ADDENDUM

TO: All Bidders

FROM: Proposition S Construction Management Team

DATE: August 31, 2012

FOR: RFP# PS61-1213 – **IP Clock District Wide Schools**

ADDENDUM #3: Revised Bid date, Approved Equal decision, Revised (Cost Form) Attachment "B" Scope modifications, Revised Specification,

Notice to Bidders

This Addendum forms a part of the Contract Documents for RFP PS61-1213 – **IP Clock District Wide Schools**. Contractors are required to acknowledge receipt of this addendum on the bid proposal form. Failure to acknowledge the receipt of this addendum may be subject for bidder to be disqualified.

Bidders are hereby informed that the contract documents are modified as follows:

1. **Revised Bid date:**
    a. In lieu of September 10, the bid date is September 13, 2012.

2. **Approved Equal Decision:**
    a. The Primex product submitted for review is acceptable if it meets all the functional requirements in the performance specification.
    b. Any proposed substitutions must be submitted at the time of the bid with specifications and associates cost indicated on the revised (cost form) Attachment "B".

3. **Revised (Cost Form) Attachment "B"**
    a. Form is attached

4. **Revised Scope/Specification:**

a. The project scope description has been revised and requires pricing for the Base Bid and Alternate 1 as indicated by the attached (revised) bid sheet document.

b. Previous specifications issued with the RFP document and with Addendum 2 have been replaced in their entirety with a consolidated specifications included with Addendum 3.

Scope descriptions for the Base Bid and Alternate 1 (Item 1 above) are provided in the following paragraphs. These scope descriptions supersede scope descriptions previously provided in the RFP documents and Addendums.

Base Bid

The Base Bid is for total systems replacement of the master clock-program systems and intercom systems (including all secondary clocks, program bells and intercommunications systems devices) at all schools listed in this RFP. Quantities of system (remote) devices attached to head-end equipment shall be based on device quantities provided for each school in the Table 1 below.

Table 1 – Clock And Intercom Equipment Quantity Matrix

School Name	Qty of Clocks	Qty of Speakers	Qty of Call–in Buttons
Adam	65	135	35
Ames	56	115	29
Ashland	54	112	44
Beaumont	140	265	80
Blewet	47	100	27
Blow	59	122	35
Bryan Hill	45	101	29
Buder	48	103	31
Bush	46	102	36
Carr Lane	70	143	45
Carnahan	57	115	34
Central	75	160	51
Clay	52	105	32
Cleveland	115	230	68
Cole	49	120	30
Columbia	67	135	41
Compton Drew	71	146	43
Cote Brilliante	38	81	23
Dewey	50	102	32
Dunbar	53	103	34
Fanning	51	103	36
Farragut	38	81	27
Ford	63	120	39

Table 1 – Clock And Intercom Equipment Quantity Matrix			
School Name	**Qty of Clocks**	**Qty of Speakers**	**Qty of Call–in Buttons**
Froebel	60	115	35
Gallaudet	37	80	27
Gateway Complex	128	164	75
Gateway HS	156	206	98
Hamilton	60	112	36
Henry	35	71	24
Herzog	47	98	25
Hickey	38	72	30
Hodgen	66	116	25
Humboldt	56	102	32
Jefferson	45	93	31
Kennard	47	97	33
Kottemeyer	54	114	35
Laclede	51	101	36
Langston	56	112	32
Lexington	58	114	35
Long	57	112	36
Louverture	52	102	34
Lyon @ Blow	39	71	30
Madison	60	110	38
Mallinckrodt	29	62	24
Mann	40	82	30
Mason	46	96	32
Meda P. Washgton	32	110	24
McKinley	85	165	55
Meramec	28	55	24
Metro	54	111	36
Monroe	43	90	28
C.C. Miller	125	240	72
Mullanphy	74	138	46
Nance	57	85	37
Northwest	66	112	45
Nottingham	33	61	25
Oak Hill	25	55	23
Peabody	53	102	35
Roosevelt	160	315	95
Shaw	65	123	42
Shenandoah	45	93	33
Sherman	40	78	30
Sigel	54	110	36
Soldan	144	290	85
Stevens	67	130	43

Table 1 – Clock And Intercom Equipment Quantity Matrix			
School Name	**Qty of Clocks**	**Qty of Speakers**	**Qty of Call–in Buttons**
Stix	62	120	38
Sumner	143	284	84
Vashon	154	310	89
Walbridge	67	135	46
Washington	48	97	34
Wilkinson	39	72	32
Woerner	44	94	31
Woodward	46	92	30
Yeatman	53	102	43

The replacement systems to be provided under the Base Bid shall include:

- A centralized Network Time Protocol (NTP) synchronization source (to be located at the SLPS District Offices) for synchronization of all master clock-program systems at all of the schools listed.
- Clock-program systems administration software for management of all master clock-program schedules, for all of the schools, from 3 central personal computer (PC) workstations located at the SLPS District Offices at 801 N. 11th Street and the Buildings and Grounds. The systems administration software shall be installed and programmed on several PC workstations provided by SLPS. Initial programming of the administration software shall be provided under the construction contract and training of SLPS personnel for ongoing administration of this software shall also be provided.
- Master clock-program controllers at each school. Either a wireless or hardwired clock system solution is acceptable but all conduit and wiring shall be provided for any wired solution proposed. Primary power for wireless secondary clocks shall be provided via dedicated power wiring. Battery powered secondary clocks will not be accepted. Where wireless clocks systems are proposed for replacement of an existing wired clock systems the reuse of existing clock system wiring (to distribute secondary clock power) is acceptable provided the wiring is adequate to distribute the power required and also meets local codes. Where wired system replacement solutions are proposed utilization of the existing conduit and wiring system is acceptable provided that the wiring is compatible with the system being proposed and meets local code requirements. For wireless clock system solutions, all required antennas, receivers, primary transmitters and secondary transmitters shall be provided for distribution of the synchronization signals. FCC licenses for wireless systems operation shall also be applied for and provided under the contract (including individual licensing fees require for each school site).
- Network horizontal data wiring and connections of the Master Clock and Program Controller at each school to the SLPS district Wide Area Network (WAN). Network

switching equipment to be utilized will consist of existing SLPS switchers (with available ports) or additional switching equipment that will be provided by SLPS as required.

- Intercommunications systems head-end equipment including controller, switching equipment, preamplifiers, power amplifiers, tone generators, microphones (or handsets), and other components as require for a complete operational system along with housings and equipment racks required for mounting of the equipment.
- Clock and intercom systems devices inclusive of secondary clocks, speakers assemblies (speakers, transformers, housings with grilles, and mounting hardware), call-in switches, etc. Signal wiring, power wiring and power supplies shall also be included. Device quantities shall be based on the quantities indicated in the Table 1 above.
- Systems programming, setup, testing, and commissioning.
- SLPS staff training on operation, programming, and maintenance.

Pricing shall be provided for total systems replacement for all of the schools with an individual line item price provided for each school location as indicated on the attached (revised) proposal bid sheet. Systems replacement pricing for individual school locations shall be considered stand-alone pricing (per school) and shall not be based on the purchase of systems replacement for all of the schools listed in Table 1 of this RFP. Unit pricing (including equipment and labor) shall also be provided for each type of system device, i.e. speaker, clock, call switch, etc., as indicated on the bid sheet.

Alternate 1

Alternate 1 work is broken down into three categories of work for three different groups of schools as described under each category in the paragraphs below. School categories shall be defined as follows:

Category 1 schools – Schools that will retain their existing clock systems, secondary clocks, and associated bells, that will be connected to the SLPS wide area network for master clock time synchronization and remote system programming of the system bell schedules. Note: Some of these existing systems may utilize connections with the existing intercommunications systems to provide tones over the speaker for class change signaling in lieu of bells.

Category 2 schools – Schools that will require replacement of the existing master clock-programmer (including any associated clock or bell power supplies, etc.) and network connections to the SLPS wide area network for master clock time synchronization and remote system programming of the systems schedules. Note: Some of these systems may utilize connections with the existing intercommunications systems to provide tones over the speaker for class change signaling in lieu of bells.

Category 3 schools – Schools (as identified in the Schools Category Table below) that have master clock-program systems, secondary clocks, bells, and intercommunications systems that

are in disrepair (requiring total systems replacement) and network connections to the SLPS wide area network for master clock time synchronization an remote system programming of the systems schedules. System replacement requirements for these schools are the same as those identified under the Base Bid requirements above.

Category 1, 2 and 3 schools and the manufacturer of the existing master clock-program system are listed in Table 2 below. Equipment quantities for the system devices can be found in Table 1 above.

Category 1 Schools	
School Name	**Existing Clock System Manufacturer**
Ashland Elementary	Lathem
Cole Elementary	Lathem
Columbia Elementary	Lathem
Compton-Drew	Dukane
Cote Brilliante Elementary	Lathem
Fanning Middle School	Lathem
Herzog Elementary	Lathem
Humboldt Elementary	Lathem
Kennard Elementary	Lathem
Laclede Elementary	Lathem
Langston Middle School	Lathem
Lexington Elementary	Lathem
Mann Elementary	Lathem
Mullanphy Elementary	Lathem
Northwest High School	Lathem
Peabody Elementary	Lathem
Sherman Elementary	Lathem
Sigel Elementary	Lathem
Soldan High School	Lathem
Walbridge Elementary	Lathem
Woerner Elementary	Lathem
Woodward Elemementry	Lathem
Category 2 Schools	
Adams Elem.	
Alternative at Stevenson	Lathem
Ames Elem. LATHEM	Lathem
Beaumont HS	Lathem (Bogen)
Blewett ICA	Lathem
Buder Elementary	Lathem
Busch MS	
Carnahan HS	
Carr Lane CPA	Lathem

Clay Elementary	Lathem
Clyde Miller HS	
Dewey Elementary	
Dunbar Elementary	Lathem
Farragut Elementary	Cincinnati TC1000
Ford Elementary	Lathem
Fresh Start Meda P.	Lathem
Froebel Elementary	Dukane
Gaulldet	Dukane
Gateway Elementary *	Rauland
Gateway Michael*	Rauland
Hamilton Elementary	Lathem
Henry Elementary	Lathem
Hickey (Philip) Elementary	Lathem (Bogen)
Hodgen Elementary	
Jefferson Elementary	Simplex
Kottmeyer IWC	
L'Ouverture MS	Cinncinati TC1000
Long MS	Lathem (Dukane)
Lyon Elementary	Simplex
Madison IP	Lathem
Mallinckrodt Elementary	Lathem
Mason Elementary	Lathem
McKinley HS	Lathem
Meramec Elementary	Lathem
Metro HS	Rauland
Monroe Elementary	Simplex 6400
Nance Elementary	Rauland
Oak Hill Elementary	Lathem
Shaw Visual Elementary	Simplex 6400
Shenandoah	Simplex 6400
Stix Early Childhood	
Sumner HS	Cincinnati TC1000
Vashon HS	Rauland ICS
Washington Mont Elementary	Rauland 2490
Wilkinson Elementary	
Yeatman MS	Lathem
Category 5 Schools	
Roosevelt HS	
Central VPA HS	
Nottingham	
Bryan Hills	
Gateway IT	

* These *Gateway Schools (Gateway Elementary and Gateway Michael) have one bell system. The schools shall be reconfigured to have separate master clock-programmers and bell systems to allow each school to have separate programming schedules.*

Alternate 1 (inclusive of Categories 1, 2 and 3) shall include the following:

- A centralized Network Time Protocol (NTP) synchronization source (to be located at the SLPS District Offices) for synchronization of existing and replacement master clock-program systems for all of the schools listed in Categories 1, 2 and 3.
- Clock-program systems administration software for management of all master clock-program schedules (for all of the schools listed in Categories 1, 2 and 3) from one central personal computer (PC) workstation located at the SLPS District Offices at 801 N. 11th Street. A single software package solution shall be provided to manage all of the systems if possible, but a solution that requires multiple administration software packages in order to administer the replacement systems and the existing systems is acceptable if a single software solution is not available. If multiple administrative software packages are required the quantity shall be limited to two; one for the replacement clock systems and one for the existing clock systems. The administrative software (package or packages) shall be installed and programmed on a PC workstation provided by SLPS. Initial programming of the administration software(s) shall be provided under the construction contract and training of SLPS personnel for ongoing administration of this software.
- Network horizontal data wiring and connections of the master clock-program systems (for all schools listed in Categories 1, 2 and 3) to the SLPS WAN. Network switching equipment to be utilized shall consist of existing SLPS switchers (with available ports) or additional switching equipment that will be provided by SLPS as required. For Category 1 schools (where existing Lathem and Dukane clock systems will be retained and connected to the SLPS district WAN), use of the Lathem RS-232 to Ethernet adaptor (in conjunction wih Lathem Masterlink V.2 Administrative Control software) is acceptable if a direct Ethernet connection for these systems is not possible. Category 2 and Category 3 schools shall have master clock-programmers that can be connected to the SLPS WAN utilizing direct connection to Ethernet switch port connection for Network Time Protocol synchronization.
- Reutilization of existing clock system master clock-programmers, secondary clocks, and class change bell signals at Category 1 schools.
- Reutilization of existing school intercommunications systems for distribution of class change tone signals over the speakers at Category 1 schools where the existing clock systems are interfaced with the intercom system for class change signaling).
- Replacement of existing master clock-programmers (inclusive of power supplies and other master clock-programmer head-end equipment) at Category 2 schools.

- Connection of replacement master clock-programmers at Category 2 schools to existing secondary clocks, bells, and intercommunications systems for class change signaling (where the intercoms are used to provide class change signaling).
- Total systems replacement for the entire master clock systems and intercommunications systems inclusive of head-end equipment, wiring and secondary devices (per the systems replacement scope requirements indicated in the Base Bid section of Addendum 3).
- Systems programming, setup, testing, and commissioning. SLPS staff training on operation, programming, and maintenance of the clock system network connection equipment and software.

REVISED SPECIFICATION:

1. The specifications that have previously been issued have been revised and consolidated. The following specifications shall replace all of the specifications that have previously been issued under this RFP.

SPECIFICATION FOR MASTER CLOCK PROGRAM SYSTEM – HARDWIRED SYSTEM

PART 1 - GENERAL

SUMMARY
This Section includes an Atomic Clock Synchronized Master Clock System. It includes requirements for an Atomic Clock Synchronization system components including, but not limited to, the following:

- Atomic Clock Synchronization Central Control Unit (with Internet sourced signal)
- Master Clock-programmer
- Hardwired Secondary Clocks
- Wiring

SYSTEM DESCRIPTION
General: Furnish and install all equipment, accessories, and materials in accordance with these specifications to provide a complete and operating Atomic Clock Synchronized Master Clock system for the St. Louis Public Schools.

- The intent of this specification is to establish a standard of quality, function and features. It is the responsibility of the bidder to insure that the proposed product meets or exceeds every standard set forth in these specifications.

- The functions and features specified are vital to the operation of this facility, therefore, the acceptance of alternate manufacturers does not release contractor from strict compliance with the requirements of this specification.

- The Contractor for this work shall be held to have read all of the Bidding Requirements, the General Requirements of Division 1, and Contract Proposal Forms; and in the execution of this work, he will be bound by all of the conditions and requirements therein.

- The contractor shall be responsible for providing a complete functional system including all necessary components whether included in this specification or not.

- In preparing the bid, the bidder should consider the following:

- No claim will be made against the owner for any costs incurred by the bidder for any equipment demonstrations which the owner requests.

- Any prior approval of an alternate system does not automatically exempt the supplier from meeting the intent of these specifications. Failure to comply with the operational and functional intent of these specifications may result in the total removal of the alternate system at the expense of the contractor.

- **Alternate equipment shall be considered if submitted at the time of the bid with associated cost indicated on the revised (cost form) attachment "B"** . Submission of an alternate shall contain engineering drawings of the system with specification sheets covering all components of

the system as well as all items of Section 1 "SUBMITTALS." The system and equipment drawings and specifications sheet shall meet all items of the specification.

- The specifying authority must approve any alternate supplier.

SYSTEM REQUIREMENTS

GENERAL:

- The system shall provide the state of the art in technology for internal atomic clock synchronization and multi-vendor secondary clock corrections.

- The system shall be easy to learn and operate. All standard system programming shall be user friendly to allow the system administrator the ability to easily program system features.

- Provide complete and satisfactorily operating Atomic Synchronized Clock System with analog and/or digital secondary clocks as described herein, using materials and equipment of types, sizes, ratings, and performances as indicated. Use materials and equipment that comply with referenced standards and manufacturers' standard design and construction, in accordance with published product information. Coordinate the features of all materials and equipment so they form an integrated system, with components and interconnections matched for optimum performance of specified functions.

- Features offered by this system shall be implemented and controlled by software programs that can be changed and expanded as customer needs evolve.

- The system shall allow system administration from a local Windows PC.

- The system shall be an electronic system consisting of central atomic clock synchronized clock (with Internet connection for atomic time signal source) , network connected master clocks utilizing Network Time Protocol synchronization, and secondary clocks (at schools where total system replacement is indicated).

- The system shall lend itself to expansion by simple addition of secondary clocks and their required power supplies and/or buffer modules and synchronization wiring.

PART 2 – PRODUCTS

MANUFACTURERS

- Manufacturers: Subject to compliance with the specifications requirements, provide equipment manufactured by one of the following: Rauland, Dukane, Lathem, KRONOsync or Approved Equal.

ATOMIC CLOCK SYNCHRONIZED CENTRAL CONTROLLER UNIT
The Clock shall have the following capabilities:

- Facilities for multiple operations simultaneously without interference with an established pattern of priorities for all master/classroom clock capabilities.
- Ability to automatically adjust for Daylight Saving Time.
- Ability to bypass Daylight Saving Time.
- Ability to acquire time signal from government sponsored, atomic clock based timeservers using computer network with internet access. Synchronize other master/secondary clocks using this time signal.
- The Atomic Clock Synchronized Controller Unit shall provide a Universal Serial Bus port for the connection of on-site diagnostics by distributor or factory-trained personnel.
- This port shall be usable for the programming and saving of all programmed data for each system with the utilization of an on-site computer.
- Ability to offset local System time in one minute increments from atomic time.
- 12-hour or 24-hour display on the Master Clock and Atomic Synchronization Device

MASTER CLOCK REQUIREMENTS

- Non-volatile memory capacity for storing configuration settings. Ability to review, edit and delete configuration settings via a PC using a Windows XP or newer Windows-based operating system, running the configuration program.
- Fully automatic secondary clock correction execution.
- User programmable Automatic Daylight Savings Time Change.
- Automatic holiday program operation
- Minimum capability of eight (8) selectable zones (units shall not be provided withless than the number of existing zones circuits at each school).
- Minimum capability of using up to four (4) available schedules.
- Memory capable of storing up to a minimum of three hundred fifty (350) events.
- Front panel current time and events display
- Front panel pushbuttons for basic programming functions
- Battery backup for a minimum of 24 hours of programmed events

- Ability to correct secondary clocks from other vendors.

- Interface with secondary slave clocks whether synchronous wired or electronic (including the existing system manufacturers listed in the RFP documents).

- User-programmable custom slave clock correction.

- Output relays shall be rated adequate for use with the voltage and current requirements for the device circuits that they are controlling and shall be provided for the number of circuits required as necessary.

- Battery backup shall provide not less than 5 years battery back-up for timekeeping function.

SECONDARY ANALOG CLOCK REQUIREMENTS

- The secondary clocks shall not use battery power for their primary power source.

- The clocks must carry a five-year manufacturer's warranty.

- The clock shall provide automatic clock correction signal detection.

- The clock shall have the ability to be powered and corrected using dedicated clock wiring. Systems that can be powered and corrected via the wiring of an associated intercom/paging system are also acceptable.

- The ability for automatic daily correction by an associated master clock synchronized with an atomic clock synchronization device.

- The clock lens shall use a shatterproof polycarbonate material.

- The clock shall have a black hour and minute hands, as well as a red second hand**.**

- Classroom clocks shall be 12-inch diameter face units (minimum. Auditorium and gymnasium clocks shall be 16-inch diameter face units (minimum). Gymnasium clocks shall be provided with wire guards.

- The clock shall be an Underwriters Laboratories listed device.

- The clock shall have a safety mounting eyelet that prevents accidental separation of the clock from its mounting surface.

- It shall have the ability to be automatically corrected daily by a master clock that is corrected by an atomic clock synchronization device

- The analog clocks must be available in various mounting configurations including single and double-faced clocks and provisions for both wall and ceiling mount.

PART 3 – EXECUTION

EXAMINATION

- Examine conditions, with the Installer present, for compliance with requirements and other conditions affecting the performance of the Atomic Clock Synchronized Master Clock system.

- Do not proceed until unsatisfactory conditions have been corrected.

INSTALLATION

General:

- Install system in accordance with NFPA 70 and other applicable codes. Install equipment in accordance with manufacturer's written instructions.

Wiring Methods:

- Install wiring in raceway except within consoles, desks, and counters, and except in accessible ceiling spaces, and in gypsum board partitions, where open cable wiring method may be used. Use UL listed plenum cable in environmental air spaces including plenum ceilings. Conceal wiring except in unfinished spaces. Use metallic Wiremold type raceways for surface mount raceway runs that are below the level of the ceiling.

Control Circuit Wiring:

- Install control circuits in accordance with NFPA 70 and local codes and as indicated. Provide number of conductors as recommended by system manufacturer to provide control functions indicated or specified.

- Make installation in strict accordance with approved manufacturer's drawings and instructions.

- Provide necessary transient protection on the AC power feed. All protection shall be as recommended by the equipment supplier and referenced to earth ground.

Wiring Within Enclosures:

- Provide adequate length of conductors for cable management within enclosures. Bundle, lace, and train the conductors to terminal points with no excess. Provide and use lacing bars. Provide physical separation as recommended by equipment manufacturer for other Atomic Clock Synchronized Master Clock system conductors.

Identification of Conductors and Cables:

- Use color coding of conductors and apply wire and cable marking tape to designate wires and cables so all media are identified in coordination with system wiring diagrams.

Weatherproofing:

- Provide weatherproof enclosures for items to be mounted outdoors or exposed to weather.

Repairs:

- Wherever walls, ceilings, floors, or other building finishes are cut for installation, repair, restore, and refinish to original appearance.

GROUNDING

- Provide equipment grounding connections for Atomic Clock Synchronized Master Clock systems as indicated. Tighten connections to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounds.

- Ground equipment, conductor, and cable shields to eliminate shock hazard and to minimize to the greatest extent possible, ground loops, common mode returns, noise pickup, cross talk, and other impairments. Provide 5-ohm ground at main equipment location. Measure, record, and report ground resistance.

- The contractor shall provide all necessary transient protection on the AC power feed leaving or entering the building.

- The contractor shall note in his system drawings, the type and location of these protection devices as well as all wiring information.

- The contractor shall furnish and install a dedicated, isolated earth ground from the central equipment rack and bond to the incoming electrical service ground buss bar.

FIELD QUALITY CONTROL

Manufacturer's Field Services:

- Provide services of a duly factory authorized service representative for this project location to supervise the field assembly and connection of components and the pre-testing, testing, and adjustment of the system.

Inspection:

- Make observations to verify that units and controls are properly labeled, and interconnecting wires and terminals are identified. Provide a list of final Atomic Clock Synchronized Master Clock system configuration.

Testing:

- Rectify deficiencies indicated by tests and completely re-test work affected by such deficiencies at Contractor's expense. Verify by the system test that the total system meets the specifications and complies with applicable standards.

COMMISSIONING

- Train Owner's maintenance personnel in the procedures and schedules involved in operating, troubleshooting, servicing, and preventative maintenance of the clock system. Provide a minimum of 8 hours training. Operators Manuals and Users Guides shall be provided at the time of this training.

- Schedule training with Owner through the Architect, with at least seven days advance notice.

OCCUPANCY ADJUSTMENTS:

- When requested by the Owner within one year of date of Substantial Completion, provide on-site assistance in adjusting Atomic Clock Synchronized Master Clock system and adjusting controls to suit actual occupied conditions. Provide up to three visits to the site for this purpose.

CLEANING AND PROTECTION

- Prior to final acceptance, clean system components and protect from damage and deterioration.

SPECIFICATION FOR WIRELESS CLOCK PROGRAM SYSTEM

PART 1 - GENERAL

Furnish and install a complete NTP Wireless Synchronized Clock system as specified herein or equal in the administration area only of each school district wide (73 schools). The Wireless Synchronized Clock System must be compatible with the existing bell system to ensure accurate functioning of the clock and the bell. All Bids shall be based on the product specification as contained herein. Bidders wishing to submit alternative equipment must supply alternative specification documents which contain technical documentation to prove it's a technical and functional equivalent.

Final Approval of any alternative system shall be determined at the time of job completion. Failure to provide the "precise functional equivalent" shall result in the removal of the alternative system at the contractor's expense.

SUMMARY

This Section includes Wireless Clock-Program System utilizing Network Time Protocol (NTP) input for centralize synchronization. It includes but is not limited to, the following:

- Application Management Network Time Protocol Server
- Application Management Software
- Network Connected Master Transmitters with Antennas Utilizing NTP Synchronization
- Combination Wireless Receiver-Satellite Wireless Transmitter Units with antennas
- Wireless Analog Secondary Clocks (with hardwired primary power connections)
- Wireless Control Modules for Control of Class Change Program Signaling
- Other components as required for a complete and functional system.

SYSTEM DESCRIPTION AND OPERATION

The Wireless NTP timekeeping system consists of a NTP receiver box connected via an RJ45 Ethernet cable from an in-house computer network to the transmitter, along with analog or digital clocks, and accessories. Once operational, the transmitter shall keep all system clocks synchronized to the second all day, each day, everyday. The system shall provide the following minimum features and functions:

- System shall synchronize all clocks to each other. System shall utilize NTP technology to provide atomic time to components.
- System shall not require hard wiring for its components except for AC power. Analog clocks may be battery operated for full portability if required.
- Clocks shall automatically adjust for Daylight Saving Time per the Daylight Saving time settings in the Master Clock.
- Analog Clocks shall synchronize to +/- 1 second of the master clock displayed time.

- The system shall have an internal clock that will continuously be updated by NTP. If a NTP failure were to occur, the clocks would continue to be synchronized to the internal clock and would not deviate from one another. Once NTP time is restored, all clocks would once again be synchronized.
- The system shall have a fail safe design so that if a power interruption were to occur, the clocks will continue to operate. Upon the restoration of power, the transmitter will once again communicate with the clocks and normal operation will resume.
- Analog clocks shall utilize AC powered as the primary power source, wired to end user specifications.
- The system shall be 100% programmable from the front operation panel with lights that indicate power status, and NTP reception.
- System programming for Time Zone, Frequency, 12 or 24 hour operation and DST on/off must be programmable from the front of transmitter.

REFERENCES

National Fire Protection Agency (NFPA) – 70, National Electric Code 2005

DEFINITION OF TERMS

(NTP): Network Time Protocol, Short for Network Time Protocol, an Internet standard protocol (built on top of TCP/IP) that assures accurate synchronization to the millisecond of computer clock times in a network of computers. Based on UTC, NTP synchronizes client workstation clocks to the U.S. Naval Observatory Master Clocks in Washington, DC and Colorado Springs CO. Running as a continuous background client program on a computer, NTP sends periodic time requests to servers, obtaining server time stamps and using them to adjust computers clocks.

SUBMITTALS

System Product Data: Submit all data for each component, describing its operational and physical characteristics along with the method of installation. Submit a brochure showing all available colors and dimensions of clocks.

Operating License: The system must operate in accordance with a “Radio Station Authorization” form FCC 601 granted by the Federal Communication Commission (FCC). Submit evidence of application for operating license prior to installing equipment. Furnish the license, or if the license has not been received, a copy of the application for the license, to the Owner prior to operating the equipment. Upon receipt of License, deliver original license to Owner.

Samples: Submit one clock for approval. The approved sample is to be tagged and installed as part of the final operating system.

Manufacturer’s Instructions: Submit complete installation, set-up and maintenance instructions.

Schematic indicating the location of the transmitter(s) and all clocks must be submitted by owner prior to installation.

QUALITY ASSURANCE

Qualifications:

- Manufacturer: Company specializing in manufacturing of timekeeping products with a minimum of 10 continuous years of documented experience.
- Installer: Company with documented experience in the installation of commercial timekeeping systems.
- Permits: Obtain FCC license for Transmitter authorization

Substitutions:

- Proposed substitutions, if considered, shall be manufactured of equivalent materials and meet or exceed all detailed operational features of the specified requirements of this section. Submission of an alternative shall contain an original draft point by point comparison of the submitted product relative to the requirements of this specification. Engineering drawings of the system and specifications of all components must be the same on a technical and functional level as per the Innovation Wireless specifications contained herein. **Any proposed substitutions must be submitted at the time of the bid with specifications and associated cost indicated on the revised (cost form) attachement "B".** Other systems that are unlicensed or have the FCC license in the name of someone other than the building owner will not be accepted.

- Final Approval of any alternative system shall be determined at the time of job completion. Failure to provide the "precise functional equivalent" shall result in the removal of the alternative system at the contractor's expense.

REGULATORY REQUIREMENTS

Master Transmitter and receiver shall comply with Part 90 of FCC rules, as follows:

- This device must not cause harmful interference and must accept interference received, including interference that may result in undesirable operation.
- Transmitter frequency shall be governed by FCC Part 90.35.
- Transmitter output power shall be governed by FCC Parts 90 and 74.
- System shall be installed in compliance with local and state authorities having jurisdiction.
- The system shall be provided with a user an operating license that will be granted by the FCC to permit the end user to legally operate this Wireless system.

DELIVERY STORAGE AND HANDLING

Deliver all components to the site in the manufacturer's original packaging. Packaging shall contain manufacturer's name and address, product identification number, and other related information. Store equipment in finished building, unopened containers until ready for installation.

PART 2 – PRODUCTS

MANUFACTURERS

Products Manufactured by: Primex, Wireless Time Systems Rauland, KRONOsync or approved equal, subject to meeting the requirements of this specifications.

EQUIPMENT

Master Wireless Transmitter: The Transmitter is to be installed in an internal location, and be mounted as a stand alone unit or as part of a rack system and include the following feature set at minimum:

- The LED and associated buttons on front of Transmitter will allow for the programming and display of the following operating features:

    - Master Transmitter: System shall have an internal clock which will guarantee that the operation of the clocks will continue to be synchronized in the event of a temporary GPS failure.
    - Time Zones: Display and programming must allow for the selection and display of Time zones for all of North America: Eastern, Central, Mountain, Pacific, Alaska and Hawaii. It must also allow for all international time zone options.
    - Daylight Saving Time: Transmitter must allow for automatic adjustment of the system, allowing it to be active or inactive.
    - 12hr or 24hr Operation: System must allow for programming of desired method of operation on the face of the transmitter.

- Frequency Range: 467.2125- 467.4375 MHz.
- Programming: All programming of operating features must occur on the front of the Transmitter and all changes must be able to be viewed on the digital display as the changes are being made.
- Master Transmitter Power: 1 watt minimum.
- Satellite Transmitter Power: 1 watt minimum
- Transmission Range: transmitter power dependent
- Operating Range: 32 degrees F to 158 degrees F (0 degrees C. to 70 degrees C.)
- Radio Technology: Narrowband FM, 12.5 KHz bandwidth

- FM Antenna: Shall be used for indoor applications and attached to the rear of the transmitter.)
- Power Supply Input: 120-volt AC 50/60 Hz
- Surge Protection: Per manufacturers recommendations

Analogue Clocks: Analog clocks shall AC powered. Clocks shall have ABS (polystyrene) frame and polycarbonate lens. Face shall be white or antique. Hour and minute hands shall be black, second hand is red.

Clock features:

- Clocks shall automatically update from the transmitter 6 times a day.
- Clocks shall automatically adjust for Daylight Savings Time, if option is selected.
- Clocks shall keep operating in synchronized mode if NTP signal is lost due to NTP failure. Once signal is re-acquired, clocks will resume NTP time synchronization.
- Clocks shall keep operating as quartz based clocks if there is a transmitter malfunction.
- The clock lens shall use a shatterproof polycarbonate material.
- The clock shall have a black hour and minute hands, as well as a red second hand**.**
- Classroom clocks shall be 12-inch diameter face units (minimum. Auditorium and gymnasium clocks shall be 16-inch diameter face units (minimum). Gymnasium clocks shall be provided with wire guards.
- The clock shall be an Underwriters Laboratories listed device.
- The clock shall have a safety mounting eyelet that prevents accidental separation of the clock from its' mounting surface.

SYSTEM OPERATION

- Transmission System shall receive time synchronization information every second from the NTP time source via a network connection.
- Upon power up and receipt of NTP time: the Transmitter will then transmit NTP synchronized time to all receiving devices programmed to the system frequency. The transmitter and all receiving devices will monitor receipt of NTP time and remain synchronized.
- Wireless Master Transmitter Operation: When power is first applied to the master transmitter, it shall search for a valid NTP signal and upon receipt, it shall set the internal clock of the transmitter. The transmitter shall update its internal clock whenever it receives a valid time signal from the NTP receiver. It shall transmit NTP time 3 times per minute to all receiving devices.
- Analog Clock Operation: The receiver shall search for a signal from the transmitter by scanning all frequencies. Upon receipt of the signal, the clock shall store the frequency in memory and set the clock to the exact second of the transmitter. The clocks shall locate the position of the hands and automatically set them to be in perfect synchronization to the Master Transmitter. The clock hands shall move in a quick "clockwise" motion until they get to the transmitter time.

PART 3 - EXECUTION

System Installation: Install in accordance with manufacturer's installation manual furnished with system.

Cleaning: Prior to final acceptance, clean exposed surfaces of all system components, using cleaning methods recommended by the manufacturer. Remove any labels from the faces of the clocks.

Manufacturer Services/Demonstration: Provide technical assistance to owner's representatives on functioning of the system and ongoing operation requirements.

Field Inspection: Prior to final inspection and acceptance, inspect entire system to ensure proper functioning and synchronization of components and replace any parts found defective.

SPECIFICATIONS FOR INTERCOMMUNICATIONS SYSTEM

PART 1 – GENERAL

This section includes a fully operational school internal communications including interface with the network connected master clock-program system. Section includes but is not limited to the following:

1. The system shall provide complete internal communications and interface with clock control including the minimum functions listed.
    a. Two-way Loud Speaking Internal Intercommunications.
    b. Event announcement
    c. Emergency announcement that will override any pre-programmed zones assuring that emergency announcements are heard at each and every speaker location.
    d. Capability of prerecording emergency announcements that can simply be activated by a single button.
    e. School Safety Paging and Evacuation tones,
    f. Class Change Tones utilizing multiple, programmable schedules for each zone,
    g. Paging and Program Distribution.
    h. Interface with the master clock-program system to provide class change signaling.
2. The system shall provide for correction and power classroom secondary Analog clocks over the same cable drop also used for intercom speakers and call-in switch.

DEFINITION OF TERMS

Installer(s): Shall refer to the person, persons, or company who or which actually contracts to perform the work specified herein.

SUBMITTALS

Product data: Shall be provided for each component.

Shop Drawings: Prior to proceeding with the work: Provide detailed equipment assemblies and indicate dimensions, weights, required clearances, method of field assembly, components, and location of each field connection, and a complete schedule of all equipment and materials with associated manufacturers cuts sheets which are to be used.

1. Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer-installed and field-installed wiring. Identify terminals to facilitate installation, operation, and maintenance. Include a single-line diagram showing cabling interconnection of components and levels throughout system and impedances.
2. Artwork drawings and lists indicating proposed nameplate nomenclature and arrangements for control panels and plug panels prior to fabrication reflecting equipment used.

3. Each drawing shall have a descriptive title and all sub-parts of each drawing shall be labeled. All drawings shall have the name and locations of the project, Systems Contractor's name in the title block.
4. Details and descriptions of any other aspect of the system, which must differ from the contract documents due to field conditions or equipment, furnished.

Product Certificates: Signed by manufacturers of equipment certifying that products furnished comply with specified requirements.

Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.

Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements.

Field Test Reports: Indicate and interpret test results for compliance with performance requirements. Include record of final matching transformer-tap settings, and signal ground-resistance measurement certified by Installer.

Maintenance Data: For equipment to be included in maintenance manuals specified in Division 1.

1. Record of Owners equipment-programming option decisions.
2. All instructions necessary for proper operation and manufacturers instructions.
3. "Proof of Performance" information.
4. Manufacturer's maintenance information.
5. Copies of non-proprietary computer programs and system set up disks documenting all programmable features of the installed system.

Record Drawings: Prior to final acceptance, provide three (3) complete sets of drawings indicating all cable numbers and construction details in accordance with the actual system installation. Revise all shop drawings to represent actual installation conditions. These Record Drawings will be used during "Final Acceptance Testing".

System Training: Submit the following information describing the training programs and system trainers as outlined in paragraph 1.6 of this specification and in accordance with Division 1 specifications.

1. Include with the submittal a preliminary staff development training program in outline form for review and approval by the owner's representative.
2. Include with the submittal a current copy of the trainer's certification from the manufacturer that certifies and identifies the trainer(s) who are eligible to provide training and support for the project.
3. Include with the submittal a current copy of trainer's need's assessment form which will be reviewed with the owner's designated representative for the system's preliminary system programming and configuration.
4. Include with the submittal copies of all documentation used to identify for the owner those participants attending and completing the training programs.

A copy of the manufacturer's standard statement of warranty proving all equipment provided for the school communications network is covered with the required five-year warranty shall be included with the project submittal. This statement of warranty shall be provided on the manufacturer's stationary.

QUALITY ASSURANCE

Installer Qualifications: An experienced installer who is an authorized representative of equipment manufacturer for both installation and maintenance of equipment required for this Section. Provide the following with in thirty (30) days after notification to proceed:

1. Provide documentation demonstrating a successful completion of five (5) projects of similar size and scope of work.
2. Provide a list of installations that the Installer has specifically installed for verification by the Owner. Random installations from other vendors and/or Installers shall not be accepted. The Installer, not its employees, must meet these qualifications.
3. The Installer shall be bondable.
4. The Installer shall demonstrate to the satisfaction of the Owner or his representative that he has:
    a. Adequate plant and equipment to pursue the work properly and expeditiously.
    b. Adequate staff and technical experience to implement the work.
    c. Suitable financial status to meet the obligations of the work.
    d. Technically capable and factory trained service personnel at a local service facility to provide routine and emergency service for all products used in this project.

Any Contractor, who intends to bid on this work and does not meet the requirements of the "Quality Assurance" paragraph(s), shall employ the services of a "Installer" who does meet the requirements and who shall provide the equipment, make all connections and continuously supervise the installation. A subcontractor so employed as the "Installer" must be acceptable to the Architect/ Engineer. The "Installer" shall be identified within thirty (30) days of notification to proceed for acceptance by the Architect/Engineer

Because the life expectancy of this type of communications system normally exceeds 10 years, the owner expects continuity from the service provider. If the installing/servicing company has not been an authorized provider of the manufacturer's product for it least (5) years, the following is required:

1. A list of (2) systems manufacturers of which they currently are authorized service providers where the relationship exceeds (5) years
2. A letter from the manufacturer outlining the details of changes in service providers over the last (2) years and what actions they will take to ensure continuity in service to the customer.

Each major component of equipment shall have the manufacturers name, address and model number on a plate securely affixed in a conspicuous place. NEMA code ratings, UL Label, or other data that is die-stamped into the surface of the equipment shall be easily visible.

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

Comply with NFPA 70

Comply with NEMA Standard SB-40 for Emergency Communications in K-12 schools. .

Comply with UL 60950.

Installation shall comply with local codes.

IN-SERVICE TRAINING

Provide and implement a complete and comprehensive staff training program for all administrators, facility staff members, and teachers. This mandatory training program will provide school staff a complete understanding of how to utilize and properly operate all functions

The training program shall be implemented by a staff member/trainer employed by the contractor. The trainer must be factory certified to provide training on their product.

All staff development training is to be coordinated through the owner's designated representative. As training sessions are completed, the trainer will provide the school's administrative staff and school district's staff a document listing all of the staff and faculty members who attended, received, and completed the training program.

WARRANTY

Provide a manufacturer's five-year warranty of the school communications network equipment against defects in material and workmanship. This warranty will cover all electronic equipment, as well as analog clocks, speakers, and call-in switches. If any defects are found within the warranty period, the defective equipment shall be replaced at no cost (equipment only); a one year warranty shall be provided for labor.

A copy of the manufacturer's standard statement of warranty proving all equipment provided for the school communications network is covered with the required five-year warranty shall be included with the project submittal. This statement of warranty shall be provided on the manufacturer's stationary. The standard five-year warranty is an important element in establishing a standard in quality. Manufacturers who circumvent the five-year warranty by offering special "extended warranties" that are not part of their normal published warranty will not be accepted.

Contractor shall respond, excluding weekends and holidays, within 24 hours to any warranty service calls. If equipment cannot be repaired within 24 hours of service visit, the contractor shall provide "loaner" equipment to the facility at no charge.

Make available a service contract offering continuing factory authorized service of the system after the initial warranty period.

MANUFACTURERS

Manufacturers: Subject to compliance with requirements, provide the following system:

1. Rauland-Borg Corp
2. Dukane
3. Valcom
4. Krono sync
5. Approved Equal

PART 2 - PRODUCTS

SYSTEM REQUIREMENTS

This Section includes hardwired or IP (Internet Protocol) based school Intercommunications system with interface to master clock-program system. If an IP based systems is proposed it shall include all network equipment and all horizontal cabling required for a fully functional system. This section includes requirements for Integrated Electronic Communications system components including, but not limited to, the following:

1. Intercom Call-in Buttons
2. Tone Generator for Class Change Tones
3. Two-way Loud Speaking Internal Intercommunications
4. Paging and Program Distribution.
5. Ceiling/Wall Mounted Speaker Assemblies

Provide complete and satisfactorily operating Integrated Intercom/Communications System as described herein, using materials and equipment of types, sizes, ratings, and performances as indicated. Use materials and equipment that comply with referenced standards and manufacturer's standard design and construction, in accordance with published product information. Coordinate the features of all materials and equipment so they form an integrated system, with components and interconnections matched for optimum performance of specified functions.

Features offered by this system shall be programmable so that programs that can be changed and expanded as customer needs evolve.

The system shall be an electronic system consisting of one or two amplified intercom channels, (classroom) speakers, call switches, and/or telephones, digital readout for display of call origination, and solid state logic and sensing.

Ability to provide multiple zone program distribution which is not interrupted by intercom communications.

The system shall provide the ability to initiate school safety paging announcements, evacuation tones and take cover tones.

Ability to selectively communicate or monitor individual classrooms in emergency situations; all communication within the classroom shall be hands free and will not require any interaction by the end-user to answer.

The system shall lend itself to expansion by simple addition of modules.

The central switching system shall provide for switching of the intercom talk path to a classroom telephone, during the course of a call.

Two-way communication between any telephone and any room speaker.

Sixteen (16) separate paging zones shall be provided; each location shall be programmable to belong to any combination of software zones.

The system shall be UL listed.

The system shall provide the ability to initiate school safety paging announcements, evacuation tones and take cover tones.

Ability to correct and power secondary clocks using the same cable drop used for intercom speaker, call switch.

EQUIPMENT AND MATERIAL

CENTRAL CONTROL UNIT FEATURES AND CAPABILITIES

1. The Integrated Electronic Communications Controller shall have the following capabilities:

    a. Facilities for multiple operations simultaneously without interference with an established pattern of priorities for all classroom communication capabilities:
        1) Facilities for centralized attendant answering.
        2) Facilities for automatically sounding a warning tone signal over any loudspeaker selected for two-way communications to alert the station attendant (classroom teacher) to the call and prevent unauthorized monitoring.
        3) Facilities for access to any single loudspeaker unit, zone loudspeaker unit, or all loudspeaker units. The warning tone signal shall sound as soon as the station is selected and shall be automatically repeated at regular intervals for the duration of the call if the voice circuit is not activated.
        4) Two-way amplified voice intercom between all locations equipped with administrative telephones and staff station speakers without the use of a press-to-talk or talk-listen switch.
        5) The system shall provide a port for the connection of on-site or off-site diagnostics by distributor or factory-trained personnel.
        6) Facilities for the instantaneous distribution of emergency announcements simultaneously, by a single button access, to all locations equipped with speakers.
        7) Facilities for the distribution of alarm signals to all areas equipped with speakers by single button access.
        8) Up to nine (9) separate distinct alarm signals shall be provided. Each of the distinct alarm signals can be activated by a designated single button.
        9) Capability for assigning speaker locations to any one or more of a minimum of sixteen (16) zones for zone paging, and minimum of sixteen (16) zones for program distribution. Zone capability shall be expandable. ,
        10) Facilities for answering calls registered merely by pressing a single response button.
        11) Capability for assigning speaker locations to any one or more of the zones for zone paging or time signal reception.
        12) Time signal tones shall be capable of being generated on a manual or automatic basis.

13) Power amplifiers shall meet all specifications exactly as specified herein, including power capacity and count.

CALL SWITCHES

1. Call Switches shall provide the following functions and features:
   a. Call switches call switch that shall activate a distinctive call-in tone level call from a single button activation.

AUDIO PAGING POWER AMPLIFIERS

1. Power amplifier(s) shall be provided and sized to provide a minimum of ½ watt of power to all intercom speakers, 2 watts of power to all paging speakers, and 15 watts of power to all paging horns.
2. The maximum load on the paging/program amplifiers shall be 80% of the rated maximum output of the amplifiers.

INTERIOR RECESS-MOUNTED WALL/CEILING SPEAKERS

1. Provide premium quality 8" cone transducer speaker. Transformer assembly shall be dual voltage multi-tap type suitable for 25 or 70-volt installations. The speaker shall have a frequency response of 65 Hz to 17 KHz with a power rating of 8 watts. Sensitivity shall be 93 dB, 1 watt, 1 meter. Voice coil shall be ¾" diameter with a 5 ounce magnet. When installed in ceiling, no speaker assembly weight shall be resting on any ceiling tiles.
2. Recessed back boxes shall be of heavy gauge cold-rolled steel, spot welded for stability with a rust-retardant gray primer finish. Acoustically treat the interior to eliminate mechanical resonance. The back box shall be 10-3/4"x10-3/4"x3-3/4" deep and shall be capable of accommodate the clock speaker baffle in locations designated.
3. Surface mount speaker backbox shall be of 22 gauge cold-rolled steel, with baked powdered epoxy cool gray finish. Supports either vertical or horizontal mounting. The surface mount clock/speaker backbox shall be 20.18" x14.26" x2.78" deep.
4. Baffles shall be constructed of a one-piece, 22 gauge cold-rolled steel, zinc-treated to prevent corrosion. The finish shall be white baked powdered epoxy and be virtually scratch/mar proof. The baffle perforation pattern shall be designed for wide sound dispersion and screw attachment to top of the back box. Provide tamper proof, stainless steel mounting hardware.

WALL MOUNTED HORNS

1. Provide double re-entrant type horn loudspeakers with integral driver. The horn loudspeaker shall be impervious to weather and vandalism. Horn loudspeaker drivers shall be rated at 15 watts with a frequency response of 480 Hz to 14 KHz. Sensitivity shall be 106 dB 1 watt, 1 meter. Transformer assembly shall be dual voltage multi-tap type suitable for 25 or 70-volt installations. Dispersion pattern shall be 180 degrees conical. The horn loudspeaker shall be constructed of treated heavy gauge aluminum, with all exposed parts potted and a sealed driver. Wiring terminal shall be fully enclosed. The speaker flange and mounting surface shall have a cork-rubber gasket. The horn loudspeakers finish shall be baked on enamel.

UNINTERRUPTIBLE POWER SUPPLIES (UPS)

1. UPS equipment provided for this system will include Power Conditioning to smooth current and voltage fluctuations.
2. UPS equipment will be sized in accordance with the system manufacturer's recommendations.
3. Provide an individual UPS for EACH SYSTEM CONTROLLER furnished with the system.
4. Provide additional UPS(s) for protection of all other equipment furnished with the system and housed in the equipment racks.
5. All UPS equipment shall be rack mounted.

EQUIPMENT RACKS

1. All equipment racks shall provide 44 spaces (77") minimum for mounted system equipment.
2. All equipment racks shall be multi-rack format ("gangable") style, bolted together, and open cavity.
3. All equipment racks will be provided with lockable rear doors.
4. Equipment rack(s) shall be located in climate-controlled areas/rooms as shown on drawings.
5. All head-end, distribution, and source equipment, including data and power, shall be located in racks configured as approved by the Engineer.
6. Rack mounted equipment shall be accessible from front and rear.
7. All unused rack spaces will be covered with appropriate blank/vent panels.

PART 3 - EXECUTION

EXAMINATION

Examine conditions, with the Installer present, for compliance with requirements and other conditions affecting the performance of the School Communications and School Safety Network.

Do not proceed until unsatisfactory conditions have been corrected.

INSTALLATION

General: Install system in accordance with NFPA 70 and other applicable codes. Install equipment in accordance with manufacturer's written instructions.

Furnish and install all material, devices, components and equipment for a complete operational system.

Impedance and Level Matching: Carefully match input and output impedance's and signal levels at signal interfaces. Provide matching networks where required.

Control Circuit Wiring: Install control circuits in accordance with NFPA 70 and as indicated. Provide number of conductors as recommended by system manufacturer to provide control functions indicated or specified.

All housings are to be located as indicated.

The contractor shall provide necessary transient protection on the AC power feed, all copper station lines leaving or entering the building, and all central office trunks. All protection shall be as recommended by the equipment supplier and referenced to earth ground.

Wiring within Enclosures: Provide adequate length of conductors. Bundle, lace, and train the conductors to terminal points with no excess. Provide and use lacing bars.

Provide physical isolation from speaker-microphone, telephone, line-level wiring, and power wiring. Run in separate raceways, or where exposed or in same enclosure, provide 12 inch minimum separation between conductors to speaker-microphones, telephone wiring and adjacent parallel power. Provide physical separation as recommended by equipment manufacturer for other system conductors.

Identification of Conductors and Cables: Use color coding of conductors and apply wire and cable marking tape to designate wires and cables so all media are identified in coordination with system wiring diagrams.

Weatherproofing: Provide weatherproof enclosures for items to be mounted outdoors or exposed to weather.

GROUNDING

Provide equipment grounding connections for Integrated Electronic Communications Network systems as indicated by the manufacturer’s installation requirements. Tighten connections to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounds.

Ground equipment, conductor, and cable shields to eliminate shock hazard and to minimize to the greatest extent possible, ground loops, common mode returns, noise pickup, cross talk, and other impairments. Provide 5-ohm ground at main equipment location. Measure, record, and report ground resistance.

Provide all necessary transient protection on the AC power feed and on all copper station lines leaving or entering the building. Note in system drawings, the type and location of these protection devices as well as all wiring information.

FIELD QUALITY CONTROL

Manufacturer's Field Services: Provide services of a duly factory authorized service representative for this project location to supervise the field assembly and connection of components and the pre-testing, testing, and adjustment of the system.

Inspection: Make observations to verify that units and controls are properly labeled and interconnecting wires and terminals are identified. Provide a list of final tap settings of paging speaker line matching transformers.

Testing: Rectify deficiencies indicated by tests and completely re-test work affected by such deficiencies at Contractor's expense. Verify by the system test that the total system meets the Specifications and complies with applicable standards.

FINAL ACCEPTANCE TESTING

The Final Acceptance Testing shall be provided to the Owner or the Owners designated representative only. Final acceptance testing to any other trade or service provider for the project will not comply with the requirements of this section.

The contractor will provide a Final Acceptance Test record document signed by both the contractor and the Owner or designated Owner's Representative establishing the "In Warranty" date. The warranty period will not commence until the Final Acceptance Test is completed.

Be prepared to verify the performance of any portion of the installation by demonstration, listening and viewing test, and instrumented measurements. Make additional adjustments within the scope of work and which are deemed necessary by the Owner because of the acceptance test.

COMMISSIONING

The contractor shall train the Owner's maintenance personnel in the procedures and schedules involved in operating, troubleshooting, servicing, and preventative maintenance of the system. This training will be in accordance with the training as outlined in Section 1.6, paragraphs 3, 5 & 6 of these specifications. In addition to the Training Materials provided, the contractor will also furnish Operators Manuals and Users Guides at the time of this training.

Schedule training with Owner through the owners representative, with at least seven days advance notice.

OCCUPANCY ADJUSTMENTS

The contractor shall provide Occupancy Adjustments in accordance with Section 1.6, paragraph 9 of these specifications. A response scenario amenable to both the owner and the contractor will be established and followed for the first year of service.

CLEANING AND PROTECTION

Prior to final acceptance, the contractor shall vacuum and clean all system components and protect them from damage and deterioration. All blank spaces in equipment cabinets will be covered with blank panels. Top and side panels, and all cabinet doors will be installed. All general areas within and around all equipment rack/cabinets in the facility will be swept, vacuumed, and cleaned up. No cabinets will be left unlocked and all cabinet keys will be turned over to the owner or designated owner's representative.

ATTACHMENT B

COST / PRICING PROPOSAL

Purchasing Office of the St. Louis Public Schools,
Second Floor – Cashier's Window
801 North 11th Street St. Louis, Missouri 63101

Subject: Saint Louis Public Schools

RFP Title – IP Clocks District Wide
RFP PS #61 – 1213

Design-Build Contractor

Company Name: _____

Contact Person: _____

Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____

In the event electrical load calculations and/or drawings are required to correctly complete these projects, the Design-Build contractor shall have available a licensed Electrical Engineer capable of providing the necessary technical expertise to advise and provide the guidance and construction documents (in necessary) in order to fully
Execute this project. **The cost of this service shall be included in the Design-Builder proposal.**

Proposed Engineer:

Company Name: _____ Discipline: _____

Contact Person: _____

Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____

1. The Undersigned Bidder offers and agrees, if this Proposal is accepted, to enter into an Agreement with the Saint Louis Public School District in the form included in the Contract Documents and to complete all work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this proposal and in accordance with the Contract Documents.

2. BIDDER has examined and is familiarized with the Instructions to Bidders, all of the other Bidding Documents, and all of the Contract Documents; Bidder has examined the actual site and locality where the Work is to be performed; Bidder has familiarized themselves with the legal requirements (federal, state, and local laws, ordinances, rules, and regulations); Bidder has made independent investigations as they deem necessary; and Bidder has satisfied themselves as to all conditions affecting cost, progress, or performance of the scope of work outlined in this RFP.

3. BIDDER accepts all of the terms and conditions as outlined in this RFP.

4. BIDDER aggress to perform the work in the time specified and accepts the provisions of and assessment of liquidated damages as defined in the General Conditions of the Contract for Construction

   a) Contract Period – The Contractor shall complete all work required as specified in Attachment B.

   b) If the reason for any delay in the commencement or progress of the Work is not attributed to any of the causes listed in the General Conditions, then the Design-Builder and his Surety shall be liable for and shall pay to the Owner the sum of **$1,000 for each calendar day** of delay as liquidated damages. The liquidated damages shall be paid for each day of delay until the Contract Work is Substantially Complete as defined herein.

5. BIDDER upon acceptance of this bid will execute the Agreement and will furnish the required Contract security and insurance certificates within 5 days after the award of the Contract.

6. BIDDER agrees to furnish all labor, materials, supplies, equipment, services, and other facilities necessary or proper for, or incidental to, all work as required by, and in accordance with the Contract Documents for this RFP for the lump sum price as noted in the “Base Bid Proposal” section.

7. Bidders should be advised that, prior to award of any contract, the Saint Louis Public School District reserves the right to conduct a pre-award survey for the purpose of determining the bidder's responsibility and capacity to perform the contract. This survey may include review of subcontracting agreements, financial capacity, and quality of work performed on other contracts.

8. Bidder agrees to indemnify the Board of Education, Operations Department, Construction Managers and it's Project Mangers from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description made, brought or recovered against the Board of Education by reason of any act of omission of the Bidder.

9. Bidder agrees that in all required bonds, the bidder shall include such provisions as will guarantee the faithful performance of the prevailing hourly wage clause as provided by contract.

10. Bidder and their subcontractors shall be required to submit weekly payroll sheets with their monthly invoices, showing compliance to the Prevailing Wage Standard, as well as an Affidavit of Compliance with Prevailing Wage Law at the conclusion of the project, prior to final payment.

11. Bidder agrees that accurate records pertaining to wages paid all workers employed on the contract shall be kept within the state by the contractor and each subcontractor, for a period of one (1) year following the issuance of final payment for the subject work.

12. Bidder will forfeit a penalty to the St. Louis Public Schools of $100 per day (or portion of a day) for each worker that is paid less than the prevailing wage rate for any work done under the contract by the contractor or by any subcontractor.

13. Bidder and all subcontractors to the contract must require all on-site employees to complete the ten-hour safety training program required under Section 292.675, RSMo, (enclosed in the laws section), if they have not previously completed the program and have documentation of having done so.

14. Bidder will forfeit a penalty to the St. Louis Public Schools of $2,500 plus an additional $100 for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, if such employee is employed without the required training.

15. Bidder agrees that during periods of excessive employment (any month immediately following two consecutive calendar months during which the level of unemployment in the state has exceeded five percent as measured by the United States Bureau of Labor Statistics) only Missouri laborers (persons who have resided in Missouri for at least thirty days and intend to become or remain Missouri residents) and laborers from non-restrictive states (persons who are residences of a state which has not enacted state laws restricting Missouri laborers from working on public works projects in that state, as determined by the Labor and Industrial Relations Commission) (see Excessive Unemployment section), may be employed under the contract, except that other laborers may be used when Missouri laborers or laborers from nonrestrictive states are not available, if so certified by the contractor and approved by the contracting officer.

16. Bidder agrees that every transit employer, as defined in section 285.230 RSMo, enclosed in the laws section, must post in a prominent and easily accessible place at the work site a clearly legible copy of the following: (1) The notice of registration for employer withholding issued to such transient employer by the director of revenue; (2) Proof of coverage for workers' compensation insurance or self-insurance signed by the transient employer and verified by the department of revenue through the records of the division of workers' compensation; and (3) The notice of registration for unemployment

insurance issued to such transient employer by the division of employment security. Any transient employer failing to comply with these requirements shall, under section 285.234, RSMo, enclosed in the laws section, be liable for a penalty of five hundred dollars per day until the notices required by this section are posted as required by that statute.

17. PROLOG – Electronic Program Management System - As part of project administration, the contractor is required to utilize an electronic web-based program & document management system known as Prolog to facilitate communications, submittals, reports, RFI's, invoices, schedules, and other relevant information.

18. **The contractor shall include an allowance of $1,000.00 in this bid to cover the cost of the software license.**

ACKNOWLEDGEMENT

In response to the Advertisement for Bidders and in accordance with the accompanying Bidding Documents therein listed, the undersigned, upon written notice of award of contract, acknowledges and agrees to provide all labor, material, equipment, tools, supervision, safety, technical services, taxes, insurance, overhead, profit, bonds and to pay all permit costs and fees necessary or required, and to supply the operations necessary and incidental to perform the Contract work in accordance with the provisions of the above referenced documents in a safe, timely and workmanlike manner for the Lump Sum Price(s) as stated below:

A. ADDENDA

Addenda to the Bidding Documents are included in the above Base Bid Proposal, and receipt thereof is acknowledged as follows:

Addendum No : _____ Date: _____

Addendum No : _____ Date: _____

Addendum No : _____ Date: _____

Addendum No : _____ Date: _____

B. BASE BID PROPOSAL

The following describes our cost/pricing proposal to provide services specified in this RFP for IP Clock District Wide Schools PS#61-1213 dated July 27, 2012

Base Bid Cost Summary by School (Complete Replacement)

Existing system in Full Capital Letters

1. **Ashland EleAm – LATHEM Design/Build Cost $ _____**
2. **Cole Elem - LATHEM Design Build Cost $_____**
3. **Compton-Drew DUKAN Design/Build Cost $_____**
4. **Cote Brilliante Elem- LATHEM Design/Build Cost $_____**
5. **Fanning MS- LATHEM Design/Build Cost $_____**
6. **Herzog Elem- LATHEM Design/Build Cost $_____**
7. **Humboldt Elem. – LATHEM Design/Build Cost $_____**
8. **Kennard Elem.- LATHEM Design/Build Cost $_____**
9. **Laclede Elem.- LATHEM Design/Build Cost $_____**
10. **Langston MS- LATHEM Design/Build Cost $_____**
11. **Lexington Elem. – LATHEM Design/Build Cost $_____**
12. **Mann Elem. – LATHEM Design/Build Cost $_____**
13. **Mullanphy Elem- LATHEM Design/Build Cost $_____**
14. **Northwest HS- LATHEM Design/Build Cost $_____**
15. **Peabody Elem. – LATHEM Design/Build Cost $_____**
16. **Sherman Elem. – LATHEM Design/Build Cost $_____**
17. **Sigel Elem. – LATHEM Design/Build Cost $_____**
18. **Soldan HS – LATHEM Design/Build Cost $_____**
19. **Walbridge Elem.- LATHEM Design/Build Cost $_____**
20. **Woerner Elem. – LATHEM Design/Build Cost $_____**
21. **Woodward Elem. LATHEM Design/Build Cost $_____**
22. **Adams Elem. Design/Build Cost $_____**
23. **Alternative @Stevenson – LATHEM Design/Build Cost $_____**
24. **Ames Elem. LATHEM Design/Build Cost $_____**
25. **Beaumont HS –LATHEM (BOGAN) Design/Build Cost $_____**
26. **Blewett ICA –LATHEM Design/Build Cost $_____**
27. **Buder Elem. – LATHEM Design/Build Cost $_____**
28. **Busch MS Design/Build Cost $_____**
29. **Carnahan HS - Design/Build Cost $_____**
30. **Carr Lane CPA – LATHEM Design/Build Cost _____**
31. **Clay Elem. – LATHEM Design/Build Cost $_____**
32. **Clyde Miller HS – Design/Build Cost $_____**
33. **Columbia Elem- LATHEM Design/Build Cost $_____**
34. **Dewey Elem. –RAULAND Design/Build Cost $_____**
35. **Dunbar Elem. – LATHEM Design/Build Cost $_____**
36. **Farragut Elem. -CINN TC1000 Design/Build Cost $ _____**

37. **Ford Elem. – LATHEM Design/Build Cost $_____**
38. **Fresh Start Meda P. – LATHEM Design/Build Cost $_____**
39. **Froebel Elem. –DUKANE Design/Build Cost $_____**
40. **Galludet-DUKANE Design/Build Cost $_____**
41. **Gateway Elementary –RAULAND Design/Build Cost $_____**
42. **Gateway Michael –RAULAND Design/Build Cost $ _____**
43. **Hamilton Elem. – LATHEM Design/Build Cost $_____**
44. **Henry Elem. – LATHEM Design/Build Cost $_____**
45. **Hickey (Philip) Elem. – LATHEM (BOGAN) Design/Build Cost $_____**
46. **Hodgen Elem. Design/Build Cost $_____**
47. **Jefferson Elem. –SIMPLEX Design/Build Cost $_____**
48. **Kottmeyer IWC Design/Build Cost $_____**
49. **L'Ouverture MS –CINN TC1000 Design/Build Cost $_____**
50. **Long MS – LATHEM (DUKANE) Design/Build Cost $_____**
51. **Lyon Elem. – SIMPLEX Design/Build Cost $_____**
52. **Madison IP – LATHEM Design/Build Cost $_____**
53. **Mallinckrodt Elem. – LATHEM Design/Build Cost $_____**
54. **Mason Elem. – LATHEM Design/Build Cost $_____**
55. **McKinley HS- LATHEM Design/Build Cost $_____**
56. **Meramec Elem. – LATHEM Design/Build Cost $_____**
57. **Metro HS –RAULAND Design/Build Cost $_____**
58. **Monroe Elem. –SIMPLEX 6400 Design/Build Cost $_____**
59. **Nance Elem- RAULAND Design/Build Cost $_____**
60. **Oak Hill Elem.- LATHEM Design/Build Cost $_____**
61. **Shaw Visual Elem. –SIMPLEX 6400 Design/Build Cost $_____**
62. **Shenandoah –SIMPLEX 6400 Design/Build Cost $_____**
63. **Stix Early Childhood Design/Build Cost $_____**
64. **Sumner HS –CINN TC1000 Design/Build Cost $_____**
65. **Vashon HS –RAULAND ICS Design/Build Cost $_____**
66. **Washington Mont Elem. –RAULAND 2490 Design/Build Cost $_____**
67. **Wilkinson Elem. Design/Build Cost $_____**
68. **Yeatman MS- LATHEM Design/Build Cost $_____**
69. **Bryan Hills elem.- LATHEM Design/Build Cost $_____**
70. **Gateway IT HS- SIMPLEX Design/Build Cost $_____**
71. **Nottingham School – LATHEM Design/Build Cost $_____**
72. **Roosevelt High School – RAULAND 2524 (Master/secondary clocks and PA) Design/Build Cost $_____**
73. **Central VPA High School- RAULAND (Master/secondary clocks and PA) Design/Build Cost $_____**

Total Design/Build Complete Replacement Cost (all schools)

$_____

Alternate 1 Bid – See description of each category above

Category 1 Schools needing only network setup
Cat 1 Design/Build Cost $_____

Category 2 Schools needing new master clock/head-end and network setup
Cat 2 Design/Build Cost $_____

Category 3 Schools Needing Complete replacement
Cat 3 Design/Build Cost $_____

Total Alternate 1 Category 1, 2 and 3 Design/Build Cost $_____

Unit Prices (Installed Fixed Price including OH and Profit)

- **Master Clock (each) $_____**
- **Secondary Clock (each) $_____**
- **Speaker (each) $_____**
- **Call Button (each) $ _____**

1. **Brief Explanation of the Services to be provided under the above cost/pricing proposal.**
   _____
   _____
   _____
   _____
   _____

2. **Optional Substitution Products**
   Manufacturer's Name _____
   Add/ Deduct to Base Bid $_____
   Add/ Deduct to Alternate Bid $_____
3. **Please attach the detail addressing Sections 5.3 as Attachment B**

_____ _____

Signature of Authorized Official **Date**

_____

Company Name

C. PERFORMANCE BOND

Performance Bonds and Labor and Material Payment Bonds will be required for the proposed Contract work described in the above Bid Category. The amount included in the Base Bid Amount above is: $_____

Performance and payment bonds will be required on or before the date of contract execution.

D. VALUE ENGINEERING (Recommendations to save time or money)

Enclose with the Bid Form, at the Bidder's option, recommendations that may assist in evaluation of cost and duration of any bid categories:

1. Submit a Voluntary Alternate proposal describing Bidder's recommending adjustments to the Plans and Specifications, which will reduce the cost or improve the Project Schedule. Attached separate sheet(s) describing the proposal.

E. CONTRACTOR LABOR RATES (attach additional sheets as necessary)

With this bid, contractor shall provide the cost per hour for all labor classifications in its employ. These rates will be used for any extra work ordered by the school district or construction manager and should include all wages, taxes, tools, and any other miscellaneous costs deemed

necessary by the contractor. Provide for each work classification. All rates should be costs per hour. Labor rates shall not include any mark-ups as related to Overhead and Profit.

These rates will be a critical part of each bid analysis. **Labor rates shall remain valid for the total duration of the project.**

Craft/Work Classification: _____ Rate: $_____/HR

Craft/Work Classification: _____ Rate: $_____/HR

Craft/Work Classification: _____ Rate: $_____/HR

Craft/Work Classification: _____ Rate: $_____/HR

(Attached information on separate sheet for additional Craft/Work classifications if necessary)

Note: Labor rates shall not include any marks as related to Overhead and Profit. Contractors shall also note that additional breakdown may be required by the School District/Construction Manager prior to acceptance of quoted rates.

F. STATEMENT OF MBE/WBE PARTICIPATION

All contractors submitting a bid must complete and sign the minority contractor's good faith effort form. Failure to do so is cause of rejection of this bid.

MBE/WBE Percentage included in Base Bid: Percent (___%)

Name, Address, & Telephone _____

WBE/MBE _____

Work Covered _____

Dollar Amount of MBE/WBE Firm Participation _____

_____

_____

_____

_____

_____

(List any additional on additional sheets as necessary)

OPPORTUNITY for ADDITIONAL MBE/WBE Participation

List below any additional MBE/WBE opportunities not included in the above bid amounts and the cost change to include these opportunities:

$_____DOLLARS

($_____) Add/Deduct

$_____DOLLARS

($_____) Add/Deduct

$_____DOLLARS

($_____) Add/Deduct

(List any additional on additional sheets as necessary)

G. LISTING OF MAJOR SUBCONTRACTORS & VENDORS

All subcontractors to be utilized in the performance of the scope of work anticipated by this bid must be listed below. The Bidder hereby certifies that the following proposed Subcontractors will be used in the performance of the work. (Additional sheets may be attached)

NAME OF SUBCONTRACTOR PERFORMED VENDOR EQUIPMENT	WORK TO BE MATERIAL OR SUPPLIED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

H. SCHEDULE

The contractor acknowledges that all work must be completed by **November 28, 2012.**

1. Calendar days required after award to prepare shop drawings/submittals for review: _ Days

2. Calendar days required for material delivery to site after receipt of approved shop drawings/submittals:
_____ Days

3. Calendar days required to complete all work in this bid package: _ Days

4. Average crew size by Trade: ___/Day

5. Average MBE/WBE field workforce: ___/Day

PROPOSED EQUIPMENT:

_____

_____

_____

_____

SPECIAL PROVISIONS TO BE PROVIDED BY OTHER CONTRACTORS AND/OR CONSTRUCTION MANAGER:

_____

_____

_____

_____

The Undersigned certifies that it has examined and is fully familiar with all of the provisions of the Bidding Documents and any Addenda thereto; and that it has carefully reviewed all of the words and figures shown in the Bid Documents and the accuracy of all statements in this Bid Proposal; and that he/she has been fully authorized to make such statements and submit this Proposal in his/her companies behalf.

Respectfully
submitted,

Legal Name of Firm:

Address of Business: _____

Telephone Number: _____

Federal Employee No: _____

Contractor acknowledges they are in Registered in Good Standing to Perform Work in the State of Missouri

YES_____ NO_____

Signature: _____

Title: _____

DATE SIGNED: _____

We operate as :(check

accordingly) Individual Owner: _____

Partnership: _____

Corporation: _____

Joint _____

Venture:

Limited Liability Corporation: _____

Other: _____

Located in the state of: _____

(Seal the Original Bid Proposal Form if Bid is by a Corporation)

Seal

CONTRACTORS GOOD FAITH EFFORT REPORT

PROJECT: _____ SUBCONTRACTOR: _____

BID PACKAGE NO.: _____ BID PROPOSAL AMOUNT: _____

PART I: (COMPLETE IF BIDDER IS AN MBE SUBCONTRACTOR/SUPPLIER; SIGN BELOW)

1. THIS BID PROPOSAL HAS BEEN SUBMITTED BY (CHECK ONE)

_____ A MINORITY BUSINESS ENTERPRISE

_____ A WOMAN BUSINESS ENTERPRISE

2. BIDDER IS A MBE OR WBE FIRM CERTIFIED BY (CHECK 0NE)

_____Saint Louis Lambert Airport Authority _____Saint Louis Minority Business Council

_____Missouri Department of Transportation _____Illinois Department of Transportation

_____BiState Transit Authority dba METRO _____Saint Louis Development Corporation

PART II: (COMPLETE IF BIDDER IS NOT AN M/WBE SUBCONTRACTOR/SUPPLIER; SIGN BELOW)

NAME OF MBE SUBCONTRACTOR	MWBE	TYPE OF WORK	BID AMOUNT	AMOUNT APPLICABLE TO GOAL

TOTAL: _____

MBE Participation: _____ %
WBE Participation: _____ %
Anticipated MWBE Workforce: _____ %

The Undersigned certifies that it is an M/WBE firm or will entire a formal agreement with MBE contractors for work identified above conditioned upon award of a sub-contract agreement.

CONTRACTOR: _____

BY: _____ DATE: _____

CONTRACTORS GOOD FAITH EFFORT STATEMENT

CONTRACTOR: _____

BY: _____ DATE: _____

E-Verify AGREEMENT

[**Name of Vendor**]:

a) Agrees to have an authorized person execute the "Federal Work Authorization Program Affidavit" attached hereto and deliver the same to The Special Administrative Board of the Transitional School District of the City of St. Louis (d/b/a St. Louis Public School System) ("District") prior to or contemporaneously with the execution of a contract with the District;

b) Affirms it is enrolled in the "E-Verify" (formerly known as "Basic Pilot") work authorization program of the United States, and are participating in E-Verify with respect to your employees working in connection with the services being provided (to the extent allowed by E-Verify), or to be provided, by your company to the District;

c) Affirms that it is not knowingly employing any person who is an unauthorized alien in connection with the services being provided, or to be provided, by your company to the District;

d) Affirms you will notify the District if you cease participation in E-Verify, or if there is any action, claim or complaint made against you alleging any violation of Missouri Revised Statute 285.530, or any regulations issued thereto;

e) Agrees to provide documentation of your participation in E-Verify to the District prior to or contemporaneously with the execution of its contract with the District (or at any time thereafter upon request by the District), by providing to the District an E-Verify screen print-out (or equivalent documentation) confirming your participation in E-Verify;

f) Agrees to comply with any state or federal regulations or rules that may be issued subsequent to this addendum that relate to Missouri Revised Statute 285.530; and

g) Agrees that any failure by your company to abide by the requirements a) through f) above will be considered a material breach of your contract with the District.

By: _____

(Signature) (Date)

Printed Name and Title:

For and on behalf of: _____

(Company Name)

End of Addendum 3