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700 N. Schoenbeck Road
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Project: **INTERCOM CONTROL SYSTEM REPLACEMENT at Betsy Ross Elementary School**
Subject: **Rauland TCU IP-Based Critical Communication System**

Submitted By:
Michael Banish
Senior Account Executive
Sound Incorporated

Enclosed please find Sound Incorporated's proposal response which includes the following
information:
- Executive Summary
- TCU Application Explanations (See Attached Appendix A of Potential Hardware Options)
- Project Highlights and Equipment / Solution(s) Proposed
- Total Investment
- Warranty & Maintenance Information
- Project Clarifications & Qualifications
- Network Readiness
- Proposed Payment Terms
- Additional Information on our Education Solutions

Based on the information provided and review of your existing applications, Sound has
provided the most thorough solution designed to meet the District's Critical Communication
System requirements. If you have any questions regarding this proposal and any of the items
contained within, please feel free to contact me to schedule a meeting to review. I can easily be
reached at (630) 718-3181 or via email at mbanish@soundinc.com .

Thank you for considering our proposal.

Michael Banish

Executive Summary:

Sound provides a diverse portfolio of innovative solutions in the areas of Connectivity, Sound & Audio Visual, Security, and Critical Communications for the Education and Healthcare markets. Our Education Team has been partnered with Rauland for over 50 years providing applications that evolved from scheduling and intercom platforms to a fully unified communication platform critical for day to day and emergency situations.

The Rauland TCU system offers District-Wide IP-based communication capabilities between school offices, classrooms, off-site buildings as well as notifications and interactions with other entities such as local authorities and first responders. The TCU system can also control other processes, such as locking/unlocking doors, and can automate sequences of communications actions to streamline operations on both a day-to-day and emergency basis. More than just an intercom system, a brief overview of the various applications of this diverse platform are outlined for your review.

TCU Application Explanations:

CDC Guidelines:
As of August 2020, TCU can help districts & classrooms operate within CDC guidelines during COVID-19 including cleaning requests and reminders.

COVID 19 & Potential TCU Applications (*Further Explained*):
The new 2022 software and hardware components complement existing TCU integrated solutions designed for everyday education communications, scheduling, event management and emergencies:
- Text to Speech ability for critical messaging.
- Temperature screening with camera interface.
- Tracking cleaning of classrooms with new workflows.
- Wayfinding with voice and visual prompts.
- Flexible bell schedules allow you to quickly and easily change how students move through your building as different phases of reopening occur.
- Audio and visual reminders to occupants of CDC guidelines including handwashing and social distancing.

"CHECK-IN" (Brief Description):

During Lockdown, many schools utilize a team to walk the halls looking for color coded sheets of paper indicating the safety status of classrooms. The TCU "Check-In" feature eliminates the need to walk the halls during a lockdown by providing each classroom a special "Check-In" Button associated with the Call Button.

Example:
1) The school enters "Lockdown Mode" by pressing a Panic Button or using the Lockdown Speed Dial on any Console, or Smart Phone App.
2) The TCU system automatically suspends all Bell Schedules to eliminate any possible confusion.
3) The TCU system automatically suspends the normal "Pre-Alert Tone" when the Office calls into a classroom.
4) Teachers lock their door, cover their door window, move to their shelter in place location and then press their blue "Check-In" button indicating they're OK.
5) Any classroom which does *not* press their "Check-In" button automatically calls any or all system Consoles.
6) Any system Console can then answer that call without them knowing, since the "Pre-Alert Tone" has been suspended automatically. If that room simply forgot, the office could then ask them to press their button.

If an unwelcomed visitor is detected within the room while listening in, First Responders now know exactly where to go to address the situation. In the meantime, no additional school personnel have been placed in potential harm's way by roaming the halls looking for an intruder.

2-Button Call Buttons:
In schools equipped with 2-Button Call Buttons, TCU can offer a feature called "Check-In" which offers an additional layer of Life Safety. The 2-Button Call Buttons come in either Normal/Emergency or Normal/Check-In varieties.

TCU Application Methods (Any School):
1. **TCU "Overlay":**
TCU can be applied to any school, with or without an existing Rauland head-end. TCU provides a link between your data network and existing Intercom System, allowing administrators to initiate targeted emergency actions from a Browser, SIP phone, Phone App, Panic Buttons, 3rd Party Security System or the included POE color control console.
In an Overlay, Pre-Recorded Emergency + Live Paging and single-zone Bell Scheduling are in the forefront, while "office-to-room" Intercom remains with the existing intercom system.

A TCU Overlay gives you an economically attractive *migration path* to replace aged infrastructure with a system that provides immediate Life-Safety benefits of superior communications for both day-to-day and Automated Emergency scenarios. When funds are

available to replace the existing intercom control components, Classroom Modules and/or TCU Gateways are added to complete the Head-End "Replacement". When applied District-Wide, a TCU Overlay links all schools in any Emergency … automatically!

2. **Replacement of Existing "Head-End" Using Existing Cable & Devices:** This Proposal

When upgrading from an Overlay, initial TCU components remain!

When proposed to replace an existing legacy head-end, TCU components contained with an Overlay are interfaced with TCU "Gateways" which connect to existing cables, speakers, and call buttons.

Existing Intercom cables are attached to the self-amplified TCU Gateways via 66-blocks. Usually an additional Zone Page Module is added along with a dual-channel amplifier to handle Halls and Outdoor Page Zones.

When a Gateway upgrade is fully complete, Classroom Call-In & Intercom is as currently possible. However, Gateways also offer the inherent additional ability to create virtually unlimited new Zones for Paging & Bell Tones which may not currently be possible.

Gateway applications assume existing cabling, cabling topography, and supporting speakers are in good working condition.

3. **"Full Network" IP Application:**

TCU has flexibility to be utilized in either of the previous methods.

Additionally, Classrooms can connect directly to the network via PoE+ and a "Classroom Module" which then support the Speaker, Multiple Buttons, Closures, Audio Output, Rauland Status Lights and LED Message Boards. In a school using Gateways, this ability is especially handy when wanting to add a new room or rooms which may be closer to an IDF than it is the Main Office or existing Gateway locations.

Mixing Applications:

All 3 methods can be mixed or matched providing the District a very flexible and powerful Critical Communication Solution!

For any of the Applications, based on individual user rights, the browser-based TCU software allows District personnel access to any of the following on a per-school or District-Wide basis:

- Emergency Sequences including initiation of Pre-Recorded Messages (Hard/Soft Lockdown, Weather, All-Clear etc.)
- Bell Schedule Applications

TCU Software Benefits:

The following examples are all possible at any school equipped with any TCU application. Specific applications for your school are listed later in Project Highlights.

Campus-Wide Centralized Communication Benefits Include:

- Intercom and paging communication from any school or offset offices or phone to any classroom.

- Intercom communication initiated from any classroom *(with call button)* to any school or off-site location or telephone extension with rollover/escalation sequences if unanswered.

Bell Scheduling: Web-based *"point-and-click"* calendar-like; usable by school office staff including automated communications such as music before/after school, tones between classes, and pre-recorded messages.

Automated Threat Management: Automated Emergency Sequences *(Threat Management)* for systematic execution of School District's emergency operations to save time and enable personnel to focus on critical decisions rather than procedural steps.

Examples include:
o **Tornado spotted from the West:**
  District leadership initiates TCU tornado sequence from smart phone, tablet, PC or console and selects the schools affected. The District's custom sequence instantly and simultaneously will:
    - Play each of the school principal's prerecorded calm message over those school's intercoms with appropriate announcements. (TCU Overlay Application required)
    - Access outside PA systems at those schools, turning them on if necessary, with preprogrammed delay for amps to power up.
    - Unlock appropriate doors at each school to allow rapid entrance into shelters.
    - Send texts and emails to all response team members.
    - Shut down HVAC.
o **An individual is admitted to school lobby and becomes an unmanageable threat:**
  ACTION: Staff member presses a duress button (or office personnel press console button, or personnel initiate via smartphone or tablet, or however your School allows).
  TCU REACTION: Your School's custom sequence can instantly, automatically, and simultaneously:
    - Activate locks to front doors or any other internal areas.
    - Play school's principal's prerecorded "Lock Down" announcement.
    - Document classroom "Check In" whereby teachers press the appropriate button when their room is secure. Office and District personnel can immediately observe any classrooms that have not confirmed "secure."
    - Dial 911 and/or email authorities.
    - Send emails to district and school leadership.
    - Notify buses to redirect rather than bring children to school at that time.
    - Notify nearby schools *and* initiate Soft Lock Downs including prerecorded announcements over outside speakers to come inside from outside activities.

  Because Rauland's TCU is programmable and customizable, these procedures and automated sequences can be modified and updated over time, preserving the long-term value of your School District's investment. Just as school may not have

envisioned lock downs and intruder alerts when purchasing intercom systems fifteen years ago, schools equipped with TCU will continue to evolve five, ten and fifteen years from now. *Rauland TCU evolves with you!*

Deferring Capital Investment

The Rauland TCU uniquely provides the ability to reuse existing classroom speakers and cabling, as well as those in hallways and common areas, within the campus-wide IP-based communications system. No other system provides either the above benefits or this migration path. Benefits include:

- Lower initial capital investment by more than half (~ 60%) versus complete replacement.
- Modernize classroom speakers to IP only when necessary (i.e., upon failure or remodel).
- Remove aged and failing head-end intercoms at each school while retaining investment in classroom speakers that will more-than-likely last several more years.
- Streamline installation with no entries to classrooms and minimal interruption to school communications.
- Reduce inventory cost (fewer numbers of parts to service).

Project Highlights:

Specific TCU Features Included within this proposal with programming:

- Lockdown Message*: To be triggered by TCU Administrative Console.
- Inclement Weather Message*: To be triggered by TCU Administrative Console or Audio from Customer-Supplied Emergency Weather Radio.
- Lockdown DRILL: This message can be initiated by TCU. During "Drills", First Responder notification does not occur.
- All-Clear Message*: For use after Lockdown or Inclement Weather scenario subsides. Triggered by TCU Console.
- Manual Tone* Annunciation Button on the Administrative Console.
- Music Playback* to All Zones: Memory Button on the Admin Console On & Off
- Browser-Based Bell Schedule: District to provide Sound Technician with Bell Schedule at installation. Sound's tech to program existing Bell Schedule into TCU System. Instruct end-user on Browser Bell Schedule basics. Existing Master Clock to be reused for Clock Sync.

  *Wav files to be provided to the technician by School or District. If the files are not available at installation time, Sound Inc. will use the pre-recorded messages included within TCU. Dedicated Single "Speed-Dial" Button to be created on the Admin Console for these events.

Many additional system features available at additional cost depending on programming time & related hardware.

Pricing is based on the following proposed "Scope of Work":

1. Install Qty. 1 TCU-IP Color Console at the existing location (Main Office). Please note this will require a POE+ Port (by District) at the existing Main Office Intercom Phone Location prior to Installation.
2. Install Remote Program Input Module at the existing Rack Location. This will allow any audio source to plug in via the 3.5mm Audio Input jack. Please note if you would like this Module to be in the Main Office, a POE+ Data Port is required (by District) prior to Sound Inc installation.
3. Install Emergency Microphone or Weather Radio Input Module at the existing rack location. Please note if you would like this Module to be in the Main Office, a POE+ Data Port is required (by District) prior to Sound Inc installation.
4. Program existing Bell Schedule into the TCU.
5. Using the existing location, furnish & install new components listed within this proposal.
6. Program, Test & Train end users on new equipment utilizing existing wiring & devices.

The following equipment shall be furnished and installed:

2	TCC2024	24-Port Hybrid Gateway
1	TCU3000SW	TCU Controller LICENSE
1	TCC2000	Campus Controller
1	TCC2033	AUX I/O Module
1	TCC2055	Program Audio Input Module
2	TCC2022	Zone Page Module
	TCC2077	Microphone Input Module
2	TCC2099	Universal Rack Mount (1-3)
1	TCC2045	IP Admin Console
1	SMA-3R0-0004-1	Master Clock Sync Module
1	TRA-2075	2x75W/25V RU=2
1	GS516PP	16-Port Gigabit PoE+ Compliant Unmanaged Switch - 260 Watts of PoE power
1	ERK-2125	21SP/25D 36.75"H RACK
1	CBS-ERK-25	Caster Base (25"D)
1	PWR-16-V	16 Outlet Vertical AC Strip
1	SMT750RM2UC	APC 750VA Smart UPS with SmartConnect, SMT750RM2UC Rack Mount UPS Battery Backup, Sinewave, AVR, 120V, Line Interactive Uninterruptible Power Supply Black

Total Investment Including Rauland's 5 Year Material Warranty:
For Sound to provide and implement the solution as outlined in this proposal, **$ 54,795.00**

Warranty:
In the Total Investment Pricing listed and approved within this proposal, the equipment furnished and installed by Sound shall be warranted for one (1) year from substantial completion, with Rauland hardware warrantied for five years. Any exceptions to this are listed in clarifications and qualifications.

Clarifications & Qualifications:

- All work to be completed during normal business hours (7:00AM to 3:30PM), Monday thru Friday (excluding holidays).
- Please allow 4-8 weeks for mobilization: equipment, engineering, scheduling and coordination.
- Sound will need free access to all areas related to the work within their scope.
- The proposal does not include any raceway, conduit, sleeves, coring, back boxes or 120 VAC power, where required.
- All painting and patching, if required, done by others.
- Owner to provide all the necessary IP addresses for the network devices.
- Owner to provide Server for the Rauland TCU Software load.
- Should any existing equipment, or communications media (i.e. cables, fiber optics, etc.) be used on this contract Sound Incorporated does not warrant the operation of said equipment, and as such should any faults be found with existing equipment, we reserve the right to make additional charges to rectify such faults. All such faults will be reported to the client prior to rectification.
- Drawings not included.
- Owner to provide us with a list of contacts, phone numbers and e-mail addresses for the individuals that will be involved in the project and training session. One up to two-hour training class has been allocated. Any supplemental training will require additional cost, of which is not included in this proposal.
- Due to the volatile market, this proposal can only be valid for a maximum of thirty days and may be subject to cost adjustment resulting from manufacture component shortages, international production crises, market equipment values, etc...
- *THIS PROPOSAL IS CONTINGENT ON A LACK OF IMPACT BY THE CORNOAVIRUS. Given the existence of the coronavirus pandemic, Sound will use its best efforts to staff and supply this project to be able to hit the scheduled completion date but reserves its right to seek an excusable extension of time if Sound or its subcontractors and suppliers are unable to maintain planned crew sizes due to the illness, supply shortages or governmental restraints on business, travel and/or assembly. To the extent that the project is suspended pursuant to the terms of the proposed contract or subcontract, we may need to seek additional costs associated with the suspension.*

Network Readiness:

With our diverse portfolio of solutions, Sound offers network readiness assessments and connectivity plans to assist clients implementing new IP solutions. We follow strict cyber hygiene procedures and have access to industry leading providers of network, cyber, and colocation services to ensure the greatest functionality of your solution without negative impact to existing platforms. Please let me know if we can assist you with those services.

Proposed Payment Terms:

30% due upon order acknowledgement, 30% due upon equipment delivery, 30% due upon completion, 10% due upon acceptance.