be audited. If the audit results for those two days show an installation error rate of three percent (3%) or greater, all work done by the installer for that month will be reviewed.

Installers who are retrained and returned to the field will have one hundred percent (100%) of their work audited for five (5) consecutive working days.

VENDOR will resolve all installation errors.

VENDOR will follow auditing procedures as detailed in F.6 Installation Quality Control Procedures.



D.3.4. Installation Appointments, Sequencing, and Scheduling

This section describes the process of engaging customers for appointments as well as the customer notification procedures.

D.3.4.1. Appointment Window

VENDOR will have several shifts Monday through Saturday to accommodate customer availability.

VENDOR will have sufficient coverage during peak access times, 5 p.m. to 8 p.m. Monday through Friday, and all-day Saturday.

D.3.4.2. Call Center Availability

The VENDOR will be responsible for scheduling and handling all installation appointments. The VENDOR's call center will be staffed from 7am to 8pm EST Monday to Saturday.

D.3.4.3. Customer Notification

All procedures must be approved by the City. Each attempt to notify a customer must be documented by the VENDOR.

The text of all VENDOR letters, door hangers, and other communications with customers must be submitted to the City Project Manager for approval at least 2 weeks prior to use. VENDOR will also develop and submit to the City the scripts for any telephone conversations with customers for approval by the City's Project Manager at least 1 week prior to use.

D.3.4.4. Customer Notification Procedure

Gaining access to the meter will be paramount in completing all installations in a timely fashion. The VENDOR may propose any enhancements or modifications to the procedure, which PMA and City will reasonably accept.

The following customer notification procedure is required prior to the return of a work order to the City. City and VENDOR will comply with the following procedure:

- a. The City will coordinate with the VENDOR's installer to provide a customer billing insert or bill message at least four (4) weeks prior to an installation.
- b. The VENDOR will jointly develop with the CITY a three (3) Letter series as part of the customer notification. VENDOR will be responsible for all costs associated with this series including printing, postage, and management of the distribution of these letters. The series includes:
 - o Letter 1 included color brochure, one side print letter with color letter head
 - o Letter 2 includes one side print letter with color letter head
 - o Letter 3 includes one side print letter with color letter head
- c. VENDOR will visit the installation location and attempt to complete the work order. Door hangers will be left at installation locations with uncompleted work orders.
- d. VENDOR will then make three (3) attempts to reach the customer by phone. A minimum of one (1) phone attempt will be made outside of normal business hours.
- e. The VENDOR will then provide a second field visit outside of normal business hours, and a thirty (30) day enforcement notice will be left.
- f. The City will mail an additional thirty (30) day enforcement letter to the customer.
- g. The VENDOR will retain work order for thirty (30) days after enforcement letter is mailed by the City.

VENDOR will document each attempt to notify a customer.

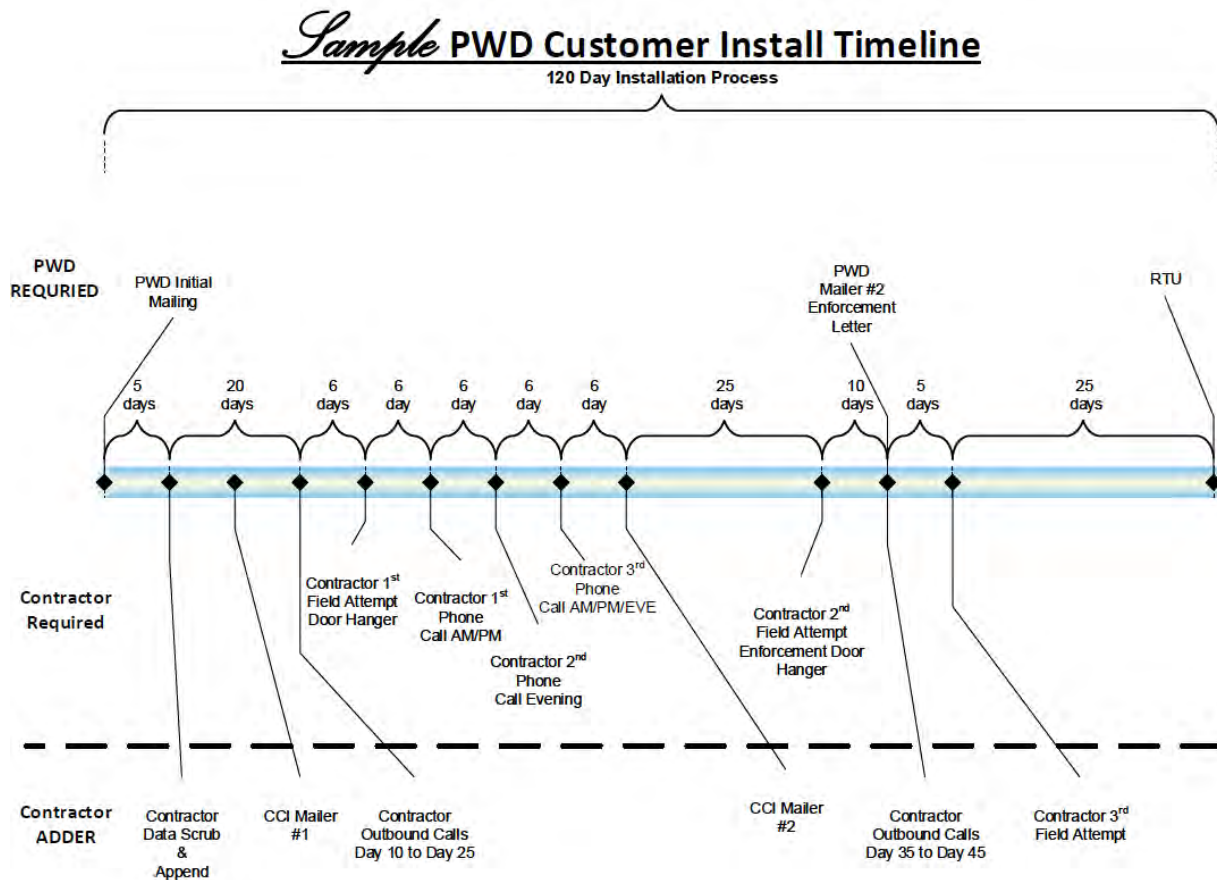
VENDOR will provide notification documentation such as call logs as requested by the City.



D.3.4.5. Enforcement Procedure

After all outreach due diligence has been completed by the install contractor, for any account where an appointment or access cannot be obtained, Sensus/CCI will return these accounts to PMA with a specified code indicating that access was not obtained. PMA will then initiate shut-off activities to include:

- a. PWD will issue a letter (First Shutoff Notice) to the property owner indicating that water could be shut off to the specified location after 30 days from the date of the letter if no appointment is made. The Letter will contain the VENDOR’s Installation Contractor’s phone number.
- b. The VENDOR will complete all installations generated from the Shutoff Notice.
- c. If no appointment is scheduled/completed within the 30-day window, the account will enter in PWD’s shutoff process.
- d. The PWD work order will remain open for 60-Days.
- e. When PWD completes a shutoff work order, PWD will leave a notice with PWD’s phone number. Appointments generated from a shutoff will be completed by PWD during the restoration of water service.



D.3.4.6. Account Owner Requests and Authorizations

The owner of a water account may authorize the VENDOR to make an appointment with an adult (age 18 or over) occupant. VENDOR will document such authorization. Customers who have multiple



meters will be given the opportunity to schedule the installation of replacement register/AMI MIUs on all those meters in a short period of time, provided those meters are located near each other.

D.3.4.7. Appointment Scheduling

VENDOR will be responsible for scheduling and handling all installation appointments within a two (2)-hour window. Whenever possible, VENDOR will notify customers of any changes in schedule at least 1 day in advance of the original appointment.

The VENDOR's installer will call ahead thirty (30) minutes before arrival whenever possible. At the very least, after completing one appointment, the VENDOR must call the next scheduled customer and tell the customer an approximate arrival time.

D.3.4.8. Failed Attempts

VENDOR will notify the City if it is unable to secure an installation appointment with a customer. VENDOR will be responsible for installation if the City secures an appointment within thirty (30) days of receiving written or electronic notice that the VENDOR could not access the property or secure an installation appointment.

D.3.4.9. Available Installation Area(s)

The VENDOR will conduct MIU installations by existing meter reading route. Each route averages approximately 8,000 accounts, and there are approximately 60 routes. The VENDOR shall be provided with seven (7) Routes prior to the MIU Installation Commencement Date.

The City will not provide the VENDOR with an additional Route until 80% of an initial or additional Route has been completed.

On the first business day of each week, the VENDOR will provide the City an updated schedule of where work is planned for the next three (3) weeks.

D.3.5. O & M During Deployment

VENDOR to follow applicable O&M requirements detailed in Section E during the Turnkey Installation Term. Additional support will be provided by VENDOR during the Turnkey Installation Term intended to ensure all project requirements are met.



D.4. Phase #4 Acceptance Testing

In addition to the miscellaneous testing requirements set forth in the SOW, there will be three levels of acceptance tests performed at various stages throughout the project, as set forth below.

D.4.1. Interim Functional Acceptance Testing (FAT)

Under this task, the VENDOR will finalize and demonstrate system integration with a small-scale pilot with a mutually agreeable number of accounts. Sensus may require that PMA, City, and PWD install the MIUs for the FAT testing. The purpose of the FAT is to test and evaluate the end-to-end functionality of the AMI System to determine if it conforms to the Technical Requirements, Business Requirements, and System Performance Specifications. General Requirements

The VENDOR for each interface will:

- a. Identify the City personnel and resources, required to support testing.
 - o Part of Workshop BRD & TRD deliverable D.1.3.3/4
- b. Complete a comprehensive test plan of each interface.
 - o Part of Workshop BRD & TRD deliverable D.1.3.3/4
- c. Secure testing acceptance from the City

The City will review and reasonably approve the testing plan.

D.4.1.1. Required Interfaces

The VENDOR will test the integration of the following interfaces:

- a. AMI Head-end/ Control System (RNI) to/from SEW Meter Data Management System (MDMS).
- b. SEW MDMS to/from the City's Basis2 and CIS databases.
- c. SEW MDMS Functionality within the City's Intranet.
- d. Customer Portal Integration w/ SEW Meter Data Management System (MDMS)
- e. Service Link (mobile data work management) and MIU Installation Integration.
- f. Service Link / Field Logic work order management software to The City's work order database.
- g. Additional information technology identified as and mutually agreed to be critical during the design and programming phases.

D.4.1.2. Release Notice to VENDOR

Upon completion of the integration of all required interfaces and the installation of a mutually agreeable number of accounts, the City will issue a written Release Notice to VENDOR to proceed with the Interim Functional Acceptance Testing (the "FAT").

D.4.1.3. Acceptance Criteria

The functional acceptance testing should be jointly completed by a representative of PWD and Sensus utilizing the provided test plans of each interface. The following criteria are required for each interface:

- a. There are no Severity Level 1 or 2 errors.
- b. The AMI equipment and software meets the Technical Requirements, Business requirements and System Performance Specifications.
- c. A completed and successful test plan is provided for each interface.

If the FAT is successfully completed, The City will give written Notice to VENDOR within ten (10) Business Days after the completion of the test. The City may provide notice earlier at its discretion.



D.4.1.4. Retesting Actions

In the event that the FAT is not successful or inconclusive, the following actions shall be taken until all functional acceptance criteria are met:

- d. RF Field Equipment (e.g., MIU or DCU) issue, the parties will work collaboratively to remedy the issue and repeat the FAT.
- e. Software for which The City is responsible, The City will correct the problem and repeat the FAT.
- f. Software for which VENDOR is responsible, VENDOR will correct the Severity Level 1 or Level 2 Error(s) and the FAT will be repeated.

PWD may reasonably require retesting of any tests for which it determines the test results are unclear. Sensus and PWD will prioritize any retesting required due to unclear/failed test results as not to cause any delays.

D.4.2. Field Readiness Test. (FRT)

VENDOR will follow the requirements as detailed in D.3.1 Field Readiness Pilot

D.4.3. SEW Software User Acceptance

After the successful completion of the Field Readiness test the SEW Software User Acceptance can begin provided that a mutually agreeable number of installs have been completed and PWD Project resources are available. The user acceptance tests will be conducted by both a member of PWD and VENDOR. The testing will incorporate both technical and business requirements identified during the planning phase D.1.3.3/4 The following activities shall be conducted for the SEW software components.

D.4.3.1. Phase 3 – Test

- System/Quality Assurance Testing - Quality assurance testing of all defined business requirements and the designed solution intended to ensure end to end functionality is working as desired.
- SES Acceptance Testing - SEW acceptance testing focused on end user experience.
- The City Functional Testing- Testing conducted by The City to confirm business requirements in scope and validate that the system is working as desired.
- User Acceptance Testing – The City User Acceptance Testing to test the end to end solution from The City’s customers and The City perspective.
- User Training - User training for The City Customer Service and internal team members on the Customer Service solution and how to best support The City’s Customers with the tool.

D.4.3.2. Phase 4 – Deploy

- Product Deployment - Deployment of SCM and any necessary source system changes into the production environment.
- Knowledge Transfer - Knowledge transfer of configurations required in The City systems and documentation review of changes with The City support team.
- SES Production Verification - Production environment validation of all functionality after product deployment to ensure the product was deployed successfully.
- The City Production Verification – The City production verification of all functionality after product deployment to ensure the product was deployed successfully.



D.4.3.3. Phase 5 – Stabilization

Post Go Live Stabilization – Four weeks of production stabilization immediately following Go Live. During the Post Go Live Stabilization phase, the SEW project team shall remain available and early live support as needed to address any product related issues. The issue resolution process shall follow the Run.

D.4.3.4. Acceptance Criteria

The functional acceptance testing should be jointly completed by a representative of PWD, and VENDOR utilizing the provided test plans.

- a. The AMI software meets the Technical Requirements, Businesses Requirements, and System Performance Specifications.
- b. Completed and successful test plan documentation is provided.
- c. Assembly and delivery to the City of all records, training documents and all other documents required in this agreement pertaining to the AMI MDMS Software.

Upon completion of the activities stated herein, the SEW SCM and Smart iQ User Acceptance testing shall be deemed to be accepted and shall be launched in production environment.

D.4.4. Final System Acceptance Testing

Three (3) to six (6) months prior to completion of the full deployment, VENDOR and The City will mutually agree on a plan to begin the Final System Acceptance Testing (the “FSAT”). The purpose of the FSAT is to confirm the AMI System performs in conformance with the Technical Requirements, Business Requirements, and the System Performance Specifications and all required work has been completed as detailed in the SOW. The final acceptance tests will be conducted by a member of PWD, VENDOR, and SEW.

D.4.4.1. General Requirements

The final system acceptance will begin following the notice of completion for the Turnkey Installation and the completion of a Final System Acceptance Testing plan. The test will run continuous for at least a 30-day period.

- a. The City will generate a punch list of unfinished or noncompliant work. If, at any time during the City’s evaluation of the unfinished or corrective work required by the punch list, the City discovers that additional corrective work is required, the City may include that corrective work in the punch list. The City will meet with the VENDOR until all punch list items are corrected. The City and the VENDOR will meet 30 days prior to the expected completion of the Turnkey Installation phase to begin the development of a punch list. The City will provide a punch list of unfinished or non-compliant work within 30 days of notice of completion of the Turnkey Installation phase by VENDOR.

Notwithstanding anything to the contrary, no party may include any requirement in any punch list (however referred to) that contradicts or is in addition to the other party’s obligations under the Contract or this Statement of Work.

D.4.4.2. Acceptance Criteria

The final acceptance testing should be jointly completed by a representative of PWD, VENDOR, and SEW utilizing the provided test plans. Acceptance will be based on the following criteria:

- a. VENDOR’s assembly and delivery to the City of all records, documents, material certifications, maintenance and services agreements, operating manuals, and all other



- documents required in this agreement. VENDOR shall provide all customer contact information gathered during the turnkey installation phase.
- b. The City's punch list of unfinished or noncompliant work is corrected
 - c. AMI System performs in conformance with the Technical Requirements, Business Requirements and the System Performance Specifications of the AMI System as set forth in the SOW.
 - d. Completed and successful test plan documentation is provided.



E. O&M Services Term

This section of the Statement of Work describes the detailed process that occurs after System Acceptance and during the O&M Services Term. The VENDOR shall provide continued support for the AMI system, software, and equipment for the duration of the contract term.

E.1. Hosted and Managed Software

E.1.1. General Requirements

For all hosted software applications, the VENDOR shall at a minimum:

- a. Provide access to the City's AMI generated data and related applications on production and test systems for the City and its customers.
 - o VENDOR will install a second identical environment for development or testing. This test environment replicates the production environment in order to test any updates or changes prior to implementing them on a production environment. When the change process has been tested and approved by the City, the necessary tasks are performed on the production environment.
 - o VENDOR will configure the test and production environments so that both systems receive all on-air messages in real time.
 - o The Headend system shall be configurable to feed more than one MDM system.
- b. Make system features available to the City users through web access.
- c. Manage hardware and third party software compatibility; provide version control; and implement and test upgrades and patches, as required. Acquire all licenses for third party products required to maintain the applications.
- d. Ensure the continued integrity of all interfaces between all applications and the City Basis2 billing system when applications are patched or upgraded.
- e. Troubleshoot issues impacting system performance or accessibility.
- f. Maintain data and data center security.
- g. Back up and archive the City system data and restore it in the event of a system crash or failure.
- h. Monitor and provide reports on key performance indicators.
- i. Application development services, which include creating or assisting the City in developing application programming interfaces, features, and functionality, requested by the city outside of the Sensus Software Development Life Cycle (SDLC) would be handled via a separate SOW with Sensus Professional Services. Custom reports are included in the services provided under this agreement.
- j. Maintain an FTP site which will be used to post system files and reports.
- k. Provide software maintenance, including patches, updates and upgrades. Updates shall be scheduled with the City.
- l. Provide support in the event the City opts to cancel the managed services agreement.

E.1.2. Data Centers and Communication

All data centers used to support City AMI system and data, including any disaster recovery data centers, shall be located in the United States. Any third-party data centers used to support the City system must comply with all of the requirements of this section. No third-party data centers shall be used without prior written permission of the City.



E.1.3. Database Maintenance

VENDOR shall be responsible for the maintenance, operation, and data integrity of all hosted databases. Applicant shall:

- a. Run routine diagnostics for data corruption and abnormalities, security flaws, duplicate records, and other issues that could compromise database integrity.
- b. Monitor data and log file size to maximize response time to queries and file requests.
- c. Run all procedures on a schedule designed to minimize interference with user access.

E.1.4. Problem Analysis and Resolution

The City will provide reasonable resources to assist VENDOR in problem analysis.

All findings, including root causes and resolution, related to the AMI System and System components performance will be reasonably shared with the City.

E.1.5. Backup and Disaster Recovery

On at least an hourly basis, the VENDOR shall synchronize the City data to a disaster recovery database. VENDOR shall provide the following service levels:

- a. Four (4) hour recovery in the event of a system or database failure.
- b. One (1) hour synchronization of the City data to a disaster recovery database.
- c. On a weekly basis, the VENDOR shall back up the system and the City data to a secure off-site facility.
- d. Annual disaster recovery tests to ensure continuity of the disaster recovery process, with the results reported to the City.
- e. Maintain a disaster recovery plan, which will be made available for review by the City.

E.1.6. Reporting

The VENDOR shall deliver reports to FTP site or by other means agreed upon with the City. The VENDOR shall generate reports of any software patches or upgrades.

At a minimum, the VENDOR shall provide a monthly report of the following key performance indicators for each of the software components:

- a. System uptime and availability (including percentage of uptime)
- b. System utilization statistics related to speed of response to queries and operations
- c. Restarts, database server dead locks, and other incidents
- d. Normal maintenance downtime



E.2. Network Operation and Maintenance

The VENDOR shall provide services sufficient to maintain the meter reading success rates and redundancy performance requirements.

E.2.1. General Requirements

Under this arrangement, the VENDOR shall at a minimum:

- a. Continually monitor the performance of the Network and Network devices (ex: MIUs)24/7/365 and reasonably respond to and resolve any network issue.
- b. Provide maintenance (materials and labor), including preventive maintenance for network devices which includes replacement of any failed TGB components, cleaning and inspection, and diagnostic testing along with the day-to-day operations management,
- c. Perform routine field preventative maintenance (physical maintenance and RF analysis)
 - o Visit base station(s) twice a year
 - o Report of visits plus maintenance logs are stored in a ticketing system
 - o VSWR and DTF testing of antenna system
 - o Inspection of antenna system
 - o Inspection of exterior and interior of cabinet including GPS system
 - o Power monitor and measurement
 - o Software inspection and confirmation
 - o Completion of checklist and reporting package with update of site photos
 - o Interference and noise mitigation checks are performed
- d. Patch and/or upgrade the firmware (locally and remotely) of network components, including software as needed utilizing standard KPIs for performance & capacity management (storage, cpu, memory, security, etc.)
- e. Identify and secure replacement sites for network components should existing sites become unavailable. This includes the removal and installation of network equipment at a new site.
- f. Subject to Article VI. Section C.2. of the Contract, install additional network appurtenances (DCUS, repeaters, etc.) to maintain system performance should ambient conditions change or network performance deteriorate.
- g. Maintain backhaul communications. This includes dealing with common carriers (e.g. cell phone service providers) and City Agencies (if City Facilities are used to provided communication backhaul) to resolve issues, reset modems etc.
- h. Promptly pay communications carriers and energy providers for the costs of communications, energy and payment of fees for 3rd party site lease and cost of electricity to base station
- i. Maintain licenses, leases, agreements, and certificates as needed for all network components, including software and network design documentation
- j. Replace or upgrade any failed or obsolete equipment. Obsolete defined as no longer supported by Sensus.
- k. Provide advanced notice to access city sites for maintenance or repair, to the appropriate City Managers of said City sites, facilities, or infrastructure at which network devices are placed.
- l. Subject to Article VI. Section C.2. of the Contract, plan for and modify the network (such as adding data collectors) to maintain the system performance requirements following agreed upon change management procedures to ensure that modifications to the network are authorized, tested, approved by the City, and properly implemented and documented.
- m. Be responsible for any and all material interference and mitigation of RF spectrum including filing complaints with the FCC to stop any unlawful or harmful interference with the Spectrum and the performance of any RF analysis.
- n. Provide network optimization channel management and frequency management, meter tuning, security management update including cybersecurity.



- o. Provide direct priority technical support and disaster response support

The City shall be responsible for damaged/vandalized equipment and any increase in service territory.

E.2.2. Performance Requirements

The VENDOR shall maintain the Performance Guarantees set forth in the Contract.

E.2.3. Network Performance Investigations

The City shall have the right to require the VENDOR to investigate, diagnose, and resolve any material, clustered communication failures between the network and network devices.

All findings, including root cause and resolution, related to the AMI System and System components performance shall be reasonably shared with the City.

The City will provide reasonable resources to assist the VENDOR in problem analysis.

E.2.4. Response Times

Field dispatch to occur within 2 business days of identified issue. Resolution to occur within 1 week or as soon as reasonably practicable, unless mutually agreed upon between VENDOR and the City. Extensions will be made in writing and will not be unreasonably withheld by the City.

E.2.5. Key Performance Indicators

At a minimum, VENDOR shall provide a monthly report of the following key performance indicators:

- a. System uptime and availability (including percentage of uptime)
- b. Collector availability as percentage of uptime
- c. Backhaul availability as percentage of uptime
- d. Five (5)-Day billing read, daily read rate, 24-hour interval read rate
- e. On-demand request performance success rate and total requests.
- f. Redundancy report: the number of MIU transmissions received by zero (0), one (1), two (2), and three (3) or more data collection devices
- g. MIU performance, including number of MIU not reporting versus number of days not reporting

E.2.6. Additional Uses

The network shall not be used for any other applications or services to third parties without prior written permission of the City and demonstration of no harm to the integrity and performance of the City's AMI System.

The VENDOR as part of the Network Operation and Maintenance shall support the integration of additional network devices including IOT devices, sensors (ex: leak detectors) and other devices as needed within a mutually agreed upon time frame and as mutually agreed by the Parties. The data collected from these devices should be provided to the City through the RNI database or other as otherwise determined by the City and supported by the VENDOR.

E.3. MIU Maintenance Agreement

E.3.1. General Requirements

Under this arrangement, the VENDOR shall at a minimum:

- a. Monitoring of the City's MIUs to ensure sufficient transmissions from these devices are being received to comply with the reading success rate



- b. Staffing resources to perform field investigation / troubleshooting of MIUs which are not functioning or require maintenance.
- c. Providing the City with field investigation / troubleshooting reports
- d. Provide a local facility for the City to drop off failed units. SEW Software

E.3.2. SEW Software Operations and Maintenance

The SCM software systems shall be supported during the term of agreement per the terms stated in Exhibit N (Software) and Exhibit O (Technical Support).

E.4. Opt-Out Provisions

Should the City be required to transition/cancel any optional services, the VENDOR will develop a Scope of Work that includes the activities to support the Opt-Out transition. The City will be responsible to secure all server hardware and third-party software required to implement the transition.

E.5. Software Hosting and Management

E.5.1. General Requirements

The VENDOR shall:

- a. Assign a Project Manager, a Business Consultant, and a Technical Consultant for two to three months as outlined in the project plan and assign normal professional service rates to those persons. Modify system design documents and processes and procedures documents, including test plans, to reflect the architectural and dataflow changes, server hardware requirements, and third-party software requirements.
- b. Modify system design documents and processes and procedures documents, including test plans, to reflect the architectural and dataflow changes, server hardware requirements, and third-party software requirements.
- c. Train a minimum of 5 City employees or agents in proper system operations and maintenance of all system software and hardware; all technical equipment network component and MIU monitoring and office-based measures to correct problems.
- d. Create a data migration plan to ensure the integrity of historical data.
- e. Install and configure the software at the City-defined location.
- f. Provide the City with the System Acceptance documentation, transferring operational and maintenance responsibilities.



F. Attachments



F.1. Technical Requirements

A.1.1 General Requirements	
Item	Description
Read Success Rate	<p>Network Redundancy – greater than 90% of the meters are covered by two or more sites. No repeaters are used. (A.2.3.3)</p> <p>This spectrum is 100% primary-use for the City of Philadelphia Water Department</p> <ul style="list-style-type: none"> - Inbound RF frequencies operate at 901/932/928 MHz. - Outbound RF frequencies operate at 930/940/941/959 MHz.
Component Firmware	<p>In a Software as a Service (SaaS) environment, all patches will be completed by Sensus® via our two-way communication system.</p> <p>All firmware releases, upgrades, and patches are available to any Sensus customer.</p>
Production Capacity	<p>Sensus has analyzed the deployment schedule, and all system components (meters, SmartPoints, Base Stations) fit into Sensus’ standard production capacity.</p> <p>Following is an estimate of annual capacity:</p> <ul style="list-style-type: none"> - iPERL® meter – 1.5 million - ally™ meter – 27,000 - M400B base station – 700 - R100 – R100NA base stations – 2,000 - 510MP SmartPoint® – new product – will most likely share capacity with 510M - 510M SmartPoint– 300,000 (dependent upon TC/3W mix) - 520M SmartPoint – 1.2 million (dependent upon TC/3W mix)
Software Changes	<p>It is Sensus’ policy to make no changes in the software, firmware, or hardware design of components of its SmartPoints, DCUs, or repeaters that Sensus provides to the City without prior testing and verification for the duration of the warranty period.</p> <p>Sensus tests for backward compatibility with all new software and firmware updates. It is a standard practice to inform all stakeholders.</p> <p>Should a change in the software, firmware, or hardware design of components of its SmartPoints, DCUs, or repeaters cause incompatibility or loss of full functionality, Sensus will engage with its local contractor to resolve the situation.</p>



A.2.1 Overall System Characteristics	
Item	Description
Elapsed Time (Latency)	On-demand reads are processed within 30 to 90 seconds.
Data Transmission Accuracy, Integrity and Security	<p>End-to-end integrity of data and communication of data within the system is a key component of the security model used throughout the system.</p> <ul style="list-style-type: none"> - Beginning at the endpoints, we achieve physical integrity of the devices through physical locks and seals. We also validate the integrity of the firmware installed in the endpoint through the meter’s cryptographic key and CRC checks to ensure the image is valid and has not been altered during transmission. - We safeguard integrity of the communications to and from the endpoint via authenticated messages that use the endpoint’s unique cryptographic key and the AES-CCM algorithm. This approach is intended to ensure that communications originate from the head end system and have not been altered during transmission. - Communications with the meter include a time-based quantum to prevent replay attacks or retransmission of communications. - Devices along the communication path include the FlexNet Base Station (DCU), which is a store-and-forward device; it needs no specific integrity controls because it does not perform processing of the messages it handles. To prevent local or remote logical access, we employ authentication and authorization mechanisms. Local or remote access to the system requires a username/password combination that can be integrated with a radius or LDAP back end to maintain only authorized access to the system. We secure and validate communications from the base station to the head end system via an SSL VPN. This reasonably ensures the integrity of the communication across an IP-based backhaul network that can be public. - We secure physical and logical integrity of the base station through locks and seals to reasonably prevent unauthorized physical access. - The head end system stores information and initiates communications for field devices. Integrity of this system is critical. Physical integrity of the servers that comprise the head end system relies on locked cabinets inside a secure data center. - Logical integrity of the head end system relies on several key controls. Authentication and authorization provide for role-based access control, which enables control of critical functions (administration, communications, and security). In addition, we secure access to the system with encryption (SSL) intended to ensure that communication with the system cannot be tampered or altered to manipulate data.
Interoperability	<ul style="list-style-type: none"> - Subject to the Exhibit R and the requirements of Article III, Section C.2, VENDOR will integrate New Water Meters following PMA’s request. <p>If integration is not viable, Sensus should provide technical documentation detailing the reason integration is not possible and suggested steps.</p> <p>Integration will be completed within 8 months of data exchange between meter manufacture, City, and Sensus.</p> <p>Typical Timeline:</p> <ul style="list-style-type: none"> - Legal/Business; NDA, Scope and Scale – 1 Month - Technical Discovery & Architecture – 2 months - Implementation – 3 months



A.2.1 Overall System Characteristics	
Item	Description
	<ul style="list-style-type: none"> - Quality Validation & Regression – 2 months - Factory and Field Implementation – 1 month <p>Sensus will make available to the City and Vendors of their choice a requirements document for integration of currently available smartpoints. The document will be provided upon request by the City. The City will be responsible for requesting the latest version.</p>
Alarms	Meter and Smart Point Alarms to be transmitted Immediately.



A.2.2 Meter Interface Unit (MIU)		
RFP Section #	RFP Section	Description
A.2.2.2	Time Synchronization	<p>Every minute the base station sends out communication to the SmartPoint to verify time synch. This communication keeps the SmartPoint clock synchronized to within one second of network time enabling true top of the hour reads.</p> <p>Should the endpoint fall into LAT (listen after talk) mode, then the head end system will send out a message on a predefined schedule to the endpoint with a time synch code for the SmartPoint to verify that it has not drifted, or if it has, to correct itself.</p>
A.2.2.3	Communication with the MIU	<p>The head end system can send, along with time synchronization, many commands including:</p> <ul style="list-style-type: none"> - On Demand read requests - Firmware updates - Configurations including <ul style="list-style-type: none"> o alarm thresholds o radio parameters •future functionality - Encryption - Remote disconnect/reconnect (available with ally meter)
A.2.2.6	Mobile Operation	Sensus' SmartPoint can be read in both mobile and fixed mode, and can be easily converted from one to the other with no revisits to the SmartPoints.
A.2.2.9	Tampering Notifications	<p>Water Meter/SmartPoint Tamper Detection Types</p> <p>Tamper Exception Report (510M and 520M only) The Tamper Exception report is generated if tampering is detected at the transmitter or at the wire between the meter and transmitter.</p> <p>Meter and Endpoint Mismatch Detection The system offers a Meter Mismatch report and a SmartPoint Mismatch report. The Meter Mismatch report alerts the utility if the register ID at the premises does not match what is listed in the CIS billing system. The system does not apply the reading to the account unless the register ID matches what is recorded in the CIS system.</p> <p>Cut Wire Detection (510M and 520M only) The system also reports disconnected from encoded registers or cut wires via the Bad Read report. The system reports the actual reading from the register at the time of reading, or no reading at all. This prevents the SmartPoint from reporting a different reading than what is shown on the register face. The SmartPoint can transmit the SmartPoint ID and the register ID over the air. This reasonably ensures that tampering or incorrect paperwork does not result in readings being delivered to the wrong account due to an incorrectly recorded SmartPoint ID/register ID association. The FlexNet system specifically reports any SmartPoint/register association that does not match what is in the City's billing system database, and does not apply a reading to an account when the register ID does not match.</p>
A.2.2.10	Meter Register Number	The SmartPoint module will store the Badger Meter number or any other register from any other manufacturer during the activation process. The SmartPoint can automatically capture the register number if transmitted in the reading string during the activation process, or the information can be programmed from the work order database.



F.2. System Performance Specifications

Topic	Performance Requirements
Latency	The maximum latency for Available Endpoint meter readings to be populated in the MDMS will be 8 hours.
Interface to CIS and MDMS	The HES will automatically transfer appropriate data to the MDMS in a standard, nonproprietary format (e.g., fixed field ASCII) compatible with the The City's existing formats. Each record provided to the MDMS will contain at a minimum: account number, MIU ID number, port number (if the MIU is multi-port), meter ID number and/or meter register number, meter readings, date and time for each meter reading, and tamper alarms.
System Administration and Security	The HES will authenticate and authorize users of the system through user login names and encrypted and masked passwords, configurable role and function-based control to limit access to data, limit access to software functions and features of the system. The HES will provide for traceability and through user audit logging
Reports	<p>The HES supports the following reports:</p> <ul style="list-style-type: none"> o Avg SNR vs. Overall Throughput o Distance to Closest data collector vs. throughput o SNR vs. Missing Data (MaxRG) o SNR vs. Hours Stale o SNR vs. mPass Client Count o Stale Meter Histograms o Individual Meter Statistics Plots and o Exception Reports o Distance to FlexNet DCU o Average SNR, 2s SNR o Average Signal, 2s Signal o Average Noise, 2s Noise o Throughput o Gap Analysis o Number of Received Messages o SNR Histograms o Time Between Transmission Histograms o Signal Metrics o Throughput History Graphs o SNR Time Plots o General Message Time Plots o Network Status Reporting o FlexNet DCU Status (Availability) o Overall System Statistics (Service Level Agreement Metrics, e.g., Read Success Rate)
On-line storage	The MDMS system will maintain two years of "live" (that is, instantly accessible) data assuming meter reads with at least one-hour intervals. Additional years of daily reads for all the The City's meters stored off-line (archived), with ability to request a restore of archived data back into production system. Request would be made by meter for data restore. The "live" data period can be extended by adding extended data storage service.
Analysis of Usage	Identification of low flow rate leaks (e.g., extended periods when interval reads are always above zero or consumption anomalies above user defined thresholds by meter.



Topic	Performance Requirements
Analysis of Usage	Identification of continuous high consumption events above user defined thresholds by meter, then send an alert and have the ability to generate a report
Analysis of Usage	Identification of usage on inactive meters, then send an alert and have ability to generate a report.
Analysis of Usage	Identification of usage on meters that have been shut for non-payment, then send an alert and have ability to generate a report.
Analysis of Usage	Identification of intermittent backflow situations on meters, then send an alert and have ability to generate a report.
Analysis of Usage	Identification of no change in registration (zero or low consumption) for a configurable number of days on meters, then send an alert and have ability to generate a report.
Analysis of Usage	Identification of meters where usage violates temporary restrictions (e.g., apparent outdoor irrigation usage during non-allowed times or days), then send an alert and have ability to generate a report.
Analysis of Usage	Provide reports that show profiles by season and day (i.e., weekday, weekend, month, holiday, etc.) and by rate class, customer type, and any user-specified collection of meters.
Analysis of Usage	Combine consumption from two registers of a compound meter for presentation and reporting.
Analysis of Usage	Provide a report that identifies potentially underperforming meters.
Analysis of Usage	Provide consumption histograms and or other reports to help right size meters.
System Event Reporting and Tamper Management	<ol style="list-style-type: none"> 1. Provide reports that identify meters in a billing cycle that are missing reads and invoke read requests. 2. Rules will be created and scheduled to automatically run prior to a billing cycle to validate completeness of the billing cycle, and other reports will provided that identify unbilled meters.



Topic	Performance Requirements
Reporting	<ol style="list-style-type: none"> 1. User Specific Dashboards will be configured by User Role and provide concise information to the user allowing them to review, monitor, analyze and take actions as appropriate to their job functions. 2. Reports are configured by end users, this will be done by selecting dates, meters and/or filters to define what information the report shows. 3. Some reports will be scheduled to run automatically on a periodic schedule. These reports will be emailed to requester or available in a defined directory. 4. Administrative users will generate reports by identifying an existing report and pre-configuring the setup parameters, or by defining a SQL query, then registering the new report. These user-created reports are known as Registered Reports. They will be saved and added to the user interface menus, with permissions assigned by Roles. 5. Reports can be printed or exported to PDF or Microsoft Excel. 6. A metadata model will be available to support a third-party reporting tool.
Notification Support	MDMS will provide data files used to generate filed service work orders that will be provided to Customer's work management system via SFTP file transfer.
Notification Support	MDMS will provide functionality or tools to group, prioritize, filter, and send the system generated alarms and events as email messages or text messages to predetermined email addresses, text pagers, and cellular text messages.
Notification Support	MDMS will provide a data files for outbound dialing with messages concerning possible leaks, unauthorized irrigation, etc.(list will be agreed upon during project).
Data Validation and Exception Handling	The MDMS will have a VEE process to selectively fill gaps and fix data anomalies, and selectively present certain validation exceptions for manual review based on user configurable parameters.
Data Validation and Exception Handling	MDMS application suite will provide an online help function with context sensitive materials to help users understand and use the applications. Errors in the application will display the necessary information to assist users and s support personnel to easily identify the cause of the error. The MDMS application incorporates descriptive instructions for each end-user roll input point. User guides and manuals are also made available to all customers and end-users of the application. All system actions performed whether manual or automated are tracked for data integrity and audit purposes and associated with the username of the account that initiated them.
User Environment	The MDMS application suite provides time outs (automatic logout function) after a period of inactivity. This time out period is configurable.
System Configurability	MDMS application data validation and estimation rules can all be configured.
Data Synchronization	Synchronization between (CIS) the system of record with the MDMS will be nightly or as scheduled by The City.



Topic	Performance Requirements
Log in and Passwords	Customer Portal provides single sign-on (SSO) for a seamless user experience. It also supports a configurable user interface that allows for branding of the site to closely match a utility's existing website.
Log in and Passwords	Customer Portal provides functionality allowing a customer to initialize an account for access using address and account number. Initializing a customer account will require no involvement of The City staff. Customers are able to self-register and complete the registration process upon receipt of an automated email generated by Customer Portal.
Log in and Passwords	User password policy/rules will be set up via the Customer Portal administration portal. These rules will be determined during the project.
Log in and Passwords	Customers will receive a registered email if they request a password reset, in the event of lost user name and/or password. The customer is required to enter their email address they used when they registered their account. This process does not require CSR involvement unless they do not remember the emailed address they used during registration.
Log in and Passwords	The software will provide for functionality for the The City staff to manage forgotten usernames and passwords.
Multiple Meters and Accounts	Customers can access and view all contract accounts and meters they are responsible for, with a single registered user account in the portal solution.
Multiple Meters and Accounts	Where a meter has more than one register, the Portal will aggregate the consumption into a single view.
Customer Display	The portal will display all account, address, and meter information relating to a particular customer, as defined during design.
Customer Display	The portal will not display private information about the customer's login credentials.
Customer Display	The portal will display the customer consumption history in a graph that can be configured to a customer specified start and end date. The default period will be the customer's latest complete billing period.
Customer Display	The portal will display daily and hourly usage up to the most recent data available in the MDMS.
Customer Display	The portal allows users to compare different periods such as previous day, week, month or year.
Customer Display	The portal will provide ability to select the resolution of the consumption interval displayed (hourly, daily, weekly, monthly, yearly and billing period).
Customer Display	The portal will provide the ability to overlay temperature data streams over consumption graphs.
Customer Display	The portal will display estimated cost data for individual consumption profiles based on the customer's rates and consumption for the current (unbilled) billing period.

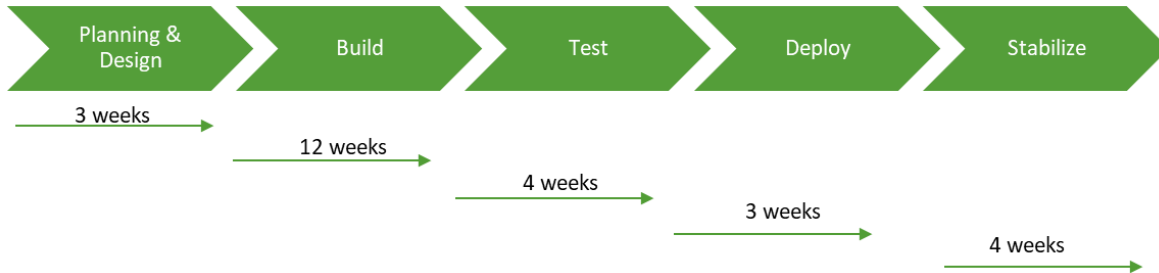


Topic	Performance Requirements
Alerts	<ol style="list-style-type: none"> 1. The customer portal allows The City to send courtesy, usage restriction violations and even emergency notifications to all customers, a group of customers or a specific customer. 2. The customer portal allows utility customers to receive notifications based on daily, weekly or monthly thresholds. These can be configured for usage or cost by the customer.
Alerts	<ol style="list-style-type: none"> 1. The customer portal allows The City customers to designate emails and cellphone numbers (for text message) for various alarms. 2. The consumer can also enable multiple contact emails or phone numbers, or contact emails or phone numbers for different conditions.
Alerts	The portal allows customers to opt in or opt out of notifications.
Reporting	The portal allows the customer to download both graphical and chart based reports of their consumption. The downloaded reports will be available in JPEG (Image), Excel or Green Button file formats.
Missing Data	<p>The portal clearly displays the occurrence of missing data points and unbilled usage.</p> <p>The City will review and modify the messages during design.</p>



F.3. Milestone Schedule

The figure below details the overall approach and the estimated duration by phase.



The table below illustrates the activities and deliverables in scope of the project.

#	Deliverable Name	Description	Responsible
<i>Phase 1 - Planning & Design</i>			
1	Implementation Project Schedule	The project schedule in a detailed MS Project file intended to properly manage the project delivery according to plan, including tasks required from The City and SEW to successfully complete the project as well as dependencies and resources accountable.	SEW
2	Document of Understanding (DOU)	The DOU will include the business requirements, business processes, and customization requirements to meet the scope of the project.	SEW
3	Conceptual Solution Architecture	The conceptual solution architecture diagram will provide a visual representation of various systems and integration points required to fulfil the objective of the project. Consistent with <CLIENT>'s High Level Design documentation requirements.	SEW
<i>Phase 2 – Build</i>			
2	End User Training Plan	The end user training plan will confirm the training approach, number of sessions, and scope of training for SEW and The City.	SEW
3	UAT Plan	User Acceptance Test (UAT) plan, test scripts and Material will solidify the training approach, tools to be used during testing, and scope of the test scripts to be created by SEW.	The City
4	UAT Environment	SEW should provide environments for testing.	SEW
<i>Phase 3 – Test</i>			



#	Deliverable Name	Description	Responsible
1	Functional test plan and corresponding results	<p>The Functional Test Plan will articulate the scope of Testing that will occur. It will include timelines, duration, participants, and the level of stakeholder involvement required for this testing.</p> <p>This activity calls for the execution of Testing as per the referenced Test Plan utilizing the referenced Test Scripts. Defects are logged and tracked</p>	The City
2	Performance test plan and corresponding results	<p>The Performance Test Plan will articulate the scope of Testing that will occur. It will include timelines, duration, participants, and the level of stakeholder involvement required for this testing.</p> <p>This activity calls for the execution of Testing as per the referenced Test Plan utilizing the referenced Test Scripts. Defects are logged and tracked</p>	SEW
<i>Phase 4 – Deploy</i>			
1	Deployment Plan	Documented deployment preparation activities and plan to deploy the solution into production including all source system components.	SEW
2	Training Workshops –	User training for The City Customer Service and internal team members on the Customer Service solution and how to best support Utility Customers with the tool. 36 hours of total sessions. Training documentation will be provided for their future reference.	SEW
3	Release and deployment certificate. Production Verification Report.	<p>Evidence that the deployment is completed successfully.</p> <p>Evidence that production verification has been successfully completed.</p>	SEW
<i>Phase 5 – Stabilization</i>			
1	Support Portal Access	Access to the support portal for tracking issues	SEW

Key Assumptions

VENDOR and SEW have relied on the assumptions stated below in pricing, planning, and determining its approach to the Services.

SEW team will migrate existing Customer Notification preference data to the SCM platform. However any validation or cleansing of the source data is not in scope. SEW team will work with the The City team to identify and catalog the data for migration and agree upon a migration strategy. Upon completing the strategy for data conversion and migration, SEW shall be responsible for taking the data in the source format and translate and convert to the SCM platform. As an additional best practice if data is required



to be moved, it shall be moved to a staging area at which point SEW shall apply logic for any conversion required. The SEW validation checks will be applied at the time of loading into the staging area to confirm data was moved without error.

It is assumed a redundant system is required with up to two application servers for each primary and secondary location. Additional infrastructure will be estimated during the blueprint and design activities

The payment functionality and integration will be dependent on the web service integration for online payment gateway provided by the Customer's payment provider. The Customer shall be responsible for coordinating the access to the APIs from payment provider.

Data quality and validation will be the responsibility of Customer

Any customization to standard features and functionality not included in this may impact budget and/or schedule.

Integration to source systems and data is dependent on access to said systems, including API allowances, as applicable.

Standard SEW implementation and configuration is conducted primarily from SEW offices with any included on-site activities to be determined and documented during Planning Phase.

The project duration and effort (hours) have been estimated based on the preliminary understanding of the specific project deliverables and requirements.

Training will be conducted in a train the trainer format. End user training will be the responsibility of the Customer.

The SCM platform include messaging/notification services including email, SMS Text, IVR Dialer, and push notifications. The SMS Text and IVR Dialer notifications will incur additional per message fees outside the scope of pricing stated in the SOW.



F.4. Project Reports & Sample Meeting Agendas

The VENDOR will provide the following project reports. Additionally, the VENDOR will develop reports as requested and mutually agreed by the Parties.

System and Project Performance:		
#	Report and Description	Frequency
1.	Completed Work – electronic report of all completed work.	Daily
2.	Actual versus planned install - weekly, monthly and cumulative, Actual versus Planned. Missed customer appointments.	Weekly
3.	Route Saturation Report - work orders in routes showing total, exchanged, deactivated, pending, and Percent Saturated; also used to track routes opened, completed, and accepted.	Weekly
4.	Route Acceptance Summary – summary report of route acceptance, including quantity of routes and a summary of Endpoints attempted, read, and unread, and a rollout of the expected reasons on unread modules.	Weekly
5.	Quality Assurance – field quality results including audits completed against planned and findings.	Monthly
6.	Installation and Data Errors - report listing data issues compared against install totals by month. Errors include incorrect out readings, Endpoints set at wrong CUSTOMERs, incorrect endpoint type installed, or wrong endpoint number reported.	Monthly
7.	Service & Technology Issues – report listing service issues compared against install totals by month segregated by pre and post installation	Monthly
8.	Work Order Exceptions – report listing work order exceptions compared against install totals by month. Will also display average time to close.	Monthly

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Inventory and New Endpoints:		
#	Report and Description	Frequency
1.	Inventory Balance – inventory (Endpoints, seals, keys – SCC<CUSTOMER> and endpoint, etc.) received, consumed and available by part number and cross dock.	Weekly
2.	Lost Inventory Report – report listing lost inventory (Endpoints, seals, keys – SCC<CUSTOMER> and endpoint, etc.) against inventory received.	Monthly

SCC<CUSTOMER> Service:		
#	Report and Description	Frequency
1.	SCC<CUSTOMER> Complaints and Claims –	Monthly



	<p>Report listing complaints and claims compared against install totals by month. Will also display average time to close with details available as required. Need:</p> <ul style="list-style-type: none"> • Reports by categories of complaints and claims along with the overall numbers • Number/Percentage resolved • Number/Percentage escalated • Breakdown by Area (Op center level or cross dock level) • SCC<CUSTOMER> detail data (to include SCC<CUSTOMER> name, premise address and SCC<CUSTOMER> account number) 	
2.	<p>SCC<CUSTOMER> Appointments – number of SCC<CUSTOMER> appointments scheduled through call center with follow-up results summary (completed exchange; missed appointment; CUSTOMER missed appointment; service issue).</p> <ul style="list-style-type: none"> • CUSTOMER appointments section should be included under Call Center activity • Track number of calls Contractor received directly from CUSTOMERs via toll-free number (from door hanger and letter responses or responses from messages left on/in answering machines/voicemails) • Number of appointments set • Number of calls received from SCC<CUSTOMER> Call Centers (i.e., transferred from SCC<CUSTOMER>) • Number of calls referred back to SCC<CUSTOMER> Call Centers (i.e., SCC<CUSTOMER> had other questions or concerns regarding account) • Track productivity to ensure that all SCC<CUSTOMER> messages are responded to the same or next business day • Call center statistics (Missed calls, hang-ups, wait time, others) 	Weekly
3.	<p>Call Center Metric</p> <ul style="list-style-type: none"> • Sensus must answer at least 85% of all calls within one minute. • No more than 1% of customers' calls may be abandoned after 2 minutes. • Number of calls handled after hours by answering service. 	Weekly
4.	<p>Training & Inspection Reports</p>	Weekly

Safety:		
#	Report and Description	Frequency
1.	<p>Installer Safety Report</p> <ul style="list-style-type: none"> • Report provided by contractor on field safety performance. • Split between controllable/uncontrollable vehicle accidents. • OSHA Injuries. • Human performance (near-misses, etc). 	Monthly

Revenue Protection:		
#	Report and Description	Frequency



1.	RPI Report <ul style="list-style-type: none"> • Missing or damaged seals with successful installs provided by Sensus. • Set-asides due to theft provided by Sensus. • Follow-up by SCC<CUSTOMER> . 	Weekly
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Typical project reports include:

- Endpoint related
- Installation (forecasted vs. actual)
- Route and cycle saturation
- Routes and cycles in deployment
- Return to utility (customer refusal, access issues, safety, theft, etc.)
- Quality Assurance samples
- Network related
 - Installation (forecast vs. actual)
 - Plans and targets
- Product shipping schedules (delivered and pending shipment)
- Risks identified and mitigation plans

Table 1: Sample Risk Register

VENDOR KPIs manage these areas:

- On-time delivery
- Deployment progress
- Network performance
- Actual versus planned for various project milestones

Sample Project Status Meeting Agenda

- Greeting and safety message
- Review project status, progress made over the past week and month and tasks to be completed in the coming weeks
- Review project schedule and progress
- Discuss open action items and record any new action items
- Discuss any critical items to be escalated
- Discuss inventory status
- Discuss equipment order status
- Discuss project invoices
- Discuss any contract issues
- Discuss change orders
- Open discussion
- Close meeting



F.5. Detailed Deployment Team Responsibilities

F.5.1. Program Manager

The Program Manager is responsible for the overall planning and execution of the FlexNet project, employing generally-accepted, Project Management Professional (PMP) and Sensus processes. This position is also responsible for business planning, customer interface, interaction with the City Project Manager, network deployment, optimization, systems acceptance testing, and customer acceptance.

The Program Manager interacts with all levels of the customer organization (field to executive level), supervise on-site personnel, and coordinate activities related to the FlexNet deployment project. This position helps develop, and adhere to, cost, quality, and schedule parameters. The Program Manager schedules and conducts periodic reviews, and imposes scheduled maintenance and operational tests to reasonably ensure system performance. This lead develops topics for and conducts routine meetings with the City and VENDOR associated with the deployment project, reviews with corporate headquarters, and special meetings as necessary. The Program Manager works closely with the Project Manager at the City on this project.

Responsibilities include the following:

- Overall program delivery manager
- Coordinate roadmap review meetings between VENDOR and the City
- Project system acceptance lead
- Facilitate and communicate the City's system and process impacts based on new product functionality
- Manage consolidated work list among local team
- First escalation point for the City
- Liaison among technical, product, and engineering groups and the City
- Distributes firmware and software updates per the City processes
- Attend the City meetings
 - Weekly priority setting
 - Daily RNI
 - Daily command center
 - PMO
 - Weekly Risks and Issues
- Attend meetings as the City program representative
 - Monthly Product Lifecycle Management

F.5.2. Endpoint Re-Work Manager

The Endpoint Re-work Manager reports to the Program Manager and is responsible for the planning, coordination and execution of the effort to retrofit the existing Badger / Itron water units with the Badger / Sensus radio units. This position will be responsible for managing a team of technicians who will retrofit the existing units. The manager will be responsible for resource planning, managing the inventory, testing, safety, quality and delivery of units to meet the deployment schedule. The manager will help develop schedules and adhere to cost, quality, and schedule parameters. The manager will schedule and conduct periodic quality reviews and operational tests to ensure operational performance. The manager will attend project review meetings and report status on the re-work effort.

Responsibilities include:



- Responsible for all aspects of the endpoint rework process to include: facilities setup, process definition, unit testing, work planning, staffing, training, quality, safety, inventory management, shipping and receiving
- Working with the Program Manager, contributes to the development of the endpoint deployment plan
- Creates the inventory ordering schedule for the rework project and reviews schedule weekly to ensure endpoint buffer stock is available for deployment
- Manages the staff to reasonably ensure proper work procedures, safety and quality procedures are followed
- Coordinates weekly with project team to ensure that production levels are sufficient to maintain buffer stock inventory for the deployment
- Coordinates ordering of buffer stock of new units to replace failed units
- Manages inventory to ensure that all endpoints ordered, units failed in testing and reworked are accounted for in the project.
- Manage tracking to ensure replacement endpoints are delivered in a timely manner.
- Creating risk mitigation plans and managing with risks in mind.
- Attends weekly project review meetings and reports status, issues and progress.

F.5.3. Endpoint Deployment Manager

The Endpoint Deployment Manager reports to the Program Manager and is responsible for all aspects of the endpoint rework process to include: facilities setup, process definition, unit testing, work planning, staffing, training, quality, safety, inventory management, shipping and receiving. The Endpoint Deployment Manager will be experienced in supervising water meter installation contracts, and familiar with applicable regulations and safe and proper installation procedures. Endpoint Deployment manager is also responsible for:

- Working with the Program Manager, contributes to the development of the endpoint deployment plan
- Creates the inventory ordering schedule for the rework project and reviews schedule weekly to reasonably ensure endpoint buffer stock is available for deployment
- Manages the staff to ensure proper work procedures, safety and quality procedures are followed
- Coordinates weekly with project team to reasonably ensure that production levels are sufficient to maintain buffer stock inventory for the deployment
- Coordinates ordering of buffer stock of new units to replace failed units
- Manages inventory to reasonably ensure that all endpoints ordered, units failed in testing and reworked are accounted for in the project.
- Manage tracking to reasonably ensure replacement endpoints are delivered in a timely manner.
- Creating risk mitigation plans and managing with risks in mind.
- Attends weekly project review meetings and reports status, issues and progress.

F.5.4. Network Deployment Manager

The Network Deployment Manager is responsible for the overall planning, coordination, and design of the FlexNet communication network for the City. Working closely with RF Design Managers and the Application Engineer Manager (AEM), the Network Deployment Manager assists with the deployment and troubleshooting of FlexNet Base Station sites from a design perspective. The Network Deployment Manager schedules and conducts periodic status reviews with the City and the Project Management Team, and works with the Program Manager to reasonably ensure that overall network performance meets the requirements of the Contract.



Responsibilities include:

- Serving as the interface between and among the RF network planning and propagation group, installation contractors, the utility and tower site owners in implementing the network plan, optimization, systems acceptance testing, and customer acceptance.
- Scheduling and conducting periodic reviews and imposing scheduled maintenance and operational tests regarding system performance.
- Performing site visits to network equipment sites to determine feasibility of use and extent of equipment installation requirements.
- Providing reports and participating in routine meetings with the City, contractors, and corporate headquarters for project reviews and special meetings as necessary.

F.5.5. Application Engineer Manager

The Application Engineer Manager (AEM) is responsible for the delivery of all head end system integration activities including the development, test, and deployment of the FlexNet Head End System. This position helps develop and adhere to cost, quality, and schedule parameters; schedules and conducts periodic reviews; imposes scheduled maintenance and operational tests regarding system performance, and develops topics for and conducts routine meetings with customers, project reviews with corporate headquarters, and special meetings as necessary.

The AEM has the support of the operations team for technical issues that require additional guidance.

Responsibilities are as follows:

- Reviewing the system reports for network failures.
- Coordinating and taking action to enhance meter read performance.
- Recommending or performing over-the-air upgrades to SmartPoint communication modules.
- Recommending SmartPoint communication modules change-outs to the City to improve performance.
- Maintaining daily, weekly, and monthly maintenance plans.
- Performing preventive maintenance of network components.
- Responsible for researching and documenting technical backend aspects of system acceptance on the City Program.
- Responsible for the technical research, explanation, and closure of RNI based consolidated work list items as prioritized by Program Manager.
- Provide the technical RNI details to accurately status RNI Salesforce tickets on a weekly basis.
- Work with the City Meter Shop and IT testers with technical understanding, and RNI troubleshooting while test cases are under review.
- Analyze data being populated within the RNI, from the endpoints, to troubleshoot complex deployment issues, while working collaboratively with a team of Subject Matter Experts and the City testers.
- Participate in RNI PIN review sessions impacting deployment.
- Schedule and attend weekly technical meeting.
- Troubleshoot RNI issues and facilitate defect resolution.
- Assist with RF network troubleshooting as it relates to backend data analysis.
- Support RNI upgrades as required

F.5.6. RF Network Analyst

RF Network Analyst works under the direction of the Project Manager and is responsible for investigation, troubleshooting and remediation of any issues related to decreased billing read success for the water systems. Duties of this position include:



- Plots non performing meters to determine general areas and patterns.
- Coordinates investigation of non-performing radios to determine that the radio is active in the system, Creates work orders for replacement of non-performing radios.
- Coordinates with meter installers to ensure that non-performing units are replaced and verified as reporting into the system.
- Coordinates with optimization and tuning team to ensure that non-performing units are optimized to more aggressive transmit modes or buddy modes – as required.
- Leads coordination effort with the RF propagation team to investigate any network anomalies that are suspected of being the root cause of decreased billing read success.
- Works with the RF team to investigate, plan and deploy any new RF network hardware
- Coordinates activity to install, commission and certify any RF hardware.
- Coordinates with Operations team to get approvals for RF network hardware additions.
- Responsible for weekly progress updates to the VENDOR and City management teams.
- Attends meetings as required

F.5.7. RF Engineer

The RF Engineer is responsible for assisting in the interpretation and implementation of the RF network plan, overseeing and certifying network equipment installation work, performing and overseeing network equipment maintenance, and ensuring the overall system performance of the FlexNet system components including FlexNet Base Stations, and other network devices employing generally accepted commercial practices and Sensus processes. Inherent in these responsibilities is the overall systems optimization for network and metering components requiring field visits to various locations throughout the service area.

This Engineer is responsible for:

- Serving as the interface between and among the RF Network Planning and Propagation Group, installation contractors, the utility and tower site owners in implementing the network plan, optimization, systems acceptance testing, and customer acceptance.
- Scheduling and conducting periodic reviews and imposing scheduled maintenance and operational tests to ensure system performance.
- Performing site visits to network equipment sites to determine feasibility of use and extent of equipment installation requirements.
- Providing reports and participating in routine meetings with the utility, contractors, and corporate headquarters for project reviews and special meetings as necessary.
- Reviewing system reports for network and SmartPoint communication module failures.
- Coordinating and taking action to enhance SmartPoint communication module read performance.
- Recommending or performing over-the-air refinements to SmartPoint communication module.
- Recommending SmartPoint communication module change-outs for customers to improve performance.
- Maintaining daily, weekly, and monthly maintenance plans and logs and preparing Key Performance Indicators (KPIs).
- Performing preventive maintenance of network components.
- Following and enforcing applicable corporate and safety and professional standards.

F.5.8. Field Technician

The Field Technician is responsible for deployment strategy, the City field work, and complex SmartPoint communication module installation. Responsibilities include:

- Monitor installation field work and AMI network.
- Maintain and troubleshoot AMI network elements and Field Area Network devices.



- Responsible for SmartPoint communication module sampling, quality control, troubleshooting, resolving field exceptions, site issues and customer complaints, and testing.
- Responsible for logistics and inventory.
- Responsible for SmartPoint communication module installation and removals.
- Re-engineer field operations business processes.

F.5.9. Subject Matter Experts (SME)

Subject Matter Experts are various resources called upon as required to provide training, information or knowledge transfer. They are not specifically included in the organization chart.

- Provides technical support and assistance to RF Engineer; does site work as required including testing support.
- Responsible for ensuring knowledge transfer and/or cross-training as appropriate to client for meter & network knowledge domain.
- Provide support for configuration of endpoints and handhelds.
- Assist with troubleshooting of the endpoints and assist with training where required.
- Provide support for HAN testing and operation, including meter configuration, device configuration and VENDOR provided Software application to provision and operate such HAN devices, approved by VENDOR.
- Provide support for configuration of endpoints and handhelds.
- Assist with troubleshooting of the endpoints

F.5.10. Training Instructors

General Training Responsibilities

- a. Training Instructors will provide an integrated training plan for the City's approval at the beginning of the network deployment.
- b. Training Instructors will provide (as applicable) accompanying training guides and materials with its training sessions.
- c. Training Instructors will make available online eLearning solutions immediately following project kick-off.
- d. Training Instructors will provide Introductory Series training session(s) (four hours).
- e. Training Instructors will provide FlexNet Administrator training session(s) (four hours).
- f. Training Instructors will provide FlexNet Operator training session(s) (four hours).
- g. Training Instructors will provide Field Installer/Meter Technician training session(s) (four hours).
- h. Training Instructors will distribute a training evaluation form at the conclusion of each training session and will review student responses with the City to identify any additional training needs.
- i. Training Instructors and the City will work together to resolve any mutually agreed training gaps or deficiencies throughout the training schedule.

F.6. Installation Quality Control Procedures

This section represents the Quality Audit Procedure

F.6.1. Deployment Quality Audit Procedure Guidelines

This describes the process and expectations for performing quality assurance audits. This will also describe the quality audit process and method for conducting a quality audit, and verifying that all training criteria have been satisfied in conjunction with the PWD/Sensus MIU Installation procedures.



General Program Structure:

The current program structure is primarily based on both a field and call center based audit program. These spot checks, on employees within various roles at the project, ensure that agreed upon and then subsequently trained upon standards are consistently evidenced within the project's work. The results are tracked and then reported to PWD monthly, for review and analysis.

QA Roles & Responsibilities:

Project Manager

- Oversees the entire audit program.
- Compiles monthly statistical reports.
- Conducts back office and field audits of employees found to be in violation
- Reviews all compliance faults of a serious nature and / or has occurred more than once.
- Monitors the QA staff & compliance program to ensure objective and consistent results.
- Oversees the progressive discipline program and related skills training.
- Designs corrective actions for evidenced compliance faults in conjunction with PWD.

Call Center Manager:

- Conducts audits of the back office administrative staff.
- Participates in the progressive discipline program and related performance counseling
- Assists with the required skills training.
- Implements designed corrective actions.

Field Supervisors

- Conduct objective audits of the field staff.
- Participates in the progressive discipline program and related performance counseling
- Assists with the required skills training
- Implement designed corrective actions.

Independent of the established project compliance program, the CCI Corporate Safety Manager reviews all audits, at all CCI projects, monthly. This review and reporting on results occurs within the executive management level of the company, independent of the operations reporting structure.

Audit Types and Frequency:

- Back Office/Call Center Staff:
 - See "Call Monitoring Policy" Attachment F.6.1.2
- Field Staff:
 - Daily Tailboards
 - Random Field Audits - Roll Up Audits & Go-Behind Audits
 - Targeted Audits
 - Data Audits
 - Driving Observations

Audit Results, Collection and Related Technology:

- Call Center Staff – back-office audits based on observations and metrics - Excel
- Field Staff – TBD based on Service Link Solution Design.

Monthly Reporting of Compliance Program Results:

The monthly results of the compliance program results are reported to the Sensus/PWD Project Manager, for analysis, trending, and design of corrective actions as required. The following reports are used monthly:



- Trending Fails – tallies audit-fail types
- Safety Audit Stats – summarizes overall field compliance program results
- Call Center Audit Stats – summarizes overall call center compliance program results
- Weekly Audit Summary – breaks monthly compliance results into a weekly distribution
- Safety Analysis – trends RVA and OSHA recordable results, by month, year over year

OVERALL RESULTS:

The overall results of the QA inspection are rated as satisfactory and unsatisfactory. A satisfactory inspection will require all the required tasks rated as satisfactory. An unsatisfactory inspection will be rated if one or more of the required tasks are rated as unsatisfactory.

INSPECTION STATUS:

- Satisfactory – All required/essential tasks performed properly
- Unsatisfactory – One or more of the required/essential tasks not performed properly.
- N/A (Not Applicable) – One or more of the required tasks in the installation procedures are not applicable to any category of the task scope.

F.6.1.1. Meter Module Installation Inspection Criteria

ENSURE the actual customer location and the location referenced on the Hand-Held Unit (HHU) are the same.

ENSURE that any special instructions are reviewed prior to entering the customer's property.

ENSURE that AMI Installations are being performed on the scheduled day, and that appointments are being met.

NOTIFY customer of potential interruption, and verify that correct register is removed.

VERIFY that the module has been programmed, and that the cover has been replaced and sealed properly.

VERIFY that the before and after pictures are taken

VERIFY that an HHU scan of the meter work was performed.

ENSURE a post installation inspection of area is performed, and that a check for parameters of new meter(s) was performed.

ENSURE meter installer is wearing a full uniform, that his/her identification badge is being worn, and that a professional appearance is maintained. Also verify that all personal protective equipment is being worn, and that vehicle driving and parking procedures are being followed. Verify that safety procedures are being utilized and in compliance with the Safety and Work Practices Manual, as applicable.

USE this step to perform an inspection of a unique situation that is **not** referenced in this Attachment or Check Sheet. i.e.: **IF** inspection of a specific activity was performed, **THEN** please note.

F.6.1.2. Call Monitoring

In order to comply with State and Federal laws and regulations, and to enhance training, Contract Callers Inc. (CCI), monitors its employees' telephone calls monthly to client customers or third parties. CCI's Management) Department scores the calls based on the type of call: right party, third party, and voice message, as applicable; and the Management Department evaluates the results. The employee's acknowledgement of the review is recorded and a remediation plan, if needed, is implemented. The results are stored in CCI's system.



Enforcement

Customer Service Reps shall have no less than a minimum of five (5) calls reviewed monthly. Each month Compliance shall deliver a list of previous month scores to calculate the number of monitors required for the current month based on past performance. Below is the matrix for determining the number of monitors:

- Customer Service Reps with average score 95% or above – 5 monitors
- Customer Service Reps with average score between 85% - 94% 7 monitors
- Customer Service Reps with average score below 85% - 10 monitors
- New hires first month – 15 monitors

Failed calls, within a six-month period, will subject the employee to remediation as follows:

- First month with failed calls: the employee's supervisor directly discusses the issue with the employee, and the employee attends specific training that includes the area(s) of the failed calls.
- Second month with failed calls: the employee's supervisor and the Project Director directly discusses the issue with the employee, and the employee attends specific training that includes the area(s) of the failed calls.
- Third month with failed calls: the employee is terminated or removed from consumer communications.

Management reserves the right to discipline or terminate employment for any failed phone call if deemed necessary notwithstanding the remediation points stated above.

Periodic Review

This policy is reviewed at a frequency of no less than one year to determine if any modifications are needed.

F.6.2. Lot Acceptance

Lot acceptance will be based on the procedures outlined in International Standard ISO 2859 -1 "Sampling procedures for inspection by attributes."

F.6.2.1. Sampling

The sampling size code letter will be determined by Table I. Initial testing will be conducted at General Inspection Level II and will be reduced to a General Inspection I after the City determines a consistent pattern of successful lot acceptance tests.



CODE

Table I – Sample size code letters (see 10.1 and 10.2)

Lot or batch size	Special inspection levels				General inspection levels		
	S-1	S-2	S-3	S-4	I	II	III
2 to 8	A	A	A	A	A	A	B
9 to 15	A	A	A	A	A	B	C
16 to 25	A	A	B	B	B	C	D
26 to 50	A	B	B	C	C	D	E
51 to 90	B	B	C	C	C	E	F
91 to 150	B	B	C	D	D	F	G
151 to 280	B	C	D	E	E	G	H
281 to 500	B	C	D	E	F	H	J
501 to 1 200	C	C	E	F	G	J	K
1 201 to 3 200	C	D	E	G	H	K	L
3 201 to 10 000	C	D	F	G	J	L	M
10 001 to 35 000	C	D	F	H	K	M	N
35 001 to 150 000	D	E	G	J	L	N	P
150 001 to 500 000	D	E	G	J	M	P	Q
500 001 and over	D	E	H	K	N	Q	R

Acceptable Quality Levels

The acceptance of a lot will be based on Table II-A and the following Acceptable quality levels:

- Major Defects (AQL = 0.65)
 - Examples include: MIUs that won't turn on, MIUs with the incorrect starting read.
- Minor Defects (AQL = 1.0)
 - Cosmetic defects



Table II-A – Single sampling plans for normal inspection (Master table) (see 10.3 and 10.4)

Sample size code letter	Sample size	Acceptable quality levels (normal inspection)																											
		0,010	0,015	0,025	0,040	0,065	0,10	0,15	0,25	0,40	0,65	1,0	1,5	2,5	4,0	6,5	10	15	25	40	65	100	150	250	400	650	1 000		
		Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	
A	2	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
B	3	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
C	5	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
D	8	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
E	13	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
F	20	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
G	32	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
H	50	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
J	90	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
K	125	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
L	200	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
M	315	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
N	500	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
P	800	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
Q	1 250	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
R	2 000	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑		

= Use first sampling plan below arrow. If sample size equals, or exceeds, lot or batch size, carry out 100 % inspection.
 = Use first sampling plan above arrow.
 Ac = Acceptance number
 Re = Rejection number



F.7. Customer Holidays

Holiday schedule for both The City and Sensus

- New Year's Day
- Martin Luther King's Birthday
- President's Day
- Good Friday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving
- Christmas

F.8. Communication Plan

The objective of the City of Philadelphia Customer Communication Plan is to empower the City, its customers; and enhance the customer experience, while at the same time, creating a positive climate for acceptance of the AMI project from the City's citizens. The plan will help to address common questions and concerns as well as highlight benefits of the AMI program.

F.8.1. City Website

The City of Philadelphia (City) will provide information about Smart Water and Smart Meters on its public website for customers to access. The site will highlight overall benefits of the new technologies being implemented and include a series of frequently asked questions. Links to other pertinent material may be provided as the website is updated throughout the implementation and post implementation phases.

A suggested link to the program may include the following overview:

The City is introducing an Advanced Metering Infrastructure (AMI) program, or Smart Meters, that will deploy the water industry's latest metering technology. This technology will upgrade how we read your water meter and provide you with better service through greater reliability, improved efficiency and early detection of water leaks.

F.8.2. Project Team Communications Plan

The VENDOR's Program Manager will ensure that a communication plan is developed specific to this deployment and the requirements of the customer. Our typical communications plan consists of weekly meetings to review project status and written reports that are submitted to document project progress, issues and actions. On a monthly basis the Program Manager will hold an executive review with all stakeholders where we review the project status, review progress against the schedule, and discuss actions requiring escalation. On a quarterly basis we hold an executive review meeting to update the executives and project sponsors on the status of the project.

F.8.3. Endpoint Installation Communication Plan

VENDOR and City will meet at the start of the project to discuss the deployment plan and develop a customer communication plan that includes:

- Customer education about the AMI project and endpoint changes



- How we will notify the customer that we are changing endpoints in their neighborhood (mailers, signs, news articles)
- Installer actions to take prior to, during and after performing an installation
- Actions to take for customer visits that result in no access or issues that prohibit the completion of the installation
- Actions and behavior of the installer if approached by a customer
- Specify door hangers, call center scripts, notification of local authorities, letters and handouts for customer questions, any additional policies required by RWA
- Rules for handling accounts that cannot be completed due to issues beyond the control of the installer

VENDOR and City are responsible for high level communication to customers informing them of the intent and overall schedule for the AMI Project. Sensus and The City will meet at the start of the project to determine the appropriate customer notification methods.

The City will approve all customer communications for the AMI Project. The City will create the appropriate marketing theme which will be used and approved for all customer communications. Examples of communication methods are:

- Customer mailings and bill stuffers
- Post Cards
- Door hangers
- The City Website
- FAQ's
- Special letters
- Emails
- Municipalities', Police, Fire, and Emergency Management Agencies

Customer appointments, as may be necessary to change, add, remove, or install the Smart Point module at the customer location are the responsibility of VENDOR. VENDOR is responsible for direct customer communications associated with the appointment-setting process, or customer complaints related to AMI Smart Module installation.



F.9. PMA Data Transfer During Turnkey Installation Phase

VENDOR will document and implement a data transfer process for both onsite storage as well as with a 3rd party cloud service provider identified by the City (ex: Amazon Web Services, Microsoft Azure) for all PMA Data.

F.9.1. General Requirements

- a. During the turnkey deployment phase, VENDOR will provide PMA Data in a CSV file format approved by the City.
- b. VENDOR will upload the CSV file nightly to City's FTP site for the City to access.
- c. The Vendor will incorporate requirements collected by the City in the BRD and TRD as outlined in Exhibit E.1.3.
- d. Prior to final acceptance, VENDOR will provide read only SQL database Access to retrieve all PMA data directly from RNI or duplicate/mirror database with PMA Data.
- e. The VENDOR will support the City in configuring, testing and modifying the file transfer procedure.

F.9.1.1. Configuration of Local Storage of PMA Data

- a. VENDOR will provide a recommendation on required hardware necessary to store the data locally based on the City's requirements.
- b. The City will develop the required interfaces for the retrieval and long-term storage of PMA Data.
- c. The City will procure Hardware as required.

F.9.1.2. Configuration of Cloud Based Storage of PMA Data

- a. VENDOR will support the configuration with a 3rd Party Cloud Storage provider for PMA data with either Amazon Web Services, Microsoft Azure or mutually agreed upon 3rd party platform.
- b. The City will develop the required interfaces to retrieve PMA Data from the mutually agreed upon transfer processes.
- c. The City will pay all cost for the Storage of PMA data on a 3rd Party Cloud Storage application.

F.10. PMA Data Transfer During O & M PHASE

VENDOR will monitor and maintain a file transfer process for both onsite storage as well as with a 3rd party cloud service provider identified by the City (ex: Amazon Web Services, Microsoft Azure). Vendor will provide PMA Data via CSV(s) and read only SQL database Access City.

F.10.1. General Requirements

- a. VENDOR will assign a technical engineering resource who has the ability to modify the configuration of the PMA data process as required by the City (ex: adding additional fields). The usage of this resource will not exceed 20% of an FTE per year for the duration of the O and M period. Unused time will not "roll-over" or accumulate.
- b. VENDOR will provide read only SQL database Access to retrieve all PMA data directly from RNI or duplicate/mirror database with PMA Data.
- c. VENDOR will develop and maintain all Data Transfer documentation including versioning and any compatibility issues.
- d. VENDOR will as part of the RNI update processes test the check for anomalies in the data transfer processes and report the results.



- e. VENDOR will host at least quarterly review meetings with PWD's data transfer manager or as other mutually agreed upon

F.10.1.1. Configuration Changes.

- a. A 90-day notification should be provided prior to any scheduled change affecting PMA data transfer configurations.
- b. Data requests or file transfer modifications should be reasonably delivered within 90 days of PWD's request unless a different time period is mutually agreed upon.



F.11. EasyLink Meter Reading Service

F.11.1. About this Document

This Statement of Work (SOW) is attached to, and governed by, the Advanced Metering Infrastructure Services Contract by and between the Philadelphia Municipal Authority (PMA) and Sensus USA Inc, dated [XXX]. Any terms used in this SOW as defined terms, and which are not defined herein, have the meanings given to those terms in the Agreement. The purpose of the SOW is to provide mutual understanding for the work required to implement and provide meter reading services by Sensus to PMA. This SOW may be updated under the change order process described in Article III, Section E.1 of the Agreement.

Throughout this document, “CLIENT” refers to the Philadelphia Municipal Authority acting through the Philadelphia Water Department, and “SENSUS” refers to Sensus USA Inc.

F.11.2. Project Summary

Encoder receiver transmitter (ERT) is a packet radio protocol developed by Itron for automatic meter reading (AMR). The technology is used to transmit data over a short range so a vehicle can collect billing reads without a worker physically inspecting each meter.

Itron ERTs are installed throughout the CLIENT service territory with approximately 480,000 water meters having a register with an ERT attached. The ERTs are currently read by an Itron contractor using the MV-RS drive-by system. The contractor drives the CLIENTs route each day collecting billing reads from the ERTs and at the end of each day creates a MV-RS billing file that is uploaded to the CLIENTs billing system.

According to CLIENT the CLIENT’s monthly meter and ERT replacement capacity is somewhere around 1500 per month. The CLIENT desires to transition away from the installation and purchase of obsolete equipment and begin installing SENSUS SmartPoints. The SENSUS SmartPoint is a radio transceiver that gives RF inbound and outbound access to the device. The SmartPoint (515M) is a retrofit module, whereby the ERT radio is removed from a badger register and replaced with the SmartPoint (515M). SENSUS iPERL, 510M and 520M are other SmartPoint options the CLIENT can utilize when replacing ERTs.

CLIENT requested SENSUS provide a solution whereby CLIENT could purchase Sensus SmartPoints, install the SmartPoint in the field, and rely upon SENSUS to collect the billing reads from the SmartPoints prior to the SENSUS FlexNet Communication Network being fully deployed and operational.

SENSUS proposes to use EasyLink, a vehicle drive-by system, to read the SmartPoints in advance of the FlexNet Communications Network being operational.

The EasyLink drive-by solution, in addition to reading SENSUS SmartPoints, is also able to read Itron ERTs; therefore, this SOW for Meter Reading Services will include readings for both SENSUS SmartPoints and Itron ERTs. SENSUS will provide CLIENT with billing reads via their standard MV-RS file format.

In this SOW, SENSUS is providing a Meter Reading Service that allows the CLIENT to perform the following using the EasyLink Solution:

- Purchase SENSUS SmartPoints in lieu of Itron ERTs
- Replace ERTs with SmartPoints



- Outsource reading of the newly installed SmartPoints using EasyLink
- Outsource reading of the currently installed ERTs using EasyLink
- Ability to continue billing customer via the same MV-RS billing file

F.11.3. Project Overview

Routes:

There are 60 routes with approximately 8,000 meters per routes. The routes are read each month over a 20 day period (3 routes per day). There are months during the year when there are not 20 billing days available. In those cases, the last route of the month will be read on the first business day of the following month. There are also months in which there are more than 20 billing days. In those months, there will be 1-3 days during which meter reads will not be scheduled. CLIENT will provide an annual schedule of dates on which the billing system (BASIS2) will send properties / routes to SENSUS for meter reads and the dates by which BASIS2 expects to receive those reads. Each of the 60 routes will be included in each month's schedule.

Control Day:

The CLIENT will prepare Control Day files and provide to SENSUS via an MV-RS flat download file. The

CLIENT will provide SENSUS with a meter reading file for each control day five (5) days ahead of the bill

creation date for that Control Day. This file will be used by SENSUS to collect and process AMR billing reads. SENSUS will receive the file and prepare on-cycle reading routes for its meter readers.

Using EasyLink, SENSUS will collect billing reads from all SmartPoints and ERTs within the Control Day window. After billing reads are collected and processed by SENSUS, SENSUS will create and transfer an MV-RS upload file, inclusive of all billing reads and missed billing read information, to the CLIENT. SENSUS will collect and deliver billing reads on a monthly basis for each Control Day during a 3-day window ahead of the bill creation date for each Control Day.

SENSUS shall be responsible for providing accurate Billing reads, at performance levels equal to Itron's. The baseline performance level will be determined during the period of time where both SENSUS and ITRON are mutually reading the AMR system.

SENSUS shall not be responsible for providing accurate Billing reads:

- a. for locations from which a signal has been received indicating tampering with any AMR device,
- b. from installed AMR devices that have been referred to the CLIENT for service calls which have not been completed. CLIENT and VENDOR will determine a service call procedure as part of the AMR transition plan.
- c. for special or off-cycle billing reads

For each Control Day of each Billing Month, CLIENT will ensure that complete Control Day files in the MV-RS file format are available to SENSUS. File transfers of billing reads between the CLIENT and SENSUS will be performed via an SFTP site provided by the CLIENT. As part of the Meter



Reading Service, SENSUS takes responsibility for all costs and expenses related to the collection and delivery of billing reads to the CLIENT's Billing System Interface.

Reporting:

Meter reading performance review meetings will be held at least every two (2) weeks for the first three (3) months, and every four (4) weeks or as needed for the remainder of the Meter Reading Services project. Meeting locations, attendance, and time period will be determined jointly by SENSUS and the CLIENT Project Manager and identified as part of the transition plan.

Meetings will be scheduled to discuss technical aspects of the work, provide status updates in addition to the status reports, and to review implementation changes (i.e. scope additions, schedules). SENSUS will follow the Project Documentation and Meetings procedures outline in C.1.1 of the SOW.

SENSUS will provide to the CLIENT a Missed billing reads report on a daily basis. On the first day of each

calendar month, SENSUS will submit via electronic mail status reports to the CLIENT covering meter reading volume and reading success rate and issues and their resolution.

Sensus and CLIENT will develop a process for handling the possible errors that will be encountered in the reading process. These will be included in the transition plan:

- Premise meter data mismatch
- Shut-off at curb
- Premise no longer there (fire, demolished, etc)
- Account closed

F.11.4. Solution Overview

This section provides an overview of the SENSUS solution to be deployed as part of the Meter Reading Services project.

F.11.4.1. Solution/Business Objectives

The CLIENTs objective and overall reasoning is to eliminate the ongoing expense of purchasing and installing an ERT device that will eventually (in the short-term) be removed as part of the "Advanced Metering Infrastructure Services Contract".

CLIENT requested SENSUS provide a detailed statement of work and utilizing SENSUS's previously proposed EASYLINK equipment in lieu of the ITRON AMR Equipment. Pricing will be submitted as part of the "Advanced Metering Infrastructure Services Contract – Exhibit G Rate Sheet". This SOW will provide a plan for:

1. Removing Itron ERTs and installing SENSUS SmartPoints



2. Reading SmartPoints prior to full deployment and operation of the SENSUS FlexNet Communications Network
3. Reading ERTs during the same time as reading the SmartPoint route
4. Delivering billing reads to CLIENT for both ERTs and SmartPoints
5. Utilization of Service Link for the Installation of Smart Points with Sensus's Command Link

F.11.4.2. SmartPoint and Installation Requirements As Part of Solution

As detailed in this SOW, SENSUS will provide a turn-key Easylink solution eliminating the need for CLIENT to purchase any hardware or software for the transition period to AMI. Training will be provided as required and CLIENT will start installation of SmartPoints following the completion of the ServiceLink integration for SmartPoint activation. The following hardware, software, services, and training support this effort.

- *Hardware:*
 - *SmartPoints*
 - *Command Link*
 - *Trimble Hand Held Devices*
 - *Itron Hand Held Devices*
 - *EasyLink Reading Device*
 - *ToughBooks for EasyLink*
- *Software:*
 - *EasyLink WorkSpace License*
 - *EasyLink WorkBook License*
 - *FieldLogic v.6.9*
- *Services:*
 - *Provide SmartPoints and associated components for purchase*
 - *Read ERTs and SmartPoints daily for monthly billing*
 - *Provide billing reads from EasyLink to CLIENT billing system; in accordance with CLIENT billing schedule*
 - *Completion of the Integration of Service Link and Field Logic for the deployment of SmartPoints by 4/1/2018*
- *Training:*
 - *SENSUS to provide CLIENT SmartPoint installation, programming, and troubleshooting training (following completion of ServiceLink integration)*

SmartPoints:

SENSUS has a number of different SmartPoint products available for CLIENT to consider and purchase. Some products are available now while others will be available at different time intervals and thus can be selected as needed when they become commercially available. The SmartPoint products are:



1. 515M-3W

This SmartPoint product will be available on site at CLIENTS Field Headquarters for installation 6 weeks after a Purchase Order is submitted following the Control Launch date of 5th November 2018.

This product is the encoder register version that will attach to a badger encoder register and utilizes the 510M-Series radio. The SmartPoint is a radio transceiver that provides inbound and outbound access to water measurement and ancillary device diagnostics via radio signal.

2. 515M-PLS

This SmartPoint product will be available on site at CLIENTS Field Headquarters for installation 6 weeks after a Purchase Order is submitted following the Control Launch date of 19th March 2019.

This product is the pulse register version that will attach to a badger pulse register and utilizes the 510M-Series radio. The SmartPoint is a radio transceiver that provides inbound and outbound access to water measurement and ancillary device diagnostics via radio signal.

3. iPERL with Bracket

This SmartPoint product will be available on site at CLIENTS Field Headquarters for installation 6 weeks after a Purchase Order is submitted following the Control Launch date of 1st February 2019.

This product is a meter with an electronic register and a M-Series radio transceiver that provides RF inbound and outbound access to water measurement and ancillary device diagnostics.

4. 510M and 520M

This SmartPoint product is available for purchase

The SmartPoint 510M is a non-pit set module and the 520M is a pit set module designed for use in submersible, pit set environments. Both are radio transceivers that gives you RF inbound and outbound access to water measurements and ancillary device diagnostics.

Command Link

The CommandLink wireless interface provides access to functional controls within a SmartPoint transceiver. This Bluetooth-enabled device, coupled with a hand-held reader or programmer, controls activation, programming and diagnostic settings, as well as on-demand interrogation of the SmartPoint radio.

Service Link

Service Link is CLIENTS work order management system for field installations. Sensus's FieldLogic software and hardware will be integrated with this system for installation of SmartPoints.

Trimble Hand Held Device



The FieldLogic Hand-held Device is an alternative electronic device used to collect and store meter readings and program SmartPoint modules.

Itron Hand Held Device

SENSUS requests the Itron model FC200 or compatible model that interrogates 40W, 50W, 60W and 100W ERTs. This device is required to collect readings from Itron ERTs during walk-up. CLIENT is required to provide to SENSUS (6) FC200s.

EasyLink Reading Device

The EasyLink Reading Device will interrogate and capture readings from both Itron ERTs and SmartPoints and pass that data to a collection device like a ToughBook.

ToughBook for EasyLink

The ToughBooks are required to collect / process data being collected by the EasyLink Reading Device.

Software:

SENSUS will provide the following software products.

1. EasyLink WorkSpace License

This is a server solution that will manage the data for the field reading collections and process returning data that creates the MV-RS reading files for billing.

2. EasyLink WorkBook License

An on-screen map that allows users to view routes and status real-time. This license is for operating the software that manages the data being collected by the EasyLink Reading Device and post the data back to the host server - EasyLink WorkSpace.

3. FieldLogic Tools

The FieldLogic Software runs on a hand held device and is used by field personnel to program, troubleshoot, and read SmartPoints.

4. FieldLogic Hub

This product is a PC-based application that manages hand-held devices used for programming or reading SmartPoints.

Training:



SENSUS will train CLIENT personnel responsible for installing, programming, and troubleshooting SmartPoints. Training will consist of the following.

- Training will be conducted over the course of five (5) days, Monday-Friday, with a maximum of 40 attendees or an average of eight (8) per day.
- The course will be provided once per day to group leaders of approximately 4-6 installers and their supervision and support staff. Training to consist of 2 hours of classroom study and 4-6 hours on-the-job field training performing change outs and installations. Training on how to install, program, and troubleshoot SmartPoints using Service Link, FieldLogic, and Command Link.
- Additionally, a “Train the Trainer” session will be provided as part of the single day training, and will enable the CLIENT to provide support and additional training to their internal staff as required.
- SENSUS to provide written directions for the procedures and process required for the installation of Sensus SmartPoints w/ CLIENTS meters.

F.11.5.SENSUS Meter Reading Service(s) and Solution

SENSUS will provide meter reading services to CLIENT; whereby, SENSUS will use EasyLink to collect billing reads from both Itron ERTs and SENSUS SmartPoints. The process requires CLIENT to provide daily Control Day files for upcoming routes. The route files will be stored on a CLIENT supplied secure FTP site and SENSUS will grab the Control Day file and consume it into a system that will generate reading route information for the meter readers. SENSUS will have up to five (5) days to collect billing reads for each route and return to CLIENT. SENSUS and CLIENT will develop a file transfer process as part of the transition plan detailing the rules for file naming and file transfer process.

Replacing ERTs with SmartPoints:

SENSUS recommends CLIENT to begin the Meter Reading Service using the 515M-3W product as it will be ready for commercial shipment in early November 2018. This should meet the timeline as the CLIENT has expressed interest to begin replacing Itron ERTs with SmartPoints as soon as possible after contract signature.

Services – Reading SmartPoints for Billing:

SENSUS will use EasyLink WorkBook to drive-by the SmartPoints to collect the billing reads. SENSUS will meet or exceed a 99% billing read rate performance for the SmartPoints that are installed, working correctly and broadcasting a meter reading. At the end of each day the collected billing reads are transferred from EasyLink WorkBook to EasyLink WorkSpace, where the billing reads are processed and prepared into a MV-RS file for upload to the CLIENT billing system. The MV-RS billing file is sent to CLIENT via a secure FTP site. CLIENT is responsible for taking the MV-RS file from the secure location and importing into their billing system.

For SmartPoints that are not broadcasting, CLIENT will be responsible to troubleshoot to determine the problem.

Services – Reading Itron ERTs for Billing

SENSUS, using EasyLink WorkBook, will read the Itron ERTs that are working and broadcasting a billing reading. When EasyLink cannot collect a billing read via the vehicle drive-by, SENSUS will



attempt a walk-by to collect a reading using an Itron Hand Held device. SENSUS will NOT seek entry into the home or business to collect a billing read. For those ERTs not broadcasting due to failure, tamper, etc, SENSUS will create a daily report of missed readings so CLIENT can address the issue and potentially change the ERT to a SmartPoint. CLIENT will provide SENSUS with Itron hand held devices to collect walk-up ERT reads. The hand held device should be Itron model FC200 or compatible model that interrogates 40W, 50W, 60W and 100W ERTs.

SENSUS will begin reading Itron ERTs for billing approximately 8 months after contract signature or prior to September 1st 2019 whichever comes first. The first 2 months will be dedicated to creating a transition plan and ramping up, i.e. getting equipment / resources / vehicles, etc in place. The next 1 to 3 months, SENSUS will monitor the EasyLink ERT readings and tweak the process to enhance reading performance.

During the final 3 months, SENSUS will read in parallel with Itron meter readers to create a baseline performance of EasyLink meter reads as compared to the Itron's MV-RS meter reading performance. SENSUS will baseline the read rate performance and meet or exceed the Itron read rate performance based on working ERTs broadcasting a viable billing read. The baseline performance will provide SENSUS with key factors in understanding the exceptions that will occur on a day-to-day basis of reading CLIENT routes around the service territory.

At the end of the 8 month period, or prior to September 1st 2019 whichever comes first, SENSUS will be prepared to take ownership of reading all of the Itron ERTs for CLIENT billing.

Timeline after Notice to Proceed

- Month 1-2 – create transition plan; ramp up
- Month 3-5 – monitor EasyLink ERT readings and compare to Itron MV-RS; tweak the process
- Month 6-8 – read all routes in parallel with Itron contractor and create EasyLink baseline reading performance
- Month 9 – take ownership of reading contract; begin reading for billing

F.11.5.1. Meter Reading Route Completion

SENSUS SmartPoints

SENSUS will discontinue reading Sensus SmartPoints using EasyLink once the FlexNet Communications Network is operational and all back-office system integration has been accepted by the CLIENT. This would be in conjunction with Exhibit E – SOW and would occur around the same time Field Readiness Testing (FRT) is approved.

ITRON ERTs

SENSUS will discontinue reading an Itron ERT meter reading route with EasyLink once 90% of the ERTs within that route have been converted to SmartPoints.

F.11.6. Tasks and Responsibilities

Table of tasks and responsibilities



Task (Normal Reading Operations)	Responsible Party
Create control day route information 5-business days prior to billing day and provide this information in MV-RS file format	CLIENT
Provide Control day route file (MV-RS) to secure FTP site	CLIENT
Provide secure FTP site	CLIENT
Retrieve Control day route file (MV-RS) from secure FTP site	SENSUS
Consume the Control day route file (MV-RS) into EasyLink Solution	SENSUS
Create daily reading routes for meter readers using EasyLink Solution; routes created for both ERT and SmartPoint	SENSUS
Meter readers collect daily SmartPoint billing reads using EasyLink drive-by	SENSUS
Meter readers collect daily ERT billing reads using EasyLink drive-by	SENSUS
Meter readers upload daily SmartPoint billing reads into EasyLink Solution	SENSUS
Meter readers upload daily ERT billing reads into EasyLink Solution	SENSUS
Create Control day billing file (MV-RS) with ERT and SmartPoint readings	SENSUS
Provide Control day billing file (MV-RS) to secure FTP site	SENSUS
Retrieve Control day billing file (MV-RS) from secure FTP site	CLIENT

Task (Exception When Reading ERT)	Responsible Party
Cannot collect reading from ERT using EasyLink drive-by	SENSUS
Use Hand Held device and walk towards water meter to collect reading	SENSUS
If no ERT reading available, report to CLIENT to remove ERT	SENSUS
Schedule appointment to remove ERT (Prior to Mass Deployment)	CLIENT
Remove ERT (Prior to Mass Deployment)	CLIENT
Install SmartPoint (Prior to Mass Deployment)	CLIENT
Troubleshoot SmartPoint installation issues	CLIENT
Troubleshoot SmartPoint product issues	SENSUS

Task (Exception When Reading SmartPoint)	Responsible Party
Cannot collect reading from SmartPoint using EasyLink drive-by	SENSUS
Use Hand Held device and walk towards water meter to collect reading	SENSUS
If no SmartPoint reading available, report to CLIENT to troubleshoot	SENSUS



Task (Exception When Reading SmartPoint)	Responsible Party
Schedule appointment to troubleshoot SmartPoint	CLIENT
Troubleshoot SmartPoint installation issues and take appropriate action	CLIENT
Troubleshoot SmartPoint product issues and take appropriate action	SENSUS

F.11.7. Assumptions

1. CLIENT will purchase approximately 1500 SmartPoints per month.
2. CLIENT will remove ERTs and install SmartPoints during transition period. This is period while EasyLink is being deployed to collect billing reads; prior to the FlexNet Communications Network being operational.
3. CLIENT will troubleshoot all SmartPoints installed by CLIENT during transition period
4. CLIENT will provide Itron hand held units (model F200 or compatible model) that interrogates 40W, 50W, 60W and 100W ERTs for walk-up reads
5. CLIENT will perform HIGH/LOW test on billing reads when importing MV-RS billing file
6. CLIENT will review and approve SENSUS vehicle signage, uniforms, customer FAQ sheets, work rules, public communications, badges, etc. to reduce community questions and police inquiries.
7. CLIENT will provide all 60 route files prior to contract signing
8. CLIENT will authorize use of its FCC radio license, if required
9. SENSUS will baseline the Itron read rate performance and meet or exceed the Itron read rate based on working ERTs broadcasting a viable billing read
10. SENSUS is not required to enter homes or businesses to secure billing reads
11. SENSUS will not perform any data validation on the billing reads prior to delivery to CLIENT
12. There are no blackout periods for collecting billing reads



F.12.Meter Integration Plan

Meter Size	Meter Manufacturer	Meter Model	Pulse or Encoder	Estimated Quantities	Current Connection Method	Pulse Integration	Integration Method	Integration Notes
1	Badger	M70	Pulse	>1000	Integral Mount		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
1.5	Badger	M120	Pulse	>1000	Integral Mount Pulser		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
2	Badger	M170	Pulse	>1000	Integral Mount Pulser		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
3	Badger	M450	Pulse	>100	Integral Mount Pulser		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
4	Badger	M1000	Pulse	>100	Integral Mount Pulser		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
6	Badger	M2000	Pulse	>100	Integral Mount Pulser		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
8	Badger	M3500	Pulse	>100	Integral Mount Pulser		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
10	Badger	M5500	Pulse	>10	Integral Mount Pulser		*PWD provides New Encoder Register: Assume 98% 510M Integral & 2% 520M with Bracket	The City to provide Integral Mount Encoder Register OR Encoder Register with lead and Itron Quick-Connect to VENDOR. VENDOR to retrofit 510M Integral Mount for all Integral Mounts provided, and VENDOR to provide 520M Pit Set with bracket and Itron Quick Connect Male port for all Encoder Registers with a lead and Itron Quick-Connect provided.
0.625	Badger	M25 (HRE - Mech)	Encoder	>10001	Integral Mount Encoder		510M w/ Integral Mount	VENDOR to provide 510M Integral Mount Encoder MIU with Itron TouchCoupler connector for iPERL, or equivalent method of connection to be reviewed by the City.
3	ABB	T-3000	Pulser	>100	Integral Mount Pulser	Yes (w/ Backplate)	510MP Integral Mount	City to provide VENDOR with Integral Mount ABB Pulser Register & Itron MIU. VENDOR to provide the City with Integrally Mounted 510MP.
0.625	Badger	M25 (RTR)	Pulse	460000	Integral Mount Pulser	Yes	510MP W/ Integral Mount	Vendor to provide 510MP w/ integral Mount
2	Badger	E-Series Ultrasonic	Encoder/Pulse		Itron Quick-Connect		520 Itron Connector w/Bracket	The City to replace this meter.
0.75	Sensus	iPERL	Encoder	>100	MIU with Touch Pad Connector & Itron Quick Connect		520M Integral Mount with pre-wired TouchCoupler	VENDOR to provide 520M Integral Mount Encoder MIU with Itron TouchCoupler connector for iPERL, or equivalent method of connection to be reviewed by the City.
1	Sensus	iPERL	Encoder	>1000	MIU with Touch Pad Connector & Itron Quick Connect		520M Integral Mount with pre-wired TouchCoupler	VENDOR to provide 520M Integral Mount Encoder MIU with Itron TouchCoupler connector for iPERL, or equivalent method of connection to be reviewed by the City.
0.625	Badger	E-Series Ultrasonic	Encoder	>1000	None		520M W/ Bracketwith pre-wired connection	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
1.5	Metron	Spectrum 88	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
2	Metron	Spectrum 130	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.



Scope of Work

3	Master Meter	Octave	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
3	Sensus	OMNI T2 3"	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
3	Sensus	OMNI C2 3"	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
4	Master Meter	Octave	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
4	Sensus	OMNI T2 4"	Encoder	10	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
4	Sensus	OMNI C2 4"	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
6	Master Meter	Octave	Encoder	>10	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
6	Sensus	OMNI T2 6"	Encoder	>10	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
6	Sensus	OMNI C2 6"	Encoder	>100	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
8	Master Meter	Octave	Encoder	>10	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
8	Sensus	OMNI T2 8"	Encoder	>1	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
10	Master Meter	Octave	Encoder	>1	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
10	Sensus	OMNI T2 10"	Encoder	>1	MIU with Itron Quick-Connect		520M with Itron Quick-Connect, Bracket & Meter Mount	VENDOR to provide 520M Encoder MIU with Itron Quick-Connect Male Port, Pit Bracket & Meter Mount-Bracket.
0.75	Badger	E-Series Ultrasonic	Pulse	>100	Itron Quick-Connect		Replace Meter - Most Likely one of the above	The City to replace this meter.
1	Badger	E-Series Ultrasonic	Pulse	>100	Itron Quick-Connect		Replace Meter - Most Likely one of the above	The City to replace this meter.
1	Metron	Spectrum 50	Encoder	>100	MIU with Itron Quick-Connect		Replace Meter - Most Likely one of the above	The City to replace this meter.
1.5	ABB	C-700	Encoder	>100	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
1.5	ABB	C-700	Pulser	>100	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
2	ABB	C-700	Encoder	>10	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
2	ABB	C-700	Pulser	>100	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
2	Sensus	Displacement	Encoder	1	MIU with Itron Quick-Connect		Replace Meter - Most Likely one of the above	The City to replace this meter.
3	ABB	T-3000	Encoder	>10	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
3	Actaris	Flowstar M DN 80	Pulser	>10	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
4	ABB	T-3000	Encoder	1	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
4	Actaris	Flowstar M DN 100	Pulser	1	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
6	ABB	T-3000	Encoder	1	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
6	Actaris	Flowstar M DN 150	Pulser	1	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
8	ABB	T-3000	Encoder	1	Integral Mount Pulser		Replace Meter - Most Likely one of the above	The City to replace this meter.
10	ABB	T-3000	Encoder	>1	Integral Mount Pulser	Yes (w/ Backplate)	510MP Integral Mount	The City to replace this meter.
4	Badger	Compound (Dual Register)	Pulse	>100	Pulser Registers connected with Sumnator	Maybe	See Options - >	VENDOR to provide pulse integration method of sumnating 2 registers, OR: VENDOR to provide Encoder MIU with two (2) Itron Quick-Connect Male Ports, SEW to sumnate reads for billing AND separately track register reads.
6	Badger	Compound(Dual Register)	Pulse	>100	Pulser Registers connected with Sumnator	Maybe	See Options - >	VENDOR to provide pulse integration method of sumnating 2 registers, OR: VENDOR to provide Encoder MIU with two (2) Itron Quick-Connect Male Ports, SEW to sumnate reads for billing AND separately track register reads.

EXHIBIT F
ECONOMIC OPPORTUNITY PLAN

**City of Philadelphia
Economic Opportunity Plan**

Advanced Metering Infrastructure [AMI]

I. Introduction, Definitions and Diversity Practices

A. Chapter 17-1600 of The Philadelphia Code requires the development and implementation of “Economic Opportunity Plan(s)” for certain classes of contracts and covered projects as defined in Section 17-1601. This Economic Opportunity Plan (“Plan”) memorializes the Applicant’s (hereinafter Contractor’s) “Best and Good Faith Efforts” to provide meaningful and representative opportunities for Minority Business Enterprises (“MBEs”), Woman Business Enterprises (“WBEs”) and Disabled Business Enterprises (“DSBEs”) (collectively, “M/W/DSBEs” which also includes firms designated as Disadvantaged Business Enterprises or “DBEs”¹) and employ an appropriately diverse workforce in [Project Description] (“Project”). The term “Best and Good Faith Efforts,” the sufficiency of which shall be in the sole determination of the City, means: a Contractor’s efforts, the scope, intensity and appropriateness of which are designed and performed to foster meaningful and representative opportunities for participation by M/W/DSBEs and an appropriately diverse workforce and to achieve the objectives of Chapter 17-1600 within this project. Best and Good Faith Efforts are rebuttably presumed met, when a Contractor makes commitments and causes its professional services providers and contractors retained by Contractor (collectively, the “Participants” and each a “Participant”) to make commitments within the M/W/DSBE Participation Ranges established for this RFP and employ a diverse workforce as enumerated herein.

This contract is subject to the Plan requirements as described in Section 17-1603 (1). Accordingly, by submission of this Plan, a responsive and responsible Contractor makes a legally binding commitment to abide by the provisions of this Plan which include its commitment to exercise its Best and Good Faith Efforts throughout the project and its commitment to cause its Participants to use their Best and Good Faith Efforts to provide subcontracting opportunities for M/W/DSBEs in all phases of the project and to employ a diverse workforce. This Plan expressly applies to all contracts awarded in connection with the project. The objectives set forth in this Plan shall be incorporated in all Contractor requests for proposals, bids and solicitations and communicated to all Participant levels.

B. For the purposes of this Plan, MBE, WBE, DBE and DSBE shall refer to certified businesses so recognized by the City of Philadelphia through its Office of Economic Opportunity (“OEO”). Only the work or supply effort of firms that are certified as M/W/DSBEs by an OEO approved certifying agency² or identified in the OEO Registry will be eligible to receive credit as a Best and Good Faith Effort. In order to be counted, certified firms must successfully complete and submit to the OEO an application to be included in the OEO Registry which is a list of registered M/W/DSBEs maintained by the OEO and available online at www.phila.gov/oEO/directory. If Contractor is certified by an approved certifying agency, a copy of that certification should be furnished with the proposal.

¹ “DBE” or “Disadvantaged Business Enterprise” means a socially and economically disadvantaged minority or woman owned business that is certified under 49 C.F.R. Part 26. If applicant makes solicitation(s) and commitment(s) with a DBE, applicant shall indicate which category, MBE or WBE, is submitted for counting.

²A list of “OEO approved certifying agencies” can be found at www.phila.gov/oEO

C. Contractor is required to submit a statement summarizing current and past practices relating to its diversity practices (“Diversity Practices Statement”). This statement shall identify and describe examples of processes used to develop diversity at all levels of Contractor’s organization including, but not limited to, board and managerial positions. This Diversity Practices Statement should also summarize Contractor’s strategic business plans specific to its current or past practices of M/W/DSBE utilization on its government and non-government projects and procurement activities. Attachment “A” to this Plan is provided for this purpose and should be submitted with Contractor’s proposal although the City reserves the right to request it at any time prior to contract award.

D. Contractor and its Participant(s) hereby verify that all information submitted to the City including without limitation, the Plan and all forms and attachments thereto, are true and correct and are notified that the submission of false information is subject to the penalties of 18 Pa.C.S. Section 4904 relating to unsworn falsification to authorities. Contractor and its Participants also acknowledge that if awarded a contract/subcontract resulting from this RFP, it is a felony in the third degree under 18 Pa.C.S. Section 4107.2 (a)(4) if, in the course of the contract/subcontract, Contractor and/or its Participant(s) fraudulently obtains public moneys reserved for or allocated or available to minority business enterprises or women’s business enterprises.

I. Goals

A. M/W/DSBE Participation Ranges

As a benchmark for the expression of Best and Good Faith Efforts to provide meaningful and representative opportunities for M/W/DSBEs in the contract, the following participation ranges have been developed. These participation ranges represent, in the absence of discrimination in the solicitation and selection of M/W/DSBEs, the percentage of MBE and WBE participation that is reasonably attainable on this project through the exercise of Best and Good Faith Efforts. In order to maximize opportunities for as many businesses as possible, a firm that is certified in two or more categories (e.g. MBE and WBE and DSBE or WBE and DSBE) will only be credited toward one participation range as either an MBE or WBE or DSBE. The firm will not be credited toward more than one category. These ranges are based upon an analysis of factors such as the size and scope of the project and the availability of MBEs and WBEs to perform various elements of the contract. The participation ranges below, one participation range for MBE and another participation range for WBE, relate to the total dollar value of the contract with the acknowledgement that the Contractor will most likely furnish all proprietary electronics (i.e., Meter Reading Electronics and Network Hardware):

PROPOSAL	MBE
Installation of Network and Electronics	25%-30% AND
Project Management and Integration	WBE 5%-10%

The separate participation ranges listed above are based upon historical achievement and current availability for the anticipated scope of work. Because this contract will be governed by a

Project Labor Agreement, it is desired that a single MBE furnish all installation associated with the project.

II B. Workforce Goals

Contractor and its Participants agree to exhaust their Best and Good Faith Efforts to employ minority persons and females in their workforce as “AMI Technicians” (a labor classification defined in the Project Labor Agreement for this project), in conformity with the following goals:

- African American – 22% of all journey hours worked across all trades
- Asian – 3% of all journey hours worked across all trades
- Hispanic – 15% of all journey hours worked across all trades
- Female – 5% of all journey hours worked across all trades

The Labor Standards Unit shall have the responsibility of administering oversight of these Workforce Goals including monitoring Contractor and its Participants’ Best and Good Faith Efforts towards realization of the goals.

III. Contractor Responsiveness and Responsibility

A. Contractor shall identify all its M/W/DSBE commitments and evidence its agreement to employ a diverse workforce on the form entitled, “M/W/DSBE Participation and Workforce Commitments.” The Contractor’s identified commitment to use an M/W/DSBE on this form constitutes a representation by Contractor, that the M/W/DSBE is capable of completing the subcontract with its own workforce, and that the Contractor has made a legally binding commitment with the firm. The listing of the M/W/DSBE firm by Contractor further represents that if Contractor is awarded the contract, Contractor will subcontract with the listed firm(s) for the work or supply effort described and the dollar/percentage amount(s) set forth on the form. In calculating the percentage of M/W/DSBE participation, Contractor shall apply the standard mathematical rules in rounding off numbers. In the event of inconsistency between the dollar and percentage amounts listed on the form, the percentage will govern. Contractor is to maintain the M/W/DSBE percentage commitments throughout the term of the contract which shall apply to the total amount of the contract and any additional increases. In the event the Contractor’s contract is increased by change order and/or modification, or amendment, it shall be the responsibility of the Contractor to apply its Best and Good Faith Efforts to the amended amount in order to maintain any participation ranges committed to on the total dollar amount of the contract at the time of contract completion.

1. Commercially Acceptable Function

A contractor that enters into a subcontract with an M/W/DSBE shall be considered to have made a Best and Good Faith Effort in that regard only if its M/W/DSBE subcontractor performs a commercially acceptable function (“CAF”). An M/W/DSBE is considered to perform a CAF when it engages in meaningful work or supply effort that provides for a distinct element of the subcontract (as required by the work to be performed), where the distinct element is worthy of the dollar amount of the subcontract and where the M/W/DSBE carries out its responsibilities by actually performing, managing and supervising the work involved; M/W/DSBE subcontractors must perform at least twenty percent (20%) of the cost of the subcontract (not including the cost of materials, equipment or supplies incident to the performance of the subcontract) with their own employees.

The City may evaluate the amount of work subcontracted, industry practices and any other relevant factors in determining whether the M/W/DSBE is performing a CAF and in determining the amount of credit the Contractor receives towards the participation ranges. For example, a contractor using an M/W/DSBE non-stocking supplier (i.e., a firm that does not manufacture or warehouse the materials or equipment of the general character required under the contract) to furnish equipment or materials will only receive credit towards the participation ranges for the fees or commissions charged, not the entire value of the equipment or materials furnished.

B. Upon award, letters of intent, quotations, and any other accompanying documents regarding commitments with M/W/DSBEs, including the M/W/DSBE Participation and Workforce Commitments Form, become part of the contract. M/W/DSBE commitments are to be memorialized in a written subcontract agreement and are to be maintained throughout the term of the contract and shall apply to the total contract value (including approved change orders and amendments). **Any change in commitment, including but not limited to termination of the subcontract, reduction in the scope of committed work, substitutions for the listed firms, changes or reductions in the listed dollar/percentage amounts, must be pre-approved in writing by OEO.** Throughout the term of the contract, Contractor is required to continue its Best and Good Faith Efforts.

C. **In the event Contractor does not identify on the M/W/DSBE Participation and Workforce Commitments Form that it has made M/W/DSBE commitments within the participation ranges established for this Contract and/or does not agree to employ a diverse workforce as described herein, Contractor must complete and submit a *Documentation of Best and Good Faith Efforts Form* (“BGFE Form”), documenting its solicitations and any commitments with M/W/DSBEs, and detailing any efforts made to include M/W/DSBEs in the contract and to employ a diverse workforce.** The submission of the BGFE Form is an element of proposal responsiveness and failure to include this form may result in the rejection of the Proposal. The BGFE Form must include at a minimum, certification and documentary evidence that the following actions were taken:

1. Solicitation directed to both qualified M/W/DSBEs registered with OEO and qualified M/W/DSBEs certified by agencies approved by OEO. Contractor must provide a list of all certification directories used for soliciting participation for this Contract. Contractor must determine with reasonable certainty if the M/W/DSBEs are interested by taking appropriate steps to follow up on initial solicitations; one time contact, without follow up, is not acceptable; and

2. Contractor provided interested M/W/DSBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation; and

3. Contractor negotiated in good faith with interested M/W/DSBEs. An Contractor using good business judgment would consider a number of factors in negotiating with subcontractors, including M/W/DSBE subcontractors, and would take a firm’s price and capabilities as well as the objectives of the Plan into consideration; and

4. Documentation of the following:

i. Any commitments to use M/W/DSBEs in its proposal for subcontracted services and materials supply even when Contractor would otherwise prefer to self-perform/supply these items; and

ii. Correspondence between the Contractor and any M/W/DSBE(s) related to this Proposal; and

iii. Attendance logs and/or records of any scheduled pre-proposal meeting; and

5. Certification and evidence that the following actions were taken or documentation of the following, or an explanation why these actions were not taken or why documentation does not exist:

i. Any arms length business assistance provided to interested M/W/DSBEs; and

ii. Solicitation through job fairs, newspapers, periodicals, advertisements and other organizations or media that are owned by M/W/DSBEs and/or focus on M/W/DSBEs; and

iii. Telephone logs of communications related to this Contract; and

iv. Notification of and access to proposal documents at the Utility Supplier's office or other office locations for open and timely review; and

v. Contractor sought assistance from the Urban Affairs Coalition, PACareerlink, Opportunity Industrial Center and Philadelphia Works, Inc. to perform employment outreach; and

vi. Contractor published its policy of nondiscrimination in the hiring, retention and promotion of employees; and

vii. Any agreement with a training program that targets the employment of minority persons, disabled persons and women.

IV. Evaluation of Responsiveness and Responsibility

A. Evaluation and Determination

1. The City, acting through its OEO, will evaluate the responsiveness of the Plan to these requirements. OEO reserves the right to request further documentation and/or clarifying information at any time prior to the award of the contract which may result in Contractor's amendment of its M/W/DSBE Participation and Workforce Commitments Form or BGFE Form.

B. Administrative Reconsideration

1. If the OEO determines that the Contractor has not made sufficient Best and Good Faith Efforts, the Contractor will be notified that its proposal is nonresponsive and may file a written appeal with OEO within forty-eight (48) hours of the date of notification. The decision of OEO may be appealed in writing within forty-eight (48) hours of the date of the OEO's decision to the Chief Operating Officer of the Commerce Department or his designee whose decision shall be

final. If it is determined that the Contractor did not make sufficient Best and Good Faith Efforts, its Proposal will be rejected.

2. Notwithstanding compliance with the requirements set forth herein, the City reserves the right to reject any or all proposals as deemed in the best interest of the City.

V. Compliance and Monitoring of Best and Good Faith Efforts

A. The Contractor shall file a hard copy of this Plan, as certified below by OEO, with the Chief Clerk of City Council within fifteen (15) days of receiving a Notice of Award. The Plan shall be filed with:

Michael Decker, Chief Clerk of City Council
Room 402 City Hall
Philadelphia, Pennsylvania 19107

The Contractor also agrees to cooperate with OEO in its compliance monitoring efforts, and to submit, within the time limits prescribed by OEO, all documentation which may be requested by OEO relative to the awarded contract, including the items described below. The Contractor must provide as required and maintain the following contract documentation for a period of three (3) years following acceptance of final payment under the contract:

- Copies of signed contracts and purchase orders with M/W/DSBE subcontractors;
- Evidence of payments (cancelled checks, invoices, etc.) to subcontractors and suppliers to verify participation;
- Telephone logs and correspondence relating to M/W/DSBE commitments.

B. Prompt Payment of M/W/DSBEs

1. The Contractor shall within five (5) business days after receipt of a payment from the City for work performed under the contract, deliver to its M/W/DSBE subcontractors their proportionate share of such payment for work performed (including the supply of materials). In connection with payment of its M/W/DSBE subcontractors, the Contractor agrees to fully comply with the City's payment reporting process which may include the use of electronic payment verification systems.

2. Each month of the contract term and at the conclusion of the contract, the Contractor shall provide to the OEO documentation reconciling actual dollar amounts paid to M/W/DSBE subcontractors to M/W/DSBE commitments presented in the Plan.

C. Oversight Committee

1. For this project, the City, in its sole discretion, may establish a Project Oversight Committee consisting of representatives from the City and Contractor ("Committee"). The Committee will meet regularly to provide advice for the purpose of facilitating compliance with the Plan.

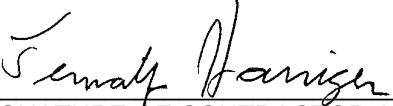
2. If a Project Oversight Committee is established, the City will convene meetings of the Committee no later than one (1) month after issuance of the Notice to Proceed.

VI. Remedies and Penalties for Non-Compliance

A. The Contractor agrees that its compliance with the requirements of the Plan is material to the contract. Any failure to comply with these requirements may constitute a substantial breach of the contract. It is further agreed and understood that in the event the City determines that the Contractor hereunder has failed to comply with these requirements the City may, in addition to remedies reserved under Section 17-1605 of The Philadelphia Code, any other rights and remedies the City may have under the contract, or any bond filed in connection therewith or at law or in equity, exercise one or more of the remedies below, which shall be deemed cumulative and concurrent:

1. Withhold payment(s) or any part thereof until corrective action is taken.
2. Terminate the contract, in whole or in part.
3. Suspend/Debar the Contractor from proposing on and/or participating in any future City contracts for a period of up to three (3) years.
4. Recover as liquidated damages, one percent of the total dollar amount of the contract for each one percent (or fraction thereof) of the commitment shortfall. (NOTE: The “total dollar amount of the contract” shall include approved change orders, amendments and for requirements contracts shall be based on actual quantities ordered by the City.)

The remedies enumerated above are for the sole benefit of the City and City's failure to enforce any provision or the City's indulgence of any non-compliance with any provision hereunder, shall not operate as a waiver of any of the City's rights in connection with the Contract nor shall it give rise to actions by any third parties including identified M/W/DSBE subcontractors. No privity of contract exists between the City and the M/W/DSBE subcontractor identified in the contract. The City does not intend to give or confer upon any such M/W/DSBE subcontractor(s) any legal rights or remedies in connection with subcontracted services under any law or Executive Order or by any reason of the Contract except such rights or remedies that the M/W/DSBE subcontractor may seek as a private cause of action under any legally binding contract to which it may be a party.

Tim Harriger, Sensus, Vice President of Sales - North American Water	March 3, 2017
<hr/>	
PRINT NAME OF CONTRACTOR AND TITLE	DATE
 Sensus, Vice President of Sales North American Water	March 3, 2017
<hr/>	
SIGNATURE OF CONTRACTOR AND TITLE	DATE

IOLA HARPER, DIRECTOR, OFFICE OF ECONOMIC OPPORTUNITY³ DATE

[See Forms on following pages; these Forms, must be submitted by Contractor]

³ Pursuant to Section 17-1603 (2) of The Philadelphia Code, the representative of the City of Philadelphia's Office of Economic Opportunity, the "certifying agency", certifies that the contents of this Plan are in compliance with Chapter 17-1600.

STATEMENT OF DIVERSITY PRACTICES, POLICIES AND PAST ACHIEVEMENTS

In compliance with Chapter 17-1600 of the Philadelphia Code, Section 17-1603 entitled “Equal Opportunity Plan: Contents,” the Plan shall contain a statement from the contractor, developer and/or recipient of financial assistance summarizing past practices by identifying and describing examples of processes used to develop diversity at any/all levels of its organization including, but not limited to, Board and managerial positions. This statement shall also summarize strategic business plans specific to current or past practices of M/W/DSBE utilization on government and non-government projects and procurement. Where appropriate, such a statement should contain:

1. Describe employment and recruitment policies used to achieve diversity in your workforce.
2. Provide the race, gender, and residential (local) status of your
 - a) Board of Directors
 - b) Management
 - c) General Workforce
3. Identify your organization’s methods of solicitation and utilization of Minority, Woman and Disabled Businesses (M/W/DSBEs). Please be specific in describing outreach and any procurement policies that are focused on creating or sustaining business relationships with M/W/DSBEs.
4. What percentage of your company’s total spend with vendors and suppliers is attributable to M/W/DSBEs? Please include a list of the largest M/W/DSBEs used by your organization in the last 12 months.
 - a) Identify the type of goods or services purchased
 - b) Amount of the contract.
 - c) Indicate if any of these M/W/DSBEs are listed in the City of Philadelphia’s Office of Economic Opportunity Registry.
 - d) Are these companies certified as M/W/DSBEs? Do you rely on any particular certifying agency?
 - e) If there is no previous M/W/DSBE utilization, the Plan shall contain a statement that explains the reason for the lack of M/W/DSBE participation in past contract(s) or project(s).
5. Describe any initiatives made by your organization to increase investment and promote equity ownership by minorities and women.

***Sensus has complete these responses and submitted in document 10.0_Office of Economic Opportunity.pdf

EXHIBIT G
RATE SHEET

SENSUS 20 YEAR COST MODEL FOR PWD
Section 1 - Products and Services

		Quantity	Unit Price	Assumptions	Contract Year		
					1	2	
A AMI INFRASTRUCTURE							
1	Retrofitted MIU	430000	\$ 52.21	2 Year Roll Out	\$ 11,225,150	\$ 11,225,150	
2	Retrofitted MIU Installation	430000	\$ 87.73	2 Year Roll Out	\$ 18,861,950	\$ 18,861,950	
2a	Retrofitted MIU Pre-Installation of MIU on Regi	430000	\$ 6.11	2 Year Roll Out	\$ 1,313,650	\$ 1,313,650	
3	MIU (single port)	40000	\$ 52.00	Deployed in Year 2	\$ -	\$ 2,080,000	
4	Pit MIU (single port)	15000	\$ 57.00	Deployed in Year 2	\$ -	\$ 855,000	
5	MIU (dual port)	0	\$ 57.00	TBD			
6	Data Collection Unit	43	\$ 12,500.00	Deployed in Year 1	\$ 537,500	\$ -	
7	Data Collection Unit Installation	43	\$ 11,650.00	Deployed in Year 1	\$ 500,950	\$ -	
8	Data Collection Unit Installation	30	\$ 53,500.00	Est. Only T/E to be billed as incurred	\$ 1,605,000	\$ -	
9	MIU Programming Peripheral for integration w	50	\$ 372.26	Purchased in Year 1	\$ 18,613	\$ -	
10	Work order Tablets	50	\$ 700	Purchased in Year 1	\$ 35,000	\$ -	
11	Ipearl bracket	25000	\$ 10.00	Over life of the contract	\$ 250,000		
B SOFTWARE & PROJECT LICENSES							
These items do not apply to PWD in a Software as a Service (SaaS) Model							
C PROJECT MANAGEMENT AND INTEGRATION							
1	Project Management	1	\$ 2,545,486	2 Year Roll Out	\$ 1,272,743	\$ 1,272,743	
2	Training	1	\$ 9,125	Year 1	\$ 9,125	\$ -	
3	Solution Architecture and Test Consulting	1	\$ 100,000	Year 1	\$ 100,000	\$ -	
4	3rd party MDMs and Customer Portal Integrat	1	\$ 65,000		\$ 65,000		
5	Mailer program	485000	2.32	installation period	\$ 1,125,200		
6	System Hosting Meter Data Management- SEV	1	\$ 224,010.00		\$ 224,010		
D METER READING DURING AMR TO AMI TRANSITION							
1	Setup Fee	1	\$ 35,295	Year 1	\$ 35,295	\$ -	
2	Cost Per Month	24	\$ 42,260	Service provided for 2 years (Assumes 3 crews for Year 1, 1.5 crews for Year 2)	\$ 507,120	\$ 253,560	
E HOSTED SERVICES							
1	Setup Fee System Hosting Control Software	1	\$ 45,000.00	Year 1	\$ 45,000	\$ -	
2	Setup Fee Network Operation and Maintenance	1			\$ -	\$ -	
3	Endpoint Managed Services Setup Fee	1	\$ 52,500.00	Year 1	\$ 52,500	\$ -	
F Bond Premiums							
1	Project Bond Fee	1	\$ 840,000.00	Payment in accordance with the Con	\$ 840,000.00		
					Annual Capital Costs	\$ 38,623,806	\$ 35,862,053
SENSUS PROVIDED SOLUTION DISCOUNT					Payment in accordance with Contract	\$ 2,500,000	
					Annual Capital Costs net of Solution discount	\$ 36,123,806	\$ 71,985,859.00

SECTION 2- FEES FOR SUPPORT/OPERATION/MAINTEN SENSUS DESCRIPTION		Quantity	Unit Price (per meter per year)	Assumptions	1	2	3	Price Years 4 - 20		
1	System Hosting Control Software		RNI SaaS Annual Fee	485000 \$	0.90	1/12 per month. Escalates at 3% per year after mass deployment completed	\$ 118,219	\$ 236,438	\$ 449,595	% increase Based on CPI
2	System Hosting MDM	1	Analytics Annual Fee (SEW MDM) (10)	\$ 209,520	50% YR 1, 75% YR 2 during ramp up	\$ 104,760	\$ 157,140	\$ 209,520		Fixed
3	System Hosting Customer Portal	1	Customer Portal Annual Fee (10)	\$ 209,520		\$ 104,760	\$ 157,140	\$ 209,520		Fixed
4	Network Operation and Maintenance		Network Managed Services	485000 \$	0.75	1/2 total meters installed in Year 1, 1/12 per month. Escalates at 3% per year after mass deployment completed	\$ 98,516	\$ 197,031	\$ 374,663	% increase Based on CPI
5	MIU Maintenance + 20 Year Extended Warranty		Endpoint Managed Services	485000 \$	0.48	1/2 total meters installed in Year 1, 1/12 per month. No price escalation. PWD to service first 200 SmartPoint failures on a monthly basis with no chargeback to Sensus. Monthly failures greater than 201 and less than 2% of the SmartPoint population will be serviced by PWD with Sensus providing an in/out credit of \$30 per unit for failures covered under Sensus' warranty. Failures in excess of 2% of the SmartPoint population will be serviced by Sensus.	\$ 63,050	\$ 126,100	\$ 232,800	Fixed
5a	Meter Catastrophic Warranty Agreement		catastrophic fee (iperl and omni)	\$	0.48	per meter per year				
6	Service Link	1	Annual SW maintenance fee	\$51,541		(includes 107 users) annual escalation 4% maps to Service Link fee structure	\$ 51,541	\$ 53,603	\$ 55,747	4%
7	WOMS Backhaul fees (Samsung Tablets)		TBD			Monthly Cellular charge billed to PWC	\$ -	\$ -		
8	SEW Optional Fees									
8a	SMS	1	Annual Fee (paid up front) + \$0.003 inbound /0.008 outbound message	\$ 28,350		short/vanity code (one time implem add programmable recording \$0.003min/storage \$0.001min per month/Transcription \$0.07min < 1M email/month= \$875,<4M email mn= \$1700,>4M mn=\$2400	\$ 32,000	\$ 28,350	\$ 29,201	Fixed
8b	IVR		\$2.15 per number + \$0.030 per min inbound/\$0.020 outbound toll free included up to 485K users	485000 \$						
8c	Email									
8d	Payment Processing (Utility Paid- Flat Rate)		Credit card, Check- Flat Rate Absorbed			Return Fee Visa, MasterCard, and Discover Transactions (Debit & Credit) \$2.50, AMEX Transactions \$3.00, Check (Web and ACH)\$0.99 add \$469 per user per year, after yr 2 additional storage \$0.15 per endpoint	\$ 46,875	\$ 46,875	\$ 46,875	Fixed
8d1	Payment Processing (Service Fee)		Credit card, Check- Zero Cost Processing							
8e	Data as a Service (SEW DataMart)	1	Analytics as a Service	\$ 46,875.00			\$ 46,875	\$ 46,875	\$ 46,875	Fixed

EXHIBIT G - RATE SHEET (*per hour*)

- 1 Project Manager \$ 121.43
- 2 RF Project Manager \$ 92.86
- 3 Endpoint Deployment Manager \$ 121.43
- 4 Application Engineer \$ 92.86
- 5 Network/Data Analyst \$ 92.86
- 6 Radio Frequency Engineer \$ 92.86
- 7 Field Technician \$ 50.00
- 8 Training \$ 92.86
- 9 Prof. Services \$225/hr, \$30K per Month per resource

SEW Rates (Hourly)

Delivery Director	\$258.50
Project Manager	\$203.50
Product Lead	\$192.50
Director – Client Success	\$165.00
Business Analyst	\$121.00
Product Quality Lead	\$148.50
CIS Lead	\$203.50
Technical Integration Lead	\$192.50
QA Lead	\$126.50

NOTES:

- 1 This Price Sheet represents expected fee structure for the PWD AMI project. Any goods or services required for any Additional Services or a Changes may be subject to new pricing as agree to between the Parties
- 2 Radio pricing is fixed for the first 5 years all other pricing indicated is guaranteed for the installation phase unless otherwise noted.
- 3 Travel and Related expenses are invoiced at cost
- 4 Hourly rates will escalate at 3% annually
- 5 Change orders will follow the City's Change Order Process. Sensus will invoice on a Time and Materials rate with a 10% adder applied
- 6 Additional materials and services from 3rd party items will be at cost plus 10% with the exclusion of travel expenses which will be billed at cost.
- 7 Payment for these items incorporated into a project milestone payment schedule.
- 8 Pit MIU with TR/PL cable @ 5' length is \$71.50
- 9 EasyLink application includes i) Reader ii) laptop iii) Workbook/Workspace License Fee iv) Software Server Licence Fee v) Hosted environment vi) Data Back-up vii) Annual Maintenance. Not to exceed 24 months.
- 10 Pricing and annual escalator subject to change per changes in SEW price model as provided to Sensus.
- 11 Out of scope work limited to Pole installation and site restoration work

EXHIBIT H

METER DATA DELIVERY SUCCESS RATE REDUCED FEE SCHEDULE

Exhibit H - Meter Data Delivery Success Rate Reduced Fee Structure

Meter Data Delivery Success Rate	Percentage Paid of O&M Fee
99.50 - 100.00	100.00%
99.00 - 99.50	100.00%
98.50 - 99.00	95.00%
98.00 - 98.50	90.00%
97.50 - 98.00	80.00%
97.00 - 97.50	65.00%
96.50 - 97.00	50.00%
96.00 - 96.50	40.00%
95.50 - 96.00	30.00%
95.00 - 95.50	20.00%
94.50 - 95.00	0.00%

Sample tables for Daily Small Meter Read Rate and Daily Large Meter Read Rate are shown below, as well as a sample calculation of Meter Data Delivery Success Rate. VENDOR shall provide PMA with monthly invoices substantially in the form of this Exhibit H each month, which will be signed by representatives of both.

Daily Small Meter Read Rate

Day	Total Meters	Meters Read	Missed Reads	Pct. Reads
1	470,000	469,309	691	99.85%
2	470,000	467,873	2,127	99.55%
3	470,000	466,755	3,245	99.31%
4	470,000	468,211	1,789	99.62%
5	470,000	468,880	1,120	99.76%
6	470,000	465,917	4,083	99.13%
7	470,000	469,889	111	99.98%
8	470,000	465,671	4,329	99.08%
9	470,000	468,572	1,428	99.70%
10	470,000	466,386	3,614	99.23%
11	470,000	466,240	3,760	99.20%
12	470,000	466,259	3,741	99.20%
13	470,000	466,837	3,163	99.33%
14	470,000	465,540	4,460	99.05%
15	470,000	467,412	2,588	99.45%
16	470,000	469,923	77	99.98%
17	470,000	467,349	2,651	99.44%
18	470,000	466,022	3,978	99.15%
19	470,000	466,978	3,022	99.36%
20	470,000	465,027	4,973	98.94%
21	470,000	469,304	696	99.85%
22	470,000	467,035	2,965	99.37%
23	470,000	467,121	2,879	99.39%
24	470,000	467,296	2,704	99.42%
25	470,000	468,808	1,192	99.75%
26	470,000	466,387	3,613	99.23%
27	470,000	465,875	4,125	99.12%
28	470,000	467,501	2,499	99.47%
29	470,000	467,113	2,887	99.39%
30	470,000	466,311	3,689	99.22%
Monthly Daily Avg.	470,000	467,260	2,740	99.42%

Daily Large Meter Read Rate

Day	Total Meters	Meters Read	Missed Reads	Pct. Reads
1	15,000	14,962	38	99.75%
2	15,000	14,954	46	99.69%
3	15,000	14,959	41	99.73%
4	15,000	14,996	4	99.97%
5	15,000	14,947	53	99.65%
6	15,000	14,998	2	99.99%
7	15,000	14,904	96	99.36%
8	15,000	14,948	52	99.65%
9	15,000	14,944	56	99.62%
10	15,000	14,979	21	99.86%
11	15,000	14,961	39	99.74%
12	15,000	14,974	26	99.82%
13	15,000	14,902	98	99.35%
14	15,000	14,984	16	99.89%
15	15,000	14,928	72	99.52%
16	15,000	14,901	99	99.34%
17	15,000	14,957	43	99.71%
18	15,000	14,905	95	99.37%
19	15,000	14,985	15	99.90%
20	15,000	14,949	51	99.66%
21	15,000	14,998	2	99.98%
22	15,000	14,998	2	99.98%
23	15,000	14,959	41	99.73%
24	15,000	14,985	15	99.90%
25	15,000	14,923	77	99.48%
26	15,000	14,953	47	99.68%
27	15,000	14,910	90	99.40%
28	15,000	14,987	13	99.92%
29	15,000	14,995	5	99.97%
30	15,000	14,923	77	99.49%
Monthly Daily Avg.	15,000	14,956	44	99.70%

Average Read Rate	% of O&M Fee	Monthly O&M	Amount Due
$(99.42\% + 99.7\%) / 2 = 99.56\%$	100.00%	\$ 120,257	\$ 120,257

Monthly Reading Acceptance
Manager, (Vendor) Outsource Operations / Date
Director, Philadelphia Municipal Authority / Date

EXHIBIT I
PERFORMANCE AND PAYMENT BOND FORM

Exhibit I

PERFORMANCE AND PAYMENT BOND

1. The **Principal, SENSUS USA INC.** and the **Surety** _____ jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the **Philadelphia Municipal Authority** (“PMA”) in the sum of **TWENTY-FIVE MILLION DOLLARS (\$25,000,000.00)** for the performance of the **ADVANCED METERING INFRASTRUCTURE SERVICE CONTRACT** (“Contract”) and the payment of labor, materials, and equipment furnished for the use in the Contract. The Contract is incorporated herein by reference.
2. If the Principal performs the Contract, in accordance with the terms and conditions of the Contract during the **Turnkey Installation Term**, as defined in the Contract, the Surety and the Principal shall have no further obligation under this Performance and Payment Bond (“Bond”).
3. The Surety’s obligation under this Bond shall arise after PMA has declared an Event of Default as defined in the Contract (except where the sole Event of Default by Principal are those Events of Default described in Article III. Section C. or Article IX. Section E.2, E.3, or E.4 in the Contract), formally terminated the Contract or the Principal’s right to complete the Contract, and notified the Surety of the PMA’s claim under this Bond.
4. When the PMA has satisfied the conditions of Paragraph 3 above, the Surety shall, at the Surety’s sole cost and expense, undertake one or more of the following actions:
 - a. Arrange for the Principal to perform and complete the Contract, provided, however, that the Surety may not proceed with this option, except upon the express written consent of the PMA, which consent may be withheld by the City for any reason; or
 - b. Perform and complete the Contract itself, through qualified contractors who are acceptable to the PMA, through a contract between the Surety and qualified contractors, which performance and completion shall be undertaken in strict accordance with the terms and conditions of the Contract; or
 - c. Promptly make payment, directly or indirectly, for all sums due Claimants; or
 - d. Tender payment to the PMA in the amount of all losses incurred by the PMA as a result of the Event of Default and as determined by the PMA for which the Surety is liable to the PMA, including all costs of completion of the Contract and all consequential losses, costs, and expenses incurred by the PMA as a result of the Event of Default, and including all unpaid fees or payments owed to the PMA by the Principal under the Contract, except that Surety’s payment under this option shall in no event exceed the limit of the Bond amount. The Surety may not proceed with this option, in lieu of the options set forth in subparagraphs (a) or (b)

above, except upon the express written consent of the PMA, which consent may be withheld by the PMA for any reason.

5. The Surety shall proceed under Paragraph 4 above within fifteen (15) business days after notice from the PMA to the Surety of the Event of Default, formal termination of the Contract or the Principal's right to complete the Contract, except that the Surety shall proceed within twenty-four (24) hours after notice, where the notice states that immediate action by the Surety is necessary to safeguard life or property.
6. If the Surety fails to proceed in accordance with Paragraphs 4 and 5 above, then the Surety shall be deemed to be in default on this Bond three (3) business days after receipt of written notice from the PMA to the Surety demanding that the Surety perform its obligations under this Bond. Thereafter, if notice to the Surety is without effect, the PMA shall be entitled to enforce any legal or equitable remedy available to the PMA. If the Surety has denied liability, in whole or in part, the PMA shall be entitled without further notice to Surety to enforce any legal or equitable remedies available to the PMA.
7. After the PMA has terminated the Contract or the Principal's right to complete the Contract, and if the Surety is proceeding under subparagraphs 4(a) or 4(b) above, then the responsibilities of the Surety to the PMA shall not be greater than those of the Principal under the Contract, and the responsibilities of the PMA to the Surety shall not be greater than those of the PMA under the Contract. The Surety shall be obligated to the limit of Bond amount as set forth on the front page, subject, however, to a commitment by the PMA for payment to the Surety of the Balance of the Contract Price in mitigation of costs and damages on the Contract. The Surety shall be obligated, without duplication, for:
 - a. The responsibilities of the Principal for correction of defective or unsuitable work and performance and completion of the Contract;
 - b. Additional legal, design professional, and delay costs incurred by the PMA as a result of the Event of Default, and as a result of the Surety's actions or failures to act under Paragraph 4 above;
 - c. Liquidated damages as specified in the Contract, or, if no liquidated damages are specified in the Contract, actual damages and consequential damages incurred by the PMA as a result of delayed performance or non-performance of Contract by the Principal or the Surety; and
 - d. Payment of all unpaid and due and owing fees or payments owed to the PMA under the Contract at the time of the Event of Default.
8. To the extent of payment to the Surety of the Balance of the Contract Price, the Surety shall defend, indemnify, and hold harmless the PMA from all claims, suits, causes of actions, and demands (including all costs of litigation and a reasonable attorney's fee), which are brought against the PMA by the Principal or any other party and which arise from or by reason of payment to the Surety the Balance of the Contract Price.

9. The Surety hereby waives notice of any change or modification to the Contract, including changes of time, or changes to related subcontracts, purchase orders, and other obligations.
10. Any proceeding, suit, or claim, legal or equitable, under this Bond shall be instituted in the U.S. District Court for the Eastern District of Pennsylvania or the Court of Common Pleas of Philadelphia County and shall be instituted within two (2) years of the date on which the Surety refuses or fails to perform its obligations under this Bond, in accordance with Paragraphs 4 and 5 above. If the provisions of this Paragraph are void or prohibited by law, the minimum limitations period available to sureties as a defense in the jurisdiction of the proceeding, suit, or claim shall be applicable.
11. All notices to the Surety or the Principal shall be mailed or delivered to the respective addresses shown on the signature page. In the event of a change in the address of the Surety or the Contractor, such party shall promptly provide notice to the PMA and the other party, with such notice to include reference to the Contract.
12. When this Bond has been furnished in compliance with the Public Works Contractors' Bond Law of 1967, 8 P.S. § 191, et seq., any provision in this Bond which conflicts with the statutory or legal requirement of such statute shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein.
13. The law controlling the interpretation or enforcement of this Bond shall be Pennsylvania law.
14. Definitions
 - a. Balance of the Contract Price: The total amount payable by the PMA to the Principal under the Contract after all proper adjustments have been made, including change orders and credits due the PMA, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract and reduced further by all direct costs and expenses incurred by the PMA as a result of the Event of Default, including costs of additional supervision or inspection by the PMA of the Principal's work under the Contract and fees and expenses paid to consultants or others hired by the PMA for purposes of monitoring or investigating the Principal's work under the Contract.
 - b. Claimant: An individual or entity having a direct contract with the Principal or with a subcontractor of the Principal to furnish labor, materials, or equipment for use in the performance of the Contract.
 - c. Labor, materials, or equipment: All labor supplied or performed, all materials furnished, all equipment or machinery rented, and all services rendered by public utilities in the performance of the work under the Contract, whether or not such labor, material, equipment, machinery, or public utility services enter into and become component parts of the work or improvement contemplated by the Contract,

including, inter alia: (a) all material furnished, equipment or machinery rented, services rendered by public utilities, and labor supplied or performed in preparing the work site for the performance of the work covered by the Contract; (b) all equipment, machinery, public utility services, labor, shoring, sheathing and blasting supplies, and other materials used on the work site in doing such excavating as may be necessary or required to institute or perform the work specified in the Contract; (c) all water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the work of the Principal and the Principal's subcontractors; and (d) all material furnished, equipment or machinery rented, services rendered by public utilities, and labor supplied or performed in the performance of work or of maintenance required by or performed under the terms of the Contract.

CONTRACTOR AS PRINCIPAL:

SURETY:

Signature: _____

Signature _____

Attorney-In-Fact
(*Attach Power of Attorney)

Date: _____

Date:

Address:

Address:

(Corporate Seal)

(Surety Seal)

EXHIBIT J

O&M SERVICES TERM BOND FORM

Exhibit J

O&M SERVICES TERM BOND

1. The **Principal, SENSUS USA INC.** and the **Surety** _____ jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the **Philadelphia Municipal Authority** (“PMA”) in the sum of **TEN MILLION DOLLARS (\$10,000,000.00)** for the performance of the **ADVANCED METERING INFRASTRUCTURE SERVICE CONTRACT** (“Contract”). The Contract is incorporated herein by reference.
2. If the Principal performs the Contract, in accordance with the terms and conditions of the Contract during the **O&M Services Term**, as defined in the Contract, the Surety and the Principal shall have no further obligation under this O&M Services Term Bond (“Bond”).
3. The Surety’s obligation under this Bond shall arise after PMA has declared an Event of Default as defined in the Contract (except where the sole Event of Default by Principal are those Events of Default described in Article III. Section C. or Article IX. Section E.2, E.3, or E.4 in the Contract), formally terminated the Contract or the Principal’s right to complete the Contract, and notified the Surety of the PMA’s claim under this Bond.
4. When the PMA has satisfied the conditions of Paragraph 3 above, the Surety shall, at the Surety’s sole cost and expense, undertake one or more of the following actions:
 - a. Arrange for the Principal to perform and complete the Contract, provided, however, that the Surety may not proceed with this option, except upon the express written consent of the PMA, which consent may be withheld by the City for any reason; or
 - b. Perform and complete the Contract itself, through qualified contractors who are acceptable to the PMA, through a contract between the Surety and qualified contractors, which performance and completion shall be undertaken in strict accordance with the terms and conditions of the Contract; or
 - c. Tender payment to the PMA in the amount of all losses incurred by the PMA as a result of the Event of Default and as determined by the PMA for which the Surety is liable to the PMA, including all costs of completion of the Contract and all consequential losses, costs, and expenses incurred by the PMA as a result of the Event of Default, and including all unpaid fees or payments owed to the PMA by the Principal under the Contract, except that Surety’s payment under this option shall in no event exceed the limit of the Bond amount. The Surety may not proceed with this option, in lieu of the options set forth in subparagraphs (a) or (b) above, except upon the express written consent of the PMA, which consent may be withheld by the PMA for any reason.

5. The Surety shall proceed under Paragraph 4 above within fifteen (15) business days after notice from the PMA to the Surety of the Event of Default, formal termination of the Contract or the Principal's right to complete the Contract, except that the Surety shall proceed within twenty-four (24) hours after notice, where the notice states that immediate action by the Surety is necessary to safeguard life or property.
6. If the Surety fails to proceed in accordance with Paragraphs 4 and 5 above, then the Surety shall be deemed to be in default on this Bond three (3) business days after receipt of written notice from the PMA to the Surety demanding that the Surety perform its obligations under this Bond. Thereafter, if notice to the Surety is without effect, the PMA shall be entitled to enforce any legal or equitable remedy available to the PMA. If the Surety has denied liability, in whole or in part, the PMA shall be entitled without further notice to Surety to enforce any legal or equitable remedies available to the PMA.
7. After the PMA has terminated the Contract or the Principal's right to complete the Contract, and if the Surety is proceeding under subparagraphs 4(a) or 4(b) above, then the responsibilities of the Surety to the PMA shall not be greater than those of the Principal under the Contract, and the responsibilities of the PMA to the Surety shall not be greater than those of the PMA under the Contract. The Surety shall be obligated to the limit of Bond amount as set forth on the front page, subject, however, to a commitment by the PMA for payment to the Surety of the Balance of the Contract Price in mitigation of costs and damages on the Contract. The Surety shall be obligated, without duplication, for:
 - a. The responsibilities of the Principal for correction of defective or unsuitable work and performance and completion of the Contract;
 - b. Additional legal, design professional, and delay costs incurred by the PMA as a result of the Event of Default, and as a result of the Surety's actions or failures to act under Paragraph 4 above;
 - c. Liquidated damages as specified in the Contract, or, if no liquidated damages are specified in the Contract, actual damages and consequential damages incurred by the PMA as a result of delayed performance or non-performance of Contract by the Principal or the Surety; and
 - d. Payment of all unpaid and due and owing fees or payments owed to the PMA under the Contract at the time of the Event of Default.
8. To the extent of payment to the Surety of the Balance of the Contract Price, the Surety shall defend, indemnify, and hold harmless the PMA from all claims, suits, causes of actions, and demands (including all costs of litigation and a reasonable attorney's fee), which are brought against the PMA by the Principal or any other party and which arise from or by reason of payment to the Surety the Balance of the Contract Price.
9. The Surety hereby waives notice of any change or modification to the Contract, including changes of time, or changes to related subcontracts, purchase orders, and other obligations.

10. Any proceeding, suit, or claim, legal or equitable, under this Bond shall be instituted in the U.S. District Court for the Eastern District of Pennsylvania or the Court of Common Pleas of Philadelphia County and shall be instituted within two (2) years of the date on which the Surety refuses or fails to perform its obligations under this Bond, in accordance with Paragraphs 4 and 5 above. If the provisions of this Paragraph are void or prohibited by law, the minimum limitations period available to sureties as a defense in the jurisdiction of the proceeding, suit, or claim shall be applicable.
11. All notices to the Surety or the Principal shall be mailed or delivered to the respective addresses shown on the signature page. In the event of a change in the address of the Surety or the Contractor, such party shall promptly provide notice to the PMA and the other party, with such notice to include reference to the Contract.
12. When this Bond has been furnished in compliance with the Public Works Contractors' Bond Law of 1967, 8 P.S. § 191, et seq., any provision in this Bond which conflicts with the statutory or legal requirement of such statute shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein.
13. The law controlling the interpretation or enforcement of this Bond shall be Pennsylvania law.
14. Definitions
 - a. Balance of the Contract Price: The total amount payable by the PMA to the Principal under the Contract after all proper adjustments have been made, including change orders and credits due the PMA, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract and reduced further by all direct costs and expenses incurred by the PMA as a result of the Event of Default, including costs of additional supervision or inspection by the PMA of the Principal's work under the Contract and fees and expenses paid to consultants or others hired by the PMA for purposes of monitoring or investigating the Principal's work under the Contract.

CONTRACTOR AS PRINCIPAL:

SURETY:

Signature: _____

Signature _____
Attorney-In-Fact
(* Attach Power of Attorney)

Date: _____

Date:

Address:

Address:

(Corporate Seal)

(Surety Seal)

EXHIBIT K
METER WARRANTY FORM

Exhibit K
Sensus Meter Warranty

1. General Product Coverage. All products are sold to PMA pursuant to the Advanced Metering Infrastructure Services Contract to which this Exhibit K is attached (the “Contract”). Any terms not defined herein shall have the meaning given to them in the Contract. If a defined term in this Exhibit K is inconsistent with a defined term in the Contract, the defined term in this Exhibit K will take precedence. Unless otherwise provided in the Contract or in this Exhibit K, Sensus warrants its products, parts, and services to be free from defects in material and workmanship for one (1) year from the date of Sensus shipment and as set forth below.

Notwithstanding anything to the contrary herein (including in Exhibit L (Catastrophic Meter Warranty)), Sensus does not warrant any goods manufactured by third parties. For example, if PMA elects to buy meters from a third party, the Sensus SmartPoint Modules installed in such third party meters shall be covered by the warranty set forth in this Exhibit K, but any warranty on the meter itself shall be a matter directly between PMA and such third party meter supplier.

2. SR II® and accuSTREAM™ 5/8”, 3/4” & 1” Meters are warranted to perform to AWWA New Meter Accuracy Standards for five (5) years from the date of Sensus shipment or until the registration shown below, whichever occurs first. Sensus further warrants that the SR II and accuSTREAM meters will perform to at least AWWA Repaired Meter Accuracy Standards for fifteen (15) years from the date of Sensus shipment or until the registration shown below, whichever occurs first:

	New Meter Accuracy	Repair Meter Accuracy
5/8” SR II Meter and accuSTREAM Meter	500,000 gallons	1,500,000 gallons
3/4” SR II Meter and accuSTREAM Meter	750,000 gallons	2,250,000 gallons
1” SR II Meter and accuSTREAM Meter	1,000,000 gallons	3,000,000 gallons

3. SR® 5/8”, 3/4” & 1” Meters are warranted to perform to AWWA New Meter Accuracy Standards for one (1) year from the date of Sensus shipment. Sensus further warrants that the 5/8”, 3/4” and 1” SR meter will perform to at least AWWA Repaired Meter Accuracy Standards for fifteen (15) years from the date of Sensus shipment or until the registration shown below, whichever occurs first:

	Repair Meter Accuracy
5/8” SR Meter	1,500,000 gallons
3/4” SR Meter	2,250,000 gallons
1” SR Meter	3,000,000 gallons

4. SR 1-1/2” & 2” are warranted to perform to AWWA New Meter Accuracy Standards for one (1) year from the date of Sensus shipment. Sensus further warrants that the 1-1/2” and 2” SR meter will perform to at least AWWA Repaired Meter Accuracy Standards for ten (10) years from the date of Sensus shipment or until the registration shown below, whichever occurs first:

Repair Meter Accuracy	
1-1/2" SR	5,000,000 gallons
2" SR	8,000,000 gallons

5. PMM® 5/8", 3/4", 1" Meters are warranted to perform to AWWA New Meter Accuracy Standards for one (1) year from the date of Sensus shipment. Sensus further warrants that the 5/8", 3/4", and 1" PMM meter will perform to at least AWWA Repaired Meter Accuracy Standards for fifteen (15) years from the date of Sensus shipment or until the registration shown below, whichever occurs first:

Repair Meter Accuracy	
5/8" PMM	1,500,000 gallons
3/4" PMM	2,000,000 gallons
1" PMM	3,000,000 gallons

6. PMM 1-1/2", 2" Meters are warranted to perform to AWWA New Meter Accuracy Standards for one (1) year from the date of Sensus shipment. Sensus further warrants that the 1-1/2", and 2" PMM meter will perform to at least AWWA Repaired Meter Accuracy Standards for ten (10) years from the date of Sensus shipment or until the registration shown below, whichever occurs first:

Repair Meter Accuracy	
1-1/2" PMM	5,000,000 gallons
2" PMM	8,000,000 gallons

7. ally® Meters that register water flow are warranted to perform to the accuracy level set forth in the ally Data Sheet available at sensus.com/ally/datasheet for fifteen (15) years from the Date of Installation, but no longer than sixteen (16) years from date of manufacture, not including the meter's sensors, valve, and gear motor, which are warranted under different terms described below. As used herein, "Date of Installation" means the date after which the ally Meter has been out of empty pipe for seven (7) consecutive days, as those days are measured by the ally Meter and stored in the meter's nonvolatile memory.

8. iPERL™ Meters that register water flow are warranted to perform to the accuracy levels set forth in the iPERL Data Sheet, attached hereto as [Attachment 2], for twenty (20) years from the date of Sensus shipment. The iPERL System Component warranty does not include the external housing.

9. Maincase of the SR, SR II and PMM in both standard and low lead alloy meters are warranted to be free from defects in material and workmanship for twenty-five (25) years from the date of shipment. Composite and E-coated maincases will be free from defects in material and workmanship for fifteen (15) years from the date of shipment.

10. Sensus OMNI™ Meters and Propeller Meters are warranted to perform to AWWA New Meter Accuracy Standards for one (1) year from the date of Sensus shipment.

11. Sensus accuMAG™ Meters are warranted to be free from defects in material and workmanship, under normal use and service, for 18 months from the date of Sensus shipment or 12 months from startup, whichever occurs first.

12. Sensus Registers are warranted to be free from defects in material and workmanship from the date of Sensus shipment for the periods stated below or until the applicable registration for AWWA

Repaired Meter Accuracy Standards, as set forth above, are surpassed, whichever occurs first:

5/8" thru 2" SR, SR II, PMM, accuSTREAM Standard Registers	25 years
5/8" thru 2" SR, SR II, PMM, accuSTREAM Encoder Registers	10 years
All HSPU, IMP Contactor, R.E.R. Elec. ROFI	1 year
Standard and Encoder Registers for Propeller Meters	1 year
OMNI Register with Battery	10 years

13. Sensus Electric and Gas Meters and lighting products are warranted pursuant to the General Limited Warranty available at sensus.com/TC.

14. Batteries, iPERL System Components, AMR and FlexNet™ System AMI Interface Devices are warranted to be free from defects in material and workmanship from the date of Sensus shipment for the period stated below, except as may be applicable in Exhibit L (Catastrophic Meter Warranty):

Electronic TouchPad	10 years
RadioRead® MXU (Model 505C, 510R or 520R) and Batteries	20 years*
Act-Pak® Instrumentation	1 year
FlexNet Water SmartPoint™ (MIUs) Modules and Batteries	20 years*
6500 series Hand Held Device	2 years
Vehicle Gateway Base Station and other AMR Equipment	1 year
FlexNet Base Station (including the R100NA and M400 products)	1 year
Echo and Remote Transceivers	1 year
iPERL System Battery and iPERL System Components	20 years*
Residential Electronic Register and Electronic Register+	20 years*
Smart Gateway	1 year

* Sensus will repair or replace non-performing:

- RadioRead® MXU (Model 505C, 510R and 520R) and Batteries;
- FlexNet Water SmartPoint Modules (MIUs) (configured to the factory setting of six transmissions per day under normal system operation of up to one demand read to each SmartPoint Module per month and up to five firmware downloads during the life of the product) and batteries, unless the FlexNet Water SmartPoint Module is ever paired with an ally Meter, which event immediately amends the warranty terms to those described in Section 15;
- Residential Electronic Register with hourly reads; and
- iPERL System Batteries, and/or the iPERL System flowtube, the flow sensing and data processing assemblies, and the register (“iPERL System Components”) with hourly reads for the first ten (10) years from the date of Sensus shipment, and for the remaining ten (10) years, at a prorated percentage, applied towards the published list prices in effect for the year product is accepted by Sensus under warranty conditions according to the schedule below. However, for so long as PMA purchases and maintains the Extended Coverage as described in Exhibit L, then the remedies in Exhibit L shall apply.

Years	Replacement Price	Years	Replacement Price
1 – 10	0%	16	55%
11	30%	17	60%
12	35%	18	65%
13	40%	19	70%
14	45%	20	75%
15	50%	>20	100%

15. ally® Meter Batteries and Components, including SmartPoint™ Modules are warranted to be free from defects in material and workmanship from the Date of Installation, as defined in Section 7, for the period stated below:

Batteries	15 years*
Sensors	5 years
Valve & Gear Motor	5 years**
FlexNet Water SmartPoint™ Modules and Batteries	15 years*

* Sensus will repair or replace non-performing:

- ally Meters, excluding sensors, valve, and gear motor;
- Batteries used with ally Meters,
- If applicable, any FlexNet Water SmartPoint Modules ever paired with an ally Meter are warranted with the following limitations:
 - When configured to the default installation setting of six transmissions of metrology and pressure per day and one update of temperature per day, the SmartPoint is warranted to perform up to five (5) firmware upgrades for the SmartPoint Module and up to five (5) firmware upgrades for the ally Meter;
 - 2500 Operational Commands, where “Operational Commands” include on demand reads (such as consumption, pressure, temperature), an ally valve command, or a configuration command; and
 - 15 Diagnostic Commands, which includes 2-way communications tests and installations

for the first ten (10) years from Date of Installation at no cost. For the remaining five (5) years, PMA will pay the reduced Replacement Price of the then-current price in effect for PMA at the time the product is accepted for return in accordance with the following schedule:

Years	Replacement Price	Years	Replacement Price
1 – 10	0%	14	65%
11	35%	15	75%
12	45%	>15	100%

13	55%		
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** Notwithstanding the foregoing, valve and gear motor components of ally Meters are not warranted beyond two thousand (2000) Valve State Operations, even if the warranty period provided herein has not yet expired. As used herein, “Valve State Operations” means adjustments of the Meter to open, close, or reduce flow.

16. Sensus Connectors and Cables are warranted to be free from defects in materials and workmanship, under normal use and service, for ten (10) years from the date of Sensus shipment. Nicor or Itron connectors included with a Sensus product are warranted according to the terms for Third-Party Devices in Section 17. For the avoidance of doubt, the connection from an internal connection between an integrally mounted Sensus FlexNet Water SmartPoint is warranted to be free from defects in materials and workmanship, under normal use and service, for 10 years.

17. Third-Party Devices sold by Sensus are warranted to be free from defects in materials and workmanship, under normal use and service, for one (1) year from the date of Sensus shipment. As used in this Exhibit, “Third Party Devices” means any product, device, or component part used with a Sensus product that is manufactured by any party that is not Sensus. Failure of a Third Party Device which subsequently causes failure to a Sensus device shall be the responsibility of the manufacturer of the Third Party Device. For the avoidance of doubt, Badger registers are not Third Party Devices and Sensus provides no warranty on the Badger registers.

18. Software. Software supplied and/or licensed by Sensus is supported according to the terms of the applicable software license or usage agreement. Sensus warrants that any network and monitoring services shall be performed in a professional and workmanlike manner.

19. Return. Sensus’ obligation, and PMA’s exclusive remedy, under this Exhibit K is, at Sensus’ option, to either (i) repair or replace the product, and prepay the freight costs both to and from PMA, provided PMA returns the product within the warranty period to the location designated by Sensus; or (ii) deliver replacement components to PMA and prepay the freight costs both to and from such location identified by PMA, provided PMA installs, at its cost, such components in or on the product (as instructed by Sensus), provided, that if Sensus requests, PMA returns the product within the warranty period. In the event PMA does not return the product within the time period designated by Sensus following Sensus’ delivery of replacement product, Sensus will invoice, and PMA will pay within thirty days of the invoice date, for the cost of the replacement product and/or components.

The return of products for warranty claims must follow Sensus’ Returned Materials Authorization (RMA) procedures. Water meter returns related to accuracy must include a reasonable level of documentation of PMA’s test results. Test results must be obtained according to AWWA standards and must specify the meter serial number. The test results will not be valid if the meter is found to contain foreign materials. If PMA chooses not to test a Sensus water meter prior to returning it to Sensus, Sensus will repair or replace the meter, at Sensus’ option, after the meter has been tested by Sensus. PMA will be charged Sensus’ then current testing fee. Sensus SmartPoints modules and MXU’s must be returned with a reasonable level of documentation. For all returns, Sensus reserves the right to request meter reading records by serial number to validate warranty claims.

For products that have become discontinued or obsolete (“Obsolete Product”), Sensus may, at its discretion, replace such Obsolete Product with a different product model (“New Product”), provided that the New Product has substantially similar features as the Obsolete Product. The New Product shall be warranted as set forth in this Sensus Limited Warranty.

EXCEPT AS OTHERWISE SPECIFICALLY PROVIDED IN THIS EXHIBIT K, EXHIBIT L, OR THE CONTRACT, THIS SECTION 19 SETS FORTH PMA'S SOLE REMEDY FOR THE FAILURE OF THE PRODUCTS, SERVICES OR LICENSED SOFTWARE TO CONFORM TO THEIR RESPECTIVE WARRANTIES.

20. Warranty Exceptions and No Implied Warranties. Except as otherwise provided in the Contract, the warranties provided by Sensus do not include costs for removal or installation of products, or costs for replacement labor or materials, which are the responsibility of PMA. The warranties in this Exhibit K do not apply to goods that have been: installed improperly or in non-recommended installations; damaged, or are in need of repair; tampered with; modified or repaired with parts or assemblies not certified in writing by Sensus, including without limitation, communication parts and assemblies; improperly modified or repaired (including as a result of modifications required by Sensus); converted; altered; damaged; read by equipment not approved by Sensus; for water meters, used with substances other than water, used with non-potable water, or used with water that contains dirt, debris, deposits, or other impurities; subjected to misuse, improper storage, improper care, improper maintenance, or improper periodic testing (collectively, "Exceptions."). If Sensus identifies any Exceptions during examination, troubleshooting or performing any type of support on behalf of PMA, then PMA shall pay for and/or reimburse Sensus for all expenses incurred by Sensus in examining, troubleshooting, performing support activities, repairing or replacing any Equipment that satisfies any of the Exceptions defined above. The above warranties do not apply in the event of Force Majeure.

EXCEPT AS OTHERWISE EXPLICITLY PROVIDED IN THE CONTRACT OR EXHIBIT L (CATASTROPHIC METER WARRANTY), THE WARRANTIES SET FORTH IN THIS EXHIBIT K ARE THE ONLY WARRANTIES GIVEN WITH RESPECT TO THE GOODS, SOFTWARE, SOFTWARE LICENSES AND SERVICES SOLD OR OTHERWISE PROVIDED BY SENSUS. SENSUS EXPRESSLY DISCLAIMS ANY AND ALL OTHER REPRESENTATIONS, WARRANTIES, CONDITIONS, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, REGARDING ANY MATTER IN CONNECTION WITH THIS EXHIBIT K, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, NON-INFRINGEMENT AND TITLE.

EXCEPT AS MAY BE EXPLICITLY PROVIDED HEREIN OR IN THE CONTRACT, SENSUS ASSUMES NO LIABILITY FOR COSTS OR EXPENSES ASSOCIATED WITH LOST REVENUE OR WITH THE REMOVAL OR INSTALLATION OF EQUIPMENT. THE FOREGOING REMEDIES ARE PMA'S SOLE AND EXCLUSIVE REMEDIES FOR THE FAILURE OF EQUIPMENT, LICENSED SOFTWARE OR SOFTWARE SERVICES, AND OTHER SERVICES TO CONFORM TO THEIR RESPECTIVE WARRANTIES.

EXHIBIT L
CATASTROPHIC METER WARRANTY

Exhibit L
Catastrophic Meter Warranty

1. Introduction. All products are sold to PMA pursuant to the Advanced Metering Infrastructure Services Contract to which this Exhibit L is attached (the “Contract”). Any terms not defined herein shall have the meaning given to them in the Contract or in Exhibit K (Sensus Meter Warranty). If a defined term in this Exhibit L is inconsistent with a defined term in the Contract or Exhibit K, the defined term in this Exhibit L will take precedence.

2. Definitions. As used in this Exhibit L, the following capitalized terms have the meanings set forth in this Section 2.

“Annual Failure Rate” means, once ten thousand (10,000) MIUs have been installed more than two percent (2%) of the total number of MIUs at MILs fail in any rolling 12 month period divided by the total number of MIUs at MILs.

“Base Warranty” means the warranties provided in Sections 8, 10, 12, 14, and 15 of Exhibit K (Sensus Meter Warranty) for the iPerl meters, Omni meters, and Water SmartPoints / MIUs.

“Excessive Failure” means failures of more than (i) two-hundred (200) MIUs when fewer than ten thousand (10,000) MIUs have been installed (“Early MIU Threshold”) or (ii) the Annual Failure Rate once ten thousand (10,000) MIUs have been installed.

“Failure,” “Failed,” and “Fail” (whether capitalized or not) mean a malfunction that would be covered by the Base Warranty had the malfunction occurred within the applicable warranty period set forth in the relevant warranty sections in Exhibit K.

3. Catastrophic Warranty Coverage. All limitations on and exclusions to the Base Warranty (including the Exceptions set forth in Section 20 (Warranty Exceptions and No Implied Warranties) of Exhibit K (Sensus Meter Warranty)) apply to this Exhibit L; except that this Exhibit L will take precedence if there is a conflict between this Exhibit L and the limitations and exclusions of the Base Warranty.

- a. **Catastrophic Coverage of iPerl and Omni Meters.** Sensus shall provide PMA with extended warranty coverage on iPerl and Omni meters only (“Extended Coverage”), provided that PMA has paid Sensus four cents (\$0.04) per meter per month (“Meter Coverage Fee”) throughout the Meter Extended Warranty Periods listed in each of subsections (i) and (ii) below for every iPerl and Omni meter purchased by PMA and as detailed in this Exhibit L. The Extended Coverage provides:
 - i. For iPerl meters only, Sensus will replace failed iPerl System Components in accordance with Section 14 of Exhibit K (Sensus Meter Warranty) except that the time frame will be extended to fifteen (15) years for full replacement; PMA shall pay the replacement prices shown in Attachment 1 (iPerl Replacement Cost Under Extended Meter Coverage) beginning in year 16 for any failed iPerl System Component. The applicable iPerl Meter Extended Warranty Period is twenty (20) years from the date of shipment. PMA shall install at least three thousand (3,000) iPerl meters before this coverage applies.
 - ii. PMA will service up to two percent (2%) of each failed iPerl and Omni meter

types as measured over a rolling twelve (12) month period. For failures exceeding two percent (2%) in a rolling twelve (12) month period as measured by product line, Sensus shall provide PMA with a plan for remediation within thirty (30) days of exceeding the two percent (2%) failure threshold. PMA shall reasonably approve the remediation plan within thirty (30) days of Sensus providing the remediation plan. Unless otherwise agreed by the parties, Sensus shall have three (3) Billing Months to reduce the failure level, and the failure will be deemed cured when the failure rate of the entire population of installed iPerls and Omni meters falls below two percent (2%) for three (3) consecutive Billing Months. The applicable iPerl Meter Extended Warranty Period is twenty (20) years from the date of shipment, and the applicable Omni Meter Extended Warranty Period is ten (10) years from the date of shipment. For the avoidance of doubt, failure rates will be measured separately for Omni and iPerl meters types based on the entire population of each meter type.

- b. **MIU Maintenance and Extended Warranty.** For a period of twenty (20) years beginning on the MIU Installation Commencement Date (“MIU Managed Service Coverage”) and so long as PMA pays the forty-eight cent (\$0.48) per MIU per year managed service fee for all of PMA’s MIUs (the “MIU Managed Service Fee”), if an Excessive Failure occurs, after receiving written notice from PMA of the Excessive Failure, Sensus will (i) repair or replace the MIUs at MILs above the Excessive Failure threshold and (ii) install the repaired or replacement MIUs at the MILs unless otherwise provided below.
- i. Once ten thousand MIUs have been installed, for MIU failures between 200 and the Annual Failure Rate in any one month, (a) PMA shall install the repaired or replacement MIU at MILs and (b) Sensus shall provide PMA with a credit of thirty dollars (\$30) per MIU that PMA installs.
 - ii. At all times in any particular month, PMA shall install the first two hundred (200) repaired or replacement MIU at MILs without additional compensation from Sensus.
- c. **Catastrophic Warranty Remedies.** The remedies in this section are contingent upon PMA paying Sensus the applicable (i) Meter Coverage Fee for the Extended Coverage or (ii) the MIU Extended Warranty Fee for the MIU Managed Service Coverage, in each case as outlined in subsections (a) and (b) above, for PMA’s entire population of installed devices in each relevant product line and throughout the applicable time periods. As examples, (x) PMA cannot elect to purchase the MIU Managed Service Fee on some, but not all, of its MIUs, nor (y) may PMA elect to purchase the Meter Coverage Fee for some, but not all, iPerl meters, nor (z) may PMA elect to purchase the Meter Coverage for some, but not all, Omni meters. PMA may terminate the Extended Coverage and/or MIU Managed Service Coverage at any time (and discontinue paying any per device fees), provided, however, that (i) Sensus will not reimburse or refund any payments upon termination of such coverage and (ii) the remedies in this Exhibit L will not be provided to PMA and (iii) the Base Warranty shall apply. Any credits owed to PMA will be forever forfeited upon termination of the Contract for any reason and will not be paid in cash to PMA. For all failures below applicable thresholds in this Exhibit L, the Base Warranty shall apply.

- d. **Catastrophic Warranty Exceptions.** In addition to subparagraph (c) above, the remedies in this Exhibit L shall not apply if (i) the failure is due to a Force Majeure Event; (ii) PMA is in material breach of the Contract; or (iv) the applicable time period in sections (a) and (b) above has ended.

Attachment 1

iPERL REPLACEMENT COST UNDER EXTENDED METER COVERAGE

Year After Installation	Pro-Rated Replacement Cost Percentage
1	0%
2	0%
3	0%
4	0%
5	0%
6	0%
7	0%
8	0%
9	0%
10	0%
11	0%
12	0%
13	0%
14	0%
15	0%
16	55%
17	60%
18	65%
19	70%
20	75%

The pro-rated replacement costs above shall only apply if PMA has purchased and maintained the Extended Coverage for its entire population of iPERL meters as further provided in Exhibit L. Pro-rated replacement cost is based the then-current price in effect for PMA.

EXHIBIT M
SPECTRUM MANAGER LEASE

Exhibit M Spectrum Manager Lease

1. Spectrum Manager Lease

- A. **Definitions in this Exhibit M.** In this Exhibit M only, “Sensus” shall mean Sensus USA Inc. and its wholly owned subsidiary, Sensus Spectrum LLC. “Customer” shall mean the Philadelphia Water Department, which is a division of the municipal government of the City of Philadelphia ultimately governed by the mayor and city council of Philadelphia, Pennsylvania. All other defined terms not defined herein shall have the meaning prescribed in the Contract to which this Exhibit M is attached. This Exhibit M is incorporated into and part of the Contract as if fully set forth therein.
- B. **Spectrum Lease.** Sensus hereby grants to Customer, and Customer accepts, a spectrum manager lease (“Spectrum Lease”) over the frequencies of certain FCC license(s) further described in Attachment 1 attached hereto (“FCC License”) solely within Customer’s Service Territory. “Service Territory” means the geographic area in which Customer provides water service to its End Users as of the Effective Date of the Contract. The frequencies of the FCC License within Customer’s geographic Service Territory are called the “Leased Spectrum.” Customer shall pay the fees described on Exhibit G for use of the Leased Spectrum.
- C. **FCC Forms.** At the Federal Communications Commission (FCC), Sensus will; (1) obtain an FCC Registration Number (FRN) for Customer; (2) submit on behalf of Customer the FCC Form 602 Ownership Disclosure Information if Customer has not already done so; and (3) file a FCC Form 608, notification/application for long-term spectrum manager lease (the “Lease Application”). This Spectrum Lease becomes effective when the FCC accepts the FCC Form 608.
- D. **Lease Application.** In order to complete the FCC Lease Application, Customer will promptly:
- i. Complete and sign the representations in Attachment 2 of this Exhibit M such that Customer demonstrates it qualifies for a Spectrum Lease under FCC rules. Customer’s signature will indicate that Customer authorizes Sensus to; (1) obtain an FRN on behalf of Customer; (2) submit the FCC Form 602 Ownership Disclosure Information on behalf of Customer if Customer has not already done so; and (3) file the spectrum manager lease notification on FCC Form 608 with the Customer as spectrum lessee.
 - ii. Give Sensus the coordinates of the boundaries of Customer’s Service Territory or, alternatively, approve Sensus’ estimation of the same.
 - iii. If Customer has not already done so; Customer hereby authorizes Sensus to apply on Customer’s behalf and obtain for Customer a Federal Registration Number (FRN, the FCC’s unique identifier for each licensee) and shall supply Sensus with Customer’s Taxpayer Identification Number (TIN).
 - iv. Provide any other information or other cooperation reasonably necessary for the Parties to perform as set forth herein.
- E. **Permitted Use of Spectrum Lease and Equipment.** Customer may transmit or receive over the Leased Spectrum only in the Service Territory and only using FlexNet equipment manufactured by Sensus and used in accordance with Sensus’ specifications. Customer may use the Leased Spectrum only to read and direct MIUs or any other

operation approved by Sensus in writing. Without limiting the foregoing, Customer is prohibited from reselling, subleasing or sublicensing the FlexNet Equipment and Leased Spectrum, and from transmitting voice communications over the Leased Spectrum. For each DCU used by Customer, Customer shall, or shall allow Sensus to, affix a label to the exterior of the DCU cabinet or other appropriate visible place to indicate that RF operation is conducted under authority of FCC License(s) issued to Sensus.

- F. **Term of Spectrum Lease.** Unless terminated earlier (because, for example, Customer stops using the FlexNet equipment or because the Contract terminates or expires for any reason), this Spectrum Lease will have the same term as the FCC license. If Customer is operating in compliance with the Contract, including this Spectrum Lease, and is current on any payments owed to Sensus, when the FCC License renews, the Parties will apply to the FCC to renew this Spectrum Lease.
- G. **Termination of Spectrum Lease.** The Spectrum Lease will terminate: (a) two months after Customer stops transmitting with FlexNet equipment manufactured by Sensus; (b) upon termination, revocation or expiration of the FCC License; (c) upon Customer's breach of the Contract; or (d) upon termination or expiration of the Contract for any reason.
- H. **FCC Compliance.** The following FCC requirements apply
 - i. Pursuant to 47 CFR 1.9040(a);
 - (a) Customer must comply at all times with applicable FCC rules. This Agreement may be revoked by Sensus or the FCC if Customer fails to so comply;
 - (b) If the FCC License is terminated, Customer has no continuing right to use the Leased Spectrum unless otherwise authorized by the FCC;
 - (c) This Agreement is not an assignment, sale or other transfer of the FCC License;
 - (d) This Agreement may not be assigned except upon written consent of Sensus, which consent may be withheld in its discretion; and
 - (e) In any event, Sensus will not consent to an assignment that does not satisfy FCC rules.
 - ii. Referencing 47 CFR 1.9010, Sensus retains *de jure* and *de facto* control over the applicable radio facilities, including that,
 - (a) Sensus will be responsible for Customer's compliance with FCC policies and rules. Sensus represents and warrants that it has engineered the FlexNet equipment and accompanying software and other programs to comply with FCC rules. Customer will operate the FlexNet equipment subject to Sensus' supervision and control and solely in accordance with Sensus' specifications. Sensus retains the right to inspect Customer's radio operations hereunder and to terminate this Agreement or take any other necessary steps to resolve a violation of FCC rules, including ordering Customer to cease transmission. Sensus will act as spectrum manager in assigning spectrum under the FCC License so as to avoid any harmful interference or other violation of FCC rules. Sensus will be responsible for resolving any interference complaints or other FCC rule violations that may arise; and
 - (b) Sensus will file any necessary FCC forms or applications and Customer agrees to reasonably assist Sensus with such filing by providing any necessary information or other cooperation. Sensus will otherwise interact with the FCC with respect to this Agreement, the FCC License or FlexNet equipment.

- I. **Interference.** Customer agrees to report to Sensus promptly, and in no event later than 72 hours afterward, any incident related to the Leased Spectrum, including where Customer experiences harmful interference, receives a complaint or other notice of having caused harmful interference, or receives any type of communication from the FCC or other government agency regarding radio transmission.

Exhibit M - Attachment 1
Frequencies Leased to Customer

Market Name	Call Sign	Ch Block	Lower Freq.	Upper Freq.	Service	Market Number
Philadelphia-Wilmington-Atl. C	WQDP618	AM	932	932.0125	MS	BEA012
Philadelphia-Wilmington-Atl. C	WQDP618	AM	941	941.0125	MS	BEA012
Philadelphia-Wilmington-Atl. C	WQDP619	AN	932.0125	932.025	MS	BEA012
Philadelphia-Wilmington-Atl. C	WQDP619	AN	941.0125	941.025	MS	BEA012
Philadelphia-Wilmington-Atl. C	WQDP620	AO	932.025	932.0375	MS	BEA012
Philadelphia-Wilmington-Atl. C	WQDP620	AO	941.025	941.0375	MS	BEA012
Philadelphia-Wilmington-Atl. C	WQDP621	AP	932.0375	932.05	MS	BEA012
Philadelphia-Wilmington-Atl. C	WQDP621	AP	941.0375	941.05	MS	BEA012

**Attachment 2 – Exhibit M
Notification of Spectrum Manager Lease**

In order for Sensus to apply to the FCC on the Customer’s behalf for a spectrum manager lease, Customer must complete the information below in boxes one (1) through ten (10) and certify via authorized signature. Customer’s signature will indicate that Customer authorizes Sensus to file the spectrum manager lease notification on FCC Form 608 with the Customer as spectrum Lessee, and if Customer does not already have one, ownership disclosure information on FCC Form 602.

Customer / Lessee Information

1	Customer/Lessee Name:		
	Attention To:	Name of Real Party in Interest:	
	Street Address:		City:
	State:	Zip:	Phone:
	Fax:	Email:	

Is Customer contact information same as above? Yes No (If No, complete box 2 below)

Additional Customer/Lessee Contact Information

2	Company Name:		
	Attention To:		
	Street Address:		City:
	State:	Zip:	Phone:
	Fax:	Email:	

3	Customer/Lessee is a(n) (Select one): <input type="checkbox"/> Individual <input type="checkbox"/> Unincorporated Association <input type="checkbox"/> Trust <input type="checkbox"/> Government Entity <input type="checkbox"/> Corporation <input type="checkbox"/> Limited Liability Company <input type="checkbox"/> General Partnership <input type="checkbox"/> Limited Partnership <input type="checkbox"/> Limited Liability Partnership <input type="checkbox"/> Consortium <input type="checkbox"/> Other _____
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4	FCC Form 602: FCC File Number of Customer’s Form 602 Ownership Information: _____. If Customer has not filed a Form 602, Sensus will file one for Customer. Please complete questions 5, 6, and 7 below if Customer does <u>not</u> have a Form 602 on file. Customer must complete items 8, 9 and 10 irrespective of whether Customer has an ownership report on file.
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5	Customer Tax ID:
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6 Individual Contact For FCC Matters

6	Please designate one individual (the Director of Public Works or similar person) who is responsible to the FCC for the operation of the FlexNet radio system.	
	Name	
	Title:	
	Email:	Phone:

Ownership Disclosure Information

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Customer/Lessee to list the names of the President and all Board Members below, as well as verify citizenship and ownership interests in any entity regulated by the FCC. Such ownership must be disclosed where a President/Board member owns 10% or more, directly or indirectly, or has operating control of any entity subject to FCC regulation. If any answer to Ownership question is Yes, or any answer to Citizenship question is No, provide an attachment with further explanation.		
	US Citizen?	Ownership Disclosure?
Mayor:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
City Council Member:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
City Council Member:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
City Council Member:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
City Council Member:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
City Council Member:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
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City Council Member:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
City Council Member:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

8

Alien Ownership Questions (if the answer is Yes, provide an attachment explaining the circumstances)

1) Is the Customer/Lessee a foreign government or the representative of any foreign government?	<input type="checkbox"/> Yes <input type="checkbox"/> No
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9

Basic Qualification Information

1) Has the Customer or any party to this application had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license or construction permit denied by the Commission?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2) Has the Customer or any party to this filing, or any party directly or indirectly controlling the Customer or any party to this filing ever been convicted of a felony by any state or federal court?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3) Has any court finally adjudged the Customer or any party directly or indirectly controlling	<input type="checkbox"/> Yes <input type="checkbox"/> No

the Customer guilty of unlawfully monopolizing or attempting to unlawfully monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	
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10

Customer/Lessee Certification Statements

1) The Customer/Lessee agrees that the Lease is not a sale or transfer of the license itself.	<input type="checkbox"/> Yes
2) The Customer/Lessee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, and if the Customer/Lessee fails to so comply, the Lease may be revoked, cancelled, or terminated by either the Licensee or the Commission.	<input type="checkbox"/> Yes
3) The Customer/Lessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C § 862, because of a conviction for possession or distribution of a controlled substance (<i>See</i> Section 1.2002(b) of the rules, 47 CFR § 1.2002(b), for the definition of "party to the application" as used in this certification.)	<input type="checkbox"/> Yes
4) The Customer/Lessee hereby accepts Commission oversight and enforcement consistent with the license and lease authorization. The Lessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the Licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with applicable Commission policies.	<input type="checkbox"/> Yes
5) The Customer/Lessee acknowledges that in the event an authorization held by a Licensee that it has association with it a spectrum leasing arrangement that is the subject of this filing is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Customer/Lessee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.	<input type="checkbox"/> Yes
6) The Customer/Lessee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and Regulations.	<input type="checkbox"/> Yes
7) The Customer/Lessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.	<input type="checkbox"/> Yes
8) The Customer/Lessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.	<input type="checkbox"/> Yes

Signature block follows

The Customer/Lessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith. The Customer/Lessee shall notify Sensus in writing in the event any information supplied on this form changes.

Type or Printed Name of Party Authorized to Sign

First Name:	MI:	Last Name:	Suffix:
Title:		Customer Name:	
Signature:			Date:
<p>FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.</p> <p>WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)) AND/OR FORFEITURE (U.S. Code Title 47, Section 503).</p>			

EXHIBIT N.1
SOFTWARE

Exhibit N.1
Software

Software as a Service

I. Description of Services

This Exhibit contains the details of the Software as a Service that VENDOR shall provide to PMA for so long as PMA is current in its payments for such applications of Software as a Service in accordance with the Contract.

A. Software as a Service Generally.

Software as a Service is a managed service in which VENDOR will be responsible for the day-to-day monitoring, maintenance, management, and supporting of certain software applications provided to PMA. As between PMA and VENDOR, VENDOR owns all components of the Software as a Service solution (server hardware, storage, network equipment, VENDOR software, and all third-party software except as otherwise provided) that runs and operates the applications. These software applications consist of the following (each an “Application”):

- Regional Network Interface (RNI) Software
- SEW Smart Customer Mobile (SCM) - PMA Web Portal and Mobile Apps
- SEW SCM Utility Customer Service Portal including Smart IQ Analytics
- Service Management Application (SMA)

The managed application systems consist of the hardware, VENDOR Software, and other third-party software that is required to operate the software applications. Each Application will have a production, test, and disaster recovery (each as described below) environment.

B. Use of Software as a Service. Subject to the terms of the Contract (including VENDOR’s suspension rights under Article VI. Section F. and Article VI. Section G. of the Contract), VENDOR shall make Software as a Service available to PMA to access and use solely for the uses permitted under this Contract. The Software as a Service term commences on the date that VENDOR first makes Software as a Service available to PMA for use following Software Implementation as defined in the Contract and detailed in the Statement of Work, and ends upon the earlier of: (i) the expiration or termination of the Contract; or (ii) breach by PMA of this exhibit or the Contract.

C. “Software as a Service” means only the following services:

- i. VENDOR will provide the use of required hardware, located at VENDOR’s or a third-party’s data center facility (as determined by VENDOR), that is necessary to operate the Application. All data centers used to support the AMI System and PMA Data, including any disaster recovery data centers, shall be in the United States. VENDOR will provide production, test, and disaster recovery environments for Application.
 - a. If the Parties enter into a statement of work providing for the following services, VENDOR will provide access to the PMA Data on a second identical environment for development or testing.
- ii. VENDOR will provide and install patches and updates as required under the Contract and this Exhibit N.1, including security updates.
- iii. VENDOR will configure and manage the equipment (server hardware, routers, switches, firewalls, etc.) in the data centers:
 - a. Network addresses and virtual private networks (VPN)
 - b. Standard time source (NTP or GPS)
 - c. Security access points
 - d. Respond to relevant alarms and notifications
- iv. Capacity and performance management. VENDOR will:
 - a. Monitor capacity and performance of the Application server and software applications using metrics, thresholds, and alerts to proactively identify any potential issues related to system capacity and/or performance (i.e. database, backspool, logs, message broker storage, etc.)
 - b. If an issue is identified to have a potential impact to the system, VENDOR will open an incident ticket and manage the ticket through resolution per Exhibit P (Technical Support).
 - c. Manage and maintain the performance of the server and perform any change or configuration to the server, in accordance to standard configuration and change management policies and procedures.
 - d. Manage and maintain the server storage capacity and performance of the Storage Area Network (SAN), in accordance to standard configuration and change management policies and procedures.
 - e. Exceptions may occur to the system that require VENDOR to take immediate action to maintain the

system capacity and performance levels, and VENDOR has authority to make changes without PMA approval as needed, in accordance to standard configuration and change management policies and procedures.

- i. After such immediate action, within reasonable time, VENDOR shall notify PMA of the issue and provide details regarding any expected impact to operation.
 - ii. If any changes were made, VENDOR shall provide PMA with documentation regarding the issue and the resolution in the form of a Corrective Action Report within 7 days of taking the immediate action.
- v. Database management. VENDOR will:
 - a. Define data retention plan and policy.
 - b. Monitor space and capacity requirements.
 - c. Respond to database alarms and notifications.
 - d. Install database software upgrades and patches.
 - e. Perform routine database maintenance and cleanup of database to improve capacity and performance, such as rebuilding indexes, updating indexes, consistency checks, run SQL query/agent jobs, etc.
- vi. Incident and Problem Management. VENDOR will:
 - a. Proactively monitor managed systems for key events and thresholds to proactively detect and identify incidents.
 - b. Respond to incidents and problems that may occur to the Application(s).
 - c. Maintain policies and procedures for responding to incidents and performing root cause analysis for ongoing problems.
 - d. Correlate incidents and problems where applicable.
 - e. If necessary, issues will be escalated to the appropriate Subject Matter Expert (SME).
 - f. Maintain responsibility for managing incident and problems through resolution and will coordinate with PMA's personnel and/or any required third-party vendor to resolve the issue.
 - g. Provide telephone support consistent with Exhibit P (Technical Support) in the case of undetected events.
- vii. Security Management. VENDOR will:
 - a. Monitor the physical and cyber security of the server and Application(s) to ensure system is highly secure in accordance with NIST Security Standards in a Tier IV, SAS-70 Type II, SSAE 16 Type 1 Certified data center. The physical security attributes include:
 - i. 24x7x365 on-site staffed technicians and security personnel with a dedicated guard room protected by ballistics rated glass
 - ii. Electronic badge card key and pin access
 - iii. Motion activated digital security cameras (interior and exterior)
 - iv. Biometric authentication readers on Data Center access doors through a mantrap entrance
 - b. Promptly notify PMA of any known or suspected security breach that results in the unauthorized use, access, disclosure, alteration or destruction of personal Information.
 - c. Perform active intrusion prevention and detection of the data center network and firewalls, and monitor logs and alerts.
 - d. Conduct period penetration testing of the network and data center facilities.
 - e. Conduct monthly vulnerability scanning by both internal staff and external vendors.
 - f. Perform Anti-Virus and Malware patch management on all systems.
 - g. Install updates to virus protection software and related files (including Virus signature files and similar files) on all servers from the update being generally available from the anti-virus software provider.
 - h. Respond to any potential threat found on the system and work to eliminate Virus or Malware found.
 - i. VENDOR adheres to and submits certification to NERC/CIP Cyber Security standards.
 - j. VENDOR actively participates/monitors industry regulation/standards regarding security – NERC, FERC, NIST, OpenSG, etc. through the dedicated VENDOR Security team.
 - k. Provide secure web portal access (SSL) to the Application(s).
- viii. Backup and Disaster Recovery Management. VENDOR will:
 - a. Perform daily backups of data providing two (2) year of history for auditing and restoration purposes.

- b. Back-up and store data (on tapes or other storage media as appropriate) off-site to provide protection against disasters and to meet file recovery needs on a weekly basis.
 - c. Conduct incremental and full back-ups to capture data, and changes to data, on the Application(s).
 - d. Annually disaster recovery tests to ensure continuity of the disaster recovery process, with the results reported to the City.
 - e. VENDOR will replicate the Application(s) environments to a geographically separated data center location to provide a full disaster recovery environment for the Application production system.
 - f. Provide disaster recovery environment and perform fail-over to DR environment within four (4) hours of declared event.
 - g. Generate a report following each and any disaster measuring performance against the disaster recovery plan and identification of problem areas and plans for resolution.
 - h. Maintain a disaster recovery plan. In the event of a disaster, VENDOR shall provide the services in accordance with the disaster recovery plan.
 - i. In the case of a disaster and loss of access to or use of the Application, VENDOR would use commercially reasonable efforts per the Recovery Time Objectives and Recovery Point Objectives specified herein to restore operations at the same location or at a backup location within forty-eight (48) hours.
 - j. The Application shall have a Recovery Time Objective (RTO) of forty-eight (48) hours.
 - k. The Recovery Point Objective (RPO) shall be a full recovery of the Application(s), with an RPO of one (1) hours, using no more than a twenty-four (24) hour old backup.
 - l. Data from external interfaced systems shall be recreated within a forty-eight (48) hour period with the assistance of PMA personnel and staff, as needed.
- ix. Configuration, Change, and Release Management. VENDOR will:
- a. Coordinate, schedule and install patches, updates, and upgrades to the Application(s) and other third-party applications with Customer's personnel.
 - b. Perform software patches, updates, and/or upgrades to the Application(s) in a test environment to test **the features/functionality of the new release along with coordination of Customer's personnel, in accordance to standard configuration and change management policies and procedures.**
 - c. Perform software patches, updates, and upgrades to all required third-party software applications (i.e. Microsoft® SQL server, Microsoft Windows Server, Red Hat Linux OS, and other third-party Software) **to operate the Application(s) in a test environment along with coordination of Customer's personnel, in accordance to standard configuration and change management policies and procedures.**
 - d. Once VENDOR and PMA have verified and signed off on change and release of the patch, update, and/or upgrade, Sensus will apply the appropriate patches, updates, and/or upgrades to the production environment, in accordance to standard configuration and change management policies and procedures.
- x. Training & Documentation
- a. VENDOR will provide training to PMA on the Applications yearly and/or after substantial software revisions.
 - b. VENDOR shall provide hard copies and electronic portable media (CD/DVD, etc.) of all standard manuals and written procedures that VENDOR generally makes available to its customers.
 - c. VENDOR shall maintain its standard manuals online accessible to PMA.
- xi. Service Management Application (SMA). The Service Management Application provides PMA the ability to manage the remote shutoff capability of the VENDOR-manufactured ally meter. The Service Management Application will:
- a. Provide account management: filter, sort, and group ally meters by relevant account information all in one view and pick the meters to open, close, and reduce.
 - b. Perform bulk shutoffs: shut off multiple accounts, communicate expected job completion time, and check status.
 - c. Allow cancellations: cancel one or many commands in an existing bulk job when a bill is paid.
 - d. Keep track of multiple years of audit logs: communicate who issued the command, from which application, and at what time.
 - e. Allow shopping cart work orders: generate a work list for accounts that require field service, meter

replacement, or troubleshooting.

f. Enable billing system and work order management integration, to be completed by PMA (not VENDOR). For clarity, VENDOR has no obligation to provide access to or services related to the Service Management Application unless PMA pays all applicable fees set forth in the Rate Sheet, including fees described in the Rate Sheet as “Service Management Application (SMA)” and “Integration of SMA to SEW.”

D. PMA Responsibilities:

- i. Coordinate and schedule any changes submitted by VENDOR to the system in accordance with standard configuration and change management procedures, where such coordination and scheduling shall not be unreasonably delayed.
- ii. Participate in all required configuration and change management procedures.
- iii. PMA will log incidents related to the managed Application with VENDOR personnel via email, web portal ticket entry, or phone call.
- iv. Responsible for periodic processing of accounts or readings (i.e. billing files) for PMA’s **billing system for billing** or other analysis purposes.
- v. Responsible for local area network configuration, management, and support of the systems PMA uses to access the Software as a Service and managed Applications (ie, browsers and computers used by PMA personnel).
- vi. Create and manage PMA user accounts.
- vii. To PMA preferences, customize application configurations that do not impact operation of the AMI System, such as whether Device Manager defaults to search by either meter ID or FlexNet ID.
- viii. Support PMA application users.
- ix. Investigate application operational issues (e.g. meter reads, reports, alarms, etc.).
- x. Respond to alarms and notifications.
- xi. PMA shall promptly pay all Software as a Service fees.
- xii. PMA may not (i) carelessly, knowingly, intentionally or maliciously threaten, disrupt, harm, abuse or interfere with the Application(s), Managed Systems or any of their functionality, performance, security or integrity, nor attempt to do so; (ii) impersonate any person or entity, including, but not limited to, VENDOR, a VENDOR employee or another user; or (iii) forge, falsify, disguise or otherwise manipulate any identification information **associated with PMA’s access to or use of the Application(s).**
- xiii. **The provisioning, compatibility, operation, security, support, and maintenance of PMA’s hardware and software (“PMA’s Systems”) is exclusively the responsibility of PMA.** PMA is also responsible for correctly configuring and maintaining (i) the desktop environment used by PMA to access the Application(s) managed by VENDOR; **and (ii) PMA’s network router and firewall, if applicable, to allow data to flow between PMA’s Systems and VENDOR’ Managed Systems in a secure manner via the public Internet.**
- xiv. Upon receiving the system administrator account from VENDOR, PMA shall create username and passwords **for each of PMA’s authorized users and complete the applicable VENDOR registration process (“Authorized Users”).** Such usernames and passwords will allow Authorized Users to access the Application(s). PMA shall be solely responsible for maintaining the security and confidentiality of each user ID and password pair **associated with PMA’s account, and VENDOR will not be liable for any loss, damage or liability arising from PMA’s account or any user ID and password pairs associated with PMA. PMA is fully responsible for all acts and omissions that occur using PMA’s account and any user ID and password pairs.** PMA agrees (i) not to **allow anyone other than the Authorized Users to have any access to, or use of PMA’s account or any user ID and password pairs at any time;** (ii) to notify VENDOR immediately of any actual or suspected unauthorized **use of PMA’s account or any of such user ID and password pairs, or any other breach or suspected breach of security, restricted use or confidentiality;** and (iii) to take the VENDOR-recommended steps to log out from and otherwise exit the Application(s) and Managed Systems at the end of each session. PMA agrees that VENDOR shall be entitled to rely, without inquiry, on the validity of the user accessing the Application(s) application **through PMA’s account, account ID, usernames or passwords.**

E. “Software as a Service” does not include any of the following services:

- i. Any integration between Applications not included herein, in the Contract, or in the Statement of Work, such as third-party applications used by PMA, would require a Professional Services contract agreement to be scoped, submitted, and agreed in a signed writing between VENDOR and all the applicable parties.

If an item is not listed in subparagraphs in item (C) above, such item is excluded from the Software as a Service and is subject to additional pricing.

II. Further Agreements

i. System Uptime Rate

- a. VENDOR (or its contractor) shall manage and maintain the Application(s) on computers owned or controlled by VENDOR (or its contractors) and shall provide PMA access to the managed Application(s) via internet or point to point connection (i.e., Managed-Access use), according to the terms below. VENDOR shall maintain an average System Uptime Rate equal to ninety-nine (99.5) per Month (as defined below). The System Uptime Rate, cumulative across all Applications, shall be calculated as follows:

$$\text{System Uptime Rate} = 100 \times \frac{\text{TMO} - \text{Total Non-Scheduled Downtime minutes in the Month}}{\text{TMO}}$$

ii. Calculations

- a. *“Targeted Minutes of Operation”* or *“TMO”* means total minutes cumulative across all Applications in the applicable month (“Month”) minus the Scheduled Downtime in the Month, based on a 24/7 operational schedule.
- b. *“Scheduled Downtime”* means the number of minutes during the Month, as measured by VENDOR, in which access to any Application is scheduled to be unavailable for use by PMA due to planned system maintenance. VENDOR shall provide PMA notice (via email or otherwise) at least seven (7) days in advance of commencement of the Scheduled Downtime. VENDOR will use reasonable efforts to schedule Scheduled Downtime outside of business hours.
- c. *“Non-Scheduled Downtime”* means the number of minutes during the Month, as measured by VENDOR, in which access to any Application is unavailable for use by PMA due to reasons other than Scheduled Downtime or the Exceptions, as defined below (e.g., due to a need for unplanned maintenance or repair).

iii. Exceptions. “Exceptions” mean the following events:

- a. Force Majeure Events;
- b. Emergency Work, as defined below; and
- c. Lack of Internet Availability, as described below.

iv. Emergency Work. In the event that Force Majeure Events, emergencies, dangerous conditions or other exceptional circumstances arise or continue during TMO, VENDOR shall be entitled to take any actions that VENDOR, in good faith, determines is necessary or advisable to prevent, remedy, mitigate, or otherwise address actual or potential harm, interruption, loss, threat, security or like concern to any of the Application(s) (“Emergency Work”). Such Emergency Work may include, but is not limited to: analysis, testing, repair, maintenance, re-setting and other servicing of the hardware, cabling, networks, software and other devices, materials and systems through which access to and/or use of the Application(s) by PMA is made available (the “Managed Systems”). VENDOR shall endeavor to provide notice of such Emergency Work to PMA when practicable and possible.

v. Lack of Internet Availability. VENDOR shall not be responsible for any deterioration of performance attributable to latencies in the public internet or point-to-point network connection operated by a third party. PMA expressly acknowledges and agrees that VENDOR does not and cannot control the flow of data to or from VENDOR’ networks and other portions of the Internet, and that such flow depends in part on the performance of Internet services provided or controlled by third parties, and that at times, actions or inactions of such third parties can impair or disrupt data transmitted through, and/or **PMA’s connections to, the Internet or point-to-point data connection** (or portions thereof). Although VENDOR will use commercially reasonable efforts to take actions VENDOR may deem appropriate to mitigate the effects of any such events, VENDOR cannot guarantee that such events will not occur. Accordingly, VENDOR disclaims all liability resulting from or relating to such events.

vi. Service Level Credits. Subject to the Calculations, Exceptions, and Emergency Work noted above, VENDOR shall provide a credit to the PMA based on monthly period against all the monthly fees associated with Software as a Service in accordance with the following schedule:

- a. First (10) hours of downtime, hour-for-hour credit per hour of downtime below 99.5.
- b. Hours (10-20) of downtime, two hours of credit per hour of downtime below 99.5.
- c. Hours in excess of 20 hours, three hours of credit per hour of downtime below 99.5.

To receive a service level credit, PMA must issue a written request no later than ten (10) days after the close of the prior month. VENDOR will apply each valid credit to PMA within two (2) billing cycles after VENDOR receipt of PMA request and confirmation of the failure to meet the applicable service level credit. The maximum credit hours in any monthly period shall not exceed fifteen percent (15%) of the monthly service fee, and the maximum annual credit shall not exceed twenty percent (20%) of annual Software as a Service fees. In no event will VENDOR pay PMA cash for any unused credits. The credits provided herein are **PMA's** sole and exclusive remedy for VENDOR failing to meet the System Uptime Rate or any defective Software as a Service performance. Notwithstanding the foregoing in this Section II.vi, PMA shall be entitled to all available remedies under the Contract for persistent failures by VENDOR to meet the System Uptime Rate or a single failure or group of failures that prevent PMA from receiving the benefit of the AMI Project Services, including, but not limited to, the inability for PMA to use the AMI System or extended unavailability of the AMI Project Services. The credits described herein only apply to the production environment and do not apply to the test environment.

- vii. Reporting. VENDOR will provide a monthly report of the following key performance indicators for each Application via secure FTP site:
 - a. System Uptime Rate and TMO (including percentage of uptime)
 - b. System utilization statistics related to speed of response to queries and operations
 - c. Restarts, database server dead locks, and other incidents
 - d. Scheduled Downtime, Non-Scheduled Downtime, and Emergency Work downtime amounts
 - e. Summary of changes that occurred during that month.

- viii. Data Center Site-Security. Although VENDOR may modify such security arrangements without consent or notice to PMA, PMA acknowledges the following are the current arrangements regarding physical access to and support of the primary hardware components of the Managed Systems:
 - a. The computer room(s) in which the hardware is installed is accessible only to authorized individuals.
 - b. Power infrastructure includes one or more uninterruptible power supply (UPS) devices and diesel generators or other alternative power for back-up electrical power.
 - c. Air-conditioning facilities (for humidity and temperature controls) are provided in or for such computer room(s) and can be monitored and adjusted for humidity and temperature settings and control. Such air systems are supported by redundant, back-up and/or switch-over environmental units.
 - d. Such electrical and A/C systems are monitored on an ongoing basis and personnel are available to respond to system emergencies (if any) in real time.
 - e. Dry pipe pre-action fire detection and suppression systems are provided.
 - f. Data circuits are available via multiple providers and diverse paths, giving access redundancy.

III. SEW Software

The scope of this project includes the following components:

1. Smart Customer Mobile (SCM) - Customer Web Portal and Mobile Apps - PMA-facing web portal and mobile apps for Apple iOS and Google Android
2. SCM Utility Customer Service Portal including Smart IQ Analytics – Utility-facing customer Engagement Analytics, Smart IQ Analytics, and Admin Portal for PMA staff
3. Utility Customer Personas Configuration in Customer Web Portal
 - a. Residential Customer (Up to 3 guest users)
 - b. Small Commercial Customer (Up to 3 guest users)
 - c. The Customer Web Portal will support access to at least 5000 concurrent users.

Smart Customer Mobile (SCM) - Customer Web Portal and Mobile Apps

The SCM platform web portal and mobile apps include the following customer-facing modules:

1. My Account
2. Usage
3. Billing
4. Notifications
5. Connect Me
6. Compare
7. Outage
8. Efficiency/Conservation
9. Service

The table below describes the specific features in detail:

#	Module	Features
1.	My Account	<p>The “My Account” module allows the utility customer to manage their profile, communication preferences, and contact information in the web portal and the mobile app. The customers can see all their accounts in a single sign-on view and set preferences for each account. Specifically, the customers can:</p> <ul style="list-style-type: none"> • View and manage their account information including contact details • Add multiple customer accounts and view rate plans • Set-up notification preferences by selecting the notification type and delivery channels including SMS text, IVR dialer, email, and mobile push alerts with the ability to add, delete, and update the contact information for each notification type and channel • Configure dashboard view and application theme • Opt in/Opt out of notifications events and configure preferred time and frequency for these notifications • Manage E- Billing/Paperless Billing preferences • Set budget limit to receive real time alerts on energy consumption • Manage language preferences to view information in multiple languages • Add and manage payment accounts for bill payment • Set Marketing Preferences to subscribe for utility communications • Fill a home profile survey
2.	Usage	<p>The Usage module provides the utility customer the visibility to their water usage and cost using chart displays for different periods. Specifically, the PMA customers can:</p> <ul style="list-style-type: none"> • View water meter data – monthly and seasonal for up to last 13 months with weather overlays • Access historical usage and spending for all service accounts associated with the user • View aggregated as well as individual meter consumption associated with their service accounts • View water consumption in different usage units of measure and cost (dollars) • View projected water usage for next period • View projected next bill amount • Download usage data in Excel, CSV, and PDF format
3.	Billing	<p>The Billing module allows the utility customer to manage billing and payments functions online. Specifically, the PMA customers can:</p> <ul style="list-style-type: none"> • View current balance and bill details including all services and accounts covered in the

#	Module	Features
		<p>customer's bill consistent with customer's account in th Billing system</p> <ul style="list-style-type: none"> • Make one-time payment or setup scheduled payments using ACH, credit card, and debit card • View their account history including bills posted and payments made on their account for last 13 months. • Download copy of their historical bills in PDF format for 12+ months • Enroll in "Budget My Bill" feature to setup target bill amount and receive high bill alerts (for residential customers on standard rates) • Connect with utility to submit billing or payment related queries • View utility payment locations to make payments in person • Enroll for level pay for leveling out customer's water bill
4.	Notifications	<p>The Notifications module provides a central view of all notifications exchanged between the customer and the Utility. Specifically, the customers will be able to:</p> <ul style="list-style-type: none"> • View all notifications, alerts received from the utility • Select and respond to a notification • View responses to the notifications sent by the customer to utility <p>The notification/alert types will include:</p> <ul style="list-style-type: none"> • Updates to contact information • Updates to notification preferences – Opt-in and Opt-out • Billing and Payment Alerts and Reminders • High Usage Alerts • Outage Notifications – New Outage, ETR Update, and Outage resolved • Service Request Status • Ad hoc messages to selected customers (manually triggered by CSRs)
5.	Connect Me	<p>The Connect Me module provides a single click option for the customer to contact Utility customer service via the mobile app, text message, phone, and email. Specifically, the customers will be able to:</p> <ul style="list-style-type: none"> • View all utility customer service contact options based on request type on the Mobile app and within the portal • Choose contact requests / reason related to outage, billing, programs, payments etc. • Send a message to the utility customer service desk and receive responses in real time • View all the utility's social media accounts (on Twitter, Facebook, Google+, Instagram, and YouTube) for updates in one view within the portal and the mobile app
6.	Compare	<p>The Compare module displays the customer's water usage compared with other similar customers. Specifically, the Utility customers will be able to:</p> <ul style="list-style-type: none"> • Self compare their water use for past 12 months with their historical use pattern • Compare their water use with similar households/businesses
7.	Outages	<p>The Outages module provides the utility customer a web portal and mobile capability to view current and planned outages as well as communicate with the utility customer service for outage related notifications. Specifically, the customers will be able to:</p> <ul style="list-style-type: none"> • View a map displaying all current and planned outages along with the impacted area, incident description, and current reported status • Enroll in and receive individualized notifications for the outages that impact the customer • Report an outage from the portal or using the mobile app • Send a message to the utility customer service desk and receive responses

#	Module	Features
8.	Efficiency / Conservation	<p>The Efficiency/Conservation module displays the utility water conservation programs, rebates and savings tips with ability for the customer to view and enroll these programs using any device. Specifically, the utility customers will be able to:</p> <ul style="list-style-type: none"> • View rebates and programs available • View personalized savings and educational tips based on customer profile • Apply for rebates and programs by completing and submitting an electronic form through web re-direct • Track application status for submitted applications • View home water report (updated monthly) • View Assistance Programs • Marketplace- View water conservation appliance and service catalog for utility defined products
9.	Service	<p>The Service module enables Utility customers to enter and log customer service requests, including move in, move out, and service transfer. Specifically, the customers will be able to:</p> <ul style="list-style-type: none"> • Submit self-service requests online and on mobile • Request for turn-on, transfer, and turn-off utility services • Request for account verification documents • Request for service transfer from existing premises to new premises • Submit a complaint <p>The service request and forms will be routed to appropriate customer service agents via email.</p>

SCM Utility Customer Service Portal including Smart IQ Analytics

The PMA facing Customer Service Web Portal capabilities will include the following utility facing modules.

1. *Customer Service and Administration*
 - a. Dashboard
 - b. Customer Engagement Analytics
 - c. Administration
 - d. CSR Workbench
 - e. Outages
2. *Smart iQ Analytics Version 1.9*
 - a. Water Use Analytics (Customer & Segments)
 - b. Leakage Analytics
 - c. High Usage Analytics
 - d. Program Management
 - e. Violation Management

The table below describes the specific features in scope:

#	Module	Features
1.	Dashboard	<p>The Customer Service Portal provides a configurable dashboard with visual display of key platform metrics including customer engagement metrics and transactional summary for all key business processes enabled by SCM. Specifically, PMA personnel will be able to view the process KPIs and metrics for bills and payments done, usage trends, notifications sent and received, analysis of various rebate program participation, customer behavior and customer enrolment.</p>

#	Module	Features
2.	Customer Engagement Analytics	<p>This module provides reports and live dashboards for customer interactions. The PMA personnel will be able to view reports for tracking customer activity, notification status by channel, customer browsing activity metrics, and administrative reports for daily, monthly, or date range activity for billing, usage, notification, and preference management activity. Specifically, the analytics views will include:</p> <ul style="list-style-type: none"> • PMA registration and activity status • PMA service response metrics for various inbound notifications • PMA behavior metrics including login and feature clicks by browser, device, and time • Marketing banner click metrics
3.	Administration	<p>The module provides the ability to configure the application features, user roles, and user accounts. Specifically, PMA personnel will be able to:</p> <ul style="list-style-type: none"> • Create and manage user roles for the application including granting and revoking access to specific features. • Create and manage utility user accounts including role assignments. • Manage application configurations including <ul style="list-style-type: none"> ○ Enable or disable features in scope of the modules selected. ○ Label, display content, and disclaimers ○ Workflow configurations • Create and manage multi-channel templates for customer journeys in scope.
4.	CSR – Work Bench	<p>This module provides a 360-degree view of the customer profile for the utility Customer Service Reps (CSR). Specifically, PMA CSRs will be able to lookup a customers and view:</p> <ul style="list-style-type: none"> • All service accounts for the customer • Energy Use Analytics • Contact information and last login status / online activity • Notification opt in status and corresponding contact details • All incoming and outbound notifications for that customer • Co-browsing and impersonation options • Support for web chat and mobile customer support
5.	Outages	<p>The module provides the ability to create, view, add and update outage events.</p> <ul style="list-style-type: none"> • Create a new outage incident by outlining effected area by drawing polygons • Create and embed outage message, and make updates • View and track resolved and unresolved outage events • Access outage details, history and affected customer list • Send notifications and updates
Smart iQ Analytics		
1.	Water Use Analytics (Customer & Segments)	<p>This module provides the utility users the ability to view, compare, and run reports for customer segments and individual customers based on water use patterns. Specifically, the user can:</p> <ul style="list-style-type: none"> • View the graphical trend of the water use, budget, historical use, and per day use for a customer segment • View a customer's water use profile including 12-month history, budget comparison, and water budget settings
2.	Leakage Analytics	<p>This module provides automatic leakage identification based on the hourly interval meter data to enable the users to view the meters/accounts where a leakage pattern is detected. Specifically, the users can:</p> <ul style="list-style-type: none"> • Setup configurable flow parameters by customer class to detect leaks • View meters/accounts in a tabular format where the leak has been detected • Sort the leak alerts by the leak size and meter flow to identify largest leaks • Setup automatic SMS text, email, and IVR phone alerts by customer class to notify customers where leak has been identified.

#	Module	Features
3.	High Usage Analytics	<p>This module provides automatic detection of high water usage patterns based on the hourly interval meter data to enable the users to view the meters/accounts where a high water use is detected. Specifically, the users can:</p> <ul style="list-style-type: none"> • Setup configurable rules for month to month and prior year change in water use by customer class • View meters/accounts in a tabular format where high use has been detected • Sort the high use alerts by total use to sort customers • Setup automatic SMS text, email, and IVR phone alerts by customer class to notify customers with high water use.
4.	Program Management	<p>This module streamlines the entire rebate application process. The utility personnel can:</p> <ul style="list-style-type: none"> • Review the rebate applications submitted via the SCM portal or manually enter the rebate/program applications • Update and track application status including approval, inspections, and other configurable conditions • View statistics of various rebate programs including rebates approved, types and other configurable criteria • Provide reports on rebate/program performance metrics including energy/water savings that have been achieved based on customer rebate participation at both the customer level and customer segmentation (commercial, single-family residential, multi-family residential)
5.	Violation Management	<p>This module provides the ability to track weekly watering schedule violations for different customer sets based on configurable criteria.</p>

Integrated Notification Services

The SCM platform includes integrated notification services which can be enabled by PMA for the purposes of customer alerts and notifications based on configurable workflow and decision trees.

- SMS Text Messaging – Two-way
- IVR Outbound Dialer
- Email auto notifications
- Mobile Push Notifications

The scope for configuration of notifications/alert campaigns will be limited to the notifications stated in the table above.

If an item is not listed in the section above, such item is excluded from **VENDOR's** integration under this Contract and is subject to additional fees.

iv. System Installation and Data Integration.

As further described in the Statement of Work, the scope of the project includes the following key system installation and data integration activities:

1. Design, configure, and setup of the software stated in the Section III above.
2. Integration of software with PMA systems set forth in the diagram below.
3. Load the existing customer preferences to SCM database for the notifications in scope.
4. Deploy PMA branded utility customer web portal functionality in scope.
5. Deploy and publish PMA branded mobile apps for Apple iOS and Google Android app stores.

VENDOR will integrate access with the **PMA's** systems as set forth in the Statement of Work prior to the completion of the planning phase. Integration to **PMA's** source systems and data is dependent on access to said systems, including any API allowances as applicable.

v. PMA Acknowledgements.

- i. PMA acknowledges that the PMA-facing application provides up to twenty (20) user logins for **PMA's** simultaneous use.
- ii. PMA acknowledges and agrees the Applications are based upon the actual number of end users within PMA's service territory. Pricing may increase if **PMA's service territory** or actual number of end users expands.
- iii. PMA acknowledges that all data related to the Applications are geographically hosted within the United States of America.
- iv. PMA acknowledges and agrees that the Intellectual Property provisions of this Contract apply in all respects to **PMA's access to and use of the Applications**.
- v. VENDOR is not responsible for validating the data analyzed by the Applications. VENDOR makes no promises of improving **PMA's operations or saving** PMA money, nor is VENDOR liable for any damages resulting from decisions made by PMA related to **PMA's use of Analytics**. PMA will provide timely responses to VENDOR information needs and timely review of project documents provided.
- vi. Key personnel will be made available to VENDOR as required during the project
- vii. PMA will provide onsite workspace for VENDOR resources with internet connectivity as necessary.
- viii. PMA fully acknowledges and understands that any customization to standard features and functionality as described in this document will be assessed by VENDOR and may impact approved budget and/or schedule.
- ix. Integration to **PMA's** source systems and data is dependent on access to said systems, including applicable API allowances. VENDOR will work on behalf of PMA to obtain such APIs within reason, however PMA is responsible to ensure such access and API allowances are provided. In addition, existing API or SFTP processes for source system data, including customer, billing, and usage data, will be made available for use or re-use as part of the project. Ability to view bill PDF is dependent on API availability.
- x. PMA agrees to ensure integration access with **PMA's** billing and payment systems provider. Failure to obtain such availability and/or access from **PMA's** billing provider shall not affect **PMA's** obligations under this Contract.
- xi. Standard implementation and configuration is conducted primarily from VENDOR premises with any included on-site activities to be determined and documented during project planning phase. Additional VENDOR resources beyond those so identified will travel to PMA premises on an as-requested basis when practicable and billed in accordance with the Rate Sheet.

EXHIBIT N.2

SERVICE LINK

Exhibit N.2 Service Link

1. Introduction. This Exhibit N.2 sets forth certain terms applicable to the Service Link Software (as defined in Section 2 (Definitions)).

2. Definitions. As used in this Exhibit N.2, the following capitalized terms have the meanings set forth in this Section 2. Any terms not defined in this Exhibit N.2 have the meaning given to them in the Contract. If a defined term in this Exhibit N.2 is inconsistent with a defined term in the Contract, the defined term in this Exhibit N.2 will take precedence.

“Documentation” means the published user manuals, specifications, and functional documentation (whether in print or electronic form) that relate to the Service Link Software that have been provided by WCLS to Sensus or PMA under this the Contract or the WCLS-Sensus Agreement.

“Object Code” means the binary machine-readable version of software code.

“Service Link Software” means the software provided by WCLS to VENDOR under the WCLS-Sensus Agreement.

“Source Code” means the human-readable version of software code.

“Upgrade” means any and all upgrades, updates, enhancements, modifications, patches, alterations, improvements, corrections, revisions, releases, new versions, or any other changes to the Service Link Software.

“User” means a PMA employee, contractor, affiliate, or agent.

“WCLS” means West Coast Labour Systems Corp., a British Columbia corporation with its principal place of business at 403 – 197 Forester St., North Vancouver, BC, V7H 0A6.

“WCLS-Sensus Agreement” means the Software License Agreement between WCLS and VENDOR.

3. License. VENDOR hereby grants to PMA a nonexclusive, nontransferable, nonsublicensable license to install, execute, run, copy, and otherwise use the Service Link Software in Object Code form in connection with the AMI Project Services, including the right to host (or have a third-party provider host on PMA’s behalf) the Object Code on an ASP basis for remote access by an unlimited number of Users.

4. License Restrictions. PMA will (a) not translate, reverse engineer, disassemble or decompile the Service Link Software or otherwise attempt to discover or recreate the Source Code of the Service Link Software; (b) comply with all applicable laws, including U.S. export control laws, in PMA’s and the City’s use of the Service Link Software; (c) not remove, alter, or obscure any proprietary notices (including copyright notices) of WCLS or its suppliers in the Service Link Software; and (d) not resell, rent, lease, distribute, assign, share, sell, grant a security interest in, use for service bureau purposes, or otherwise transfer the Service Link Software.

5. Provision of Upgrades. VENDOR will provide to PMA, at PMA’s request and without additional cost to PMA, any and all Upgrades developed by WCLS during the term of the WCLS-Sensus Agreement and delivered by WCLS to VENDOR under the WCLS-Sensus Agreement. Each such Upgrade will constitute an element of the Service Link Software and will be subject to the terms of this Exhibit N.2.

6. Break-Fix Services. If Sensus discovers or PMA discovers and notifies Sensus or WCLS of one or more defects or errors in the Service Link Software that cause the Service Link Software to fail to conform to its Documentation, Sensus will procure that WCLS corrects such defect, error or non-conformity by, among other things, supplying PMA with such corrective code and making such additions, modifications, or

adjustments to the Service Link Software as may be necessary to keep the Service Link Software in conformity with the Documentation.

7. Termination of WCLS-Sensus Agreement. Notwithstanding anything to the contrary in this Exhibit N.2, Sensus will have no obligations under this Exhibit N.2 or related to the Service Link Software if the WCLS-Sensus Agreement is terminated or expires for reasons outside of Sensus' reasonable control.

* * * * *

EXHIBIT O
TECHNICAL SUPPORT

Exhibit O

Technical Support

1. Introduction

Through its team of **personnel who provide technical support** (“Technical Services”), Sensus provides Customer with a point of contact for Tier 1 support of technical issues as well as any coordination of additional resources required to resolve the issue. Requests that require specialized skills are to be forwarded to a senior support engineer or technical advisor within the team for further analysis. Sensus may escalate the request as appropriate. Occasionally, on-site troubleshooting/analysis may be required.

2. Support Categories

- 2.1. General questions regarding functionality, use of product, how-to, and requests for assistance on Sensus AMR, AML, RF Network Equipment, Metering Products, Sensus Lighting Control, and Demand Response Management System (FlexNet Home).
- 2.2. Proactive reporting and resolution of problems.
- 2.3. Reactive reporting to isolate, document, and solve reported hardware/software defects.
- 2.4. Responding to service requests and product changes.
- 2.5. Addressing customer inquiries with printed or electronic documentation, examples, or additional explanation/clarification.

3. Support Hours

- 3.1. Standard Support Hours: Toll-free telephone support (1-800-638-3748 option #2) is available Monday thru Friday from 8:00 a.m. EST to 8:00 p.m. EST. After-hours, holiday and weekend support for Severity 1 and Severity 2 issues is available by calling 1-800-638-3748, option #8.

4. Support Procedures

- 4.1. Customer identifies an issue or potential problem and calls Technical Services at 1-800-638-3748 Option #2. The Customer Service Associate or Technical Support Engineer will submit a Salesforce ticket.
- 4.2. The Customer Service Associate or Technical Support Engineer will identify the caller name and utility by the assigned software serial number, city, and state based on where the call originated. The Customer Service Associate or Technical Support Engineer will require a brief description of the problem symptoms, or error messages depending on nature of the incident. The nature of the problem and severity levels will be mutually agreed upon by both parties (either at the time the issue is entered or prior to upgrading or downgrading an existing issue) using the severity definitions below as a guideline. The severity level is then captured into Salesforce for ticket creation and resolution processing. Any time during the processing of this ticket, if the severity level is changed by Sensus, the customer will be updated.

A. Severity Levels Description:

Sev1 Customer's production system is down. The system is unusable resulting in total disruption of work. No workaround is available and requires immediate attention.

Example: Network mass outage, all reading collection devices inoperable, inoperable head end software (e.g., RNI Software).

Sev2 Major system feature or function failure. Operations are severely restricted; there is a major disruption of work, no acceptable work-around is available, and failure requires immediate attention.

Examples: Network equipment failure (e.g., FlexNet Base Station transceiver, or VGB); inoperable reading devices (e.g., FL6500, VXU, VGB, or CommandLink); head end software application has important functionality not working and cannot create export file for billing system operations.

Sev3 The system is usable and the issue doesn't affect critical overall operation.

Example: Minor network equipment failure (e.g., FlexNet Base Station transceiver false alarms); head end software application operable but reports are not running properly, modification of view or some non-critical function of the software is not running.

Sev4 Enhancement requests unrelated to whether the system is usable or operational

Example: **Customer's requests to add new features or functionality to the system. To make any such request a "Sev4" issue, Customer will enter the request into the applicable customer portal. Implementation of the enhancement may be subject to additional fees in accordance with the Contract.**

- 4.3. Calls are placed in a queue from which they are accessible to Technical Support Engineers on a first-come-first-served basis. A 1st level Customer Service Associate may assist the customer, depending on the difficulty of the call and the representative's technical knowledge. Technical Support Engineers (Tier 1 support) typically respond and resolve the majority of calls based on their product knowledge and experience. A call history for the particular account is researched to note any existing pattern or if the call is a new report. This research provides the representative a basis and understanding of the account as well as any associated problems and resolutions that have been communicated.
 - a. Technical Services confirms that there is an issue or problem that needs further analysis to determine its cause. The following information must be collected: a detailed **description of the issue's** symptoms, details on the software or hardware product and version, a description of the environment in which the issue arises, and a list of any corrective action already taken.
 - b. Technical Services will check the internal database and product defect tracking system, to see if reports of a similar problem exist, and if any working solutions were provided. If an existing resolution is found that will address the reported issue, it shall be communicated to the customer. Once it is confirmed that the issue has been resolved, the ticket is closed.
 - c. If there is no known defect or support that defines the behavior, Technical Services will work with the customer to reproduce the issue. If the issue can be reproduced, either at the customer site or within support center test lab, Technical Services will escalate the ticket for further investigation and resolution.

If the issue involves units that are considered to be defective with no known reason, the representative will open a Special Investigation RMA through the Salesforce system. If it is determined that a sample is required for further analysis, the customer will be provided with instructions that detail where to send the product sample(s) for a root cause analysis. Once it is determined that the issue cannot be resolved by Tier 1 resources, the ticket will be escalated to Tier 2 support for confirmation and workarounds to resolve immediate issue. Technical Services will promptly contact the customer to advise of the escalation. The response and escalation times are listed in Section 5. At this time, screen shots, log files, configuration files, and database backups will be created and attached to the ticket.

5. **Response and Resolution Targets.**

Sensus Technical Support will make every reasonable effort to meet the following response and resolution targets:

Severity	Standard Target Response	Standard Target Resolution	Resolution (one or more of the following)
1	30 Minutes	24 hours Immediately assign trained and qualified Services Staff to correct the error on an expedited basis. Provide ongoing communication on the status of a correction. Work to resolve the issue continuously (24 hours per day, 7 days per week) until resolution.	<ul style="list-style-type: none"> Satisfactory workaround is provided. Program patch is provided. Fix incorporated into future release. Fix or workaround incorporated into Salesforce Knowledge Base.
2	4 hours	48 hours Assign trained and qualified Services Staff to correct the error. Provide communication as updates occur. Work to resolve the issue continuously during standard business hours until resolution.	<ul style="list-style-type: none"> Satisfactory workaround is provided. Program patch is provided. Fix incorporated into future release. Fix or workaround incorporated into Salesforce Knowledge Base.
3	1 Business Day	30 business days	<ul style="list-style-type: none"> Answer to question is provided. Satisfactory workaround is provided. Fix or workaround incorporated into Salesforce Knowledge Base. Fix incorporated into future release.
4	None	None	<ul style="list-style-type: none"> Review Customer's enhancement request Evaluate the possibility of adding the enhancement to a future release

6. **Problem Escalation Process.**

- 6.1. If the normal support process does not produce the desired results, or if the severity has changed, the issue may be escalated as follows to a higher level of authority.
- 6.1.1.1. Severity 1 issues are escalated by Sales or Technical Services to a Supervisor if not resolved within 2 hours; to the Manager level if not resolved within 4 hours; to the Director level if not resolved within the same business day; and to the VP level if not resolved within 24 hours.
 - 6.1.1.2. A customer may escalate an issue by calling 1-800-638-3748, Option 2. Customer will specify the Salesforce ticket number and the reason why the issue is being escalated.
 - 6.1.1.3. In the event that a customer is not satisfied with the level of support or continual problem with their products, they may escalate a given Salesforce ticket to Manager of Technical Services (1-800-638-3748, Option 2).

7. **General Support Provisions and Exclusions.**

- 7.1. Sensus provides online documentation for Sensus products through the Sensus User Forum (<http://myflexnetsystem.com/Module/User/Login>). All Sensus customers are provided access to this online database, which includes operation, configuration and technical manuals. Sensus also hosts periodic user group teleconferences to facilitate the interchange of product ideas, product enhancements, and overall customer experiences. The customer shall provide names and email accounts to Sensus so Sensus may provide access to the Portal.
- 7.2. Specialized support from Sensus is available on a fee basis to address support issues outside the scope of this support plan or if not covered under another specific maintenance contract. For example, specialized systems integration services or out of warranty network equipment repair that is not covered under a separate maintenance contract.
- 7.3. Sensus will make reasonable efforts to meet a target response service level of answering 80% or more of all incoming support calls (made in accordance with this [Exhibit O](#)) before routing the calls to voicemail.

EXHIBIT P
FIELDLOGIC

Exhibit P
FieldLogic

This Exhibit P governs the FieldLogic **Software Program (the “Software”)** owned by Sensus. For this Exhibit P only, any defined terms in this Exhibit P which are also defined in the Contract or other exhibits will have the meaning given here in this Exhibit P.

1. License.

- (a) Subject to all the terms and conditions of the Contract, Sensus hereby grants to Customer a nonexclusive, non-transferable license **(the “Software License”)** to use the **Software for the Permitted Use**. The **Software License** is personal to Customer and is nonsublicenseable to third parties. Customer shall have no rights to the Software other than those expressly granted in this Exhibit P; this Software License contains no implied licenses. Customer shall not use the Software other than for the Permitted Use.
- (b) Customer may load the Software only onto personal computers owned by Customer or City. Customer may make a single exact copy or adaptation for archival purposes only.
- (c) Except as expressly authorized in accordance with the Permitted Use, Customer shall not (and shall not attempt to or allow others to): (a) use, copy, adapt, translate, publish, display, sublicense, rent, lease, lend, transfer or distribute the Software, related documentation, or any copy thereof; (b) improve, enhance, revise, modify or make any other derivatives of the Software, related documentation or any copy or part thereof. Customer shall not reverse assemble, reverse compile, reverse engineer or otherwise translate or decode **the Software or any part thereof, or any copy thereof**. **Sensus’ suppliers of software and documentation** (or any part thereof) are third party beneficiaries of this provision. Customer shall not destroy, remove or otherwise alter any proprietary notices (including, but not limited to, copyright notices) on the Software or related documentation, or any copy thereof, and agrees to reproduce any such notice(s) on any copy thereof it makes pursuant to this Software License.

2. Third Party Software.

- (a) In addition to the Software, Sensus shall provide Customer with the third party software listed in Attachment A under **the heading “Bundled Third Party Software” (the “Bundled Third Party Software”)**. Customer acknowledges that it has received the terms and conditions of the Bundled Third Party Software (**“Third Party EULAs”**). **Customer** accepts the Third Party EULAs and agrees to comply with the terms of such Third Party EULAs.
- (b) Customer acknowledges that the Bundled Third Party Software is subject to various rights and restrictions in **favor of or imposed by the licensors thereof and that Customer’s use of the Bundled Third Party** software is subject to all such rights and restrictions. Notwithstanding anything to the contrary in the Contract, Sensus provides no warranty, indemnity nor support of or in relation to any third party software. All such rights and obligations are a matter strictly between Customer and the relevant third party licensors.

3. Term. This Exhibit P will remain in effect until the earlier of (a) termination or expiration of the Contract, or (b) termination of this Exhibit P for cause by either Customer or Sensus. Sensus may terminate this Exhibit P upon written notice if Customer violates any of its terms or conditions. Upon the termination of this Exhibit P, all rights granted in this Exhibit P shall immediately cease, and Customer shall promptly remove and return to Sensus all copies of the Software and any related documentation and shall instruct all its employees, personnel, agents, and representatives that further use of the Software is prohibited.

4. Royalty Payment. Customer shall pay the agreed license fees, if any outlined, to use the Software and documentation (**“FieldLogic License Fees”**).

5. Access to Software. Customer shall ensure that only Customer employees and Customer independent contractors who need access to the Software for Customer to obtain the benefits of this Agreement may access it. Customer is liable for ensuring that its employees and independent contractors abide by the terms of this Agreement.
6. Support and Maintenance.
 - (a) For so long as the Customer pays the FieldLogic License Fees, Sensus shall provide Customer with ongoing software Patches, Updates, ongoing software maintenance and remote telephone support of the Software according to **Sensus' standard support** terms. Upgrades are not included hereunder and shall be priced separately.
 - (b) Sensus will support and will maintain compatibility with the most recent Release and the two prior **Releases** ("Previous Releases").
7. Definitions. As used in this Exhibit P, the following terms shall have the following meanings:
 - A. "**Patches**" means **patches or other maintenance releases of the Software that correct processing errors** and other faults and defects found previous versions of the Software. For clarity, Patches are not Updates or Upgrades.
 - B. "**Permitted Use**" means only for updating and reading Customer's meters in the **Service Territory**. The Permitted Use does not include reading meters with third-party radios or reading meters outside the Service Territory.
 - C. "**Release**" means **both Updates and Upgrades**.
 - D. "**Service Territory**" means the geographic area where Customer provides water services to end users as of the Effective Date.
 - E. "**Updates**" means releases of the Software that constitute a minor improvement in functionality.
 - F. "**Upgrades**" means **releases of the Software which constitute a significant improvement in functionality or architecture of the Software**.

Attachment A
Software Listing

THIRD PARTY SOFTWARE		
	Software	Version
BUNDLED THIRD PARTY SOFTWARE	ICSharpCode.SharpZipLib	
	Antlr4	
	SQLite	
	UnitsNet	
	PDFSharp & MigraDoc	
	OxyPlot	
	Extended WPF Toolkit (Community Edition)	
	Newtonsoft JSON	

EXHIBIT Q
GUARANTY AGREEMENT

EXHIBIT Q

GUARANTY AGREEMENT

from

XYLEM INC. to

THE PHILADELPHIA MUNICIPAL AUTHORITY

___, 2018

GUARANTY AGREEMENT

THIS GUARANTY AGREEMENT is made and dated as of [_____, 2018], between Xylem Inc., a corporation organized and existing under the laws of Indiana (together with any permitted successors and assigns hereunder, the “Guarantor”), and The Philadelphia Municipal Authority (“PMA”).

RECITALS

PMA and Sensus USA Inc. (“Company”), have entered into the Advanced Metering Infrastructure Service Contract dated [_____, 2018] for the provision, operation, and maintenance of an advanced metering infrastructure system located in Philadelphia, Pennsylvania (the “AMI System”), as amended from time to time (the “Service Agreement”); and

The Company is directly owned by the Guarantor; and

PMA will enter into the Service Agreement only if the Guarantor guarantees the performance by the Company of all of the Company’s responsibilities and obligations under the Service Agreement as set forth in this guaranty agreement (the “Guaranty”).

In order to induce the execution and delivery of the Service Agreement by PMA and in consideration thereof, the Guarantor agrees as follows:

ARTICLE 1 DEFINITIONS AND INTERPRETATION

1.1 DEFINITIONS. For the purposes of this Guaranty, the following words and terms shall have the respective meanings set forth as follows. Any capitalized word or term used but not defined herein is used as defined in the Service Agreement.

“Obligations” means the amounts payable to PMA by, and the covenants and agreements of, the Company pursuant to the terms of the Service Agreement.

“Transaction Agreement” means any agreement entered into by the Company or PMA in connection with the transactions contemplated by the Service Agreement.

1.2. INTERPRETATION. In this Guaranty, unless the context otherwise requires:

(A) References Hereto. The terms “hereby,” “hereof,” “herein,” “hereunder” and any similar terms refer to this Guaranty, and the term “hereafter” means after, and the term “heretofore” means before, the date of execution and delivery of this Guaranty.

(B) Gender and Plurality. Words of the masculine gender mean and include correlative words of the feminine and neuter genders and words importing the singular number mean and include the plural number and vice versa.

(C) Persons. Words importing persons include firms, companies, associations, general partnerships, limited partnerships, trusts, business trusts, corporations and other legal entities, including public bodies, as well as individuals.

(D) Headings. The table of contents and any headings preceding the text of the Articles, Sections and subsections of this Guaranty shall be solely for convenience of reference and shall not constitute a part of this Guaranty, nor shall they affect its meaning, construction or effect.

(E) Entire Agreement. This Guaranty constitutes the entire agreement between the parties hereto with respect to the transactions contemplated by this Guaranty. Nothing in this Guaranty is intended to confer on any person other than the Guarantor, PMA and their permitted successors and assigns hereunder any rights or remedies under or by reason of this Guaranty.

(F) Counterparts. This Guaranty may be executed in any number of original counterparts. All such counterparts shall constitute but one and the same Guaranty.

(G) Applicable Law. This Guaranty shall be governed by and construed in accordance with the applicable laws of the Commonwealth of Pennsylvania, without giving effect to principles of Pennsylvania law concerning conflicts of law.

(H) Severability. If any clause, provision, subsection, Section or Article of this Guaranty shall be ruled invalid by any court of competent jurisdiction, the invalidity of any such clause, provisions, subsection, Section or Article shall not affect any of the remaining provisions hereof, and this Guaranty shall be construed and enforced as if such invalid portion did not exist provided that such construction and enforcement shall not increase the Guarantor's liability beyond that expressly set forth herein.

(I) Approvals. All approvals, consents and acceptances required to be given or made by any party hereto shall be at the sole discretion of the party whose approval, consent or acceptance is required.

(J) Payments. All payments required to be made by the Guarantor hereunder shall be made in lawful money of the United States of America.

ARTICLE 2 REPRESENTATIONS AND WARRANTIES OF THE GUARANTOR

2.1 REPRESENTATIONS AND WARRANTIES OF THE GUARANTOR. The Guarantor hereby represents and warrants that:

(A) Existence and Powers. The Guarantor is duly organized and validly existing as a corporation under the laws of Indiana, with full legal right, power and authority to enter into and perform its obligations under this Guaranty.

(B) Due Authorization and Binding Obligation. The Guarantor has duly authorized the execution and delivery of this Guaranty, and this Guaranty has been duly executed and delivered by the Guarantor and constitutes the legal, valid and binding obligation of the Guarantor, enforceable against the Guarantor in accordance with its terms except insofar as such

enforcement may be affected by bankruptcy, insolvency, moratorium or by general equity principals of reorganization and other similar laws affecting creditors' rights generally.

(C) No Conflict. Neither the execution or delivery by the Guarantor of this Guaranty nor the performance by the Guarantor of its obligations hereunder (1) to the Guarantor's knowledge conflicts with, violates or results in a breach of any law or governmental regulation applicable to the Guarantor, or (2) conflicts with, violates or results in a material breach of any term or condition of the Guarantor's corporate charter or by-laws or any judgment, decree, agreement or instrument to which the Guarantor is a party or by which the Guarantor or any of its properties or assets are bound, or constitutes a default under any such judgment, decree, agreement or instrument, or (3) to the Guarantor's knowledge will result in the creation or imposition of any natural encumbrance of any nature whatsoever upon any of the properties or assets of the Guarantor except as permitted hereby or by any Transaction Agreement.

(D) No Governmental Approval Required. No approval, authorization, order or consent of, or declaration, registration or filing with, any governmental authority is required of the Guarantor for the valid execution and delivery by the Guarantor of this Guaranty, except such as shall have been duly obtained or made.

(E) No Litigation. There is no action, suit or other proceeding, at law or in equity, before or by any court or governmental authority, pending or, to the Guarantor's knowledge, threatened against the Guarantor which has a likelihood of an unfavorable decision, ruling or finding that would materially and adversely affect the validity or enforceability of this Guaranty.

(F) No Legal Prohibition. The Guarantor has no knowledge of any Applicable Law in effect on the date as of which this representation is being made which would prohibit the performance by the Guarantor of this Guaranty.

(G) Consent to Agreements. The Guarantor is fully aware of the terms and conditions of the Service Agreement.

(H) Consideration. This Guaranty is made in furtherance of the purposes for which the Guarantor has been organized, and the assumption by the Guarantor of its obligations hereunder will result in a material benefit to the Guarantor.

ARTICLE 3
GUARANTY COVENANTS

3.1. GUARANTY TO PMA. The Guarantor hereby presently and irrevocably guarantees to PMA for the benefit of PMA (1) the full collection of the payments required to be made by the Company to or for the account of PMA under the Service Agreement, when the same shall become due and payable pursuant to this Guaranty, and (2) the full and prompt performance and observance of each and all of the Obligations. The Guarantor shall have the right to assert the defenses provided in Section 3.4 hereof against claims made under this Guaranty.

3.2. RIGHT OF PMA TO PROCEED AGAINST GUARANTOR. This Guaranty shall constitute a guaranty of (1) collection, not payment, and (2) performance of the Obligations. PMA shall enforce or exhaust its remedies against the Company or under the Service Agreement before proceeding to enforce this Guaranty. Without limiting the foregoing, PMA agrees that it shall (1) file suit or proceed to obtain a personal judgment against the Company or any other person that might be liable for any part of the Obligations, (2) make all reasonable efforts to obtain payment or performance of the Obligations from the Company, (3) foreclose against or seek to realize upon any security for the Obligations, or (4) exercise any other right or remedy to which PMA is or may be entitled in connection with the Obligations or any security therefor or any other guarantee thereof. PMA (or any successor) shall not be entitled to more than a single full performance of the obligations in regard to any breach or non-performance thereof.

3.3. GUARANTY.

(A) The obligations of the Guarantor hereunder are present and irrevocable and shall remain in full force and effect until the Company shall have fully discharged the Obligations in accordance with their respective terms, and except as provided in Section 3.4 hereof, shall not be subject to any counterclaim, set-off, deduction or defense (other than full and strict compliance with, or release, discharge or satisfaction of, such Obligations) based on any claim that the Guarantor may have against the Company, PMA or any other person. Without limiting the foregoing, the obligations of the Guarantor hereunder shall not be released, discharged or in any way modified by reason of any of the following (whether with or without notice to, knowledge by or further consent of the Guarantor):

- (1) the extension or renewal of this Guaranty or the Service Agreement up to the specified Terms of each agreement;
- (2) any exercise or failure, omission or delay by PMA in the exercise of any right, power or remedy conferred on PMA with respect to this Guaranty or the Service Agreement except to the extent such failure, omission or delay gives rise to an applicable statute of limitations defense with respect to a specific claim;
- (3) any permitted transfer or assignment of rights or obligations under the Service Agreement or under any other Transaction Agreement by any party thereto (other than (a) an assignment in accordance with Section 4.2 of this Guaranty, or (b) a permitted assignment to a replacement constructor or operator in the event of a termination of the Company pursuant to the Service Agreement), or any permitted assignment, conveyance

or other transfer of any of their respective interests in the AMI System under any of the Transaction Agreements;

(4) any permitted assignment for the purpose of creating a security interest or mortgage of all or any part of the respective interests of PMA or any other person in any Transaction Agreement or in the AMI System;

(5) any renewal, amendment, change or modification in respect of any of the Obligations or terms or conditions of any Transaction Agreements;

(6) any failure of title with respect to all or any part of the respective interests of any person in the AMI System;

(7) intentionally omitted

(8) any failure on the part of the Company for any reason to perform or comply with any agreement with the Guarantor;

(9) the failure on the part of PMA to provide any notice to the Guarantor which is not required to be given to the Guarantor pursuant to this Guaranty and to the Company as a condition to the enforcement of Obligations pursuant to the Service Agreement;

(10) any failure of any party to the Transaction Agreements to mitigate damages resulting from any default by the Company or the Guarantor under any Transaction Agreement;

(11) intentionally omitted

(12) any legal disability or incapacity of any party to the Transaction Agreements; or

(13) the fact that entering into any Transaction Agreement by the Company or the Guarantor was invalid or in excess of the powers of such party.

(B) Notwithstanding anything to the contrary expressed in this Guaranty, nothing in this Guaranty shall be deemed to amend, modify, clarify, expand or reduce the Company's rights, benefits, duties or obligations under the Service Agreement.

3.4. DEFENSES, SET-OFFS AND COUNTERCLAIMS. Notwithstanding any provision contained herein to the contrary, the Guarantor shall be entitled to exercise or assert any and all legal or equitable rights or defenses which the Company may have under the Service Agreement or under Applicable Law (other than bankruptcy or insolvency of the Company and other than any defense which the Company has expressly waived in the Service Agreement), and the obligations of the Guarantor hereunder are subject to such counterclaims, set-offs or deductions which the Company is permitted to assert pursuant to the Service Agreement if any.

3.5. WAIVERS BY THE GUARANTOR.

- (A) The Guarantor hereby unconditionally and irrevocably waives:
- (1) notice from PMA of its acceptance of this Guaranty;
 - (2) notice of any of the events referred to in Section 3.3 hereof except to the extent that notice is required to be given as a condition to the enforcement of Obligations;
 - (3) to the fullest extent lawfully possible, all notices which may be required by statute, rule of law or otherwise to preserve intact any rights against the Guarantor, except any notice to the Company required pursuant to the Service Agreement or Applicable Law as a condition to the performance of any Obligation;
 - (4) to the fullest extent lawfully possible, any statute of limitations defense based on a statute of limitations period which may be applicable to guarantors (or parties in similar relationships) which would be shorter than the applicable statute of limitations period for the underlying claim;
 - (5) intentionally omitted;
 - (6) intentionally omitted;
 - (7) intentionally omitted;
 - (8) intentionally omitted; and
 - (9) all demands upon the Company or any other person and all other formalities the omission of any of which, or delay in performance of which, might, but for the provisions of this Section 3.5, by rule of law or otherwise, constitute grounds for relieving or discharging the Guarantor in whole or in part from its present, irrevocable, and continuing obligations hereunder.

3.6 PAYMENT OF COSTS AND EXPENSES. The Guarantor agrees to pay PMA on demand all reasonable costs and expenses, legal or otherwise (including counsel fees), directly incurred by or on behalf of PMA in successfully enforcing by Legal Proceeding observance of the covenants, agreements and obligations contained in this Guaranty against the Guarantor, other than the costs and expenses that PMA incurs in performing any of its obligations under the Service Agreement, or other applicable Transaction Agreement where such obligations are a condition to performance by the Company of its Obligations.

3.7. SUBORDINATION OF RIGHTS. The Guarantor agrees that any right of subrogation or contribution which it may have against the Company as a result of any payment or performance hereunder is hereby fully subordinated to the rights of PMA hereunder and under the Transaction Agreements and that the Guarantor shall not recover or seek to recover any payment made by it hereunder from the Company until the Company and the Guarantor shall have fully and satisfactorily paid or performed and discharged the Obligations giving rise to a claim under this Guaranty.

3.8. REINSTATEMENT. The Guarantor agrees that this Guaranty shall be automatically reinstated if and to the extent that for any reason any payment by or on behalf of the Company is rescinded or must be otherwise restored by PMA, whether as a result of any proceedings in bankruptcy, reorganization or similar proceeding, unless such rescission or restoration is pursuant to the terms of the Service Agreement, or any applicable Transaction Agreement or the Company's enforcement of such terms under Applicable Law.

3.9. TERM. This Guaranty shall remain in full force and effect from the date of execution and delivery hereof until all of the Obligations of the Company have been fully paid and performed.

3.10. MAXIMUM GUARANTEE OBLIGATION. The Guarantor's maximum obligation under this Guaranty shall be limited in amount to the Company's service fee for the then-current Contract Year as defined in the Service Agreement.

ARTICLE 4 GENERAL COVENANTS

4.1. Intentionally Omitted.

4.2. ASSIGNMENT. Without the prior written consent of PMA, this Guaranty may not be assigned by the Guarantor; provided, however, that the Guarantor may assign this Guaranty to any person acquiring or receiving the shares of the Company or all or substantially all of the Company's assets in connection with an acquisition, spin-off or any other transaction. .

4.3. CONSENT TO JURISDICTION. The Guarantor irrevocably: (1) agrees that any suit, action or other legal proceeding arising out of this Guaranty shall be brought in the courts of the Commonwealth of Pennsylvania; (2) consents to the jurisdiction of such court in any such suit, action or proceeding; (3) waives any objection which it may have to the laying of the jurisdiction of any such suit, action or proceeding in any of such courts; and (4) waives its right to a trial by jury in any suit, action or proceeding in any of such courts.

4.4. BINDING EFFECT. This Guaranty shall inure to the benefit of PMA and its permitted successors and assigns and shall be binding upon the Guarantor and its successors and assigns.

4.5. AMENDMENTS, CHANGES AND MODIFICATIONS. This Guaranty may not be amended, changed or modified or terminated and none of its provisions may be waived, except with the prior written consent of PMA and of the Guarantor.

4.6. LIABILITY. It is understood and agreed to by PMA that nothing contained herein shall create any obligation of or right to look to any director, officer, employee or stockholder of the Guarantor (or any affiliate thereof) for the satisfaction of any obligations hereunder, and no judgment, order or execution with respect to or in connection with this Guaranty shall be taken against any such director, officer, employee or stockholder.

4.7. NOTICES. Any notices or communications required or permitted hereunder shall be in writing and shall be sufficiently given if faxed (with acknowledgment of receipt and followed by mailing of hardcopy), delivered in person, or sent by overnight courier to the following addresses, or to such other addresses as any of the recipients may from time to time designate by notice given in writing.

If to the Guarantor:
Xylem Inc.
1 International Drive
Rye Brook, NY, 10573
Attn: General Counsel

If to PMA: Executive Director
The Philadelphia Municipal Authority
1515 Arch Street
9th Floor
Philadelphia, Pennsylvania 19102

IN WITNESS WHEREOF, the Guarantor has caused this Guaranty to be executed in its name and on its behalf by its duly authorized officer as of the date first above written.

XYLEM INC.

As Guarantor

By: _____
Printed Name:
Title:

SEAL
[IMPRESSED ON EXECUTION COPIES]

Accepted and Agreed to by:

THE PHILADELPHIA MUNICIPAL
AUTHORITY

By: _____
Printed Name:
Title:

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EXHIBIT R
COMPATIBLE METERS

Exhibit R

Compatible Meters

VENDOR will integrate the AMI System with the following New Water Meters below that VENDOR validates meet the most recent issue of the UI1203 protocol at the time of PMA's request for such integration:

- Badger
- Master Meter
- Kamstrup
- Neptune
- Others that meet the requirements of Article III, Section C.2.

Bill No. 180972

Exhibit "C"

ECONOMIC OPPORTUNITY PLAN

**City of Philadelphia
Economic Opportunity Plan**

Advanced Metering Infrastructure [AMI]

I. Introduction, Definitions and Diversity Practices

A. Chapter 17-1600 of The Philadelphia Code requires the development and implementation of “Economic Opportunity Plan(s)” for certain classes of contracts and covered projects as defined in Section 17-1601. This Economic Opportunity Plan (“Plan”) memorializes the Applicant’s (hereinafter Contractor’s) “Best and Good Faith Efforts” to provide meaningful and representative opportunities for Minority Business Enterprises (“MBEs”), Woman Business Enterprises (“WBEs”) and Disabled Business Enterprises (“DSBEs”) (collectively, “M/W/DSBEs” which also includes firms designated as Disadvantaged Business Enterprises or “DBEs”¹) and employ an appropriately diverse workforce in [Project Description] (“Project”). The term “Best and Good Faith Efforts,” the sufficiency of which shall be in the sole determination of the City, means: a Contractor’s efforts, the scope, intensity and appropriateness of which are designed and performed to foster meaningful and representative opportunities for participation by M/W/DSBEs and an appropriately diverse workforce and to achieve the objectives of Chapter 17-1600 within this project. Best and Good Faith Efforts are rebuttably presumed met, when a Contractor makes commitments and causes its professional services providers and contractors retained by Contractor (collectively, the “Participants” and each a “Participant”) to make commitments within the M/W/DSBE Participation Ranges established for this RFP and employ a diverse workforce as enumerated herein.

This contract is subject to the Plan requirements as described in Section 17-1603 (1). Accordingly, by submission of this Plan, a responsive and responsible Contractor makes a legally binding commitment to abide by the provisions of this Plan which include its commitment to exercise its Best and Good Faith Efforts throughout the project and its commitment to cause its Participants to use their Best and Good Faith Efforts to provide subcontracting opportunities for M/W/DSBEs in all phases of the project and to employ a diverse workforce. This Plan expressly applies to all contracts awarded in connection with the project. The objectives set forth in this Plan shall be incorporated in all Contractor requests for proposals, bids and solicitations and communicated to all Participant levels.

B. For the purposes of this Plan, MBE, WBE, DBE and DSBE shall refer to certified businesses so recognized by the City of Philadelphia through its Office of Economic Opportunity (“OEO”). Only the work or supply effort of firms that are certified as M/W/DSBEs by an OEO approved certifying agency² or identified in the OEO Registry will be eligible to receive credit as a Best and Good Faith Effort. In order to be counted, certified firms must successfully complete and submit to the OEO an application to be included in the OEO Registry which is a list of registered M/W/DSBEs maintained by the OEO and available online at www.phila.gov/oEO/directory. If Contractor is certified by an approved certifying agency, a copy of that certification should be furnished with the proposal.

¹ “DBE” or “Disadvantaged Business Enterprise” means a socially and economically disadvantaged minority or woman owned business that is certified under 49 C.F.R. Part 26. If applicant makes solicitation(s) and commitment(s) with a DBE, applicant shall indicate which category, MBE or WBE, is submitted for counting.

²A list of “OEO approved certifying agencies” can be found at www.phila.gov/oEO

C. Contractor is required to submit a statement summarizing current and past practices relating to its diversity practices (“Diversity Practices Statement”). This statement shall identify and describe examples of processes used to develop diversity at all levels of Contractor’s organization including, but not limited to, board and managerial positions. This Diversity Practices Statement should also summarize Contractor’s strategic business plans specific to its current or past practices of M/W/DSBE utilization on its government and non-government projects and procurement activities. Attachment “A” to this Plan is provided for this purpose and should be submitted with Contractor’s proposal although the City reserves the right to request it at any time prior to contract award.

D. Contractor and its Participant(s) hereby verify that all information submitted to the City including without limitation, the Plan and all forms and attachments thereto, are true and correct and are notified that the submission of false information is subject to the penalties of 18 Pa.C.S. Section 4904 relating to unsworn falsification to authorities. Contractor and its Participants also acknowledge that if awarded a contract/subcontract resulting from this RFP, it is a felony in the third degree under 18 Pa.C.S. Section 4107.2 (a)(4) if, in the course of the contract/subcontract, Contractor and/or its Participant(s) fraudulently obtains public moneys reserved for or allocated or available to minority business enterprises or women's business enterprises.

I. Goals

A. M/W/DSBE Participation Ranges

As a benchmark for the expression of Best and Good Faith Efforts to provide meaningful and representative opportunities for M/W/DSBEs in the contract, the following participation ranges have been developed. These participation ranges represent, in the absence of discrimination in the solicitation and selection of M/W/DSBEs, the percentage of MBE and WBE participation that is reasonably attainable on this project through the exercise of Best and Good Faith Efforts. In order to maximize opportunities for as many businesses as possible, a firm that is certified in two or more categories (e.g. MBE and WBE and DSBE or WBE and DSBE) will only be credited toward one participation range as either an MBE or WBE or DSBE. The firm will not be credited toward more than one category. These ranges are based upon an analysis of factors such as the size and scope of the project and the availability of MBEs and WBEs to perform various elements of the contract. The participation ranges below, one participation range for MBE and another participation range for WBE, relate to the total dollar value of the contract with the acknowledgement that the Contractor will most likely furnish all proprietary electronics (i.e., Meter Reading Electronics and Network Hardware):

PROPOSAL	MBE
Installation of Network and Electronics	25%-30% AND
Project Management and Integration	WBE 5%-10%

The separate participation ranges listed above are based upon historical achievement and current availability for the anticipated scope of work. Because this contract will be governed by a

Project Labor Agreement, it is desired that a single MBE furnish all installation associated with the project.

II B. Workforce Goals

Contractor and its Participants agree to exhaust their Best and Good Faith Efforts to employ minority persons and females in their workforce as “AMI Technicians” (a labor classification defined in the Project Labor Agreement for this project), in conformity with the following goals:

- African American – 22% of all journey hours worked across all trades
- Asian – 3% of all journey hours worked across all trades
- Hispanic – 15% of all journey hours worked across all trades
- Female – 5% of all journey hours worked across all trades

The Labor Standards Unit shall have the responsibility of administering oversight of these Workforce Goals including monitoring Contractor and its Participants’ Best and Good Faith Efforts towards realization of the goals.

III. Contractor Responsiveness and Responsibility

A. Contractor shall identify all its M/W/DSBE commitments and evidence its agreement to employ a diverse workforce on the form entitled, “M/W/DSBE Participation and Workforce Commitments.” The Contractor’s identified commitment to use an M/W/DSBE on this form constitutes a representation by Contractor, that the M/W/DSBE is capable of completing the subcontract with its own workforce, and that the Contractor has made a legally binding commitment with the firm. The listing of the M/W/DSBE firm by Contractor further represents that if Contractor is awarded the contract, Contractor will subcontract with the listed firm(s) for the work or supply effort described and the dollar/percentage amount(s) set forth on the form. In calculating the percentage of M/W/DSBE participation, Contractor shall apply the standard mathematical rules in rounding off numbers. In the event of inconsistency between the dollar and percentage amounts listed on the form, the percentage will govern. Contractor is to maintain the M/W/DSBE percentage commitments throughout the term of the contract which shall apply to the total amount of the contract and any additional increases. In the event the Contractor’s contract is increased by change order and/or modification, or amendment, it shall be the responsibility of the Contractor to apply its Best and Good Faith Efforts to the amended amount in order to maintain any participation ranges committed to on the total dollar amount of the contract at the time of contract completion.

1. Commercially Acceptable Function

A contractor that enters into a subcontract with an M/W/DSBE shall be considered to have made a Best and Good Faith Effort in that regard only if its M/W/DSBE subcontractor performs a commercially acceptable function (“CAF”). An M/W/DSBE is considered to perform a CAF when it engages in meaningful work or supply effort that provides for a distinct element of the subcontract (as required by the work to be performed), where the distinct element is worthy of the dollar amount of the subcontract and where the M/W/DSBE carries out its responsibilities by actually performing, managing and supervising the work involved; M/W/DSBE subcontractors must perform at least twenty percent (20%) of the cost of the subcontract (not including the cost of materials, equipment or supplies incident to the performance of the subcontract) with their own employees.

The City may evaluate the amount of work subcontracted, industry practices and any other relevant factors in determining whether the M/W/DSBE is performing a CAF and in determining the amount of credit the Contractor receives towards the participation ranges. For example, a contractor using an M/W/DSBE non-stocking supplier (i.e., a firm that does not manufacture or warehouse the materials or equipment of the general character required under the contract) to furnish equipment or materials will only receive credit towards the participation ranges for the fees or commissions charged, not the entire value of the equipment or materials furnished.

B. Upon award, letters of intent, quotations, and any other accompanying documents regarding commitments with M/W/DSBEs, including the M/W/DSBE Participation and Workforce Commitments Form, become part of the contract. M/W/DSBE commitments are to be memorialized in a written subcontract agreement and are to be maintained throughout the term of the contract and shall apply to the total contract value (including approved change orders and amendments). **Any change in commitment, including but not limited to termination of the subcontract, reduction in the scope of committed work, substitutions for the listed firms, changes or reductions in the listed dollar/percentage amounts, must be pre-approved in writing by OEO.** Throughout the term of the contract, Contractor is required to continue its Best and Good Faith Efforts.

C. **In the event Contractor does not identify on the M/W/DSBE Participation and Workforce Commitments Form that it has made M/W/DSBE commitments within the participation ranges established for this Contract and/or does not agree to employ a diverse workforce as described herein, Contractor must complete and submit a *Documentation of Best and Good Faith Efforts Form* (“BGFE Form”), documenting its solicitations and any commitments with M/W/DSBEs, and detailing any efforts made to include M/W/DSBEs in the contract and to employ a diverse workforce.** The submission of the BGFE Form is an element of proposal responsiveness and failure to include this form may result in the rejection of the Proposal. The BGFE Form must include at a minimum, certification and documentary evidence that the following actions were taken:

1. Solicitation directed to both qualified M/W/DSBEs registered with OEO and qualified M/W/DSBEs certified by agencies approved by OEO. Contractor must provide a list of all certification directories used for soliciting participation for this Contract. Contractor must determine with reasonable certainty if the M/W/DSBEs are interested by taking appropriate steps to follow up on initial solicitations; one time contact, without follow up, is not acceptable; and

2. Contractor provided interested M/W/DSBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation; and

3. Contractor negotiated in good faith with interested M/W/DSBEs. An Contractor using good business judgment would consider a number of factors in negotiating with subcontractors, including M/W/DSBE subcontractors, and would take a firm’s price and capabilities as well as the objectives of the Plan into consideration; and

4. Documentation of the following:

i. Any commitments to use M/W/DSBEs in its proposal for subcontracted services and materials supply even when Contractor would otherwise prefer to self-perform/supply these items; and

ii. Correspondence between the Contractor and any M/W/DSBE(s) related to this Proposal; and

iii. Attendance logs and/or records of any scheduled pre-proposal meeting; and

5. Certification and evidence that the following actions were taken or documentation of the following, or an explanation why these actions were not taken or why documentation does not exist:

i. Any arms length business assistance provided to interested M/W/DSBEs; and

ii. Solicitation through job fairs, newspapers, periodicals, advertisements and other organizations or media that are owned by M/W/DSBEs and/or focus on M/W/DSBEs; and

iii. Telephone logs of communications related to this Contract; and

iv. Notification of and access to proposal documents at the Utility Supplier's office or other office locations for open and timely review; and

v. Contractor sought assistance from the Urban Affairs Coalition, PACareerlink, Opportunity Industrial Center and Philadelphia Works, Inc. to perform employment outreach; and

vi. Contractor published its policy of nondiscrimination in the hiring, retention and promotion of employees; and

vii. Any agreement with a training program that targets the employment of minority persons, disabled persons and women.

IV. Evaluation of Responsiveness and Responsibility

A. Evaluation and Determination

1. The City, acting through its OEO, will evaluate the responsiveness of the Plan to these requirements. OEO reserves the right to request further documentation and/or clarifying information at any time prior to the award of the contract which may result in Contractor's amendment of its M/W/DSBE Participation and Workforce Commitments Form or BGFE Form.

B. Administrative Reconsideration

1. If the OEO determines that the Contractor has not made sufficient Best and Good Faith Efforts, the Contractor will be notified that its proposal is nonresponsive and may file a written appeal with OEO within forty-eight (48) hours of the date of notification. The decision of OEO may be appealed in writing within forty-eight (48) hours of the date of the OEO's decision to the Chief Operating Officer of the Commerce Department or his designee whose decision shall be

final. If it is determined that the Contractor did not make sufficient Best and Good Faith Efforts, its Proposal will be rejected.

2. Notwithstanding compliance with the requirements set forth herein, the City reserves the right to reject any or all proposals as deemed in the best interest of the City.

V. Compliance and Monitoring of Best and Good Faith Efforts

A. The Contractor shall file a hard copy of this Plan, as certified below by OEO, with the Chief Clerk of City Council within fifteen (15) days of receiving a Notice of Award. The Plan shall be filed with:

Michael Decker, Chief Clerk of City Council
Room 402 City Hall
Philadelphia, Pennsylvania 19107

The Contractor also agrees to cooperate with OEO in its compliance monitoring efforts, and to submit, within the time limits prescribed by OEO, all documentation which may be requested by OEO relative to the awarded contract, including the items described below. The Contractor must provide as required and maintain the following contract documentation for a period of three (3) years following acceptance of final payment under the contract:

- Copies of signed contracts and purchase orders with M/W/DSBE subcontractors;
- Evidence of payments (cancelled checks, invoices, etc.) to subcontractors and suppliers to verify participation;
- Telephone logs and correspondence relating to M/W/DSBE commitments.

B. Prompt Payment of M/W/DSBEs

1. The Contractor shall within five (5) business days after receipt of a payment from the City for work performed under the contract, deliver to its M/W/DSBE subcontractors their proportionate share of such payment for work performed (including the supply of materials). In connection with payment of its M/W/DSBE subcontractors, the Contractor agrees to fully comply with the City's payment reporting process which may include the use of electronic payment verification systems.

2. Each month of the contract term and at the conclusion of the contract, the Contractor shall provide to the OEO documentation reconciling actual dollar amounts paid to M/W/DSBE subcontractors to M/W/DSBE commitments presented in the Plan.

C. Oversight Committee

1. For this project, the City, in its sole discretion, may establish a Project Oversight Committee consisting of representatives from the City and Contractor ("Committee"). The Committee will meet regularly to provide advice for the purpose of facilitating compliance with the Plan.

2. If a Project Oversight Committee is established, the City will convene meetings of the Committee no later than one (1) month after issuance of the Notice to Proceed.


VI. Remedies and Penalties for Non-Compliance

A. The Contractor agrees that its compliance with the requirements of the Plan is material to the contract. Any failure to comply with these requirements may constitute a substantial breach of the contract. It is further agreed and understood that in the event the City determines that the Contractor hereunder has failed to comply with these requirements the City may, in addition to remedies reserved under Section 17-1605 of The Philadelphia Code, any other rights and remedies the City may have under the contract, or any bond filed in connection therewith or at law or in equity, exercise one or more of the remedies below, which shall be deemed cumulative and concurrent:

1. Withhold payment(s) or any part thereof until corrective action is taken.
2. Terminate the contract, in whole or in part.
3. Suspend/Debar the Contractor from proposing on and/or participating in any future City contracts for a period of up to three (3) years.
4. Recover as liquidated damages, one percent of the total dollar amount of the contract for each one percent (or fraction thereof) of the commitment shortfall. (NOTE: The “total dollar amount of the contract” shall include approved change orders, amendments and for requirements contracts shall be based on actual quantities ordered by the City.)

The remedies enumerated above are for the sole benefit of the City and City's failure to enforce any provision or the City's indulgence of any non-compliance with any provision hereunder, shall not operate as a waiver of any of the City's rights in connection with the Contract nor shall it give rise to actions by any third parties including identified M/W/DSBE subcontractors. No privity of contract exists between the City and the M/W/DSBE subcontractor identified in the contract. The City does not intend to give or confer upon any such M/W/DSBE subcontractor(s) any legal rights or remedies in connection with subcontracted services under any law or Executive Order or by any reason of the Contract except such rights or remedies that the M/W/DSBE subcontractor may seek as a private cause of action under any legally binding contract to which it may be a party.

Tim Harriger, Sensus, Vice President of Sales - North American Water	March 3, 2017
_____ PRINT NAME OF CONTRACTOR AND TITLE	_____ DATE

 Sensus, Vice President of Sales North American Water	March 3, 2017
_____ SIGNATURE OF CONTRACTOR AND TITLE	_____ DATE

IOLA HARPER, DIRECTOR, OFFICE OF ECONOMIC OPPORTUNITY³ DATE

[See Forms on following pages; these Forms, must be submitted by Contractor]

³ Pursuant to Section 17-1603 (2) of The Philadelphia Code, the representative of the City of Philadelphia's Office of Economic Opportunity, the "certifying agency", certifies that the contents of this Plan are in compliance with Chapter 17-1600.

STATEMENT OF DIVERSITY PRACTICES, POLICIES AND PAST ACHIEVEMENTS

In compliance with Chapter 17-1600 of the Philadelphia Code, Section 17-1603 entitled “Equal Opportunity Plan: Contents,” the Plan shall contain a statement from the contractor, developer and/or recipient of financial assistance summarizing past practices by identifying and describing examples of processes used to develop diversity at any/all levels of its organization including, but not limited to, Board and managerial positions. This statement shall also summarize strategic business plans specific to current or past practices of M/W/DSBE utilization on government and non-government projects and procurement. Where appropriate, such a statement should contain:

1. Describe employment and recruitment policies used to achieve diversity in your workforce.
2. Provide the race, gender, and residential (local) status of your
 - a) Board of Directors
 - b) Management
 - c) General Workforce
3. Identify your organization’s methods of solicitation and utilization of Minority, Woman and Disabled Businesses (M/W/DSBEs). Please be specific in describing outreach and any procurement policies that are focused on creating or sustaining business relationships with M/W/DSBEs.
4. What percentage of your company’s total spend with vendors and suppliers is attributable to M/W/DSBEs? Please include a list of the largest M/W/DSBEs used by your organization in the last 12 months.
 - a) Identify the type of goods or services purchased
 - b) Amount of the contract.
 - c) Indicate if any of these M/W/DSBEs are listed in the City of Philadelphia’s Office of Economic Opportunity Registry.
 - d) Are these companies certified as M/W/DSBEs? Do you rely on any particular certifying agency?
 - e) If there is no previous M/W/DSBE utilization, the Plan shall contain a statement that explains the reason for the lack of M/W/DSBE participation in past contract(s) or project(s).
5. Describe any initiatives made by your organization to increase investment and promote equity ownership by minorities and women.

***Sensus has complete these responses and submitted in document 10.0_Office of Economic Opportunity.pdf

Bill No. 180972

Exhibit "D"

PROJECT LABOR AGREEMENT

PHILADELPHIA WATER DEPARTMENT

Advanced Metering Infrastructure Project

PHILADELPHIA PUBLIC PROJECTS LABOR AGREEMENT

THIS CITY OF PHILADELPHIA PUBLIC PROJECT LABOR AGREEMENT (hereinafter the “Agreement”) is entered into by and between:

(hereinafter the “Signatory Contractor(s)”), their successors or assigns, and the Philadelphia Construction and Building Trades Council, the International Brotherhood of Electrical Workers (IBEW), Local #98 and the Plumbers Local Union No. 690 (hereinafter the “Unions(s)”) with respect to City of Philadelphia (“City”) Advanced Metering Infrastructure (“AMI”) project referred to herein as the “Project.”

WHEREAS the City has determined that the Project, and in particular, the installation of new AMI meter reading devices, is an appropriate project for a Project Labor Agreement; and

WHEREAS the Signatory Contractor has been selected by the City as the party responsible for the oversight and implementation of the Project including the hiring of the workforce for the installation of AMI meter reading devices either directly or through subcontractors;

NOW, THEREFORE, the Signatory Contractor(s) and the Unions, intending to be legally bound, enter into this Agreement.

ARTICLE I - DEFINITIONS

Section 1. The term “City” shall mean the City of Philadelphia, including its departments, agencies, officials, employees and agents.

Section 2. The term “Contractor” shall include the Signatory Contractors, all contractors and subcontractors of whatever tier engaged in work within the scope of this Agreement.

Section 3. The term “craft” as applied to employees and workers shall mean those skills, crafts and trades of workers represented by the Union(s) as defined herein.

PHILADELPHIA WATER DEPARTMENT
Automatic Meter Infrastructure Project

Section 4. The term “Party” shall mean either Signatory Contractor or a Union.

Section 5. The term “Project” refers to the Project as more fully described in Article III, Section 2.

Section 6. Masculine or Feminine Gender. The use of words denoting the masculine or feminine gender in this Agreement shall be construed as including both genders.

Section 7. The term “AMI Installation Technician” shall mean a person employed by the Contractor for the purpose of installing water meter reading devices in residential, commercial and other locations in accordance with protocols established by contract between the City and the Contractor and policies developed by the Contractor for the efficient implementation of the Project.

ARTICLE II - PURPOSE

Section 1. As provided in Mayor’s Executive Order No. 8-15, the City has a compelling interest in carrying out the Project at the lowest reasonable cost, highest level of efficiency, and the highest degree of quality.

Section 2. The City has determined that certain major projects can best be carried out through the use of Project Labor Agreements, which ensure that labor disputes are resolved without disruptions resulting from strikes, lockouts or slowdowns and which provide for enforceable guarantees that the projects will be carried out in an orderly and timely manner without strikes, lockouts or slowdowns and ~~with provisions protecting the wages, hours, working conditions and safety of those workers whose skills~~ are required to complete such projects. Project Labor Agreements can provide the City with cost savings and efficiencies through project-specific adjustments to collective bargaining agreements that allow for project-specific appropriate hours of work, length of workday and workweek, overtime, starting times, breaks, shift work, crew apprentice ratios, holidays, dispute resolution and management rights, as have been mutually determined and agreed to by the City and the Union(s).

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Section 3. The City can best accomplish these goals by permitting the use of Project Labor Agreements, on a project by project basis, through which the City has determined, based on thorough investigation, analysis and justification, that the use of a Project Labor Agreement will benefit and enhance the interest of the City from a cost, efficiency, quality, timeliness and/or safety standpoint.

Section 4. The City and the Unions have determined that Project Labor Agreements can provide a framework for meeting long term goals of the City, the Union(s) and Contractors for increasing the opportunities for minorities and women to have successful careers in the construction trades.

Section 5. The City has determined that it can best accomplish all these goals by requiring for projects for which it determines the requirement is appropriate that the Contractors agree to enter into a Project Labor Agreement with the Union(s) prior to the award of the contract. The Project Labor

Agreement shall require such Contractors as well as all subcontractors, assignees or transferees to abide by an agreement setting forth the wages, hours and working conditions of the workers employed on such projects.

Section 6. The Parties to this Agreement recognize that it is essential that the work on the Project covered by this Agreement be done in an efficient and economical manner in order to secure optimum productivity and to eliminate any delays in the work. In recognition of the needs of the Project covered by this Agreement, and to maintain a spirit of harmony, labor-management peace, and stability during the term of this Agreement, the Parties agree to establish effective methods for the settlement of all misunderstandings, disputes or grievances which may arise under this Agreement.

Section 7. The Union(s) and the Contractors, their assigns, subcontractors and transferees agree to abide by the terms and conditions contained in this Agreement with respect to the performance of the work by the Contractors of the Project covered by this Agreement. This Agreement represents the complete understanding of the Parties, and it is further understood that no Contractor is required to sign any other agreement as a condition of performing work within the scope of this Agreement. No practice,

understanding or agreement between a Contractor and a Union Party which is not explicitly set forth in this Agreement and the Schedules hereto shall be binding on any other Party.

ARTICLE III - SCOPE OF THE AGREEMENT

Section 1. Scope of Agreement. This Agreement shall apply and is limited to all construction work under the direction of the Contractors and performed by those Contractors of whatever tier which have contracts awarded for such work on and after the effective date of this Agreement, for the City, for the Project defined in Section 2 below.

Section 2. Covered Projects. The Project covered by this Agreement is generally described as the Advanced Metering Infrastructure Project. The Agreement covers AMI Installation Technicians as required by the City of the Contractor(s) in residential, commercial and other facilities and such other duties as the Contractor(s) shall assign to AMI Installation Technicians.

Section 3. Award of Project Contracts.

(a) The City has the absolute right to select any qualified respondent to the AMI request for proposals for the award of contracts on this Project without reference to the existence or non-existence of any agreements between such respondent and any Party to this Agreement provided, however, only that such respondent is ready, willing and able to execute and comply with this Agreement, which it shall do should it be designated the successful respondent.

(b) It is agreed that all direct subcontractors of Contractors, of whatever tier, who have been awarded contracts for work covered by this Agreement on or after the effective date of this Agreement shall be required to accept and be bound by the terms and conditions of this Project Labor Agreement.

Section 4. Contract Administration.

(a) This Agreement is intended to provide close cooperation between management and labor. At the request of the City or a Party to this Agreement, a Project Relations Committee (as further

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described in Section 4 (c)), shall be formed and shall monitor compliance with this Agreement by all Contractors which, through their execution of this Agreement, together with their subcontractors or transferees, have become bound hereto. The Project Relations Committee shall monitor compliance with this Agreement by all Union(s) which, through their execution of this Agreement have become bound hereto.

(b) The provisions of this Agreement, including Collective Bargaining Agreements which are listed on and collectively designated as Schedule A, shall apply to the Project covered by this Agreement, notwithstanding the provisions of Local or International Agreements which may conflict or differ from the terms of this Agreement. Where a subject covered by the provisions of this Project Labor Agreement, including but not limited to, Schedule D Project Specific Conditions, is also covered by any of the Collective Bargaining Agreements in Schedule A, the provisions of this Agreement shall prevail.

(c) When established, the Project Relations Committee shall be composed of a representative of the City, representatives of each Signatory Contractor, and representatives of the Unions engaged in labor on the Project. The Philadelphia Area Labor Management Committee shall appoint one representative who will act as facilitator and staff to the Committee. The Project Relations Committee shall operate under the Philadelphia Area Labor-Management Built-Rite process.

(d) The Project Relations Committee shall meet as required.

(e) The purpose of this Project Relations Committee is as follows:

(1) To improve communications between representatives of labor and management and engender cooperative and harmonious relations between labor and management performing work under this Agreement.

(2) Provide workers and Contractors with opportunities to study and explore new and innovative joint approaches to achieving organizational effectiveness.

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- (3) Provide a forum for open and honest discussion of problems confronting labor and management, and of eliminating potential problems.
 - (4) Study and explore ways of increasing productivity of both labor and management, and of eliminating potential problems.
 - (5) Enhance the involvement of workers in making decisions that affect their working lives, and to improve the quality of work life for the employees.
 - (6) Expand and improve working relationships between workers and managers.
 - (7) Identify conflicts between labor and management before they arise as disputes, and promptly assist in fairly resolving disputes when they do arise.
 - (8) Seek to maintain a productive dialogue.
-
- (9) Pursue, achieve and document the implementation of all aspects of Schedule C, pertaining to increasing employment opportunities for women and minorities.
 - (10) Support the Contractor(s) in meeting general obligations and specific project goals for local hiring and for worker diversity as may be part of the Economic Opportunity Plan or the Project and as further described in Schedule E.

Section 5. Binding Effect. This Agreement and Schedules, including but not limited to Schedules A, B, C, D and E, attached hereto shall only be binding on the signatory Parties hereto and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such Party.

Section 6. Limitations. Nothing contained herein shall be construed to prohibit, restrict or interfere with the performance of any other operation, work or function of the Contractors or be associated with the development of the Project, or with the ongoing operations of the City.

Section 7. Exclusions. Items specifically excluded from the scope of this Agreement include, but are not limited to, the following:

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(a) Work of non-manual employees, including but not limited to, superintendents, supervisors, staff engineers, surveyors (except where expressly covered by a Collective Bargaining Agreement in Schedule A), inspectors, quality control personnel, quality assurance personnel, timekeepers, mail carriers, clerks and office workers, including messengers, guards, emergency medical and first aid technicians and other professional, engineering, administrative, supervisory and management employees.

(b) Equipment and machinery owned or controlled and operated by the City.

(c) All off-site handling of materials, equipment or machinery and all deliveries to and from the Project site except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(d) All employees of the City.

(e) Any work performed on or near, or leading to or into, the Project site by state, county, city or other governmental bodies, or their Contractors; or by public utilities or their Contractors and/or by the City, or its contractors, for work which is expressly not part of the Project covered by this Agreement.

(f) Off-site maintenance on leased equipment and on-site supervision of such work except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(g) Off-site warranty functions and warranty work and on-site supervision of such work except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(h) Exploratory geophysical testing, except where expressly covered by a Collective Bargaining Agreement in Schedule A.

(i) Laboratory or specialty testing or inspections or monitoring activities not ordinarily done by the crafts.

(j) Other work which may occur from time to time.

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Section 8. Applicability of Agreement. Nothing contained herein shall be construed to prohibit or restrict the City or its employees from performing work covered by this Agreement. As areas and systems of a Project are inspected, tested and accepted by the City, the Agreement shall not have further force or effect on such items or areas.

Section 9. Termination, Delay or Suspension of Project. It is understood that the City, in accordance with its agreement(s) with the Signatory Contractor(s), may terminate, delay and or suspend any or all portions of the Project at any time.

Section 10. Contractor and Union(s) Liability. It is understood and agreed that the liability of any Contractor and the liability of separate Union(s) under this Agreement shall be several and not joint. The Union(s) agree that this Agreement does not have the effect of creating any joint employment status between or among the City and any Contractor.

ARTICLE IV - UNION RECOGNITION AND EMPLOYMENT

Section 1. Union Recognition. The Contractor recognizes the Union(s) as the sole and exclusive bargaining representatives of all craft employees working on the Project within the scope of this Agreement.

Section 2. Competency. The Contractor shall have the right to determine the competence of all employees, the right to determine the number of employees required and have the sole responsibility for selecting the employees to be laid-off consistent with this Agreement regardless of membership or non-membership in the Union(s).

Section 3. Union Security. It shall be a condition of employment that all employees of Contractor covered by this Agreement who are members of the Union(s) in good standing on the effective date of this Agreement or on the date of execution of this Agreement, whichever is later, shall remain members in good standing and those who are not members on the effective date shall, on the eighth (8th)

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day following employment, become and remain members in good standing in the Union(s) for the term of this Agreement.

Section 4. Selection of Foremen. The selection of craft foremen and/or general foremen and the number of foremen required shall be entirely the responsibility of the Contractor. All foremen shall take orders exclusively from the designated Contractor representatives. Craft foremen shall be designated as working foremen by the Contractor, except when the Contractor determines that it is not possible for a particular foreman to be working foreman.

Section 58. Seniority. Individual seniority shall not be recognized or applied to employees working on the Project.

ARTICLE V - UNION REPRESENTATION

Section 1. Access to Project Site. Authorized and designated representatives of the Union(s) shall have access to the Project staging site, consistent with rules, regulations and policies as have been established for site security and safety and through established Contractor procedures, for the purpose of transacting business in connection with the job. Such representatives shall be subject to security clearances and may require authorized escorts to enter secure areas of the Project. Such representatives shall not interfere with the work of employees or cause unnecessary loss of time by the employees.

Section 2. Stewards. Stewards shall be appointed consistent with the appropriate Collective Bargaining Agreement as included in Schedule A.

Section 3. Non-interference. On work where City personnel or personnel of other contractors not signatory to this Agreement may be working in close proximity of the Project activities, the Union(s) agree that the Union's representatives, stewards and individual workers will not interfere with the City's personnel or the personnel of other contractors not signatory to this Agreement or with the work which is being performed by the City's personnel or personnel of other contractors not signatory to this Agreement.

ARTICLE VI - MANAGEMENT RIGHTS

Section 1. Management Rights. The Contractor retains full and exclusive authority for the management of its operation consistent with this Project Labor Agreement and the collective bargaining agreements included in Schedule A. The Contractors retain the right to (i) plan, direct and control the workforce and the operation of all of his work, including the hiring, promotion, demotion, transfer, layoff, suspension, discipline or discharge for just cause of its employees; (ii) select foremen, determine the size and make-up of each crew; (iii) assign and schedule work; (iv) promulgate work rules; (v) regulate the use of all equipment and other property of the Contractors, decide the amount of equipment to be used, the number of employees needed; and (vi) regulate overtime work, the determination of when it shall be worked, and the number and identity of employees engaged for such work. No rules, customs or practices which limit or restrict productivity, efficiency or the individual and/or joint working efforts of employees shall be permitted or observed. The Contractors may utilize any methods or techniques of construction.

Section 2. Choice of Materials. There shall be no limitation or restriction upon the Contractors' choice of materials or design.. It is recognized that other personnel having special talents or qualifications may participate in the installation consistent with Schedule A, including, but not limited to check-off or testing of specialized or unusual equipment or facilities.

ARTICLE VII - HOURS OF WORK, OVERTIME, SHIFTS AND HOLIDAYS

Section 1. Hours of Work, Overtime, Shifts and Holidays shall be governed by the Collective Bargaining Agreements included in Schedule A, except as provided in Schedule D Project Specific Conditions and otherwise mutually agreed to by the Parties.

Section 2. Where modifications to the Collective Bargaining Agreements or the provisions of Schedule D Project Specific Conditions are in the best interest of a project, such departure may be requested by the Contractors, Union(s) and the City. Such departures shall be requested utilizing the Project Relations Committee and shall be approved by mutual consent.

ARTICLE VIII - WORKING CONDITIONS

Section 1. Job Site Conditions. All Project working conditions, including rest periods, coffee breaks and work practices, shall be as determined by the Contractors.

Section 2. Project Rules. The Contractors shall establish such other reasonable Project rules as each Contractor deems appropriate. All rules and regulations shall be observed by Union employees who, by virtue of their Union membership and coverage under an appropriate Collective Bargaining Agreement, are made subject to such rules.

ARTICLE IX - APPRENTICES

Section 1. The meter device installers hired under this Agreement shall be considered ~~craftsmen and craftswomen in training as members of their respective Unions. While not part of the~~ formal apprenticeship programs of the Unions, AMI Installation Technicians shall be Union members in good standing.

**ARTICLE X – EMPLOYMENT OPPORTUNITIES FOR PHILADELPHIA RESIDENTS,
MINORITIES AND WOMEN**

Section 1. Employment Opportunities For Philadelphia Residents. The parties recognize that the size and scope of the Project covered by this Agreement, the number of craftsmen and others expected to be employed in order to complete the work in a timely fashion, and the extended period of time during which the construction will be underway should provide significant employment opportunities for qualified residents of the City of Philadelphia. The Parties further recognize that the Economic Opportunity Plan for the Project includes specific local hiring goals for the Contractor as well as those established in Schedule C.

Section 2. Opportunities for Women and Minorities. The Parties agree that increasing participation by women and minorities employees on the Project is a desirable goal. Accordingly, the

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Parties shall undertake the activities identified in Schedule C to support the City, Union(s) and Contractor objectives of increased opportunities for participation in the Union(s) and for actual work performed. Additional responsibilities of the Contractor under the Economic Opportunity Plan related to diversity may be described and required in Schedule E.

ARTICLE XI - SAFETY, PROTECTION OF PERSON AND PROPERTY

Section 1. Safe Working Conditions. In accordance with the requirements of the Occupational Safety and Health Act, it shall be the exclusive responsibility of each Contractor to ensure safe working conditions for its employees and their compliance with any safety rules contained herein or established by the Contractors, provided however, it is understood that the employees have an obligation as set forth in Section 2 below.

Section 2. Safe Performance of Work. Employees must use diligent care to perform their work in a safe manner and to protect themselves, other persons and the property of the Contractors or the City. Failure to do so will be grounds for discipline, including discharge.

Section 3. Safety, Security and Visitor Rules. Employees covered by the terms of this Agreement shall at all times while in the employ of the Contractors be bound by the safety, security and rules as established by the City and/or the Contractors and in accordance with applicable State and Federal safety and health statutes and regulations. These rules will be published and posted in conspicuous places at the Project staging site.

ARTICLE XII - NO DISCRIMINATION

Section 1. No Discrimination. The Contractors and Union(s) agree that they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or age in any manner prohibited by law or regulation. It is recognized that special procedures may be established by joint agreement of the parties to this Agreement and governmental

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agencies for the training and employment of persons who have not previously qualified to be employed on construction projects of the type covered by this Agreement. The parties to this Agreement will make all good faith efforts to assist in the proper implementation of such orders, regulations or agreements for the benefit of the population within the jurisdiction of the City of Philadelphia.

Section 2. Complaints. Any complaints regarding application of the provisions of Section 1 should be brought to the immediate attention of the involved Contractors for consideration and resolution.

ARTICLE XIII - WORK STOPPAGES AND LOCKOUTS

Section 1. There shall be no strike, picketing, work stoppages, slowdowns, sickouts or other disruptive activity for any reason by the Union(s) or employees against any Contractor covered under this Agreement, and there shall be no lockouts by the Contractors. Failure of any of the Union(s) or any employee to cross any picket line established by any Union, signatory or non-signatory, or any other organization, at or in proximity to the Project site is a violation of this Article.

Section 2. The Contractors may discharge any employee violating Section 1 above,. The Contractors and the Union(s) shall take all steps necessary to obtain compliance with this Article and neither shall be held liable for conduct for which it is not responsible.

ARTICLE XIV - DISPUTES AND GRIEVANCES

Section 1. Agreement Interpretation. It is specifically agreed that in the event any disputes arise out of the interpretation or application of this Agreement the same shall be settled by the Project Relations Committee. All disputes arising out of Contractor-employee issues shall be governed by Section 2 of this Article. No such grievance shall be recognized unless called to the attention of the Contractor within seven (7) calendar days after the alleged violation was committed.

Section 2. Unless otherwise provided for in Schedule D Project Specific Conditions, it is specifically agreed that in the event any disputes arise between the Contractors and Union employees that do not involve the interpretation or application of this Agreement, and/or questions of jurisdiction of work,

the same shall be settled by means of the grievance procedures currently set forth in the local Collective Bargaining Agreements set forth in Schedule A.

ARTICLE XV - JURISDICTIONAL DISPUTES

Section 1. There will be no strikes, no work stoppages or slowdowns, or other interferences with the work because of jurisdictional disputes. Pending the resolution of the dispute, the work shall continue uninterrupted as assigned by the Contractors.

ARTICLE XVI - SAVINGS AND REPARABILITY

Section 1. It is not the intention of either the Contractors or the Union parties to violate any laws governing the subject matter of this Agreement. The parties hereto agree that in the event any provisions of the Agreement are finally held or determined to be illegal or void as being in contravention of any applicable law, the remainder of the Agreement shall remain in full force and effect unless the part or parts so found to be void are wholly inseparable from the remaining portions of this Agreement. Further, the Contractors and Union(s) agree that if and when any and all provisions of this Agreement are finally held or determined to be illegal or void by Court of competent jurisdiction, the parties will promptly enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the requirements of any applicable law and the intent of the parties hereto.

Section 2. This Article shall not be construed to waive the prohibitions of Article XIII, and if the parties are unable to resolve their differences, the matter shall be referred to arbitration for resolution as provided for in the grievance-arbitration procedure of Article XIV.

ARTICLE XVII - DURATION OF THE AGREEMENT

Section 1. This Agreement shall be effective upon execution by the parties and shall continue in effect for the duration of the Project as described in Article III hereof. Section 2. Each Collective Bargaining Agreement contained in Schedule A hereof attached to this Agreement shall continue in full force and effect until the Contractor(s) or Union(s) who are Parties to such Agreement notify the City of

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the mutually agreed upon changes in those provisions of such Agreements which are applicable to this Project, and the effective date thereof, which shall then become the effective date under this Agreement. Unless otherwise provided in this Agreement, increases to wages and benefit payments from the effective date each new or amended Collective Bargaining Agreement shall be due and owing upon notification to the Contractors and the City of such increases. The Parties agree that any provisions negotiated into any Collective Bargaining Agreement contained in Schedule A hereof will not apply to work on Project if such provisions are less favorable to the Contractors than those uniformly required of Contractors for work normally covered by such an agreement; nor shall any provision be recognized or applied on any Project if it may reasonably be construed to apply exclusively to work covered by this Agreement.

Section 3. The Union(s) shall provide notice to all Contractors that are Parties to this

Agreement who are not signatory to collective bargaining agreements with the Unions of any changes in the Schedule A. Collective Bargaining Agreements and/or changes to rates for wages and benefits. Such changes shall not be effective as to the Contractors who are not signatory to the Collective Bargaining Agreements until such notice has been given.

Section 4. In the renegotiation of any of the Collective Bargaining Agreements contained in Schedule A hereof, the Union(s) Party to this Agreement agree that there will be no strikes, work stoppages, sympathy strikes, picketing, slowdowns or other disruptive activity affecting the Project

covered by this Agreement because of or related to the renegotiation of any such Collective Bargaining Agreement contained in Schedule A hereof, nor shall there be any lockout on this Project affecting the Union(s) Party to this Agreement during the course of such negotiations.

Section 5. Any disagreement between the parties over the incorporation into any Collective Bargaining Agreement contained in Schedule A hereof of such provisions agreed upon in the renegotiation of any such Collective Bargaining Agreement as is contained in Schedule A shall be referred to Article XIV hereof for resolution.

**PHILADELPHIA WATER DEPARTMENT
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IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and effective as of the day and year above written.

FOR THE UNION(S):

FOR THE CONTRACTOR(S):



IBEW Local 98

Signatory Contractor


Date 2/9/17

Date _____



Plumbers Local No. 690

Date _____



Philadelphia Construction and Building
Trades Council

Date _____

SCHEDULE A

COLLECTIVE BARGAINING AGREEMENTS

The Collective Bargaining Agreements, described in Article III, Section 4(b) of this Agreement,
are:

1. Agreement that the Mechanical Contractors of Eastern Pennsylvania with the Plumbers Union Local No. 690; and
 2. Agreement between the Philadelphia Division of the Penn-Del-Jersey chapter, NECA and Local Union 98 International Brotherhood of Electricians.
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SCHEDULE B

RESERVED

SCHEDULE C

**INCREASING OPPORTUNITIES FOR WOMEN AND MINORITIES
IN THE BUILDING TRADES UNION(S) AND PUBLIC WORKS PROJECTS**

Consistent with the Mayor's Advisory on Construction Industry Diversity Report and Recommendations, the City of Philadelphia, the Union(s) and Contractors shall undertake the following activities:

Section 1. City Activities.

(a) The City shall collect, tabulate and analyze data, including certified payrolls, related to the participation of male minorities, women and Philadelphia residents in City and City-funded construction projects.

(b) The City shall establish goals for employment of Philadelphia residents in City and City-funded construction projects. For City residents, the goal for employment in the Project shall be:

Philadelphia Residents: One Hundred (100) percent of all AMI Installation Technician employment hours.

(c) The City shall establish goals for workforce diversity in City and City-funded construction projects. The current goals are based on the March 2009 Report of the Mayor's Advisory Commission on Construction Industry Diversity (Commission Report). For male minorities and women the goals for

employment in the Project shall be:

Male Minority: Thirty two (32) percent of all construction employment hours

Women: Seven (7) percent of all construction employment hours

(d) The City shall assist the Union(s) in undertaking activities which would benefit from City participation and support.

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(e) The City shall establish and support a standing Advisory Commission on Construction Industry Diversity. The City shall invite union leaders, large and small contractors, contractor associations, project owners and community leaders to participate.

(f) The City shall designate a City agency for the receipt and redress of complaints from the public about the opportunities for employment on City-funded construction projects.

Section 2. Union Activities.

(a) The Union(s) shall collect demographic data on participation in the Project. The Union(s) shall provide that information to the City on monthly basis while the Project Labor Agreement is in effect.

(b) The Union(s) shall set participation goals that will significantly increase participation of minority males and women. Such goals shall be consistent with the Commission Report and such

Commission updates as may be issued.

(c) The Union(s) shall establish goals for participation of in apprenticeship programs for minority males and women. Such goals shall be consistent with the Commission Report and such Commission updates as may be issued.

(d) The Union(s) shall actively recruit minority males and women for apprenticeship positions. Outreach efforts must be appropriate for reaching minority males and women and consistent with the goals the Union(s) have established for membership of the Union(s).

(e) The Union(s) shall evaluate alternatives to apprenticeship recruitment for adding minority males and women to membership.

(f) The Union(s) shall each identify a representative who shall be responsible for reporting on each Union's progress in improving opportunities for minority males and women.

Section 3. Contractor Activities.

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(a) The Contractors shall support the City and Union efforts to increase the participation of minority males and women in the Project through apprenticeship programs and other initiatives.

(b) The Contractors shall use their best efforts to add minority males and women to their permanent or steady workforces. The Contractors shall provide workforce demographic information to the City in advance of project commencement.

(c) The Contractors shall ensure a work environment that is free from discrimination and supportive of greater participation of minority males and women in the Project.

(d) The Contractors shall use their best efforts to meet or exceed the goals established for minority males and women participation in Section 1 of this Schedule C.

(e) The Contractors shall provide monthly updates to the City, including but not limited to payroll reports, for the requirements of this Section 3.

Section 4. Third Party Monitoring

(a) In the event that the City determines that the Agreement and the goals for participation in the Project by Philadelphia residents, male minorities and women would benefit from monitoring by a qualified third party (“Monitor”), the monitoring shall be performed by the City of Philadelphia Office of Economic Opportunity or office designated in writing by the City. The Contractors and Union(s) shall provide information and access to the Monitor consistent with the requirements of this Schedule C and the

Agreement.

(b) The costs of monitoring by the Monitor shall be shared equally by the Parties.

SCHEDULE D

PROJECT SPECIFIC CONDITIONS

Project specific conditions agreed upon by the Union(s) and the City supersede the provisions established in Schedule A Collective Bargaining Agreements only as to the Project.

1. **Union Membership:** Upon commencement of employment with the Contractor (including any subcontractor) the AMI Installation Technicians shall be referred to either Plumbers Local No. 690 or to IBEW Local #98 on an alternating basis for membership. Both Unions recognize the AMI Installation Technician's work as labor experience that is consistent with the apprenticeship training for their respective Unions and the experience as beneficial for the development of apprenticeship skills in their Unions.
2. **Worker Diversity:** The Contractor shall use its best efforts to recruit and retain an ethnically and racially diverse workforce of men and women who meet the Contractor's qualifications for safe and efficient installations. The Contractor will work with the City and Philadelphia-based workforce development organizations to identify qualified candidates.

3. **Wages and Benefits:**

Hourly rate is \$21.27.

Combined benefits contribution to the AMI Installation Technician's Union is \$17.40 per hour worked.

4. **Incentive Pay:** The Contractor may develop an incentive pay program for installations that exceed the expected performance during a work day. Such performance pay shall be in addition to wages and shall not impact the combined benefits payments to the Unions. (E.g., In the City's 1997 AMR installation contract with ITRON an incentive for installation of both a water meter and reading device was provided for installations in excess of 14 per 8 hour day. The AMI Project does not require setting the meter and each installation is expected to take less time at the installation site.)

-
5. **Work Schedule:** The work schedule for the Project shall be the sole responsibility of the Contractor. Consistent with the need to schedule appointments with residential property owners or their tenants, work days may include Saturdays and Sundays at no overtime premium. A work day shall consist of eight (8) hours, starting no earlier than 6:00 AM and ending no later than 9:00 PM, with a ½ hour unpaid lunch break. Overtime at the rate of 1.5 X the hourly wage shall be paid for hours of work exceeding 40 hours in a week (Monday to Sunday).

SCHEDULE E

ECONOMIC OPPORTUNITY PLAN

City of Philadelphia
Economic Opportunity Plan

COMMERCIAL AGREEMENT
BETWEEN
THE PHILADELPHIA DIVISION
OF THE
PENN-DEL-JERSEY CHAPTER, NECA
AND
LOCAL UNION 98



INTERNATIONAL BROTHERHOOD
OF
ELECTRICAL WORKERS
PHILADELPHIA, PENNSYLVANIA

BUSINESS OFFICE
1701 SPRING GARDEN STREET
PHILADELPHIA, PA 19130
PHONE: (215) 563-5592
FAX: (215) 561-2168

FINANCIAL OFFICE
1719 SPRING GARDEN STREET
PHILADELPHIA, PA 19130
PHONE: (215) 563-8991
FAX: (215) 563-9149

ELECTRICAL INSIDE WIRING DIVISION

**UNION MEETINGS
FOURTH TUESDAY OF EVERY MONTH
1719 SPRING GARDEN STREET
7:00 PM**

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COMMERCIAL AGREEMENT

Agreement by and between the Philadelphia Division of the Penn-Del-Jersey Chapter, NECA, and Local Union 98 of the International Brotherhood of Electrical Workers.

It shall apply to all firms who sign a Letter of Assent to be bound by the terms of this Agreement.

As used hereinafter in this Agreement, the term "Chapter" shall mean the Philadelphia Division of the Penn-Del-Jersey Chapter, NECA and the term "Union" shall mean Local Union 98 of the International Brotherhood of Electrical Workers.

The term "Employer" shall mean an individual firm who has been recognized by an assent to this Agreement.

BASIC PRINCIPLES

The Employers and the Union have a common and sympathetic interest in the Electrical Industry. Therefore, a working system and harmonious relations are necessary to improve the relationship between the Employer, the Union, and the Public. Progress in the industry demands a mutuality of confidence between the Employer and the Union. All will benefit by continuous peace and by adjusting any differences by rational, common sense methods. Now, therefore, in consideration of the mutual promises and Agreement herein contained, the parties hereto agree as follows:

The parties to this Agreement agree not to discriminate against any member because of race, creed, color, sex, religion, age, or national origin.

ARTICLE I

EFFECTIVE DATE - CHANGES - TERM OF THE AGREEMENT

Section 1.01 This **four (4) year** Agreement shall take effect **April 29, 2013** and shall remain in effect until **April 29, 2017** unless specifically provided for herein. It shall continue in effect from year to year thereafter, from May 1st through April 20th of each year, unless changed or terminated in the way later provided herein.

Section 1.02 (a) Either party or an employer withdrawing representation from the Chapter or not represented by the Chapter, desiring to change or terminate this Agreement, must provide written notification at least 90 days prior to the expiration date of the Agreement or any anniversary date occurring thereafter.

(b) Whenever notice is given for changes, the nature of the changes desired must be specified in the notice, or no later than the first negotiating meeting unless mutually agreed otherwise.

(c) The existing provisions of the Agreement, including this Article, shall remain in full force and effect until a conclusion is reached in the matter of proposed changes.

(d) In the event that either party, or an Employer withdrawing representation from the Chapter or not represented by the Chapter, has given a timely notice of proposed changes and an agreement has not been reached by the expiration date or by any subsequent anniversary date to renew, modify, or extend this Agreement, or to submit the unresolved issues to the Council on Industrial Relations, for the Electrical Contracting Industry (CIR) either party or such an employer, may serve the other a ten (10) day written notice terminating this Agreement. The terms and conditions of this Agreement shall remain in full force and effect until the expiration of the ten (10) day period.

(e) By mutual agreement only, the Chapter, or an Employer withdrawing representation from the Chapter or not represented by the Chapter, may jointly with the Union, submit the unresolved issues to the Council on Industrial Relations for the Electrical Contracting Industry for adjudication. Such unresolved issues shall be submitted no later than the next regular meeting of the Council following the expiration date of this Agreement or any subsequent anniversary date. The Council's decisions shall be final and binding.

(f) When a case has been submitted to the Council, it shall be the responsibility of the negotiating committee to continue to meet weekly in an effort to reach a settlement on the local level prior to the meeting of the Council.

(g) Notice of a desire to terminate this Agreement shall be handled in the same manner as a proposed change.

Section 1.03 This Agreement shall be subject to change or supplement at any time by mutual consent of the parties hereto. Any such change or supplement agreed upon shall be reduced to writing, signed by the parties hereto, and submitted to the International Office of the IBEW for approval, the same as this Agreement.

Section 1.04 During the term of this Agreement, there shall be no stoppage of work either by strike or lockout because of any proposed changes in this Agreement or dispute over matters relating to this Agreement. All such matters must be handled as stated herein.

Section 1.05 There shall be a Labor-Management Committee of three (3) representing the Union and three (3) representing the Employers. It shall meet regularly at such stated times as it may decide. However, it shall also meet within forty-eight (48) hours when notice is given by either party. It shall select its own Chairman and Secretary. The Local Union shall select the Union representatives and the Chapter shall select the management representatives.

Section 1.06 All grievances or questions in dispute shall be adjusted by the duly authorized representatives of each of the parties to this Agreement. In the event that these two are unable to adjust any matter within forty-eight (48) hours, they shall refer the same to the Labor-Management Committee.

Section 1.07 All matters coming before the Labor-Management Committee shall be decided by a majority vote. Four (4) members of the Committee, two (2) from each of the parties hereto, shall be a quorum for the transaction of business, but each party shall have the right to cast the full vote of its membership and it shall be counted as though all were present and voting.

Section 1.08 Should the Labor-Management Committee fail to agree or to adjust any matter; such shall then be referred to the Council on Industrial Relations for the Electrical Contracting Industry for adjudication. The council's decisions shall be final and binding.

Section 1.09 When any matter in dispute has been referred to conciliation or arbitration for adjustment, the provisions and conditions prevailing prior to the time such matters arose shall not be changed or abrogated until agreement has been reached or a ruling has been made.

ARTICLE II

EMPLOYERS' REQUIREMENTS AND RIGHTS

Section 2.01 (a) No member of Local Union 98, while he remains a member of such Local and subject to employment by Employers operating under this Agreement shall himself become a contractor for the performance of any electrical work.

(b) Journeyman electricians or apprentices shall not work for Employers who are not parties to this Agreement or a separate Agreement containing the same terms as this Agreement. This does not apply to work performed under the terms of International Agreements or to regular maintenance work, or to an authorized salting program.

Section 2.02

(a) It is agreed that an Employer is a person, firm or corporation employing at least (1) journeyman continuously, who contracts to perform electrical work, or who has a bona-fide department for maintenance of an electrical installation.

(b) Maintains a permanent place of business with a business telephone, both open to the public during regular business hours. This place of business shall not be part of a domestic establishment.

(c) Maintains a financial status suitable to meet all anticipated payroll requirements, including withheld Municipal, State and Federal taxes.

(d) Every Employer who employs at least one (1) member of the Union shall be obligated to provide a surety bond, with an acceptable surety company, authorized to do business in Pennsylvania on a form furnished by the Local Union in accordance with the following scale in the amount of fifty thousand dollars (\$50,000.00), such bond to be used for the purpose of guaranteeing proper payment of all wages that may be due and owing to members employed under the collective bargaining agreement and to guarantee proper payment of all contributions due and owing to the Union (for dues and assessments), the Welfare Fund, the Pension Fund, the Deferred Income Fund, the Vacation Fund, the N.E.B.F. the Political Action Fund, the Market Recovery Fund and any other amount required by this labor contract to be submitted as an employer contribution (or dues check off amount) to the Union, with a copy to the Association, and an additional copy shall be forwarded to the Administrator of the Local 98 Benefit Fund(s).

The amount(s) of the surety bond referenced in the preceding paragraph shall be increased automatically and all affected Employers shall automatically and immediately increase the level of the surety bond, in the following circumstances:

(1) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of fifty thousand dollars (\$50,000) but not more than one hundred thousand dollars (\$100,000) for a month, the employer shall increase the amount of its surety bond to the sum of one hundred twenty-five thousand dollars (\$125,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below fifty thousand dollars (\$50,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds, and its members, the employer may reduce the amount of its surety bond to fifty thousand dollars (\$50,000).

(2) When an Employer's monthly contribution obligations(s), in the Aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of one hundred thousand dollars (\$100,000) but not more than one hundred fifty thousand dollars (\$150,000) for a month, the employer shall increase the amount of its surety bond to the sum of two hundred fifty thousand dollars (\$250,000). When the Employer's monthly contribution obligations, in the aggregate, drop below one hundred thousand dollars (\$100,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d) or 2.02(d) (1) above.

(3) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of one hundred fifty thousand dollars (\$150,000) but not more than two hundred thousand dollars (\$200,000) for a month, the Employer shall increase the amount of its surety bond to the sum of three hundred seventy-five thousand dollars (\$375,000). When the Employer's monthly contribution obligations, in the aggregate, drop below one hundred fifty thousand dollars (\$150,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d) (1), or 2.02(d) (2) above.

(4) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of two hundred thousand dollars (\$200,000) but not more than three hundred thousand dollars (\$300,000) for a month, the Employer shall increase the amount of its surety bond to the sum of five hundred thousand dollars (\$500,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below two hundred thousand dollars (\$200,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d) (1), 2.02(d) (2) or 2.02(d) (3) above.

(5) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of three hundred thousand dollars (\$300,000) but not more than five hundred thousand dollars (\$500,000) for a month, the Employer shall increase the amount of its surety bond to the sum of seven hundred fifty thousand dollars (\$750,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below three hundred thousand dollars (\$300,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d)(1), 2.02(d)(2), 2.02(d)(3) or 2.02(d)(4) above.

(6) When an Employer's monthly contribution obligation(s), in the Aggregate, to the various Local 98 Employee Benefit Funds referenced in this labor agreement exceeds a level of five hundred thousand dollars (\$500,000) but not more than eight hundred thousand dollars (\$800,000) for a month, the Employer shall increase the amount of its surety bond to the sum of one million two hundred fifty thousand dollars (\$1,250,000). When the Employer's monthly contribution obligation(s), in the aggregate, drop below five hundred thousand dollars (\$500,000) per month for two consecutive months and if the Employer is current on all financial obligations to the Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d)(1), 2.02(d)(2), 2.02(d)(3), 2.02(d)(4) or 2.02(d)(5) above.

(7) When an Employer's monthly contribution obligation(s), in the aggregate, to the various Local 98 employee Benefit Funds referenced in this labor agreement exceeds a level of eight hundred thousand dollars (\$800,000) for a month, the Employer shall increase the amount of its surety bond to the sum of one and seven tenths times the monthly obligation. When the Employer's monthly contribution obligation(s), in the aggregate, drop below eight hundred thousand dollars (\$800,000) per month for two consecutive months and if the Employer is current on all financial obligations to the

Local, the Trust Funds and its members, the employer may reduce the amount of its surety bond to the amount required by 2.02(d), 2.02(d)(1), 2.02(d)(2), 2.02(d)(3), 2.02(d)(4), 2.02(d)(5) or 2.02(d)(6) above.

(e) All employers who fail to post a bond will appear before the Labor Management Committee before further manpower is permitted.

Section 2.03

(a) All Employees who are members of the Union on the effective date of this Agreement shall be required to remain members of the Union as a condition of employment during the term of this Agreement. New Employees shall be required to become and remain members of the Union as condition of employment from and after the eighth (8th) day following the dates of their employment, or the effective date of this Agreement whichever is later. This shall not apply to seasonal help.

(b) The Employer agrees that the Union has the right to discipline its members for violation of its laws, rules, and agreements.

(c) The Employer agrees to notify the Business Manager of the Union on forms furnished by the Union, of the receipt of all contracts secured within its jurisdiction.

(d) The Employer agrees to furnish monthly to the Union reports listing the names of the members of the Union employed, number of hours of employment, and the gross earnings of each. In the event no members of the Union are employed in any month, reports shall be filed stating that fact. These reports shall be made available to the Labor-Management Committee.

(e) It shall not be a violation of this Agreement, and it shall not be cause for discharge or any other disciplinary action by the Employer against any Employee, for an Employee to refuse to cross a lawfully established primary picket line, whether at the premises of another Employer or the Employee's own Employer.

(f) Any employee exercising such right shall carefully put away all tools, materials, equipment, or any other property of the Employer in a safe manner. Each Employee will be responsible for any loss to the Employer for neglect in carrying out this provision, but only when a safe place is provided for by the Employer.

(g) The Local Union is a part of the International Brotherhood of Electrical Workers, and any violation or annulment by an individual Employer of the approved Agreement of this or any other Local Union of the IBEW, other than violations of paragraph 2 of this Section, will be sufficient cause for the cancellation of this Agreement by the Local Union after a finding has been made by the International President of the Union that such a violation or annulment has occurred.

The subletting, assigning or transfer by an individual Employer of any work in connection with electrical work to any person, firm or corporation not recognizing the IBEW or one of its local unions as the collective bargaining representative of his Employees on any electrical work in the jurisdiction of this or any other local union to be performed at the site of the construction, alteration, painting, or repair of a building, structure or other work, will be deemed a material breach of this Agreement.

All charges of violations of paragraph 2 of this Section shall be considered as dispute and shall be processed in accordance with the provisions of this Agreement covering the procedure for the handling of grievances and the final and binding resolution of disputes.

(h) In order to protect and preserve, for the Employees covered by this Agreement, all work heretofore performed by them, and in order to prevent any devise or subterfuge to avoid the protection and preservation of such work, it is hereby agreed as follows: If and when the Employer shall perform any on-site construction work of the type covered by this Agreement, under its own name or under the name of another as a corporation, company, partnership, or any other business entity, including a joint venture, wherein the Employer, through its officers, directors, partners or stock holders, exercise either directly or indirectly, management, control or majority ownership, the terms and conditions of this Agreement shall be applicable to all such work. All charges or violations of this Section shall be considered as a dispute and shall be processed in accordance with the provisions of this Agreement covering the procedure for the handling of grievances and the final and binding resolution of disputes.

(1) As a remedy for violations of this Section, the Labor Management Committee, the Council on Industrial Relations for the Electrical Contracting Industry, and/or an independent arbitrator, as the case may be, are empowered, in their discretion and at the request of the Union, to require an Employer to (1) pay to affected employees covered by this Agreement, including registered applicants for employment, the equivalent of wages lost by such employees as a result of the violations; and (2) pay into the affected joint trust funds established under this Agreement any delinquent contributions to such funds which have resulted from the violations. Provision for this remedy herein does not make such remedy the exclusive remedy available to the Union for violations of this Section nor does it make the same or other remedies unavailable to the Union for violations of other Sections or other Articles of this Agreement.

(2) If as a result of violations of this Section, it is necessary for the Union and/or the Trustees of the joint trust funds to institute court action to enforce an award rendered in accordance with subsection (1) above, or to defend an action which seeks to vacate such award, the Employer shall pay any accountants' and attorneys' fees incurred by the Union and/or Fund Trustees, plus cost of the litigation, which have resulted from the bringing of such court action.

(i) The Employer agrees to furnish all equipment necessary to safely perform work within the jurisdiction of the electrical workers.

Section 2.04

(a) There shall be a Safety Committee of three (3) representing the Union and three (3) representing the Employer. It shall meet regularly at such stated times as it may decide, or within forty-eight (48) hours when notice is given by either party. It shall select its own Chairman and Secretary.

(b) All disagreements, or claims of violation of the Safety Rules which cannot be adjusted between the duly authorized representatives of the Union and Employer, shall be referred to this Committee for decision by majority vote.

(c) In the event the Committee is unable to render a decision by majority vote, or for any reason adjust the matter in dispute, it shall be referred to the Labor-Management Committee.

(d) The Employer agrees to and shall comply with all applicable provisions of the Safety Rules as forth in a separate document or documents are hereby incorporated as part of this Agreement as if they were herein set forth at length.

(e) It is the Employer's exclusive responsibility to insure the safety of its Employees and their compliance with these Safety Rules and Standards.

(f) A joint committee will be established by the parties to implement a mutually acceptable OSHA training program.

(g) By January 1, 2008, all journeymen should complete the OSHA 10 hour course and all foremen should complete the OSHA 30 hour course. In addition, the Local 98/NECA Safety Committee will develop an identification "Smart Card" card for all members of the Local establishing the qualifications and credentials of the member including whether the member is part of the drug-free testing program, has received his or her OSHA 10 and 30 hour card, is trained in the requirements of NFPA-70E and other training certifications as developed by the Safety Committee in conjunction with the JATC.

Section 2.05 (a) The Employer shall provide a separate suitable place on all jobs for keeping or storing of Employees' clothing, and shall be held responsible for the loss of these by fire.

(b) The Employer shall provide a separate suitable place on all jobs for keeping or storing of Employees' tools, and shall be held responsible for the loss of these by fire or theft up to a maximum of \$400.00.

Section 2.06 The Union agrees that if, during the life of this Agreement, it grants to any other Employer in the Electrical Contracting Industry on work covered by this Agreement, any better terms or conditions than those set forth in this Agreement, such better terms or conditions shall be made available to the Employer under this Agreement and the Union shall immediately notify the Employer of any such concessions.

Section 2.07 The Union understands the Employer is responsible to perform the work required by the owner. The Employer shall, therefore, have no restrictions except those specifically provided for in the Collective Bargaining Agreement in planning, directing and controlling the operation of all his work, in deciding the number and kind of Employees to properly perform the work, in hiring and laying off Employees, in transferring Employees from job to job within the Local Union's geographical jurisdiction, in determining the need and number as well as the person who will act as Foreman, in requiring all Employees to observe the Employer's and/or owner's rules and regulations not inconsistent with this Agreement, in requiring all Employees to observe all safety regulations, and in discharging Employees for proper cause.

Section 2.08 The Employer agrees that, if it has not previously done so, it will recognize the Union as the exclusive collective bargaining agent for all employees performing electrical work within the jurisdiction of the Union on all present and future job sites, if and when a majority of the Employer's employees authorize the Union to represent them in collective bargaining.

Section 2.09 An Employer signatory to a collective bargaining agreement or to a letter of assent to an agreement with another IBEW Local Union, who signs an assent to this Agreement, may bring up to four bargaining unit employees employed in that Local Union's jurisdiction into this Local's jurisdiction and up to two bargaining unit employees per job from that Local's jurisdiction to this Local's jurisdiction for specialty or service and maintenance work. All charges of violations of this section shall be considered as a dispute and shall be processed in accordance with the provisions of this agreement for the handling of grievances with the exception that any decision of a local labor-management committee that may be contrary to the intent of the parties to the National Agreement on Employee Portability, upon recommendation of either or both the appropriate IBEW International Vice President or NECA Regional Executive Director, is subject to review, modification, or rescission by the Council on Industrial Relations.

Section 2.10 The Employer agrees to participate in Prevailing Wage Surveys.

ARTICLE III

CONTRIBUTIONS & PAYROLL DEDUCTIONS

N.E.B.F. - NATIONAL ELECTRICAL BENEFIT FUND (CONTRIBUTION)

Section 3.01 It is agreed that in accord with the Employees Benefit Agreement of the National Electrical Benefit Fund ("NEBF"), as entered into between the National Electrical Contractors Association and the International Brotherhood of Electrical Workers on September 3, 1946, as amended, and now delineated as the Restated Employees Benefit Agreement and Trust, that unless authorized otherwise by the NEBF the individual Employer will forward monthly to the NEBF's designated local collection agent an amount equal to 3% of the gross monthly labor payroll paid to, or accrued by, the employees in this bargaining unit, and a completed payroll report prescribed by the NEBF. The payment shall be made by check or draft and shall constitute a debt due and owing to the NEBF on the last day of each calendar month, which may be recovered by suit initiated by the NEBF or its assignee. The payment and the payroll report shall be mailed to reach the office of the appropriate local collection agent not later than fifteen (15) calendar days following the end of each calendar month.

The individual Employer hereby accepts, and agrees to be bound by, the Restated Employees Benefit Agreement and Trust.

An individual Employer who fails to remit as provided above shall be additionally subject to having his agreement terminated upon seventy-two (72) hours' notice in writing being served by the Union, provided the individual Employer fails to show satisfactory proof that the required payments have been paid to the appropriate local collection agent.

The failure of an individual Employer to comply with the applicable provisions of the Restated Employees Benefit Agreement and Trust shall also constitute a breach of this Agreement.

N.E.I.F. - NATIONAL ELECTRICAL INDUSTRY FUND (CONTRIBUTION)

Section 3.02 Each individual Employer shall contribute an amount not to exceed one percent (1%), nor less than .2 of 1% of the productive electrical payroll as determined by each Local Chapter and approved by the Trustees, with the following exclusions:

1. Twenty-five percent (25%) of all productive electrical payrolls in excess of 75,000 man-hours paid for electrical work in any one Chapter area during any one calendar year, but not exceeding 150,000 man-hours.
2. One hundred percent (100%) of all productive electrical payroll in excess of 150,000 man-hours paid for electrical work in any one Chapter area during any one calendar year.

(Productive electrical payroll is defined as the total wages (including overtime) paid with respect to all hours worked by all classes of electrical labor for which a rate is established in the prevailing labor area where the business is transacted.)

Payment shall be forwarded monthly to the National Electrical Industry Fund in a form and manner prescribed by the Trustees no later than fifteen (15) calendar days following the last day of the month in which the labor was performed. Failure to do so will be considered a breach of this Agreement on the part of the individual Employer.

Gross Labor Payroll As used herein, the parties agree that, effective August 1, 2010, the term "Gross Labor Payroll" is defined as wages paid to bargaining unit employees for work performed under the Collective Bargaining Agreement (CBA) at the wage rate required by the CBA but excludes the value of non-cash fringe benefits; bona fide contributions made by the Employer to:

- (a) a trust fund established under §302(c) of the Taft-Hartley Act; or
- (b) a separate entity or IRS-qualified fund which provides retirement benefits or medical benefits; or
- (c) bona fide bonuses of an extraordinary nature (i.e., lump sum year end bonuses, not ordinarily paid as part of a regular payroll period);
- (d) any form of monetary allowance to the extent that said allowance is not paid in order to avoid any obligation to pay the CBA wage rate and/or avoid the payment of Local Union employee benefit funds.

It is understood and agreed that the term "Gross Labor Payroll" includes holiday pay, vacation pay, and wages paid over the rate required by the CBA (over scale), and any payment classified as sick pay. It is also understood that lump sum year-end bonuses, monetary allowances and expense reimbursements are subject to audit by the IBEW Local Union 98/NECA Delinquency Committee so employers must maintain proper documentation.

LOCAL LABOR MANAGEMENT COOPERATION COMMITTEE (LMCC)

Section 3.02 (a) The parties agree to participate in a Labor-Management Cooperation Fund, under authority of Section 6(b) of the Labor Management Cooperation Act of 1978, 29 U.S.C. 175(a) and Section 302(c)(9) of the Labor Management Relations Act, 29 U.S.C. 186(c)(9). The purposes of this Fund include the following:

1. To improve communications between representatives of Labor and Management;
2. To provide workers and employers with opportunities to study and explore new and innovative joint approaches to achieving organizational effectiveness;
3. To assist workers and employers in solving problems of mutual concern not susceptible to resolution within the collective bargaining process;
4. To study and explore ways of eliminating potential problems which reduce the competitiveness and inhibit the economic development of the electrical construction industry;
5. To sponsor programs which improve job security, enhance economic and community development, and promote the general welfare of the community and industry;
6. To engage in research and development programs concerning various aspects of the industry, including, but not limited to, new technologies, occupational safety and health, labor relations, and new methods of improved production;
7. To engage in public education and other programs to expand the economic development of the electrical construction industry;
8. To enhance the involvement of workers in making decisions that affect their working lives; and,
9. To engage in any other lawful activities incidental or related to the accomplishment of these purposes and goals.

(b) The fund shall function in accordance with, and as provided in, it's Agreement and Declaration of Trust and any amendments thereto and any other of its governing documents. Each Employer hereby accepts, agrees to be bound by, and shall be entitled to participate in the LMCC, as provided in said Agreement and Declaration of Trust

(c) Each employer shall contribute one point thirty-five percent (1.35%) per hour worked. Payment shall be forwarded monthly, in a form and manner prescribed by the Trustees, no later the last day of the month following the month in which the labor was performed. The Penn-Del-Jersey Chapter, NECA, or its designee, shall be the collection agent for this Fund.

(d) If an Employer fails to make the required contributions to the Fund, the Trustees shall have the right to take whatever steps are necessary to secure compliance. In the event the Employer is in default, the Employer shall be liable for a sum equal to 15% of the delinquent payment, but not less than the sum of twenty dollars (\$20), for each month payment of contributions is delinquent to the Fund, such amount being liquidated damages, and not a penalty, reflecting the reasonable damages incurred by the Fund due to the delinquency of the payments. Such amount shall be added to and become a part of the contributions due and payable, and the whole amount due shall bear interest at the rate of ten percent (10%) per annum until paid. The Employer shall also be liable for all costs of collecting the payment together with attorneys' fees.

LOCAL UNION 98 HEALTH & WELFARE PLAN (CONTRIBUTION)

Section 3.03 Effective 12:01 A.M. April 29, 2013, the Employer agrees to and shall comply with all applicable provisions of the Trust Agreement, establishing the International Brotherhood of Electrical Workers, Local Union 98 Health and Welfare Fund, entered into December 15, 1953, as amended. The Trust Agreement provides for the payment of contributions monthly into the Trust Fund, which shall be known as the International Brotherhood of Electrical Workers, Local Union 98 Health and Welfare Fund, an amount equal to the amount specified in Appendix "A" (wage sheet).

LOCAL UNION 98 PENSION PLAN (CONTRIBUTION)

Section 3.04 (a) The Employer agrees to and shall comply with all applicable provisions of the Trust Agreement, establishing the Local Union 98, IBEW Pension Fund entered into September 1, 1961, as amended.

(b) The Local Union 98 Pension Plan shall be jointly administered by an equal number of individual Trustees appointed by the Employer and an equal number of individual Trustees appointed by the Union.

(c) Effective 12:01 A.M. April 29, 2013, the Employer agrees to contribute for all Employees covered under the terms of this Agreement, an amount equal to fourteen percent (14%) of his gross labor payroll paid to Employees in the bargaining unit represented by the Union under this Agreement.

LOCAL UNION 98 PROFIT SHARING PLAN

Section 3.05 (a) The Employer agrees to and shall comply with all applicable provision of the Trust Agreement, establishing the Local Union 98, IBEW Deferred Income Plan entered into July 4, 1983.

(b) The Local Union 98 Deferred Income Plan shall be jointly administered by an equal number of individual Trustees appointed by the Employer and an equal number of individual Trustees appointed by the Union.

(c) Effective 12:01 A.M. April 29, 2013, the Employer agrees to contribute for all Employees covered under the terms of this Agreement, an amount equal to fifteen and a half percent (15.5%) of his gross labor payroll paid to Employees in the bargaining unit represented by the Union under this Agreement.

APPRENTICE TRAINING FUND (CONTRIBUTION)

Section 3.06 (a) Effective 12:01 A.M. April 29, 2013, all Employers subject to the terms of this Agreement shall contribute two-percent (2%) of their gross labor payroll for the purpose of maintaining the Apprenticeship and Training Program.

WORKING DUES (PAYROLL DEDUCTION)

Section 3.07 The Employer agrees to deduct and forward to the Financial Secretary of the Local Union upon receipt of a voluntary written authorization - the additional working dues from the pay of each IBEW member. The amount to be deducted shall be the amount specified in the approved Local Union By-Laws. Such amount shall be certified to the Employer by the Local Union upon request by the Employer.

The Union agrees to save the Employer harmless from any action growing out of these deductions, commenced by any Employee, and assumes full responsibility for the disposition of the funds deducted once they have been received by the Union.

LOCAL UNION 98 VACATION PLAN (PAYROLL DEDUCTION)

Section 3.08 (a) Each Employer shall withhold from the net wages due each of its employees covered by the Collective Bargaining Agreement a sum equal to 5.41% of said employee's gross wages. Such deduction shall be contributed by the Employer as set forth below.

(b) The wage deductions shall be forwarded to a bank or other financial institution designated by mutual agreement of Local Union 98 and NECA, for deposit in Vacation Fund accounts, titled in the name of each employee. Local Union 98 shall be the Administrator of this Vacation Fund and, as such, shall have full power to contract with the selected bank or financial institution receiving the wage deductions, maintain records and take any and all appropriate action to enforce this agreement and protect the employee assets maintained in such accounts. Local Union 98 shall not, however, have title to such funds or, other than the powers set forth above, maintain any discretionary control over the assets of the vacation fund accounts. Employers bound by this Agreement shall also be bound by any reasonable rules and regulations adopted by the Union concerning reporting, collection and delinquency procedures, including, but not limited to, a requirement that delinquent employers pay liquidated damage penalties, interest, audit fees (if required) and reasonable counsel fees and costs necessitated by collection proceedings. The powers of administration and other duties and responsibilities set forth in this provision shall not, in any manner, be construed as allowing Local Union 98 to exercise any right, title or interest in or to any of the Vacation Fund accounts which shall, at all times, be titled and maintained in the name of each individual member for whom a contribution has been submitted by the Employer.

(c) Each Employer shall, simultaneously with the transmittal of its contributions, transmit to the bank a report form setting forth, inter alia, each employee's Social Security number, name, the individual employee's gross the total of all employees' gross earnings, in addition to any other information that may, by rule, regulation or request, be required by the bank or by the Local Union.

Section 3.09 (a) It is agreed that failure to pay wages, and/or other fringe benefits, without exception, as provided for in this Agreement by an individual Employer will be sufficient cause to having the temporary removal of electricians from such individual Employer, after receiving seventy-two (72) hours notice, in writing, by the Union, provided the individual Employer fails to show satisfactory proof that the required payments have been paid to the Local Employees' Benefit Board and the Local Union Benefit Funds.

(b) Contributions to the Local Union 98 Deferred Income Plan, Local Union 98 Health & Welfare Plan, Local Union 98 Pension Fund, Apprentice Training Fund, and deduction for the Local Union 98 Vacation Plan, shall be made in accordance with the applicable Trust document. All such contributions, as well as the working dues deduction, shall be sent to the designated depository. These payments must be received by or bear a U.S. Postal Service postmark the last day of the month following the month in which there was covered employment (the "due date"). All contributions or

payments not received as stated herein shall be deemed delinquent and this delinquency shall result in the imposition of a ten percent (10%) penalty of the total contribution as well as interest at the I.R.S. rates, or portion thereof, of the total contribution until payment has been received.

(c) Employers participating in the Automated Funds Collection Procedure prescribed by the Joint Funds Trustees are required to submit all necessary data in the prescribed manner no later than the eight (8th) day of the month following the month in which the work was performed. Payment must be made in the prescribed manner no later than five days after the due date.

Section 3.10 The following procedures will apply in the event of a delinquency:

1. Contributions and deductions must be paid or post-marked by the U.S. Postal Service by the last day of the month following the month in which there was covered employment (the "due date"). Reports must be completed and returned each month regardless of whether there was covered hours of employment.

2. Any contributions and deductions not paid or post-marked after the last day of the month following the month in which the labor was performed (the "due date") are delinquent and shall be subject to the interest and damages provisions of 3.10 of the NECA Agreement.

In addition:

(a) Any shortages on a report, plus interest and liquidated damages owed, must be paid by or postmarked by the U.S. Postal Service by the last day of the month immediately following the receipt of the shortage notification or they shall be deemed delinquent and subject to the provisions below.

(b) Interest and liquidated damages assessments must be paid or postmarked by the U.S. Postal Service by the last day of the month immediately following the receipt of the assessment or they shall be deemed delinquent and subject to the provisions below.

3. Any employer who has not paid any delinquent contributions or deductions by the third day of the month following the month in which they were due shall be subject to any or all of the following actions:

(a) A lawsuit shall be immediately instituted in federal court or other appropriate forum. In any such action, the Employer shall be liable for the unpaid contributions and deductions, as well as the interest, liquidated damages and attorneys fees and costs. Notwithstanding anything herein to the contrary, neither the Funds nor any other entity due contributions or payments hereunder shall be required to exhaust any contractual remedies under Section 1.06 of this Agreement before instituting such a lawsuit.

(b) The employees shall be subject to removal unless the delinquent contributions and deductions are paid or a settlement agreeable to the Committee has been reached.

(c) Once the employer is deemed delinquent under these procedures, it shall pay contributions and deductions on a weekly basis, and shall continue until such time as the Committee determines that weekly payments are no longer necessary.

Section 3.11 With employee authorization, the Employer may voluntarily make a payroll deduction to be paid to Tru Mark Financial Credit Union.

Section 3.12 If any Employer working under this Agreement either as a Prime Contractor, a Subcontractor, or as Subcontractor at any level ceases work on that project because of failure on the part of the Owner, Owner's Agent, Construction Manager, Prime Contractor, or Subcontractor to pay monies due for properly submitted progress payments and/or payments for completed work and/or payments for approved changes and/or payment for work

performed under notice to proceed order when such payments are due, then upon request of the affected Contractor and upon application to the Labor Management Committee, the Labor Management Committee may determine that the Union is free, and not in violation of this Agreement, to not furnish Workmen to the Owner, Owner's Agent, Prime Contractor, Subcontractor or any other Contractor for the purpose of completing that work at issue when not being paid; and the purpose of this provision is to protect the ability of the Employer to properly pay the base wages and benefits due for labor expended on that project.

Section 3.13 In the event that the amount or assets recovered from a delinquent employer is insufficient to satisfy the obligation of the delinquent employer to all of the entities that have combined to seek recovery from the employer, the available funds/assets of the delinquent employer that are recovered by means of judgment, garnishment, settlement or other device shall be allocated among the various parties and/or entities in the following priority order:

First Priority – Unpaid wage claims (including Credit Union deductions);

Second Priority – Amounts owed by the Employer for payroll deductions for Vacation pay;

Third Priority – Amounts owed by the Employer to the Profit Sharing/Deferred Income Plan;

Fourth Priority – Amounts owed by the Employer to the: a) Union through payroll deduction; b) LMCC/Administrative Fund; 3) NEIF; and 4) Apprenticeship & Training Fund. Such amounts, if less than sufficient to make each of these entities whole, shall be allocated on a pro-rate basis;

Fifth Priority – Amounts owed by the Employer to the: a) Pension Fund; b) Welfare Fund; and c) NEBF. Such amounts, if less than sufficient to make each of these entities whole, shall be allocated on a pro-rate basis.

NECA ADMINISTRATIVE FUND

Section 3.14 Each Employer covered by this Agreement shall contribute to the Penn-Del-Jersey Chapter, NECA Administrative Fund (1/2) of (1%) of their gross payroll for all work covered by this Agreement. The Fund shall be administrated solely by the Penn-Del-Jersey Chapter, NECA Administration Fund and shall be used to pay for management's costs of the labor contract Administration Fund and shall be used to pay for management's costs of the labor contract administrative including negotiations, disputes and grievance representation, and for other administrative functions and expenses required of management, including services on fringe benefit funds.

Further, from time to time is shall be utilized for promotion of the electrical contracting industry and the enhancement of labor relations in the Philadelphia area.

No part of the funds collected under this trust shall be used for any purpose which is held to be in conflict with the interests of the International Brotherhood of Electrical Workers and its Local Unions.

Payment shall be forwarded monthly to the designated depository in a form and manner prescribed by the trustees, no later than thirty (30) calendar days following the last day of the month in which the labor was performed. Failure to do so will be considered a breach of this Agreement by the individual Employer.

Enforcement for delinquent payments to the Fund shall be the sole responsibility of the Fund or the Employers and not the Local Union.

ARTICLE IV

WAGES AND HOURS

- Section 4.01 (a) Eight hours shall be the daily working period, starting between the hours of 7:00 A.M. and 8:00 A.M., with a thirty minute lunch period. All hours worked during the daily working period are paid at normal rates.
- (b) Five days shall be the regular work week, Mondays to Fridays, inclusive. The work week starts between the hours of 7:00 A.M. and 8:00 A.M. Monday.

OVERTIME, HOLIDAYS

- Section 4.02 (a) Work performed on New Year's, Memorial, Independence, Labor, Thanksgiving, and Christmas Day shall be paid for at rates double those stated in Section 4.04(a). Holidays falling on a Sunday will be celebrated on Monday.
- (b) Election Day shall be included and subject to the terms of Section 4.02(a) when notification has been given by either party to the Labor Management Committee. The Labor Management Committee will notify the employers and members of the Union in a timely manner and in any case, no less than one week in advance. Four - 10 hour days may be worked in exchange for Election Day.
- (c) Hours worked, either prior to, or after the daily working period, Monday through Friday shall be paid at one and one-half (1-1/2) times the hourly rate*. All hours worked on Saturdays shall be paid at one and one-half (1-1/2) times the hourly rate*. All hours worked on Sundays and holidays shall be paid at two (2) times the hourly rate*, until 7:00 AM on Monday Morning. Shifts may begin on a Sunday at shift rates.

* As stated in Section 4.04(a).

- (d) Unless a continuous eight hour rest period is provided after overtime stops, overtime rates shall apply to all time worked after overtime starts, except as provided for in paragraph (e) of this Section.
- (e) If a man works past midnight, the eight (8) hour rest period shall not be required on a one (1)-time basis for the duration of the job.
- (f) Overtime will be allowed to be worked for tie-ins, cut-overs, emergency shutdowns, and repairs when specifically called for by the project documents and, the Business Manager will be notified of all such overtime. All other overtime must be cleared by the Business Manager.

SHIFTS

- Section 4.03 (a) When so elected by the contractor, multiple shifts of at least five (5) days duration may be worked.
- (b) When two (2) or three (3) shifts are worked: The first shift (day shift) shall be worked between the hours of 7:00 A.M. and 4:30 P.M. Workmen on the day shift shall receive eight (8) hours pay at the regular hourly rate for eight (8) hours work.

(c) The second shift (swing shift) shall be worked between the hours of 3:30 P.M. and 12:30 A.M. Workman on the "swing shift" shall receive eight (8) hours pay at the regular hourly rate plus ten percent (10%) for seven and one-half (7 ½) hours work.

(d) The third shift (graveyard shift) shall be worked within the hours of 11:30 A.M. and 8:00 A.M. Workmen on the "graveyard shift" shall receive eight (8) hours pay at the regular hourly rate plus fifteen percent (15%) for seven (7) hours work.

(e) A lunch period of thirty (30) minutes shall be allowed on each shift. All overtime work required after the completion of a regular shift shall be paid at one and one-half times the "shift" hourly rate.

(f) There shall be no pyramiding of overtime rates and double the straight time rate shall be maximum compensation for an hour worked. There shall be no requirement for a day shift when either the second or third shift is worked.

Section 4.04

(a) The rates of wages for the hours and days stated in Section 4.01 (a) and (b) during the effective period of this Agreement shall be as hereinafter stated: (See Appendix "A")

(b) The Foreman's wage rates shall be as follows:

1. Foreman

On each job where two (2) to nine (9) men are employed for four (4) consecutive days, one of them shall be designated by the Employer as FOREMAN, and shall receive a minimum of \$2.00 more than the journeyman's rate.

2. General Foreman

On each job where ten (10) to twenty-two (22) men are employed for four (4) consecutive days, one of them shall be designated by the Employer as GENERAL FOREMAN, and shall receive a minimum of \$3.50 more than the journeyman's rate.

3. Project Foreman

On each job where twenty-three (23) or more men are employed for four (4) consecutive days, one of them shall be designated by the Employer as PROJECT FOREMAN, and shall receive a minimum of \$5.00 more than the journeyman's rate.

After the rate is established for the job, it shall remain until the number of men triggering that rate decreases and remains below a classification for a period of four (4) consecutive days. The rate of that classification shall then apply.

4. Sub-Foreman

Where twelve (12) men are employed on a job for four (4) consecutive days, one of them shall be designated by the Employer as SUB-FOREMAN and shall receive a minimum of \$1.75 more than the journeyman's rate.

For each eleven (11) men above twelve (12) employed on a job for four (4) consecutive days, an additional SUB-FOREMAN shall be designated by the Employer, and shall receive a minimum of \$1.75 more than the journeyman's rate. The Sub-Foreman rate shall expire for a

journeyman when the number of men triggering this classification is reduced by six (6) or more men.

(c) No journeyman shall be appointed as a sub-foreman, foreman, and general foreman or project foreman unless he has successfully completed a foreman training course approved by the NJATC and administered jointly by Local Union 98 and the JATC. 98 Journeyman electricians who have been employed as foremen for a period of six months for an Employer performing work in the jurisdiction of Local Union 98 prior to May 1, 1997; will not be required to complete a foreman training course all others must complete a foreman-training course.

Section 4.05 (a) Each weekly payroll period shall terminate at 12 midnight Sunday, and wages shall be paid in U.S. Currency or by check drawn on a local bank with Employer identification on check stubs, however, not more than three (3) regular work days' wages may be withheld at any time.

(b) In the event that any Employer issues an uncollectible check, no further work shall be performed by members of the Union, until the sum involved has been made good, together with all added costs. Said Employer may be required to pay all wages due Employees in cash, cashier's check, or certified check.

Section 4.06 (a) At least thirty (30) minutes notice shall be given of discharge or layoff and all wages due shall be paid in full at that time. Waiting time for wages, either on regular pay day, or upon discharge or layoff, shall be paid for at rates double those stated in Section 4.04(a).

(b) In the event of a firing, the Employer may mail the payoff check to the union hall, no later than the end of the next business day.

Section 4.07 Initial period of employment shall consist of not less than four (4) consecutive hours.

Section 4.08 Unless Employees are instructed not to report for work at least two (2) hours prior to their regular designated starting time, and they so report, (except in cases where men report, when it should be obvious, by the exercise of reasonable judgment, that no work could be performed because of weather conditions) they shall be paid not less than two (2) hours straight time wages, regardless of whether or not any work has been performed. They shall remain for the two (2) hours unless excused by a proper representative of the Employer.

Section 4.09 Work performed in the jurisdiction of another Local Union having higher wage rates shall be paid at the higher of the two rates, unless a waiver is granted by the Local Union 98 Business Manager.

Section 4.10 (a) No traveling time shall be paid for traveling, before or after working hours, to or from any job within the jurisdiction of the Union.

(b) When the Employee is required to travel from one job to another within the jurisdiction of the Union during working hours, the Employer shall pay full traveling time and all traveling expenses.

(c) When an Employee is employed outside the jurisdiction of the Union, at the request of the Employer, the Employer shall furnish or pay for all transportation and living expenses.

(d) When an Employee is employed outside the jurisdiction of the Union, at the request of the Employer, the Employer shall make all negotiated fringe benefits and deductions in accordance with the terms of the Agreement, the same as if the Employee is employed within the jurisdiction of the Union, except where Reciprocal Agreements exist.

Section 4.11 Employer may use direct deposit for employee's wages.

ARTICLE V

GENERAL

Section 5.01 No Employee shall use any automobile, motorcycle, or other vehicle in a manner considered to be unfair to other Employees or against the interests of the Union.

Section 5.02 Journeymen and apprentices shall, at all times, have a sufficient number of tools to properly perform any work on which they are employed.

Section 5.03 Employees shall be held responsible for the Employer's tools and equipment, providing the Employer furnishes a tool box with proper lock or other safe place for the storing of such tools or equipment, and allows a reasonable time for such care.

Section 5.04 Employees shall install all electrical work in accordance with Municipal rules and code requirements, also the contract specifications, and in a safe and workmanlike manner.

Section 5.05 All pulling of wire or cable shall be done by hand, by manually operated winch or by such power drive as is within the jurisdictional rights of the I.B.E.W.

Section 5.06 On all jobs requiring five (5) or more journeymen, in the event of a reduction in force, one (1) of every five (5) Journeymen fifty (50) years of age or over will remain on the job site.

Section 5.07 The inability of an Employee to safely perform his/her work functions due to the influence of drugs or alcohol shall be grounds for immediate dismissal from the shop and/or job site; and the Steward or Union shall be notified when such action is taken.

(a) The dangers and costs that alcohol and other chemical abuses can create in the electrical contracting industry in terms of safety and productivity are significant. The parties to this Agreement resolve to combat chemical abuse in any form and agree that, to be effective, programs to eliminate substance abuse and impairment should contain a strong rehabilitation component. The local parties recognize that the implementation of a drug and alcohol policy and program must be subject to all applicable federal, state and local laws and regulations. Such policies and programs must also be administered in accordance with accepted scientific principles, and must incorporate procedural safeguards to ensure fairness in application and protection of legitimate interests of privacy and confidentiality. To provide a drug-free workforce for the Electrical Construction Industry, each IBEW local union and NECA Chapter shall implement an area-wide Substance Abuse Testing Policy. The policy shall include minimum standards as required by the IBEW and NECA. Should any of the required minimum standards fail to comply with federal, state and/or local laws and regulations, they shall be modified by the local union and chapter to meet the requirements of those laws and regulations.

Section 5.08 Job Stewards shall be appointed by the Business Manager of the Union and must be a Local Union 98 Journeyman. When a steward has been appointed to a job he shall remain on such job until the next to last journeyman. Any reduction in force, which includes the Steward, shall be cleared with the Business Manager. The decision of the Business Manager may be appealed to the Labor-Management Committee.

Section 5.09 There shall be no restrictions on the use of catalog items. This does not preclude the performance of electrical work by bargaining unit persons in an Employer's shop facility under the terms of this Agreement.

TEMPORARY WIRING

- Section 5.10 (a) Temporary wiring shall be defined to include the installation and maintenance of all electrical work required or found necessary to be performed on any type of job under the scope jurisdiction of this Agreement and/or prevailing industry practices wherein electricity is being used for productive construction purposes, excluding cord and plug connected equipment and self contained powered lighting.
- (b) Electrical workers employed under the terms of this Agreement and employed by an electrical contractor, who is signatory to this Agreement, shall install and maintain all temporary wiring.
- (c) The installation and maintenance of temporary wiring shall, during all working hours, be the complete responsibility of the electrical workers employed under the terms of this Agreement.
- (d) Effective on all projects begun on or after April 28, 2003, where electric lighting, power and/or equipment is required for productive construction installation outside of normal working hours by workmen other than electricians, one (1) journeyman electrician shall be employed on the site to maintain that temporary. If the contractor hired to maintain that temporary wiring determines that the maintenance of the temporary does not require the full time attention of the journeyman, then the contractor may elect to assign that journeyman to perform productive work if available. If it is determined that no electrical contractor signatory to this Agreement has been hired or contracted with to maintain that temporary electrical after normal working hours, then for the purpose of life safety that temporary wiring shall be de-energized with the exception of temporary wiring for heating/air conditioning, job trailers, shanties, receptacles used for equipment charging, ingress/egress and security.
- (e) Under all project circumstances, temporary electric shall be left energized and in working condition past normal working hours for lighting, heating/air conditioning, job trailers and shanties, receptacles used for equipment charging, ingress/egress and security without the requirement for a journeyman electrician to be employed past normal working hours.

ARTICLE VI

STANDARD INSIDE APPRENTICESHIP & TRAINING LANGUAGE

Section 6.01 There shall be a local Joint Apprenticeship and Training Committee (JATC) consisting of a total of either 6 or 8 members who shall also serve as Trustees to the local apprenticeship and training trust. An equal number of members (3) shall be appointed, in writing, by the local chapter of the National Electrical Contractors Association (NECA) and the local union of the International Brotherhood of Electrical Workers (IBEW).

The local apprenticeship standards shall be in conformance with national guideline standards and industry policies to ensure that each apprentice has satisfactorily completed the NJATC required hours and course of study. All apprenticeship standards shall be registered with the NJATC before being submitted to the appropriate registration agency.

The JATC shall be responsible for the training of apprentices, journeymen, installers, technicians, and all others (unindentured, intermediate journeymen, etc.)

Section 6.02 All JATC member appointments, re-appointments and acceptance of appointments shall be in writing. Each member shall be appointed a 3 year term, unless being appointed for a lesser period of time to complete an unexpired term. The terms shall be staggered, with one (1) term from each side expiring each year. JATC members

shall complete their appointed term unless removed for cause by the party they represent or they voluntarily resign. All vacancies shall be filled immediately.

The JATC shall select from its membership, but not both from the same party, a Chairman and a Secretary who shall retain voting privileges. The JATC will maintain one (1) set of minutes for JATC committee meetings and a separate set of minutes for Trust meetings.

The JATC should meet on a monthly basis, and also upon the call of the Chairman.

Section 6.03 Any issue concerning an apprentice or an apprenticeship matter shall be referred to the JATC for its review, evaluation, and resolve; as per standards and policies. If the JATC deadlocks on any issue, the matter shall be referred to the Labor-Management Committee for resolution as outlined in Article I of this agreement; except for trust fund matters, which shall be resolved as stipulated in the local trust instrument.

Section 6.04 There shall be only one (1) JATC and one (1) local apprenticeship and training trust. The JATC may, however, establish joint subcommittees to meet specific needs, such as residential or telecommunication apprenticeship. The JATC may also establish a subcommittee to oversee an apprenticeship program within a specified area of the jurisdiction covered by this agreement.

All subcommittee members shall be appointed, in writing, by the party they represent. A subcommittee member may or may not be a member of the JATC.

Section 6.05 The JATC may select and employ a part-time or a full-time Training Director and other support staff, as it deems necessary. In considering the qualification, duties, and responsibilities of the Training Director, the JATC should review the Training Director's Job Description provided by the NJATC. All employees of the JATC shall serve at the pleasure and discretion of the JATC.

Section 6.06 To help ensure diversity of training, provide reasonable continuous employment opportunities, and comply with apprenticeship rules and regulations, the JATC, as the program sponsor, shall have full authority for issuing all job training assignments and for transferring apprentices from one employer to another. The employer shall cooperate in providing apprentices with needed work experiences. The local union referral office shall be notified, in writing, of all job training assignments. If the employer is unable to provide reasonable continuous employment for apprentices, the JATC is to be so notified.

Section 6.07 All apprentices shall enter the program through the JATC as provided for in the registered apprenticeship standards and selection procedures.

An apprentice may have their indenture canceled by the JATC at any time prior to completion as stipulated in the registered standards. Time worked and accumulated in apprenticeship shall not be considered for local union referral purposes until the apprentice has satisfied all conditions of apprenticeship. Individuals terminated from apprenticeship shall not be assigned to any job in any classification, or participate in any related training, unless they are reinstated in apprenticeship as per the standards, or they qualify through means other than apprenticeship, at some time in the future, but no sooner than two years after their class has completed apprenticeship, and they have gained related knowledge and job skills to warrant such classification.

Section 6.08 The JATC shall select and indenture a sufficient number of apprentices to meet local manpower needs. The JATC is authorized to indenture the number of apprentices necessary to meet the job site ratio as per Section 6.12.

Section 6.09 Though the JATC cannot guarantee any number of apprentices; if a qualified employer requests an apprentice, the JATC shall make every effort to honor the request. If unable to fill the request within ten (10)

working days, the JATC shall select and indenture the next available person from the active list of qualified applicants. An active list of qualified applicants shall be maintained by the JATC as per the selection procedures.

Section 6.10 To accommodate short-term needs when apprentices are unavailable, the JATC shall assign unindentured workers who meet the basic qualification for apprenticeship. Unindentured workers shall not remain employed if apprentices become available for OJT assignment. Unindentured workers shall be used to meet job site ratios except on wage and hour (prevailing wage) job sites.

Before being employed, the unindentured person must sign a letter of understanding with the JATC and the employer - agreeing that they are not to accumulate more than two thousand (2,000) hours as an unindentured, that they are subject to replacement by indentured apprentices and that they are not to work on wage and hour (prevailing wage) job sites.

Should an unindentured worker be selected for apprenticeship, the JATC will determine, as provided for in the apprenticeship standards, if some credit for hours worked as an unindentured will be applied toward the minimum OJT hours of apprenticeship.

The JATC may elect to offer voluntary related training to unindentured; such as Math Review, English, Safety, Orientation/Awareness, Introduction to OSHA, First-Aid and CPR. Participation shall be voluntary.

Section 6.11 The employer shall contribute to the local health and welfare plans and to the National Electrical Benefit Fund (NEBF) on behalf of all apprentices and unindentured. Contributions to other benefit plans may be addressed in other sections of this agreement.

Section 6.12 Each job site shall be allowed a ratio of 1 apprentice for every 3 Journeyman Wireman(man). The first person assigned to any job site shall be a Journeyman Wireman.

A job site is considered to be the physical location where employees report for their work assignments. The employer's shop (service center) is considered to be a separate, single job site. All other physical locations where workers report for work are each considered to be a single, separate job site.

Section 6.13 An apprentice is to be under the supervision of a Journeyman Wireman at all times. This does not imply that the apprentice must always be in sight of a Journeyman Wireman. Journeymen are not required to constantly watch the apprentice. Supervision will not be of a nature that prevents the development of responsibility and initiative. Work may be laid out by the employer's designated supervisor or journeyman based on their evaluation of the apprentice's skills and ability to perform the job tasks. Apprentices shall be permitted to perform job tasks in order to develop job skills and trade competencies. Journeymen are permitted to leave the immediate work area without being accompanied by the apprentice.

Apprentices who have satisfactorily completed the first four years of related classroom training using the NJATC curriculum and accumulated a minimum of 6,500 hours of OJT with satisfactory performance shall be permitted to work alone on any job site and receive work assignments in the same manner as a Journeyman Wireman.

An apprentice shall not be the first person assigned to a job site and apprentices shall not supervise the work of others.

Section 6.14 Upon satisfactory completion of apprenticeship, the JATC shall issue all graduating apprentices an appropriate diploma from the NJATC. The JATC shall encourage each graduating apprentice to apply for college credit through the NJATC. The JATC may also require each apprentice to acquire any electrical license required for journeymen to work in the jurisdiction covered by this Agreement.

Section 6.15 The parties to this Agreement shall be bound by the Local Joint Apprenticeship Training Trust Fund Agreement which shall conform to Section 302 of the Labor-Management Relations Act of 1947 as amended, ERISA, and other applicable regulations.

The Trustees authorized under this Trust Agreement are hereby empowered to determine the reasonable value of any facilities, materials, or services furnished by either party. All funds shall be handled and disbursed in accordance with the Trust Agreement.

Section 6.16 All Employers subject to the terms of this Agreement shall contribute the amount of funds specified by the parties signatory to the local apprenticeship and training trust agreement. The current rate of contribution is: 2%. (percent of the gross labor payroll). This sum shall be due the Trust Fund by the same date as is their payment to the NEBF under the terms of the Restated Employees Benefit Agreement and Trust.

ARTICLE VII

NATIONAL LABOR MANAGEMENT COOPERATION COMMITTEE

Section 7.01 The parties agree to participate in the NECA-IBEW National Labor-Management Cooperation Fund, under authority of Section 6(b) of the Labor Management Cooperation Act of 1978, 29 U.S.C. 175(a) and Section 302(c)(9) of the Labor Management Relations Act, 29 U.S.C. 186(c)(9). The purpose of this Fund includes the following:

1. to improve communication between representatives of labor and management;
2. to provide workers and employers with opportunities to study and explore new and innovative joint approaches to achieving organization effectiveness;
3. to assist workers and employers in solving problems of mutual concern not susceptible to resolution within the collective bargaining process;
4. to study and explore ways of eliminating potential problems which reduce the competitiveness and inhibit the economic development of the electrical construction industry;
5. to sponsor programs which improve job security, enhance economic and community development, and promote the general welfare of the community and the industry;
6. to encourage and support the initiation and operation of similarly constituted local labor-management cooperation committees;
7. to engage in research and development programs concerning various aspects of the industry, including, but not limited to, new technologies, occupational safety and health, labor relations, and new methods of improved production;
8. to engage in public education and other programs to expand the economic development of the electrical construction industry;
9. to enhance the involvement of workers in making decisions that affect their working lives; and
10. to engage in any other lawful activities incidental or related to the accomplishment of these purposes and goals.

Section 7.02 The Fund shall function in accordance with, and as provided in its Agreement and Declaration of Trust, and any amendments thereto and any other of its governing documents. Each Employer hereby accept, agrees to be bound by, and shall be entitled to participate in the NLMCC, as provided in said Agreement and Declaration of Trust.

Section 7.03 Each Employer shall contribute one cent (.01) per hour worked under this Agreement up to a maximum of 150,000 hours per year. Payments shall be forwarded monthly, in a form and manner prescribed by the Trustees, no later than fifteen (15) calendar days following the last day of the month in which the labor was performed. The Penn Del Jersey Chapter of NECA, or its designee, shall be the collection agent for this Fund.

Section 7.04 If an Employer fails to make the required contributions to the Fund, the Trustees shall have the right to take whatever steps are necessary to secure compliance. In the event the Employer is in default, the Employer shall be liable for a sum equal to 15% of the delinquent payment, but not less than the sum of twenty dollars (\$20), for each month payment of contributions is delinquent to the Fund, such amount being liquidated damages, and not a penalty, reelecting the reasonable damages incurred by the Fund due to the delinquency of the payments. Such amount shall be added to and become a part of the contributions due and payable, and the whole amount due shall bear interest at the rate of ten percent (10%) per annum until paid. The Employer shall also be liable for all costs of collecting the payment together with attorneys' fees.

ARTICLE VIII

PRODUCTIVITY, JOB ASSIGNMENT AND SCOPE FOR IBEW LOCAL 98 COMMERCIAL AGREEMENT

Section 8.01 The Employers and the Union are totally committed to improving productivity in unionized construction. The parties understand that owners and construction managers take into account, in the selection of contractors, the contractors' reputation in the field for productivity. It is further understood that the key to success of unionized construction is labor productivity.

The parties agree that every effort shall be made by the parties to insure the highest level of productivity and the expeditious performance of work assignments with the pledge of eight hours work for eight hours pay. Employees shall be at their workstation at the designated starting time and will not leave until the designated lunch break and/or quitting time. There shall be no unauthorized breaks, loafing and tardiness and unexcused absenteeism will not be tolerated.

The Employer recognizes that certain work, as described below, has been historically and customarily performed by Inside Electrical Workers of IBEW Local 98 (the "Traditional Inside Electrical Work"). To the extent the Employer controls the assignments of Traditional inside Electrical Work; it will perform the work with Inside Electrical Workers represented by Local 98 within its geographical jurisdiction. If the work is not part of the Employer's contract but is within the scope of Traditional inside Work, it will be performed by Inside Wiremen of the IBEW working for other contractors who are also signatory to this labor agreement. For purposes of this section, Traditional Electrical Work includes:

1. Coring of holes for raceways for electrical power or control and sound and communication devices, equipment, or fixtures.
2. Installing conduits, power cables or direct burial power cable inside the property line as defined by the Tariff for the purpose of electrical and communications work.
3. Installing of fire alarm, life safety, dictaphone, nurses call systems, operation room lights, patient monitoring equipment, X-ray equipment, CAT scan, MRI, and all electrical scanning equipment.

4. Handling of or loading or unloading of all appliances or equipment that are “all electric” including refrigerators, freezers, electric range, electric ovens, microwaves, non-ducted range hoods, mixers, blenders, television, video cassette recorders, lamp fixtures, DVD players.
5. The installation of all conduits, setting of all lights, electric light poles, including anchor bolts, wiring of all fixtures, fixture heads relating to all lighting for runways, taxiways at airports, parking lots and all lighting inside property lines.
6. The cutting and mechanical assembly of all electrical raceways, brackets, hangers, racks and any and all types of support beyond the building structure to be used to support and/or hold any wire, conduit, tray or any other electrical raceway or device and or equipment.
7. The lifting, setting and placement of all switchgear and sound equipment, electrical panels, electrical cabinets, motor control centers, transformers, speakers and their supports.
8. The installation of brackets to support or feed any electrically powered appliance (that doesn't have a mechanical connection) such as television and microwaves, and excluding structural support items inside of walls/ceilings. Such appliances will be unloaded, stored, and distributed by the IBEW.
9. Cutting of all existing (“existing” meaning installed at the project prior to the award of the Employer's contract) installed ceiling tile, sheetrock or other existing installed material for the installation of fixtures, appliances, electrical equipment, sound and communication equipment, projection equipment and projection screens of any type and including cutting floors.
10. The loading, unloading and handling of all computer equipment, wiring, conduit, and other raceways, connecting of computer power cables to branch circuit junction boxes and/or electrical panels, including the final placement of computers and all necessary connections for complete installation with the exception of the final placement of existing personal computer equipment by the owner's personnel.
11. All surface mounted plywood for backing for supports for all electrical powered and sound and communication equipment.
12. Offloading, handling and installation of electrical space and baseboard heaters and electrical controls and electrical components for HVAC systems.
13. The unloading and loading of any vehicle from which said games of chance, slot machines (manual or electrical) arrives or leaves said establishment.
14. The loading and unloading, uncrating or packaging, the movement and placement whether temporary or permanent, and all wiring and terminations, both electrical and data of any games of chance (e.g. slot machines, video poker machines, pinball, etc.) using electric or data transmissions will be done by IBEW Local Union 98.
15. Installation, mounting and wiring of all solar photovoltaic panels and inverters including all layout, panel supports, framing, grounding and bonding.
16. The loading and unloading, unpackaging, the placement and installation including all means of support, all wiring and terminations of all LED message boards and information boards of any kind.
17. The placement and installation including all supports, wiring, terminations of all electric signs attached to the structure inside and out.

The parties agree that the intent of these provisions is to state the scope of Traditional Inside Electrical Work presently being performed by the Inside Electrical Workers of IBEW Local 98; it is not an attempt to claim work that has not been historically and customarily performed by the inside Electrical Workers of IBEW Local 98.

Section 8.02 It is understood that the performance of traditional work will create trash, debris and the usual spoils during any construction project by every trade. While performing the electrical installation of an assigned task and prior to completing the task, it is typical to have debris such as wire clippings, wire stripping, cut off MC sheathing, plastic wraps, device boxes and associated literature, shipping wrap, foam and other shipping materials including wooden skids and reels, cardboard boxes and other specific and general trash attributable to the electrical installation. Upon request of the employer, the electrical worker is responsible to cleanup all of the above and place it as directed by the Employer. Repeated failure to “cleanup” and adhere to this will be grounds for removal from the project or shop.

Section 8.03 The parties agree to provide for adoption of the IBEW Code of Excellence Program as per the following language:

The Code of Excellence is a program designed to bring out the best in our construction members and demonstrates to our customer that IBEW members:

- Perform the highest quality and quantity of work
- Utilize their skills and abilities to the maximum
- Exercise safe and productive work practices

The Code of Excellence is not only about an IBEW job built right the first time, on schedule and under budget; it is also about pride in IBEW membership and craftsmanship and leaving a lasting impression of quality workmanship with the customer ... thus, prompting him to again employ the IBEW on future projects. The Code of Excellence program is also a means to build and project positive attitudes about who we are and the work we do ... on and off the job

Local Union training with respect to the Code of Excellence program may be facilitated by an International Representative but, regardless of delivery method or by whom, the Code of Excellence program training is to convey a strong message that IBEW construction members will:

Come to work on time, fit for duty and ready to work.

Obey recognized customer and employer work rules.

Demonstrate zero tolerance for alcohol and substance abuse.

Exercise proper safety, health and sanitation practices.

Own up to ‘8 for 8’ and be on the job unless otherwise allowed or authorized to leave.

Follow safe, reasonable and legitimate management directives.

Encourage respect for the customer’s rights and property, as well as for others.

Exercise the skills and abilities of the trade.

Care for tools and equipment provided by the employer.

Eliminate waste and other forms of property destruction, including graffiti.

Limit lunch and break times to allocated periods; adhere to established start and quit times.

Leave inappropriate behavior to those of lesser knowledge.

Employ the proper tool for the job and maintain personal tool responsibilities.

Not solicit funds or sell merchandise without the Business Manager’s approval.

Curtail idle time or pursuit of personal business during work hours, including cell phone use.

Expel job disruptions and refuse to engage in slowdowns or activities designed to extend the job or create overtime or any other conduct that would case the IBEW in a bad light.

INDIVIDUAL LETTER OF ASSENT-A

In signing this letter of assent, the undersigned firm does hereby authorize the Philadelphia Division, Penn-Del-Jersey Chapter, N.E.C.A. as its collective bargaining representative for all matters contained in or pertaining to the current and any subsequent approved Inside Commercial labor agreement between the Philadelphia Division, Penn-Del-Jersey Chapter, N.E.C.A. and Local Union 98, I.B.E.W. In doing so, the undersigned firm agrees to comply with, and be bound by, all of the terms and conditions contained in said current and subsequent approved labor agreements. This authorization, in compliance with the current approved labor agreement, shall become effective on the ____day of , 20__. It shall remain in effect until terminated by the undersigned Employer giving written notice to the Philadelphia Division, Penn-Del-Jersey Chapter, N.E.C.A. and to the Local Union at least one hundred fifty (150) days prior to the then current anniversary date of the applicable approved labor agreement.

The Employer agrees that if a majority of its Employees authorizes the Local Union to represent them in collective bargaining, the Employer will recognize the Local Union as the NLRA Section 9 (a) collective bargaining agent for all employees performing electrical construction work within the jurisdiction of the Local Union on all present and future jobsites.

In accordance with Orders issued by the United States District Court for the District of Maryland on October 10, 1980, in Civil Action HM-77-1302, if the undersigned Employer is not a member of the National Electrical Contractors Association, this letter of assent shall not bind the parties to any provision in the above-mentioned agreement requiring payment into the National Electrical Industry Fund, unless the above Orders of Court shall be stayed, reversed on appeal, or otherwise nullified.

SUBJECT TO THE APPROVAL OF THE INTERNATIONAL PRESIDENT - I.B.E.W.

Firm:

SIGNED FOR THE EMPLOYER

By:

Title:

Date:

SIGNED FOR LOCAL UNION 98, I.B.E.W.

By:

Title:

Date:

SEPARABILITY CLAUSE

Should any provision of this Agreement be declared illegal by any court of competent jurisdiction, such provisions shall immediately become null and void, leaving the remainder of the Agreement in full force and effect and the parties shall, thereupon, seek to negotiate substitute provisions where are in conformity with the applicable laws.

SIGNATURE PAGE

EFFECTIVE DATES: April 29, 2013 UNTIL April 30, 2017

Signed for:

Philadelphia Division of the
Penn-Del-Jersey Chapter,
N.E.C.A.

Jeffrey Scarpello
Robert Duff
Thomas Moore, Jr.
Bernie Schaffer

Signed for:

Local Union 98,
International Brotherhood of Electrical
Workers of Philadelphia, Pa

John J. Dougherty
Brian Burrows
Edward J. Coppinger
James Snyder

GEOGRAPHICAL JURISDICTIONAL LINES OF LOCAL UNION 98, IBEW

Bucks County:

In the area between the following lines.

1. Starting at the Delaware River and following the west limits of the Borough of Bristol, along the continuation of U.S. Highway 13 and under the Pennsylvania Railroad bridge to Route 09113, north on 09113 to Route 152, north along Route 152 to Hulmeville Road, east on Hulmeville Road to Route 344, north on Route 344 to the junction of Spurs 281 and 252, continue north on Spur 252 to Route 09028, west on 09028 to Route 152, north on 152 to TR 532, north on TR 532 to TR 113, north on TR 113 to TR 232 at Anchor Inn, northeast on TR 232 and continue northeast along Route 659 to Route 09060, west on 09060 to Route 402, north on 402 to the Borough line at the southwest corner of the Borough of New Hope. The Borough of New Hope is excluded.
2. Starting at the Delaware River and proceeding southwest along the Plumstead-Solebury and the Plumstead-Buckingham Township lines to Route 09064, northwest 09064 to U.S. Highway 611, south on 611 to the Spur of Route 270, northwest along the Spur to Route 397, southwest on 397 to Route 350, southeast on 350 to Route 395, southwest on 395 to Route 09069, southeast on 09069 to Route 09041, southwest on 09041 to the Montgomery County line.

Delaware County:

That portion east of a line following State Highway 320 from Montgomery County to Marple, then along the Springfield Road to Saxer Avenue, along Saxer Avenue to Powell Road, along Powell Road to State Highway 420 and continuing in a straight line to the Delaware River.

Montgomery County:

That portion southeast of a line following Lower State Road from Bucks County southwest to the Bethlehem Pike (U.S. Highway 309), south on Bethlehem Pike to the Penllyn Pike, Southwest on the Penllyn and Blue Bell Pikes to the Wissahickon Creek, southeast on the Wissahickon Creek to Butler Pike to North Lane near Conshohocken Borough, southeast on North Lane near to the Schuylkill River and continuing southeast in a line to Spring Mill Road and southwest on Spring Mill Road to Delaware County.

Philadelphia County:

In its entirety.

BUILD UNION

BUY AMERICAN

OFFICERS OF IBEW LOCAL UNION 98

Business Manager

John J. Dougherty

President

Brian Burrows

Vice-President

Tim Browne

Recording Secretary

Michael Mascuilli

Financial Secretary

Francis Walsh

Treasurer

Todd Neilson

Executive Board

Edward Coppinger

Jim Foy

Robert Gormley

Nick Gummel

Steven Wolfe

Examining Board

Kirk Henon

Robert Thompson

Joseph Bledsoe

www.ibew98.org

AGREEMENT

DATED MAY 1, 2013

between

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

and

**PLUMBERS LOCAL UNION NO. 690
of the
UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
COVERING PHILADELPHIA, BUCKS, CHESTER,
DELAWARE AND MONTGOMERY COUNTIES**

**EFFECTIVE
MAY 1, 2013 UNTIL APRIL 30, 2016**

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THIS AGREEMENT, made and effective this 1st day of May 2013, and amended and restated effective this 1st day of May, 2013 by and between MECHANICAL CONTRACTORS ASSOCIATION OF EASTERN PENNSYLVANIA, INC. (hereinafter called "EMPLOYERS' ASSOCIATION"), party of the first part, and LOCAL UNION No. 690 of the UNITED ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF THE PLUMBING AND PIPE FITTING INDUSTRY OF THE UNITED STATES AND CANADA (hereinafter called "LOCAL UNION"), party of the second part, for the purpose of securing at all times a sufficiency of skilled journeymen at fair wage rates, thereby preventing waste and unnecessary expense, annoyance, or delay and for the advancement of the interests of EMPLOYERS' ASSOCIATION and LOCAL UNION.

WITNESSETH:

ARTICLE I

SECTION 1

Term of Agreement

This Agreement, as amended and restated, shall remain in full force and effect from May 1, 2013 until April 30, 2016, and shall be automatically renewed from year to year thereafter unless either party shall give notice in writing to the other party not less than one hundred and twenty (120) days before the expiration of the term hereof, or the expiration of any such yearly extension of the terms hereof, of intention to terminate this Agreement or to request changes in the terms and conditions hereof. The basic changes requested shall be set forth in said written notice.

SECTION 2

Geographic Jurisdiction

The territorial jurisdiction of LOCAL UNION for the purposes of this agreement shall be Philadelphia, Bucks, Chester, Delaware and Montgomery Counties.

SECTION 3

Work Jurisdiction

This Agreement shall apply to and cover all employees of an Employer employed to perform or performing plumbing, heating and piping work as listed hereinafter within the geographical jurisdiction set forth in Section 2 above:

1. All piping for plumbing, water, waste, floor drains, drain gates, supply, leader, soil pipe, grease traps, sewage and vent lines.
2. All piping for water filters, water softeners, water meters and the setting of same.
3. All cold, hot and circulating water lines, piping for house pumps, cellar drainers, ejectors, house tanks, pressure tanks, swimming pools, ornamental pools, display fountains, drinking fountains, aquariums, amusement and water parks, plumbing fixtures and appliances, and the handling and setting of the above mentioned equipment.
4. All water services from mains to buildings, including water meters and water meter foundations.
5. All water mains from whatever source, including branches and fire hydrants, etc.
6. All down spouts and drainage areas, soil pipe, catch basins, manholes, drains, gravel basins, storm water sewers, septic tanks, cesspools, water storage tanks, etc.
 - (a) All sewers and storm drains out to the curb of property lines to be installed by journeymen plumbers.
7. All liquid soap piping, liquid soap tanks, soap valves, and equipment in bath and washrooms, shower stalls, etc.
8. All bathroom, toilet room and shower room accessories, i.e., as towel

- racks, paper holders, glass shelves, hooks, mirrors, cabinets, etc.
9. All lawn sprinkler work, including piping, fittings and lawn sprinkler heads.
10. All sheet lead lining for X-ray rooms, fountains, swimming pools or shower stalls, tanks, or vats for all purposes and for roof flashings in connection with the pipefitting industry.
11. All fire stand pipes, fire pumps, pressure and storage tanks, valves, hose racks, fire hose cabinets and accessories, and all piping for sprinkler work of every description.
12. All block tin coils, carbonic gas piping, for soda fountains and bars, etc.
13. All piping for railing work, and racks of every description, whether screwed or welded.
14. All piping for pneumatic vacuum cleaning systems of every description.
15. All piping for hydraulic, vacuum pneumatic air, water, steam, oil or gas, used in connection with railway cars, railway motor cars and railway locomotives.
16. All marine piping, and all piping used in connection with ship building and ship yards.
17. All power plant piping of every description.
18. The handling, assembling, and erecting of all economizers, superheaters, regardless of the mode or method of making joints, hangers, and erection of same.
19. All internal and external piping on boilers, heaters, tanks, and evaporators, water legs, water backs, and water grates, boiler compound equipment, etc.
20. All soot blowers and soot collecting piping systems.
21. The setting, erecting and piping, for all smoke consuming and smoke washing and regulating devices.
22. The setting, erecting and piping of instruments, measuring devices, thermostatic controls, gauge boards, and other controls used in connection with power, heating, refrigeration, air conditioning, manufacturing, mining and industrial work.
23. The setting and erecting of all boiler feeder water heaters, filters, water softeners, purifiers, condensate equipment, pumps, condensers, coolers, and all piping for same in power houses, distributing and boosting stations, refrigeration, bottling, distilling, and brewing plants, heating, ventilating and air-conditioning systems.
24. All piping for artificial gases, natural gases, and holders and equipment for same, chemicals, minerals and byproducts and refining of same, for any and all purposes.
25. The setting and erecting of all under-feed stokers, fuel burners, and piping, including gas, oil, power fuel, hot and cold air piping, and all accessories and parts of burners and stokers, etc.
26. All ash collecting and conveyer piping systems, including all air washing and dust collecting piping and equipment, accessories and appurtenances and regulating devices, etc.
27. The setting and erection of all oil heaters, oil coolers, storage and distribution tanks, transfer pumps, and mixing devices, and all piping thereto of every description.
28. The setting, erecting and piping of all cooling units, pumps, reclaiming systems, and appurtenances, in connection with transformers, and piping to switches of every description.
29. All fire extinguishing systems, and piping whether by water, steam, gas, or chemical fire alarm piping, and control tubing, etc.
30. All piping for sterilizing, chemical treatment, deodorizing, and all cleaning systems of every description, and laundries for all purposes.
31. All piping for oil or gasoline tanks, gravity and pressure lubricating and greasing systems, air and hydraulic lifts, etc.
32. All piping for power, or heating purposes, either by water, air, steam, gas, oil, chemicals, or any other method.
33. All piping, setting and hanging of all units and fixtures for air-conditioning, cooling, heating, roof cooling, refrigerating, ice making, humidifying, dehumidifying, dehydrating, by any method, and the charging and testing, servicing of all work after completion.
34. All pneumatic tube work, and all piping for carrying systems by

- vacuum, compressed air, steam, water, or any other method.
35. All piping to stoves, fire grates, blast and heating furnaces, ovens, dryers, heaters, oil burners, stokers and boilers and cooking utensils, etc. of every description.
 36. All piping in connection with central distributing filtration treatment stations, boosting stations, waste and sewage disposal plants, central chlorination, chemical treatment, waste water treatment, sewerage treatment and water treatment work; and all underground supply lines to cooling wells, suction basins, filter basins, settling basins, aeration basins, steam piping, steam condensate piping and process piping.
 37. All process piping for refining, manufacturing, industrial and shipping purposes, of every character and description.
 38. All air piping of every description.
 39. All temporary piping of every description in connection with building and construction work, excavating and underground construction.
 40. The laying out and coring of all holes, chases and channels, the setting and erection of bolts, inserts, stands, brackets, supports, sleeves, thimbles, hangers, conduits, and boxes, used in connection with the pipefitting industry.
 41. The handling and setting of boilers, setting of fronts, setting of soot blowers, and attaching of all boiler trimmings.
 42. All pipe transportation lines for gas, oil, gasoline, fluids and liquids, water aqueducts, and water lines, and booster stations of every description.
 43. All acetylene and arc welding, brazing, lead burning, soldered and wiped joints, caulked joints, expanded joints, rolled joints, or any other mode or method of making joints in connection with the pipefitting industry.
 44. Laying out, cutting, bending, and fabricating of all pipe work of every description, by whatever mode or method.
 45. All methods of stress relieving of all pipe joints made by every mode or method.
 46. The assembling and erecting of tanks used for mechanical manufacturing or industrial purposes, to be assembled with bolts, packed or welded joints.
 47. The handling of all materials in connection with the foregoing work as well as the handling and using of all tools and equipment that may be necessary for the erection and installation of all work and materials used in the pipefitting industry.
 48. The operation, maintenance, repairing, servicing and dismantling of all work installed by Employers in the Bargaining Unit. The initial protection and the first cleaning only, of all plumbing fixtures will be the work of the Union.
 49. All piping for cataracts, cascades, i.e. (artificial water falls), make-up water fountains, captured waters, water towers, cooling towers, and spray ponds, used for industrial manufacturing, commercial, or for any other purposes.
 50. Piping herein specified means pipe made from metals, tile, glass, rubber, plastics, wood, or any other kind of material or product manufactured into pipe, usable in the pipefitting industry, regardless of size or shapes.
 - (a) The rigging, leveling and setting of all fixtures, boilers assembled, compressors and any other equipment used in connection with the piping or pipefitting industry. The rigging, placing of hangers necessary to support same.
 51. And as demonstrated by custom, any other work as fits within the trade-line jurisdiction of the United Association.
 52. Installation of all pipe whether in the ground or above the ground used for drainage, waste, water lines, including industrial waste and acids and other usage including deliverance of solids and liquids.
 53. The installation, repair and maintenance of all hydraulic heating and/or cooling units, however energized.
 54. It is mutually agreed that the operation, maintenance, repair and protection of all tools and equipment used by the journeymen is the work of the United Association. It is the intention that the journeymen shall have complete control of their own equipment. The equipment referred to in this section shall include, but not be limited to, welding machines and accessories, regardless of the source of power, pipe threading and cut-off machines, winches, hoists, A-frames, stiff-leg derricks, cherry-pickers, back hoes, front end loaders, fork lifts, ditch witches, hydraulic and aerial platforms, winch trucks, job trucks, homelite generators, pumps, electric drills, transit levels, laser beams, where in connection with performing of United Association Pipe Work.
 55. All backing, regardless of material, for bathroom fixtures and accessories, heating accessories shall be installed by journeymen.
 56. When lifting devices are required in conjunction with the work of employees in this unit, a rigging crew of such employees shall be assigned by the Employer to man the rig. The size of the crew shall be determined by agreement between the Employer and the Business Manager or Agent of the Union.
 57. Geothermal Systems.
 58. Radon Piping Systems.
 59. Fire Stopping of pipe or fixture penetration sleeves.
 60. All appliances and fixtures related to the plumbing industry such as washers, dryers, refrigerators, gas ranges, garbage disposals, dish washers and all related appliances, including the unloading, handling, distribution and installation of such appliances.
 61. Manning and maintaining all electrical machines and equipment required for the execution of the work provided in this Article.
 62. Handling, placing, erection, and maintenance of all heating, cooling, and air conditioning equipment regardless of the source of heat or energy.
 63. All work performed in a UA Fabrication shop including piping, support steel, hangers and components.
 64. All handling of tools, piping, parts and components and materials, including unloading, warehousing to distribution of the work covered by this Agreement.
 65. Perform all hand and power rigging of all piping and piping components, including all hand signals and communication to the Equipment Operator when a crane or material lifting equipment is utilized.
 66. Perform all layout and framing of equipment foundations within the mechanical contractor's scope, including but not limited to pumps, compressors, boilers and any h.v.a.c. or process piping associated with the work covered by this Agreement.
 67. Cryogenic vent piping off of "MRI" magnetic resonance imaging machine.
 68. Installation of support steel for mechanical equipment whether temporary or permanent.
 69. Methane gas-all piping for landfills, whether venting or extracting.
 70. Install all VESDA piping.
 71. Install all medical gas piping and related equipment and supports.
 72. All patent scaffold up to 14 feet or 2 1/2 sections.
 73. Vent piping off of condensing furnace.
 74. The installation, maintenance, modification and testing of all power plant piping of every description. This includes all boiler and turbine piping systems and associated components, valves, controls, instruments, pipe supports and pipe hangers.
 75. The installation, maintenance and modification of any "green building system" piping and piping systems, including all components, controls, hangers and supports.
 76. Installation of all pneumatic and vacuum conveyor systems.

ARTICLE II

SECTION 1

Regular Days and Hours of Work

Eight (8) hours shall constitute a day's work, Monday to Friday, inclusive. However, no journeymen plumbers and apprentices shall work or be permitted to work in excess of forty (40) hours in any one (1) week, or eight (8) hours

in any twenty-four (24) hour period, except in an emergency wherein lives or property are in danger. No journeymen plumbers and apprentices will be permitted to make in excess of forty (40) hours in any one (1) week while other journeymen plumbers and apprentices are unemployed. By mutual consent of the Employer and the Union, the starting and quitting time of a normal established work day of eight (8) hours may be set or changed for any or all Employees between the hours of 7:00 A.M. And 4:30 P.M. on any given project. During the regular work period, the Employees shall be granted an unpaid lunch period of thirty (30) minutes - time by mutual agreement between Employer and Union. At the start of the shift, the journeymen plumbers and apprentices must be out of the trailer, ready to go to work.

SECTION 2

Overtime

Any work performed by employees between 4:30 PM. and 7:00 a.m. And between 12 noon and 12:30 p.m. and Saturday shall be paid for at one and one-half (1 1/2) times the straight time rate. Any work performed in excess of twelve (12) hours work continuously, Sundays, New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (for purposes of this Agreement when any one of the aforementioned holidays falls on Sunday, the following Monday shall be observed as the holiday) shall be paid for at the rate of double (2) the straight time rate commencing at the time the employees report for work by direction of employer, excluding shift work, which is covered by Article II, Section 3 and maintenance work covered by Article II, Section 6. Employees shall be allowed sufficient time before quitting time for collection of tools and equipment and for putting them away. On special occasions or emergencies when a hoist or rig is available for use by the employer only during the normal lunch period, then at the option of the employer, those employees whose services may be needed in connection with the use of the hoist or rig may be required to work between 12 noon and 12:30 p.m. with pay at the straight time rate, if such employees are granted a lunch period immediately before or after the regularly scheduled lunch period.

SECTION 3

Shift Work

In order to be considered as shift work, work must be performed by Employees on at least two (2) consecutive eight (8) hour shifts within one (1) day. Shifts shall be from 12:00 midnight to 8:00 A.M., 8:00 A.M. to 4:00 P.M. to 12:00 midnight. Shift work must run for a minimum of one hundred twenty (120) hours when three (3) shifts are worked, and eighty (80) hours when two (2) shifts are worked. However, shift work shall not apply to Saturday, which shall be at one and one-half times (1-1/2x), and Sunday, or holidays (on holidays hereinbefore set forth) work, which shall be at double (2) the straight time rate. Shift work will be paid for at the rate of straight time plus fifteen percent (15%) of the straight time rate of hourly pay except the shift between 8:00 A.M. to 4:00 P.M., which shall be paid for at straight time.

Single Shift Off Normal Hours

In existing facilities, and when requested by the customer, the Employer, with the consent of the Union, which shall not be unreasonably withheld, may elect to work a single "non-standard" working hour shift, for a minimum of five (5) consecutive work days, to be paid for at the rate of straight time plus fifteen percent (15%). The shift may be worked wholly or partially outside of the normal 7:00 A.M. thru 4:30 P.M. work hours and will be guaranteed for a minimum of forty (40) hours each for the entire crew.

Eight Hours Work for Eight Hours Pay

There are no paid lunch periods except when working three (3) consecutive shifts within one twenty-four (24) hour day. When working three (3) shifts,

the shift will consist of seven and one-half (7-1/2) hours worked and one half (1/2) hour for lunch, for eight (8) hours pay.

SECTION 4

Four Tens

In lieu of the traditional five (5) day, eight (8) hour per day work week, the Employer, with the consent of the Union, which shall not be unreasonably withheld, may elect to work a four (4) day, ten (10) hour per day work week. The work week will commence on Monday unless otherwise agreed upon. The first two (2) hours worked in excess of ten (10) will be paid for at the rate of time plus one-half (1-1/2x) and all hours thereafter will be paid for at the rate of double time (2x). The first twelve (12) hours worked on Friday and Saturday will be paid for at the rate of time plus one-half (1-1/2x) and all hours thereafter will be paid for at the rate of double time (2x). All hours worked on Sundays and holidays will be paid for at the rate of double time (2x).

It is the intention of this agreement to provide competitive opportunities for the industry without eroding the traditional five (5) day work week.

SECTION 5

Reporting Pay

(A) Any journeyman plumber reporting to work at the regular starting time shall receive two (2) hours pay at the prevailing rate of wages unless he has been notified previously not to report to work.

(B) Any journeyman plumber who reports to work and for whom work is provided shall receive no less than four (4) hours pay, and if more than four (4) hours are worked in any one (1) day and no further work is provided, he shall be paid for not less than eight (8) hours worked.

(C) However, on any day where rain, snow, or inclement weather at the job site does not permit the job to progress satisfactorily, the journeyman plumber shall be paid for all time worked, but in no event shall he be paid less than a minimum of two (2) hours, unless the journeyman plumber has been directed not to report for work. It is the joint understanding of the parties hereto that the meaning of this clause, that is, Section 5(c) immediately preceding, is as follows:

(1) If a journeyman plumber reports to work on any day and he is put to work by the Employer, and the weather conditions do not change appreciably for the worse within the two (2) hours from starting time, then he shall be entitled to continue to work and be paid for the time worked, but not less than four (4) hours.

(2) If a journeyman plumber reports to work on any day and he is put to work by the Employer, and the weather conditions do change appreciably for the worse within two (2) hours from the starting time, then he shall be paid for the time worked, but no less than two (2) hours. If under these conditions, the journeyman plumber is not notified to discontinue work within said two (2) hours, then he shall be paid for four (4) hours.

SECTION 6

Maintenance, Repair Work and Emergency Breakdowns

It is agreed that maintenance, repair work and emergency breakdowns are defined to mean repairs to, or the replacement of all or any part of work which is under the jurisdiction of LOCAL UNION in existing buildings presently in use, but shall not include new buildings under construction or renovation of, or additions to existing buildings. The rate of pay for overtime for the work defined above shall be one and one-half times (1-1/2x) the hourly rate, except on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day and on such days as the above mentioned holidays are observed, on which mentioned holidays the rate for said work shall continue at double (2) the hourly rate.

ARTICLE III

SECTION 1

Straight Time Rates of Pay

Commencing May 1, 2013, straight time for journeymen plumbers shall be paid at the rate of Forty-Four Dollars and Fifty-Three Cents (\$44.53).

Commencing May 1, 2014, the journeyman plumber's hourly rate shall be increased by Two Dollars and Zero Cents (\$2.00) The Union shall have the option of applying such increase or portions of such increase to fringe benefits including the Pension Plan, the Supplemental Retirement Plan, and the Health Plan.

Commencing May 1, 2015, the journeyman plumber's hourly rate shall be increased by One Dollar and Ninety-Five Cents (\$1.95) The Union shall have the option of applying such increase or portions of such increase to fringe benefits including the Pension Plan, the Supplemental Retirement Plan, and the Health Plan.

SECTION 2

Foremen's Rates of Pay

(A) On construction jobs or operations where at least two (2) and no more than five (5) journeymen plumbers are employed at a single location, one (1) journeyman plumber shall be designated as Foreman. The rate of pay which such Foreman shall receive shall be a minimum of seven percent (7%) over and above the journeyman plumber's rate of pay.

When a construction job or operation starts, which will employ six (6) or more journeymen plumbers, the Foreman shall receive a minimum of ten percent (10%) over and above the journeyman plumber's rate of pay. Such rate of pay for the Foreman shall begin when the second (2nd) journeyman plumber is employed. When more than ten (10) journeymen plumbers are employed, an additional Foreman shall be designated, and one (1) additional Foreman shall be designated for each additional ten (10) journeymen plumbers employed thereafter and shall receive ten percent (10%) over and above the journeyman plumber's rate of pay. When a construction job or operation starts, which will employ more than ten (10) journeymen plumbers, the first Foreman shall receive a minimum of fifteen percent (15%) over and above the journeyman plumber's rate of pay.

(B) On a construction job or operation where two (2) or more Foremen are required and a maximum of one hundred (100) journeymen plumbers are employed, one (1) journeyman plumber shall be designated as General Foreman who shall receive a minimum of fifteen percent (15%) over and above the journeyman plumber's rate of pay.

On a job or operation where one hundred and one (101) or more journeymen plumbers are employed, the General Foreman shall receive a minimum of twenty percent (20%) over and above the journeyman plumber's rate of pay.

In the event it is reasonably anticipated at the time of the commencement of a construction project or operation that twenty-five (25) or more journeymen plumbers will be employed, a General Foreman shall be designated at the time of the commencement of construction. However, unforeseen peaks or changes on smaller construction projects shall not entitle any Employee to retroactive pay.

(C) Area Foremen, if utilized, shall be paid at a minimum of twelve percent (12%) over and above the journeyman plumber's rate of pay.

SECTION 3

Apprentices' Rates of Pay

The total package for apprentices (i.e., hourly wages, plus contribution to the Pension Plan, Supplemental Retirement Plan, Health Plan, and Apprenticeship Training Plan) for each period of advancement can be found in Appendix "D".

In the event of a lay off, the Employer, on a per shop basis, shall first layoff

any First, Second or Third Period apprentice before laying off any Fourth through Tenth Period apprentice.

All apprentices shall be guaranteed a forty (40) hour week except where the apprentices fail to report for work, provided that:

(1) In any work week in which a holiday shall fall or is observed during the period from Monday through Friday, the guarantee for that week shall be reduced by eight (8) hours for each such holiday, and

(2) Apprentices irrespective of when indentured shall not be entitled to be paid any wages for time spent by them in attending school during the entire period of their apprenticeship training.

SECTION 4

Apprentice Training Program

The apprenticeship training program shall be reasonably increased in the number of apprentices to be enrolled in each new class commencing after the effective date of the within Collective Bargaining Agreement.

A five-year (5) Apprenticeship Training Program has been established and will be maintained by the Joint Apprenticeship Committee.

SECTION 5

Pay for Travel Time

Journeymen plumbers sent out of the jurisdiction of LOCAL UNION (which for the purposes of this Agreement shall include the Counties of Berks, Bucks, Chester, Delaware, Lehigh, Montgomery, Northampton and Philadelphia, and the southeasterly portions of Carbon and Lebanon Counties in the Commonwealth of Pennsylvania, which represent the territorial jurisdiction of LOCAL UNION) shall receive all suitable Board and Traveling expenses. Journeymen plumbers while traveling shall receive wages of straight time, not to exceed eight (8) hours in any twenty-four (24) hour period.

SECTION 6

Time for Paying Wages

Weekly wages shall be paid not later than the scheduled quitting time on the regular pay day of each week. Upon layoff or discharge, Employee is to receive wages in full not later than thirty (30) minutes prior to the scheduled quitting time on the day of layoff or discharge. Waiting time for wages either on regular pay day or discharge or layoff shall be paid for at double time (2x) rate. Where checks are used, pay day will be no later than Thursday of each week. The Employer shall provide facilities for cashing of checks without cost to the Employee by the Todd System or a similar system.

SECTION 7

Transportation Expenses

Within the territorial jurisdiction of LOCAL UNION (as hereinbefore defined in Section 5) there shall be no transportation expenses paid to or from job sites.

SECTION 8

Power Plant

The parties agree that the first new power generation plant to be constructed in the Reading and Lehigh Valley Districts will be worked at the full Philadelphia wage and fringe benefit rate.

SECTION 9

Protection for Prevailing Rate (Davis Bacon And Pennsylvania) Work

Should the wage determination for a specific project not reflect the LU 690 agreed upon CBA rates in effect at that time, it will be the employer's responsibility to notify LU 690, in writing, of this discrepancy prior to submitting a bid for the project. LU 690 agrees to recognize the wage determination for that specific project, provided proper written notification has been provided by the contractor.

ARTICLE IV

SECTION 1

Efficiency of Operations

Inasmuch as greater efficiency in all lines of work is necessary, LOCAL UNION shall encourage its journeymen plumbers and apprentices in every way to accomplish results. There shall be no restrictions as to the amount of work journeymen plumbers and apprentices shall do, nor shall there be any restrictions as to the use of labor saving machinery for the installation of any work; provided that the aforesaid machinery meets with the approval of the Conference Committee. It is agreed that there shall be, at no time, more than one (1) apprentice with any journeyman plumber for any work, whatsoever it may be.

SECTION 2

Apprentices

Members of the EMPLOYERS' ASSOCIATION agree to employ as apprentices only those who are approved by the Joint Apprenticeship Committee and who are qualified under the standards registered with the State Apprenticeship Council. Each Employer may hire one (1) apprentice where one (1) journeyman is employed steadily and one (1) additional apprentice for every additional three (3) journeymen employed steadily. The apprentice shall be at all times under the supervision of a journeyman plumber. At no time shall more than one (1) apprentice be assigned to a journeyman. It is the intention of the parties that this Section 2 shall be construed as vesting jurisdiction in the Joint Apprenticeship Committee over all apprentices, regardless of whether a particular apprentice is or is not affiliated with the LOCAL UNION.

SECTION 3

Safety; Tools and Equipment

Members of the EMPLOYERS' ASSOCIATION agree to maintain safe working equipment to satisfactorily meet all requirements of laws, rules and regulations applicable thereto, and both Employer and Employee shall comply with all of the provisions of the Occupational Safety and Health Act and with the rules and regulations promulgated thereunder.

To further promote the safety of the Employees at the job site, no journeyman nor apprentice shall be required to work alone at locations which are mutually considered to be hazardous by the Employer or his representative (superintendent or foreman) and the Business Manager of the LOCAL UNION.

It is the intent of the parties to this Agreement to provide a safe work environment for all employees. Employer will provide hard hats, eye shields, hearing protection, face shields, burning goggles, welding gloves and/or other safety devices as may be required by law, local ordinance or at their discretion to reduce industrial accidents. Employees shall supply hard-soled footwear or steel-toed footwear, as necessary, and gloves.

In the event Journeymen plumbers or apprentices need to receive inoculations or other health treatments as a result of being exposed to

chemicals or infectious agents at an assigned worksite, the Employer shall be obligated to pay for all necessary inoculations or other medical treatment costs caused by worksite exposure, plus the travel costs and time spent receiving treatments during normal working hours.

Employer shall be obliged to furnish suitable raincoats, caps and/or boots, if necessary, during inclement weather in the event the Employer requires journeymen and/or apprentices to work during such weather.

Journeymen plumbers and apprentices shall be responsible for the reasonable care of tools and equipment and for willful negligence in the performance of their work. All complaints or charges with respect thereto shall be made by the particular Employer to the Conference Committee. Should such journeyman plumber or apprentice cited to appear before said Conference Committee in connection therewith be adjudged not guilty of the charge, then the Employer citing such journeyman plumber or apprentice shall pay him for the time lost in attending such hearing.

Local 690 will establish a ten (10) hour OSHA approved safety training course. Cost of the course will be paid by the Apprentice Fund. All Local 690 members will be strongly encouraged to complete this training by April 30, 2005, the end of this contract period. Journeymen plumbers and apprentices employed by contractors who establish their own ten (10) hour OSHA approved training course will receive straight time pay by the contractor.

ARTICLE V

Change Room

Employer shall furnish a suitable change room or shanty at the job site, and said change room or shanty shall be heated during the cold weather. Employer shall furnish drinking water for the Employees in the change room or shanty and on the job site. Water, hand cleaner and towels, or a method to dry wash hands shall be provided by the Employer.

ARTICLE VI

SECTION I

Fabrication of Pipe-Tools

Both parties agree that all pipe, for installation within the jurisdiction of LOCAL UNION, shall be fabricated by machine and with tools operated and handled by members of LOCAL UNION, and they shall be paid no less than the hourly wage rate for Journeyman and Apprentices as set forth in ARTICLE III, Section 1 of this Agreement. No Employee shall be permitted to furnish tools.

SECTION 2

Pipe Two Inches (2") and Under

Pipe two inches (2") and under shall be fabricated on the job by plumber mechanics to whom the work belongs. In cases where it is not practical to cut pipe on the job, it shall be discretionary with the Employer to have pipe two inches (2") and under fabricated elsewhere; provided, however, that permission is obtained by the Employer from the Business Manager of the LOCAL UNION.

SECTION 3

Responsibility for Work

It is further understood and agreed that the plumbing contractor shall be responsible for all piping and equipment which is part of the work of the United Association and shall be handled and set by journeymen plumbers and apprentices.

SECTION 4

Subletting of Work

No plumbing contractor shall be permitted to sublet work on any part of the plumbing system which is performed by members of the LOCAL UNION. Such work includes, but is not limited to, installation of accessories, backing boards, lead work, hole cutting, kitchen equipment, packing of sleeves, site work, coring, caulking fixtures, drain cleaning, cleaning of fixtures, and tub enclosures.

SECTION 5

Supplies

It is further agreed that plumbing contractor will at all times where possible receive supplies from such houses as are in contractual relationship with the United Association. Union shall supply a list of such companies from time to time.

ARTICLE VII

SECTION 1

Who May Use Tools

There shall be no restriction on the use of tools by the foreman employed by the Employer, but it is agreed that such foreman shall be a journeyman plumber. A superintendent to use the tools shall be a journeyman plumber.

SECTION 2

Safeguarding Work of Employees

Employer shall not work "with the tools" and agrees to employ at least one (1) journeyman plumber who shall be a member of LOCAL UNION, who need not be the same member, for the duration of the term of this Agreement in accordance with the provisions of ARTICLE XVII hereof.

SECTION 3

Work Preservation

The Employer agrees that no evasion of the terms, requirements, and provisions of this Agreement will take place. If and when Employer shall perform any work of the type covered by this Agreement within the jurisdictional territory of Union, under its own name or under the name of another, as a corporation, company, partnership, or any other business entity, including a joint venture, wherein the Employer through its officers, directors, partners, or stockholders, exercise control of labor policies of such other entity, the terms and conditions of this Agreement shall be applicable to all such work.

This clause shall only be applicable to job site work as that term is used in the construction industry proviso to Section 8 (e) of the National Labor Relations Act. This clause will not be applicable to non-jobsite work.

Notwithstanding anything herein contained to the contrary, in the event there is a determination by the National Labor Relations Board (N.L.R.B.) (or its counsel) or by a court of competent jurisdiction that the aforesaid provisions are illegal, unlawful, or in violation of the provisions of the National Labor Relations Act, upon such determination the aforesaid provisions shall be void and of no effect.

Inasmuch as the Union has submitted proof that a majority of the Employers' Employees have authorized the Union to represent them in collective bargaining with the Employer and the Employer is satisfied that the Union represents a majority of its Employees in the bargaining unit described herein, the Employer recognizes the Union as the exclusive

Section 9(a) collective bargaining agent for all of its journeymen plumbers and apprentices on all present and future job sites within the jurisdiction of the Union, unless and until such time as the Union loses its status as the Employees' exclusive representative as a result of an N.L.R.B. Election.

ARTICLE VIII

SECTION 1

Union Membership

The EMPLOYERS' ASSOCIATION recognizes LOCAL UNION as the sole and exclusive collective bargaining representative of all its journeymen plumbers and apprentices who shall become and remain members of LOCAL UNION in good standing seven (7) days after the date of their employment, or seven (7) days after the effective date of this Agreement, whichever is the later, and, upon becoming members, they shall maintain their membership in good standing in order to continue in employment. LOCAL UNION agrees, at the request of EMPLOYERS' ASSOCIATION, to furnish competent plumbers and apprentices to the Employers in accordance with the provisions of ARTICLE XVII hereof.

SECTION 2

Local Union Autonomy

The LOCAL UNION shall at all times have full autonomous jurisdiction over its own membership. However, it is understood and agreed that working rules of LOCAL UNION cannot be made to conflict with this Agreement and that this Agreement governs.

SECTION 3

Union's Rights of Visitation

The EMPLOYERS' ASSOCIATION agrees that representatives of the United Association shall be permitted to visit all jobs being done by journeymen plumbers and apprentices represented by LOCAL UNION.

SECTION 4

Employer Reporting Requirements

All employers signatory to this Agreement shall report to the LOCAL UNION the name and address of all plumbing jobs contracted for in excess of \$5,000.00. Repeated failure to report plumbing jobs in excess of \$5,000.00 may result in a Steward being placed with the non-reporting Employer by the LOCAL UNION.

ARTICLE IX

SECTION 1

Employer Payments for Fringe Benefits

(A) The parties hereto agree that commencing May 1, 2013, every Employer, under the terms of this Collective Bargaining Agreement, employing journeymen plumbers and apprentices represented by LOCAL UNION, shall contribute the following sums per hour for the hours compensated (contributions shall be double (2x) or one and one-half (1-1/2x) the regular rate per hour for each hour of overtime worked, in accordance with ARTICLE II, Sections 1 through 6, and one (1) plus fifteen percent (15%) times the regular rate per hour for each hour of shift work worked, including reporting time, which shall be compensated for, by all journeymen plumbers and apprentices employed by said respective Employers, which shall be paid by checks to the order of Wells Fargo Bank or to such successor

of said company as the Trustees of the below-listed Plans may from time to time designate (hereinafter called "Depository") as the Depository for said contribution, and shall be mailed to The Industry Fund Building, 2791 Southampton Road, Philadelphia, PA 19154. Said contributions shall be in such sums and shall be allocated as follows:

Commencing May 1, 2013

Journeyman:

Health Plan.....	\$ 13.69
Health Plan - Eligibility Maintenance	\$ 0.50
Pension Plan - Regular Contribution	\$ 10.07
Supplemental Retirement Plan.....	\$ 4.00
Apprentice Training Plan	\$0.90
UA Training Fund.....	\$ 0.00
Industry Fund.....	\$ 0.27
Scholarship.....	\$ 0.05
Total.....	\$ 29.48

Apprentices:

For apprentice Wage Rates and Fringe Benefits, see Appendix "D"

In accordance with ARTICLE III, Section 1, the Union shall have the option of applying such portion or portions of the wage increase provided for on May 1, 2013, to fringe benefits, including the Pension Plan, the Supplemental Retirement Plan, and the Health Plan, or such other Plan as might be created from time to time.

Effective May 1, 2013, Employer contributions to the Industry Fund may be increased each year at the option of the EMPLOYERS' ASSOCIATION.

At any time on or after May 1, 2013, upon the mutual agreement of the parties, this Agreement may be reopened for the sole purpose of increasing the hourly contributions to the Health Fund and/or the Pension Fund, should the Trustees of such Plan agree that such increase is necessary.

(B) The Union may designate work otherwise covered by this Agreement as targeted work. As part of this designation, the Union may enter into an agreement that provides that the contribution to the Health Plan and/or the Pension Plan is lower than the hourly rate stated above. The Agreement may eliminate the hourly contribution to the Health Plan and/or the Pension Plan for such targeted work.

The parties to this agreement acknowledge that pursuant to the authority given to the Trustees in the Trust Agreement establishing the Health Plan, the Trustees may determine that employees performing targeted work at the lower hourly contribution rates than stated in (a) may receive reduced benefits or no benefits.

Each employer signatory to this Agreement will pay to the Health Plan an additional contribution of \$.50 per hour for each hour of work covered by this agreement for Eligibility Maintenance. The Eligibility Maintenance contribution will first be used by the Trustees of the Health Plan to supplement the benefits of employees working on targeted work at hourly contributions rates lower than stated in (a) to insure, to the extent it is financially feasible, that such employees will not lose health benefits or receive benefits because of the lower contribution rate. The Eligibility Maintenance contribution may also be used, in the discretion of the Trustees after they have provided for the maintenance of benefits of employees working on targeted jobs, to maintain benefits and eligibility for other employees.

SECTION 2

Vacation Plan

Commencing May 1, 2013, every Employer under the terms of this Collective Bargaining Agreement and every other mechanical contractor in contractual relationship with LOCAL UNION and/or employing journeymen plumbers and apprentices represented by LOCAL UNION shall withhold out of the net wages (gross wages less usual payroll deductions) of each journeyman plumber employed by it the sum of Two Dollars and Zero Cents (\$2.00) and of each apprentice employed by it the sum of Fifty Cents (\$.50) per hour for the hours compensated (withholding for Vacation Plan shall be

double (2) or one and one-half (1-1/2) the regular rate per hour for each hour of overtime worked in accordance with ARTICLE II, Section 2 and 5 and one (1) plus fifteen percent (15%) times the regular rate per hour for each hour of shift work worked), including reporting time which shall be compensated for and shall pay over such amounts so collected by checks to the order of Wachovia Bank, which shall be the Depository of said Vacation Plan, and shall be mailed to The Industry Fund Building, 2791 Southampton Road, Philadelphia, PA 19154.

SECTION 3

Dues Check-Off Authorization

Every Employer shall deduct from the net wages of those Employees who so authorize them by written assignment or signed "Dues Check-Off Authorization" filed with the LOCAL UNION, two point fifty-two percent (2.52%) of total package (gross wages plus fringe benefit package) representing the LOCAL UNION membership dues, and/or such other dues and assessments as may be approved by the membership from time to time, for each such Employee. All monies so deducted shall be paid by each Employer to LOCAL UNION, in accordance with the provisions of Sections 4 and 5 of this ARTICLE IX. It is understood and agreed that no deduction shall be made from any wages earned by an Employee prior to certification by the LOCAL UNION to the EMPLOYERS' ASSOCIATION of the aforesaid written assignment or signed "Dues Check-Off Authorization."

SECTION 4

**Plumbers Local Union 690 Political Action Plan
and
Plumbers Local Union 690 Social Plan**

Every Employer shall deduct Forty-Seven Cents (\$.47) per hour from the net wages of those Journeyman Employees and Thirty-Two Cents (\$.32) per hour from the net wages of those Apprentices who execute a "Voluntary Contribution Agreement and Check-Off Authorization for Plumbers Local Union 690 Political Action Plan" card representing voluntary contributions of the Employee to the Plumbers Local Union 690 Political Action Plan.

Every Employer shall deduct Fifty Cents (\$.50) per hour from the net wages of those Journeyman Employees and Forty Cents (\$.40) per hour from the net wages of those Apprentices who execute a "Voluntary Contribution Agreement and Check-Off Authorization for Plumbers Local Union 690 Social Plan" card representing voluntary contributions of the Employee to the Plumbers Local Union 690 Social Plan.

All monies so deducted shall be paid by the Employer, respectively, to the Plumbers Local Union 690 Political Action Plan, and to the Plumbers Local Union 690 Social Plan, in accordance with the provisions of Sections 5 and 6 of this ARTICLE IX. It is understood and agreed that such Employee contributions are voluntary, that participation in either of the said Plans is not a term or condition of employment, that an Employee may revoke such authorization at any time upon written notice thereof, and that no deductions shall be made from any wages earned by an Employee prior to certification by the LOCAL UNION of the aforesaid written authorization, or after receipt by the Employer of a written notice from an Employee revoking the aforesaid written authorization/check-off.

SECTION 5

Due Dates of Payments and Reports

The contributions and payments to be made in accordance with Sections 1, 2, 3, and 4 of ARTICLE IX shall be made by Employer on or before the tenth (10th) working day following the end of each calendar month. Employer shall, within ten (10) working days from the end of each calendar month, transmit to the Industry Fund Building a report containing:

(A) The names and Social Security numbers of persons to whom this Agreement is applicable, who have been in the employ of Employer during such calendar month.

(B) The number of hours during said calendar month for which compensation (including compensation for reporting and waiting time) was payable.

(C) Such other information as said respective Boards of Trustees and/or Plans may reasonably require for the proper administration thereof.

In the event no person to whom this Agreement is applicable has worked for an Employer in that calendar month, a report so stating must be forwarded by such Employer to the Industry Fund Building within the aforesaid ten (10) working day period following the end of such month.

SECTION 6

Delinquency in Making Payment or Report

(A) In the event the contribution and payments provide for in Section 1, 2, 3, and 4 of this ARTICLE IX are not paid by the 15th day following the end of each calendar month, and/or in the event the report provided for in Section 5 of this ARTICLE IX is not transmitted to the Industry Fund, the Employer shall be considered as a "delinquent". If the 15th falls on a weekend or holiday, the contributions and report are due the 1st working day past the 15th. The "delinquent" Employer shall be subject to a late payment charge from the date when reporting and/or payment thereof was due to the date when payment is made. Such charge may be set from time to time by the Trustees regarding payment and contributions and payments pursuant to Sections 1 and 2 or by the Union regarding contributions and payments pursuant to Sections 3 and 4 of the ARTICLE IX. Each Employer shall be bound and governed by any Rules and Regulations or Procedures adopted by any Board of Trustees or Fringe Benefits Plans to which contributions are due and owing under this Agreement. .

In addition to any interest, financial penalty, fines or assessments, a delinquent Employer shall also be responsible for payment of all costs of the collection process, including, but not limited to, audit fees, counsel fees and costs. If a lawsuit needs to be filed to collect any amounts due the Benefit Plans, the Employer shall also be responsible for liquidated damages in the amount of twenty percent (20%) of the contributions due at the time the lawsuit is filed, plus interest, costs and attorney's fees associated with the collection of delinquent contributions. Such charges and expenses shall be paid to that entity to whom such contributions or payments are owed. In addition, LOCAL UNION shall, at its option, treat such failure to satisfy a delinquency as a breach of contract and should it exercise its option to remove its members from the job of such delinquent Employer, then the Employer shall be liable to pay unto any Employee so removed an amount equal to the wages lost by such Employee by reason of said Employer's breach of the within Agreement. However, in the event LOCAL UNION shall furnish its members to an Employer or Employers who have violated ARTICLE XII hereof, by not having furnished a bond in the appropriate amount with a corporate surety as provided therein, then Local Union shall be liable for the payment to all Plans of the contributions of such Employer or Employers to the extent of such Employer's or Employers' delinquencies.

(B) Regardless of whether any contributions or payments are owed pursuant to ARTICLE IX, Section 4, in the event no report is received within thirty (30) working days after the date of written notice, by Certified Mail, Return Receipt Requested, to the Employer of its failure to file such report, there shall be a penalty of Fifty Dollars (\$50.00) per week thereafter that said report is delinquent; said penalty payments to be shared equally between the Pension Plan and Health and Welfare Plan.

SECTION 7

Administration of Plans

The Health Plan shall be administered by a Board of eight (8) Trustees, four (4) to be appointed by the LOCAL UNION and four (4) to be appointed

by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc., one (1) by the Plumbing and Heating Contractors Association, and one (1) by the Plumbing and Heating Supply House Employer Association). The Pension Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by the contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc., and one (1) by the Plumbing and Heating Contractors Association). The Supplemental Retirement Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by the contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania Inc. and one (1) by the Plumbing and Heating Contractors Association and one (1) by the Plumbing and Heating Supply House Employers Association). The Apprenticeship Training Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc. and one (1) by the Plumbing and Heating Contractors Association). The Vacation Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc. and one (1) by the Plumbing and Heating Contractors Association). Once it receives approval from the IRS, the Scholarship Plan shall be administered by a Board of six (6) Trustees, three (3) to be appointed by LOCAL UNION, and three (3) to be appointed by contributing Employers, (two (2) of the Employer Trustees to be appointed by the Mechanical Contractors Association of Eastern Pennsylvania, Inc. and one (1) by the Plumbing and Heating Contractors Association). The LOCAL UNION shall not participate in any way in the administration of the Industry Fund or in disbursements therefrom. The Pension, Health, Supplemental Retirement, Apprenticeship Training, Vacation and Scholarship Plans shall be governed under and subject to the terms and provisions of appropriate written trust agreements and/or written plan documents.

ARTICLE X

SECTION 1

Rules Governing Apprenticeship and Training

The Employer agrees to cooperate with the LOCAL UNION for the practical training of apprentices for the plumbing and piping industry.

SECTION 2

Powers of Apprenticeship Committee

The Joint Apprenticeship Committee shall at all times have full autonomous jurisdiction over matters of the Apprenticeship Training by or through such rules, regulations and requirements or representatives as may by agreement or action be established.

SECTION 3

Actions of Apprentice Committee Not Subject to Arbitration

The actions of the Joint Apprenticeship Committee and any agreement and plans for Apprentice Training shall not be subject to the provisions of ARTICLE XXIII, Section 1.

ARTICLE XI

SECTION 1

Limitations on Use of Industry Fund's Assets

There presently exists an Industry Fund administered by EMPLOYERS' ASSOCIATION. The parties hereto agree that no part of said Fund, and no part of the contributions as set forth in ARTICLE IX, Section 1 (Industry Fund) hereof, shall be used for advertising, propaganda, or other purposes opposed to the interests of LOCAL UNION.

SECTION 2

Purposes of Industry Fund

It is further expressly understood and agreed that said Industry Fund shall be applied in payment of the operating costs of EMPLOYERS' ASSOCIATION, including, but not limited to, the expense of conducting public relations, public education as applied to the plumbing, heating, piping and air conditioning industry, costs and expenses connected with the promotion of stability of relations between labor and management, Employers' costs of collective bargaining on an industry-wide basis, Employers' costs of Employers' representatives in the adjustment of grievances and in arbitration, Employers' share of the fees of arbitrators, Employers' costs of their representatives in the administration of the various funds and committees as in this Agreement are set forth and in comparable undertakings engaged in from time to time.

SECTION 3

Employer and Employee Interest in Fund

Although designated a "contribution" in ARTICLE IX of this Agreement, it is expressly understood and agreed that said sum payable to said Industry Fund is not intended to be and is not a contribution to the Employees and no Employee or Employer has any proprietary interest in said Industry Fund.

ARTICLE XII

Bonds to Assure Payments

Each Employer agrees to immediately furnish a bond with a financially responsible corporate surety guaranteeing the payment by it of the contributions to the Plans and payment of the Dues Check-Off and Plumbers Local Union 690 Political Action Plan Check-Off, and Plumbers Local Union 690 Social Plan Check-Off, as provided in ARTICLE IX hereof. The amount of such bond shall be based upon the total number of hours worked, during the prior calendar year, by all of the journeymen plumbers and apprentices employed by said Employer as set forth below.

Annual Hours Worked by Collectively Bargained Employees in Prior Calendar Year	Amount of Bond Required
0 - 4,500	\$25,000
4,501 - 9,000	\$50,000
9,001 - 14,000	\$75,000
14,001 - 18,500	\$100,000
18,501 - 46,000	\$250,000
46,001 - 92,500	\$500,000
92,501 - 140,000	\$750,000
140,001 and above	\$1,000,000

After the end of each calendar year, each Employer shall calculate the total number of hours worked by journeymen plumbers and apprentices for that year and, for the following year, shall furnish a bond with corporate surety in the appropriate dollar amount required by the schedule set forth above.

However, should the Employer's average hours per month for three (3) consecutive months reach a level that on an annualized basis would place the Employer in a higher bond amount category, then the Employer must furnish a bond appropriate for the higher bond amount. The bond shall be pro-rated among the Plans and the Dues Check-Off and the Plumbers Local Union 690 Political Action Plan Check-Off, and the Plumbers Local Union 690 Social Plan Check-Off, mentioned in Sections 1, 2, 3 and 4 of ARTICLE IX hereof.

If any Employer covered by this Agreement on a project as a Prime or Sub-Contractor is forced to cease work on that project due to the failure on the part of the Owner, Prime Contractor, or Sub-Contractor, to pay monies due for properly submitted progress payments and/or payments for completed work and/or payments for approved changes and/or payments for work done under a notice to proceed order when such payments are due, then the Union is free, and not in violation of this Agreement, to not furnish workers to the Owner, Prime Contractor, Sub-Contractor, or other Contractor for purposes of completing that work. The purpose of this provision is to protect the ability of the Employer to properly pay wage and benefit contributions owed to the bargaining unit employees working under this Agreement.

ARTICLE XIII

Employees' Use of Vehicles

Employees are not permitted to use vehicles of any description unless such vehicles are supplied and maintained by the Employer, either before or during or after working hours for the purpose of transporting tools or materials for the conducting of any working activities. The prohibition applies whether or not the Employee is reimbursed by the Employer.

ARTICLE XIV

SECTION 1

Promotion of Better Workmanship/Standard for Excellence

It is further agreed that the advancement of better Journeymen Plumbers and Apprentices and better workmanship is to be promoted at all times, and that all parties will work together in an effort to see that all legal acts, laws, rules and regulations, or awarding authorities' specifications are complied with. In addition to the foregoing, the LOCAL UNION, the EMPLOYER'S ASSOCIATION and all signatory Employers agree that they have reviewed and adopted, as part of this Agreement, the "Standard for Excellence" adopted and issued by the United Association. The parties further agree that the provisions set forth in the Standard for Excellence shall be part of this Agreement and that all parties shall adhere to its terms and promote its goals.

SECTION 2

Conference Committee

This committee shall meet at least semi-annually and shall be comprised of 2 members from the MCA of Eastern Pennsylvania, 2 members of the Plumbing Contractors UAC Local 690 and 4 members of Local 690. The Committee may make such recommendations to the EMPLOYERS' ASSOCIATION and the LOCAL UNION as they deem desirable but shall not be authorized to effect any change in this Agreement or in customary working conditions.

SECTION 3

Committee to Study Ways of Increasing Employment

Promptly after the execution of this Agreement, the LOCAL UNION and the EMPLOYERS' ASSOCIATION will each appoint an equal number of their respective members (such number to be determined by mutual agreement) to serve as a committee to carry on a study for the purpose of devising methods to increase opportunities of employment, as well as to increase the volume of work available to Employers, and to recruit Employees that will meet the needs of the piping industry. The Committee will make periodic reports to the EMPLOYERS' ASSOCIATION and to the LOCAL UNION of its findings and recommendations.

The above-mentioned Committee shall meet at such time and place as shall be mutually agreed upon.

The Committee shall not have any authority to effect any change in this Agreement or in customary working conditions, nor shall any of the Committee's recommendations be binding upon the parties hereto, except upon mutual written agreement of the EMPLOYERS' ASSOCIATION and the LOCAL UNION.

LOCAL UNION and EMPLOYERS ASSOCIATION agree to a formal strategic planning process. A committee will meet a minimum of twice a year to develop a program that will increase market share for employers and employees of this agreement.

ARTICLE XV

Shop Steward

On all jobs where journeymen plumbers are employed, the Business Manager or his duly designated agent shall appoint a shop steward and, at the time of such appointment, give the Employer written notice of such appointment of a shop steward or successor.

Where there is reason to believe the CBA is not being followed, the Union shall have the right to place a Steward on any project anticipated to employ 5 or more members of Local 690 or if the Union has assigned market recovery funds to the project. The Steward shall be the last employee to be discharged except for the job Foreman and an Apprentice

There shall be no restrictions as to the amount of work such shop steward shall perform nor shall his duties as steward interfere with his work unreasonably. However, a shop steward shall have the right, during working time and with no loss of pay, to spend reasonable time adjusting grievances including time to meet with Employees and supervisors, after notifying his immediate supervisor of his intent.

Failure on the part of a shop steward, in the opinion of the Employer, to perform a reasonable day's work, may, at the option of the Employer, result in his dismissal or removal from the job and a successor appointed. It is understood that such dismissal or removal shall not take place without mutual agreement between the Employer, the Business Manager of the LOCAL UNION, or his duly appointed agent.

Shop stewards shall not participate in matters related to the referral, hiring, layoff, or discharge of Employees except that the Employer shall request each new Employee to report to the shop steward. The shop steward will make sure that the Employee has received the job rules and the safety rules. The shop stewards shall be informed of all layoffs, transfers, discharges, and shall make sure Employees are properly paid.

Shop stewards shall assist any Employee receiving a serious injury on the job or becoming sick. If necessary, the shop steward shall report this information to the foreman and the LOCAL UNION at once.

Shop stewards shall have no authority whatsoever to call, order, or create a strike, work stoppage, or slowdown. He shall report all serious matters to the LOCAL UNION office.

ARTICLE XVI

Connection to Pipe, Fixture or Appliance

Journeymen plumbers and apprentices shall not be required to connect up to or with any pipe or fixture or appliance that is in connection with the plumbing system unless such material has been purchased by or furnished by the plumbing contractor doing the installation.

ARTICLE XVII

SECTION 1

Sources of Employees Other Than Apprentices

(A) Subject to the other provisions of this ARTICLE XVII, Employer may obtain Employees other than apprentices either by hiring persons applying directly to Employer, or by soliciting persons to come into its employ by any means other than advertising, or by requesting LOCAL UNION to refer applicants for employment to Employer, or by all of such methods; provided, however, when hiring new plumber journeymen employees, Employer will request Union to refer applicants for employment, not to exceed a requirement of fifty percent (50%) of such newly hired journeymen employees. (This proviso will not affect Employer's free movement of his Employees throughout his entire company's work-force.) When re-hiring previous Employees within forty-five (45) days of lay-off, Employer need not request referrals from Union, provided the Employee was employed for a minimum of ten (10) consecutive working days and that the requirements of Section 2 of this ARTICLE XVII shall be met.

(B) Subject to the other provisions of this ARTICLE XVII, every Employee or prospective Employee to whom this Agreement is applicable, other than an apprentice, may seek and obtain employment either by direct communication to or from Employer, or by requesting LOCAL UNION to refer him to Employer seeking Employees, or by both such methods.

SECTION 2

Employer Reporting Requirements

(A) The hiring of apprentices shall be governed by the rules and regulations, as amended from time to time, of the Joint Apprenticeship Committee.

(B) In order to make possible the effectuation of the provisions of this ARTICLE XVII, every Employer subject to this Agreement shall, twenty-four (24) hours prior to employment of any newly hired Employee, notify the local business agent of the Union of the names of the Employees, the Employer, and the location of the job.

SECTION 3

Registration with LOCAL UNION Required

In order to be entitled to any rights or benefits under this ARTICLE XVII, an Employee must have registered at the LOCAL UNION Office as unemployed, upon such form of application as may uniformly be required of all Employees seeking employment. All rights under this ARTICLE XVII shall begin as of the date of such registration and shall be forfeited if the applicant makes a material misstatement in his or her application.

SECTION 4

Order of Referral

(A) Employer desiring the LOCAL UNION to supply him with Employees must give LOCAL UNION, whenever possible, forty-eight (48) hours notice

and the number of men he desires, the location of the job and of the probable duration of the job, it being understood that Employer will incur no obligation to guarantee such duration.

(B) The LOCAL UNION will refer applicants for employment to an Employer in the chronological order in which they become unemployed so that an applicant who is unemployed for the longest period and who is ready, willing, and able to accept employment shall be referred before any applicant who is unemployed for a shorter period of time.

SECTION 5

Registrant's Right to Refuse Referrals

Employee shall have the right to refuse two (2) consecutive referrals to work without losing his or her position on the list. However, upon a third (3rd) consecutive refusal to accept a referral to work, said Employee shall be placed on the list as if the Employee had registered as unemployed on the date of such third (3rd) consecutive refusal.

SECTION 6

Referred Employees Working Less Than Thirty Days

If an Employee, after being referred to work, is employed for less than fourteen (14) calendar days, such Employee shall retain his or her position on the list as if he or she had not been referred to work.

SECTION 7

Applicants Who Cannot Be Reached

An Employee will not lose his or her position on the list if he or she cannot be reached when employment is available and efforts to reach him are unsuccessful.

SECTION 8

No Discrimination in Referrals

There will be no discrimination in the effectuation of the provisions of this ARTICLE XVII between members and non-members of this LOCAL UNION.

SECTION 9

Posting Copies of This Article

Employer and LOCAL UNION shall post a copy of this ARTICLE XVII in places where notices to Employees and applicants for employment are customarily posted.

SECTION 10

Union Sole Administrator

The LOCAL UNION agrees that it shall be the sole administrator of the hiring hall arrangement and shall not be considered to act as the agent of the Employer, and thereby the LOCAL UNION assumes responsibility for any violations of the law committed by it in connection with its administration of the hiring hall arrangement. The Employer assumes responsibility for any violations of the law committed by Employer in connection with hiring or severance of employment.

ARTICLE XVIII

Affirmative Action Program

The parties hereto agree that the existing Affirmative Action Program between said parties is incorporated herein by reference thereto and made a part hereof.

ARTICLE XIX

Drug-Free Workplace Rules

Both parties agree to comply with the Anti-Drug Abuse Act of 1988 and related State and local regulations and to strive for drug-free work-sites within their jurisdictions. The parties have agreed that a new drug testing policy will be negotiated and made effective May 1, 2003. The new policy will permit drug tests only if required by the owner after an on-the-job accident or when reasonable cause exists. There will be no pre-employment drug testing under the policy. The parties will attempt to structure a policy that will avoid repetitious testing among signatory contractors.

ARTICLE XX

"Most Favored Nation Clause"

LOCAL UNION agrees that should it enter into any collective bargaining agreement with any other Employer during the effective period of this Agreement containing terms or conditions, including wages, (the rate of which shall be related to that specified for each of the Districts set forth in ARTICLE III hereof), or contributions, more favorable or advantageous to such Employer than those provided herein, then Employer members of Mechanical Contractors Association of Eastern Pennsylvania, Inc. and Employer members of Plumbing and Heating Contractors Association in the respective Districts, may at its or their option, elect to substitute any or all of such more favorable conditions for those provided herein.

ARTICLE XXI

Compliance with Existing Laws

It is not the intention of the parties to this Agreement to violate any existing Federal, State, or municipal law or regulations. However, should any article, section, paragraph, sentence or clause of the within Agreement be held to be illegal or in contravention or violation of any existing law by a court of competent jurisdiction, such part or parts shall immediately be held to be inoperative under this Agreement. All other provisions hereof shall continue to remain in full force and effect for the duration of this Agreement.

ARTICLE XXII

Memoranda of Agreement

The parties hereto agree that Appendix A, B and C shall be incorporated by reference herein and made a part of this Agreement.

ARTICLE XXIII

SECTION 1

Adjustment and Arbitration of Disputes

It is mutually agreed that all disputes of any nature whatsoever which may arise between the parties hereto, or their respective individual members, shall be submitted to the Joint Arbitration Board, which shall consist of three (3) members of EMPLOYERS' ASSOCIATION and three (3) members of LOCAL UNION. Each side shall be entitled to cast three (3) votes on any issue before the Board even though less than three (3) members shall be present and voting on behalf of either EMPLOYERS' ASSOCIATION or LOCAL UNION.

Majority decisions of this Board shall be final and binding on all of the parties hereto. In the event that the Joint Arbitration Board is unable to reach a decision in the matter under consideration within five (5) days after the first scheduled meeting, which meeting shall be held within the period provided in Section 2 of this ARTICLE XXIII, then the Joint Arbitration Board shall, within twenty-four (24) hours thereafter, request the American Arbitration Association to submit a Panel List containing the names of ten (10) arbitrators from which one (1) arbitrator shall be selected. The American Arbitration Association shall submit said list of ten (10) arbitrators within forty-eight (48) hours after being notified so to do by the Joint Arbitration Board. The decision of the arbitrator so selected shall be binding and final on all of the parties hereto and in the event the issue determined involves the payment of wages or the rate of wages paid, it shall be retroactive to the date on which the matter was first submitted to the Joint Arbitration Board.

The Joint Arbitration Board shall select the arbitrator above referred to in both cases from the Panel List of ten (10) members submitted by the American Arbitration Association within five (5) days after the Panel List is submitted. In the event that the Joint Arbitration Board is unable to select

an arbitrator from the Panel List who will be mutually acceptable within five (5) days after the receipt thereof, the American Arbitration Association shall within twenty-four (24) hours thereafter be requested to submit a Second-Panel List containing the names of ten (10) additional arbitrators, from which one (1) is to be selected. The American Arbitration Association shall submit the Second-Panel List within forty-eight (48) hours after being requested so to do. In the event that the parties cannot mutually agree upon the arbitrator to be selected from the Second Panel List within five (5) days after it is received, then, within twenty-four (24) hours thereafter, the American Arbitration Association shall be requested to designate an arbitrator and the person so designated shall be acceptable by the parties hereto. The American Arbitration Association shall designate such arbitrator within forty-eight (48) hours after being requested so to do. The arbitrator, whether he or she be selected by the Joint Arbitration Board or designated by the American Arbitration Association, shall, within forty-eight (48) hours after his or her selection or designation, schedule a hearing which is to be held within but no later than one (1) week thereafter; the arbitrator shall conduct the hearing and the arbitration proceedings in accordance with the prevailing rules of the American Arbitration Association and he or she shall make a final decision within fourteen (14) days after the date upon which the first (1st) hearing takes place.

SECTION 2

Meetings of the Board

Meetings of the Board shall be held within forty-eight (48) hours after either party hereto formally submits in writing any question to the Board for settlement.

SECTION 3

No Strikes or Lockouts

It is further understood and agreed that no dispute, whether jurisdictional or otherwise, shall result in any stoppage of work or lockout pending the terms of the aforesaid arbitration clause.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives on the day and year first above written.

**MECHANICAL CONTRACTORS
ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Peter Cimino *President*

Attest: Timothy J. Brink, *Executive Vice President*

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA,
LOCAL UNION NO. 690**

By: John Kane, *Business Manager*

APPENDIX A

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

AND

**LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, it is the earnest desire of the parties to this Memorandum of Agreement to provide to the Owner who uses the services of mechanical contractor members of the Association, the most economical heating, cooling, ventilating, and piping installation consistent with desired quality, and

WHEREAS, in today's modern building and construction complexes the mechanical systems constitute a significant portion of a total project, including the cost, and

WHEREAS, any given project, be it large or small, must necessarily involve the skills of such recognized craftsmen as plumbers performing under the auspices of responsible contractor management teams, and

WHEREAS, it is the avowed intent that the provisions of this Memorandum of Agreement shall apply to any job where any of the parties hereto are involved.

Now, the parties hereto, intending to be legally bound hereby, agree as follows:

1. There shall be no work stoppage due to unauthorized or illegal strikes, lockouts, disputes, or grievances.
2. The contractor shall have the responsibility to efficiently manage his portion of the job including the supplying of sufficient tools and equipment with which to carry out the needed installation and the scheduling of an adequate number of workmen to meet job requirements and conditions. The direction of the working force, the right to hire, to plan, direct, control, and schedule all operations, in cooperation with other trades and the specified requirements of the User, shall be the responsibility of the contractor, including the right to establish, eliminate, change, or introduce methods, machinery, or techniques to efficiently perform all tasks.
3. There shall be no limitations on the productivity of workmen or on full use of tools of the trade and construction equipment.
4. Every effort shall be made by the parties to insure the highest level of productivity and the expeditious performance of the work with the pledge

of "eight hours work for eight hours pay." Workmen shall be on the job at the designated starting time and will not leave until the designated quitting time. There shall be no organized breaks, loafing, excessive tardiness, and unexcused absenteeism will not be tolerated.

5. To insure a sufficient number of skilled craftsmen to meet the needs of the industry, the Parties will continue to expand and improve their presently recognized apprenticeship and journeymen training programs.

6. The project safety rules and regulations of the Occupational Safety & Health Act shall apply and be abided by during the construction of a project.

7. Sufficient numbers of journeymen and apprentices will be made available for a project in order that working of overtime will be unnecessary except under extraordinary circumstances. Shift work may be utilized in order to expedite the job and meet completion schedules.

8. It is understood that the User of construction services is concerned with the total project being completed and delivered on time without unnecessary or undue delay created by the involved contractors. Full cooperation and coordination of the efforts of all contractors, their workmen, and supervisory personnel is required.

9. Anything contained in the respective Collective Bargaining Agreements between the parties hereto to the contrary notwithstanding, the work day or shift work or type of job subject to coverage under a particular collective bargaining agreement as defined in the said respective Collective Bargaining Agreements may be changed during the term of said Collective Bargaining Agreements by mutual agreement between Employer and the Business Manager of LOCAL UNION to such work day or shift work or wage rate as shall be established as aforesaid on any given project on a job-by-job basis.

10. The requirements of the User with respect to security conditions, safety, maintenance of production, parking, and use of vehicles and other regulations will be upheld. The contractor will inform himself of such requirements and, in turn, inform his workforce.

11. Under no circumstances will there be a work stoppage or slow down as a result of a work assignment or jurisdictional dispute. Settlement of work assignments shall follow legal and contractual avenues established for such disputes.

Where conflict seems likely, pre-assignment conferences with the contractors and Business Representatives of the Unions shall be held well in advance of actual work performance for the purpose of making a positive determination if there is thought to be a difference of opinion.

Signed and effective this 1st day of May, 2013

**MECHANICAL CONTRACTORS
ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By Timothy J. Brink, *Executive Vice President*

Area practice, prior agreements and decisions of record shall be taken into account; however, in the event a unanimous agreement is not reached, the contractor who has responsibility for the performance and installation shall make a specific assignment.

12. Parties to this agreement shall not discriminate against any Employee because of race, color, religion, sex, national origin, or age. The parties will comply with established minority employment plans as required.

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA,
LOCAL UNION NO. 690**

By: John Kane, *Business Manager*

APPENDIX B

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

AND

**LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, the parties to this Memorandum of Agreement recognize that substance abuse by any Employee may seriously endanger other Employees as well as the public and adversely affect work performance in this very competitive industry; and

WHEREAS, the parties have agreed to adopt the following substance abuse policy subject to the terms and conditions hereinafter set forth.

NOW, THEREFORE, the parties hereto, intending to be legally bound hereby, agree as follows:

1. The parties hereby adopt the United Association National Pipe Line Substance Abuse policy, as the same was adopted by the Pipe Line Contractors Association and the United Association on May 1, 1990 (the "Policy"), for all work coming within the geographic and work jurisdiction of that certain Agreement of the parties made and effective the first day of May, 2013 (the "Agreement"), except as the Policy may be modified by the other terms of this Memorandum of Agreement as hereinafter set forth.

2. The Policy shall only be observed, with respect to Employees of an Employer covered by the Agreement, in the event such Employer is required by an owner, client, user, general contractor or by Federal or State law or regulation to establish its own substance abuse policy for a particular job and/or if such Employer elects to establish a substance abuse policy for a particular job. In no event shall this Memorandum of Agreement be construed to require an Employer covered by the Agreement to adopt the Policy on those jobs where it is not required.

3. The Policy shall not serve as the substance abuse policy on any job for which an Employer covered by the Agreement is required to adopt and observe the substance abuse policy established by an owner, client, user, general contractor or by Federal or State law or regulation, regardless of whether the same is more or less restrictive than the terms of the Policy.

4. In the event the Policy is amended or modified in any respect at any time in the future by the Pipe Line Contractors Association and United Association, the terms of any such amendment or modification shall not be deemed to be a part of the policy for purposes of this Memorandum of Agreement unless and until the Association and the Union mutually agree in writing to the terms of such amendment or modification, as confirmed by an amendment to this Memorandum of Agreement.

5. The parties additionally agree that the employer may perform Pre-

Hire drug and alcohol testing. The test, if conducted prior to the employee starting for the company, will require the employer to pay for the employee's time to take the test and the actual cost of the test. If the employee fails the test, the contractor will have no obligation to pay the employee the time to take the test. If the test is administered after the employee starts work for the employer, the test must be administered within one week of starting work for the employer. If the employee fails the test, the employee will be compensated (at the established hourly rate for wages and benefits) for all time spent performing covered work. If an employee tests positive, the employee will be referred to an appropriate drug and alcohol treatment program. The cost for the treatment program is not the responsibility of the contractor. After successful participation in the program, the employees will be eligible for referral and hiring.

6. For purposes of this Memorandum of Agreement, ARTICLE VI (DURATION) of the Policy hereby is eliminated.

7. The Policy shall remain in effect for a period of time to coincide with the term of the Agreement. The Association and the Union agree that either one may move annually to reopen the policy for purposes of modification or termination by mutual agreement by giving notice sixth (60) days prior to the anniversary date of the execution of the Agreement.

Except as expressly and specifically modified and amended above, the parties hereby ratify and confirm the terms and conditions of the Agreement.

Signed and effective this 1st day of May, 2013.
**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Timothy J. Brink, *Executive Vice President*

**PLUMBERS LOCAL UNION 690 OF THE UNITED
ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF
THE PLUMBING AND PIPE FITTING INDUSTRY OF THE
UNITED STATES AND CANADA**

By: John Kane, *Business Manager*

APPENDIX C

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

**AND
LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, the parties to this Memorandum of Agreement recognize that there may arise in few limited number of circumstances, situations where the Hours of Work may need to be adjusted due to the location of the jobsite or the type of work that needs to be performed.

as early as 6:00 a.m. and ending shifts as late as 5:30 p.m. when the LOCAL UNION AGREES such changes are permitted.

NOW, THEREFORE, the parties hereto, intending to be legally bound hereby, agree as follows:

1. Article II, Section of the Agreement may be adjusted by mutual consent of the LOCAL UNION and the EMPLOYER to allow starting shifts

Signed and effective this 1st day of May 2013.

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Timothy J. Brink, *Executive Vice President*

**PLUMBERS LOCAL UNION 690 OF THE UNITED
ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF
THE PLUMBING AND PIPE FITTING INDUSTRY OF THE
UNITED STATES AND CANADA**

By: John Kane, *Business Manager*

APPENDIX D

MEMORANDUM OF AGREEMENT

BY AND BETWEEN

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.
("ASSOCIATION")**

**AND
LOCAL UNION NO. 690
("UNION")**

OF THE

**UNITED ASSOCIATION OF JOURNEYMEN AND
APPRENTICES OF THE PLUMBING AND PIPE FITTING
INDUSTRY OF THE UNITED STATES AND CANADA
("UNITED ASSOCIATION")**

WHEREAS, the parties to this Memorandum of Agreement recognize that the following rates for apprentices will be in effect beginning May 1, 2013 and remain unchanged for the duration of the Agreement.

The following wage and benefit rate structure will apply to all First Period Apprentices currently enrolled as of May 1, 2013 and all future apprentices for the duration of the CBA (May 1, 2013 through April 30, 2016). The following rates will remain unchanged and unaffected by wage package increases called for in other sections of the CBA.

Philadelphia Area:

LU 690 Phila	Effective Date	Wage	H&W	Pension	S.R.P.	App. Fund	Ind Fund	Scholarship	Total
First	5/1/13	\$16.00	\$7.19	\$6.20	\$0.00	\$0.00	\$0.00	\$0.05	\$29.44
Second	8/1/13	\$16.00	\$7.19	\$6.20	\$0.00	\$0.00	\$0.00	\$0.05	\$29.44
Third	2/1/14	\$18.21	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$39.82
Fourth	8/1/14	\$18.21	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$39.82
Fifth	2/1/15	\$20.63	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$42.24
Sixth	8/1/15	\$20.63	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$42.24
Seventh	2/1/16	\$25.48	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$47.09
Eighth	8/1/16	\$25.48	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$47.09
Ninth	2/1/17	\$30.33	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$51.94
Tenth	8/1/17	\$30.33	\$13.79	\$6.20	\$0.50	\$0.80	\$0.27	\$0.05	\$51.94

The following wage and benefit rate structure will apply to all Apprentices currently enrolled as of May 1, 2013 with the exception of First Period Apprentices for the duration of the CBA (May 1, 2013 through April 30, 2016). The following rates will remain unchanged and unaffected by wage package increases called for in other sections of the CBA.

Philadelphia Area:

LU 690 Phila	Wage	H&W	Pension	S.R.P.	App. Fund	Ind Fund	Scholarship	Total
Second	\$18.39	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$40.89
Third	\$18.39	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$40.89
Fourth	\$20.21	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$42.71
Fifth	\$22.63	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$45.13
Sixth	\$24.46	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$46.96
Seventh	\$27.48	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$49.98
Eighth	\$29.29	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$51.79
Ninth	\$32.33	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$54.83
Tenth	\$37.18	\$13.79	\$6.20	\$1.39	\$0.80	\$0.27	\$0.05	\$59.68

Signed and effective this 1st day of May 2013.

**MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.**

By: Timothy J. Brink, *Executive Vice President*

**PLUMBERS LOCAL UNION 690 OF THE UNITED
ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF
THE PLUMBING AND PIPE FITTING INDUSTRY OF THE
UNITED STATES AND CANADA**

By: John Kane, *Business Manager*

CONSENT AND APPROVAL STATEMENT
by
EMPLOYERS NOT AFFILIATED WITH THE
MECHANICAL CONTRACTORS ASSOCIATION
OF EASTERN PENNSYLVANIA, INC.

Date _____

I, or we, the undersigned Employer, subscribe to the terms and conditions in the foregoing Agreement.

Company: _____

By: _____

(Signature and Title)

PLUMBERS LOCAL UNION 690 (UA)

By: _____

(Signature and Title)