METROPOLITAN AIRPORT AUTHORITY
OF ROCK ISLAND COUNTY, ILLINOIS

QUAD CITY INTERNATIONAL AIRPORT

P.O. BOX 9009

REQUEST FOR PROPOSALS

TERMINAL PAGING SYSTEM UPDATE

March 4, 2021

RFP Process

Communication with the Authority during this RFP

The Authority has designated Joseph Goetz, Airport Operations Manager, to be responsible for coordinating communications between the Authority and Respondents. Respondents should direct all communications to Joseph Goetz via email at jgoetz@qcairport.com. Respondents are further advised that any communication, either verbally or in writing, direct or indirect, subsequent to the date of issuance of the RFP by a prospective Respondent or any of its owners, officers, employees, or agents, or any individual or entity acting on its behalf, with any member of the Board of Commissioners or any officer or employee of the Authority, except as provided in this section, is strictly prohibited and may be cause for disqualification of the prospective Respondent. Please note that the Authority prefers all communication to be in writing.

Addenda

All updates, addenda and other information, if any, shall be posted to the Authority's website, www.qcairport.com. Respondents are responsible for checking the Authority's website up to the time of the RFP submission deadline.

Pre-Proposal

A virtual pre-proposal meeting will be held Thursday March 11, 2021, at 1 p.m. Central via Go To Meeting. The meeting information will be provided upon request. Meeting access information can be requested from Joseph Goetz at jgoetz@qcairport.com. Site inspections prior to the response deadline can be scheduled with Joseph Goetz by contacting jgoetz@qcairport.com

Questions Regarding RFP

Questions regarding this RFP must be submitted in written form via email to Joseph Goetz at jgoetz@qcairport.com. Questions will be accepted until 4:30 PM, Thursday March 18, 2021. Questions may be answered via email. Any addenda, if needed, will be issued by close of business Tuesday March 23, 2021.

CAD Drawings

Simple CAD drawings of the terminal space are available upon request. Requests must be routed to Joseph Goetz at jgoetz@qcairport.com.

RFP and Response Submissions

All responses shall be sealed and clearly marked with the Respondent's name and address and the words "Terminal Paging System Update" on the outside of the envelope or container. The

Respondent shall allow sufficient time to ensure receipt of the response. It is the sole responsibility of the Respondent to have the response delivered to the Authority at the address below before the closing hour and date given in this RFP or be able to show proof of attempted delivery prior to the closing date. Any response tendered for delivery to the Authority must be in the Authority's possession prior to the opening date and time unless proof of attempted delivery can be provided. Any delivery received after the submission deadline will not be accepted and returned to the Bidder unopened unless proof of attempted delivery can be provided. Partial or incomplete responses may be rejected. The Authority reserves the right to reject responses. All proposals shall be shipped to:

Joseph Goetz
Quad City International Airport
2200 69th Avenue
Moline, IL 61265

Nothing in this RFP shall be construed to create any legal obligation on the part of the MAA or any respondents. The MAA reserves the right, in its sole discretion, to amend, suspend, terminate, or reissue this RFP in whole or in part, at any stage. In no event shall the MAA be liable to respondents for any cost or damages incurred in connection with the RFP process, including but not limited to, any and all costs of preparing a response to this RFP or any other costs incurred in reliance on this RFP. No respondent shall be entitled to repayment from the MAA for any costs, expenses or fees related to this RFP. All supporting documentation submitted in response to this RFP will become the property of the MAA. Respondents may also withdraw their interest in the RFP, in writing, at any point in time as more information becomes known.

Response Costs

All costs incurred in preparing the response to this RFP, participating in this process and negotiating with the Authority, whether or not a contract is awarded, shall be solely the responsibility of the Respondent. All materials and documents submitted by Respondents in response to this RFP become the property of the Authority and shall not be returned to the Respondents.

Protest

Any protest must be filed in writing and received by the Authority within seven (7) calendar days of the date of the occurrence of the event that is the subject of the protest, e.g., the opening of responses, the award, or a determination that a respondent is not responsible or that a response is not responsive.

Submission Requirements

Submission Instructions

Each proposal received by the Authority for Terminal Paging System Update will be evaluated as a single proposal to furnish and install all of the specified materials and services. For a respondent's proposal to be considered complete, it must include all components of the terminal paging system update items contained in this specification and attached PA System Requirements and Scope of Work. Incomplete proposals could be cause for rejection.

The MAA reserves the right to seek additional information to clarify responses to this RFP.

Response Structure:

It is not the intent of the Authority to restrict response preparation; however, to enable the Authority to evaluate each response in a uniform manner, all Respondents shall structure their response by submitting one (1) marked as "original" and three (3) marked "copies" of the response. Submit data as requested in the following sections:

Cover Letter: The cover letter shall include point of contact for the RFP response and the name of authorized dealer/installer who will be working with the Authority on this contract. Respondent shall provide a brief company description, history, and financial status.

Executive Summary: Describe your team's approach to providing the services in this RFP, identifying any unique or distinctive features, or alternatives to which the Respondent wishes the evaluation committee to give particular attention.

Experience: Indicate the experience the Respondent and any subcontractors have in providing the requested services. Indicate other relevant experience that shows the qualifications of the Respondent, and any subcontractors for the performance of the contract.

Scope of Work Requirements: Respondent must include all requirements listed in Section 5 of the attached PA System Requirements and Scope of Work document.

Relevant Contracts: Include a list of contracts the Respondent has held during the last five (5) years that relate to the Respondent's ability to perform the services outlined in this RFP. Examples should include the relative size and complexity of other similar work.

References: List four (4) references, with contact names and telephone numbers, for terminal paging systems that are similar in size and scope of services to the Authority. Please verify names and phone numbers of person to be contacted.

Additional Data Required in Attached Scope of Work: Submit additional data, exhibits, statements, and drawings necessary to assure the Authority has a total understanding of the Response. Include any other material which your team believes would be helpful in evaluation of the quality of your firm and its overall operations. The Authority may require an interview with short-listed Respondents to obtain a better understanding of their Response.

Award

Evaluation Criteria

The Authority staff will review qualifications and pricing based upon the documentation noted herein. Submittals that are timely and comply with the mandatory requirements of the RFP will be evaluated in accordance with the terms of the RFP. Any contract resulting from this RFP will not necessarily be awarded to the vendor with the lowest price. Instead, a contract shall be awarded to the respondent whose proposal demonstrates the highest quality response meeting the requirements of this RFP as determined by the scoring matrix below.

		Reviewer Score (0 to 10)	Weighted Score
Demonstrated Ability to Perform Service	15%		
Fulfillment of Vision	25%		
Experience of Respondent	15%		
Pricing	25%		
Warranty Response	5%		
Responses of References	15%		

Upon notification, the contract negotiation with the winning respondent will begin immediately. All proposals must include proposed costs to complete the tasks described in the project scope. Costs should be stated as one-time/non-recurring costs (NRC) or monthly/annual recurring costs (MRC/ARC).

The project timeline will be as listed below:

RFP Released:	Thursday March 4, 2021
Pre Proposal Meeting:	Thursday March 11, 2021
Questions Due:	Thursday March 18, 2021
Addenda Issued:	Tuesday March 23, 2021
RFP Proposals Due:	**Thursday April 1, 2021**
Commission Award:	Tuesday April 20, 2021
Project Completion:	Tuesday August 31, 2021

Final Selection:

If an appropriate Contract cannot be negotiated with the first choice, negotiations shall be terminated, and the second ranked firm may be contracted. This may continue until successful negotiations have been concluded or it is determined that it is in the Authority's best interest to cease negotiations and/or issue a new RFP. The Authority reserves the right to reject all responses, reject portions of any response, or accept the response deemed most advantageous to the Authority.

PA SYSTEM REQUIREMENTS & SCOPE OF WORK

Public Address Request for Proposal (RFP)
Quad City International Airport

March 4, 2021

Acronyms

ANS	Ambient Noise Sensors
AVIXA	Audiovisual and Integrated Experience Association
BIDs	Baggage Information Displays
BSOs	Baggage Service Offices
COTS	Commercial Off the Shelf
CTS-D/I	Certified Technology Specialist – Design/Installation
DSP	Digital Signal Processing
EVIDs	Electronic Visual Information Displays
FIDs	Flight Information Displays
FIS	Federal Inspection Station
GIDs	Gate Information Displays
I/O	Input / Output
IT	Information Technology
IP	Internet Protocol
LAN	Local Area Network
MAA	Metropolitan Airport Authority, operating entity of Quad City International Airport
MER	Main Equipment Room
MLI	International Air Transport Association (IATA) Code for the Quad City International Airport
NFPA	National Fire Protection Association
PA	Public Address
PMP	Project Management Plan
PoE	Power over Ethernet
RAID	Redundant Array of Inexpensive Disks
RCDD	Registered Communications Distribution Designer
RFP	Request for Proposal
SFP	Small Form-factor Pluggable (device)
SLA	Service Life Agreement
SP/CR	Software Problem/Change Request
SSCPs	Secondary Screening Checkpoints
STI	Speech Transmission Index
TE	Telecommunications Enclosure
TIA	Telecommunications Industry Association
TRs	Telecom Rooms
TSA	Transportation Security Administration
VPN	Virtual Private Network

Section 1 Introduction

1.1 Airport Overview

The MLI terminal, located south of the Quad City metro area of southeast Iowa and northwestern Illinois, dates to 1985 with the opening of today's "front-of-house" public terminal area serving Airline Ticketing/Bag Check, Baggage Claim, Car Rental and Airport Administration. The newer A and B Concourse expansion was opened for operation in 2001. Connecting the "front-of-house" to the Concourses is a "bridge" section serving concessions, a museum, and the TSA SSCP. The terminal operational areas are all single-level, with a basement space beneath the baggage claim end of the public terminal building housing central utilities and building maintenance operations. The newer A and B Concourse is slab-on-grade construction. Cabling pathways in the A and B Concourses are a mix of in-slab conduit and overhead cable trays, while the older public terminal area uses conduits, j-hooks and cable trays with generally easy accessibility. A utility gallery with easy accessibility is located above the airline offices behind the ticketing counters.

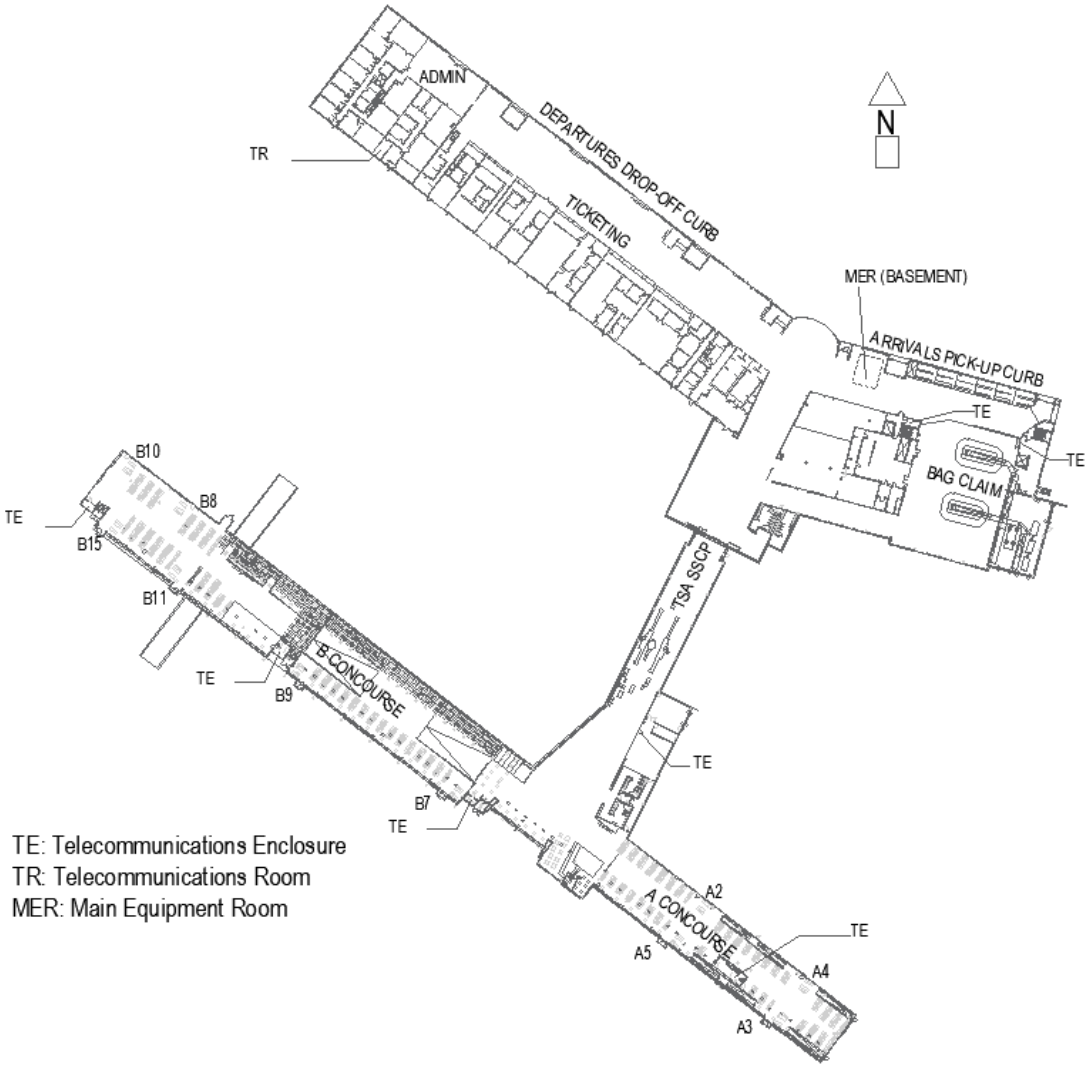


Figure 1-1 Airport Facility Map

1.2 Project Objective and Document Overview

The Metropolitan Airport Authority (MAA) seeks to upgrade functionality, replace aging equipment, and improve the operational reliability of the Public Address (PA) systems at Quad City International Airport (MLI). This document provides the following artifacts to support bidders in submitting proposals to MAA:

1. PA System Existing Conditions
2. Project Scope of Work
3. Functional Requirements and Technical Specifications
4. Submittal Requirements

MAA seeks to hire a single PA System Integrator (PA Integrator) who will be a single source of design, engineering, installation, integration, and maintenance of the PA system.

1.3 Reference Documents

In addition to this document, drawings attached in Appendix A are provided as reference and include the following information:

1. MLI Terminal floor plans indicating locations of passenger facilities:
2. Overall terminal layout
3. Layout of new PA elements
4. Pictures of existing conditions and facilities

Section 2 Public Address System Existing Conditions

2.1 PA System

The current PA system serving MLI was installed circa 2001, consisting of:

- An all-analog Bogen dial-in PA system featuring four (4) distribution zones using five (5) amplifiers distributing audio to twelve (12) circuits
- Background music is a line-level analog feed from a commercial-free subscription music service
- All voice paging is currently performed using a common MAA-provided analog PBX telephone system
- A Biamp Vocia message server was integrated into the Bogen system circa 2016 to deliver produced messages serving airport branding and TSA
- Paging microphone stations do not currently exist – all live voice paging uses the house telephone system for dial-in access to the PA
- The PA system can manage only one live voice page at a time, no automatic recording and cued playback exists
- The entire MLI Terminal is served by a total of four (4) zones that does not allow for more granular gate-hold area boarding announcements
- Ambient Noise Sensing (ANS) is not currently deployed

2.2 Message Delivery

Messaging over the MLI PA system includes:

- Scheduled playback of produced messaging serving MLI branding
- TSA general procedural announcements
- Continual low-level background music (ducked when live and scheduled announcements are running) provided by line-level analog audio from subscription to satellite-based music service.
- Live-voiced messages.

The existing PA system provides dial-in live voice paging to support life safety messaging. No special features (e.g. “ducking” of priority messages) is currently supported

2.3 Telecommunications Rooms and Facilities

The telecommunications facilities throughout MLI have been deployed to follow TIA-568 standards for service area, with horizontal cabling distances for Category 6 permanent link cabling less than 295 feet (90 meters) from TR to work area outlet. Most telecom facilities are not dedicated to telecommunications, sharing the spaces with other building utilities. Coordination with the MAA IT staff will be required to deploy the new PA systems equipment and to assign data switch ports for PA operations.

2.4 Non-Public Operations Areas

The air-side apron, ramp and baggage handling area, including out-bound baggage make-up carousels and in-bound baggage unloading, and airline operations offices are currently not served with any PA systems or delivery of life-safety messaging, and will not be included in any work with this project.

2.5 MLI Data Network

The MLI local area network (LAN) features a traditional single-core architecture feeding access-layer switches. The core switch is a newer HP E5400-series switch with 10Gbps single-mode SFP fiber transceivers connecting to newer 48-port HP 2900-series access-layer switches.

2.6 Roles and Responsibilities

The parties currently using or supporting the PA are:

1. MAA IT –responsible for LAN support.
2. MAA Operations – as the primary system owner, is responsible for Tier 1 PA system support and users of the PA system, and submit Tier 2/3 service requests to the local AV vendor.
3. Current AV Integrator – responsible for maintaining current PA application as Tier 2 and 3 support.
4. Airlines – primary users of PA system.
5. TSA - occasional users of PA system
6. Electronic Visual Information Display (EVID) Support Contractor – coordination for EVID integration

Section 3 Scope of Work

3.1 General Scope

MAA desires to replace and upgrade multiple core components of the PA system to enhance its performance and improve its reliability. The PA Integrator shall provide design, engineering, system implementation, maintenance, and service. The PA Integrator shall be responsible for supplying all software and hardware defined within this document.

The specific tasks required of the PA Integrator are as follows:

1. Replacement of existing PA system core, PA software, providing new user interface equipment, and programming of all DSPs and PA system software, resulting in a complete and fully functioning PA system.
    a. DSPs/PA system controllers
    b. Server located in existing PA cabinet.
    c. PA system software and operating systems
        i. Comply with MAA IT standards for operating systems, VLANs, and cybersecurity
    d. Paging microphone stations
        i. All paging mic stations will be IP-based and connected to the MLI LAN
2. Establishing new gate-hold area paging zones to provide more granular paging options
    a. Existing Concourse A and B paging zones will remain in place for broad-area paging
    b. New gate-hold area paging zones discussed in attached drawings
3. Replacement of all audio amplifiers with new units serving all existing paging zones, and new amplifiers deployed for new paging zones
    a. Selected PA integrator will test and verify location, functionality and delivered audio quality including delivered sound pressure levels and qualitative assessment of all paging zones and speakers prior to design, providing a pre-construction report including zone locations with functionality of speakers within each zone, and sub-proposal to resolve any functionality issues discovered.
4. Replacement of approximately 30 outdoor horn style speakers located along the Terminal curbside with box style speakers and install new amplifier for zone.
5. Full Design and Engineering Services
    a. Once the project is awarded, the PA Integrator will provide submittals at the following minimum design levels:
        i. 50% Design Documents including PA system operational narratives, system drawings and product cut sheets
        ii. 90% Permit Documents
        iii. 100% Construction Documents
        iv. As-Built Documents
    b. Documents shall be provided in both .pdf and .rvt (or .dwg) format
    c. PA Integrator shall be responsible for submitting a project phasing plan at 50%, 90% and 100% engineering milestones.

6. PA Integrator's Virtual Private Network (VPN) access to the PA system must adhere to MAA security and cybersecurity requirements including the remote access policy.

7. PA Integrator shall be responsible for transition of the existing PA system, which must remain fully operational when flights are occurring in the affected areas during PA system construction. PA Integrator shall only cut over gates and PA zones during off-peak hours when flights are not operational or others as determined by Airport Operations, to ensure no impact to flight operations.

    a. PA Integrator will provide on-site technicians to assist with technical issues that may arise immediately following the cut-over, as well as to assist with user operational training.

8. Electrical service currently exists at all locations receiving new PA equipment. LAN cabling connectivity to the switch in the TE rooms will be provided by the successful respondent.

    a. All locations will have new PA equipment placed next to existing equipment during construction

3.2 System Installation

Due to space restrictions within TRs/TEs, all equipment shall be mounted into existing EIA-310D-standard 19-inch equipment racks and cabinets.

- The existing PA core cabinets will provide sufficient space for new equipment.
- Coordinate with MAA IT for locating equipment within existing TEs and any required additional wall-mounted TEs.

3.3 Project Execution

1. The PA Integrator will provide a project manager for the duration of the project execution with the capability to be on-site as required.

2. PA Integrator shall conduct a project kickoff meeting three weeks after notice to proceed. PA Integrator will review its project plan, project schedule, communications plan, and problem escalation procedures, and introduce PA Integrator staff.

3. Throughout the project the PA Integrator is required to abide by MAA standards for IT Service Management.

4. Throughout project execution, the PA Integrator is responsible for conducting monthly status review meetings reporting on scope, schedule, resources, and quality and risk mitigation.

5. Throughout design and construction, PA Integrator will provide written weekly status reports. At the discretion of the Airport, a weekly teleconference will be conducted to review the emailed project status reports.

3.4 Testing

Following initial implementation of the new PA system a validation test will be conducted to ensure all components are accessible and working properly. Enough tests should be executed to ensure:

- All system interfaces are working properly.
- All devices are accessible and working properly; and
- Basic functions of all applications are working properly.

- Testing must validate the minimum functional and performance requirements as detailed.

The PA Integrator shall cooperate with and provide MAA representative(s) the opportunity(s) to participate in any or all the tests. Testing will be conducted at specific points in the implementation process as defined between MAA and the PA Integrator. For each test, the PA Integrator shall prepare a test report document that shall certify successful completion of that test for acceptance by MAA.

Any discrepancies or problems discovered during these tests shall be corrected by the PA Integrator at no additional cost to the project. The system or service shall be re-tested to validate that the problem or defect has been resolved.

3.5 Training

All proposals shall include the cost of delivery of training materials and what PA system training will be provided. MAA will work with the PA Integrator to identify suitable onsite locations available for training or available remote training material required.

System Administration and Monitoring Training shall cover all PA system administration and monitoring functions; provide an overview of the complete system structure including hardware, software, and networks; and describe all functions and applications needed to perform system administration.

The PA Integrator shall fully instruct the MAA designated staff and airline personnel in the operation, administration and maintenance of all products, equipment, and systems and be conducted by experienced personnel. Training shall be accomplished in a classroom setting (recognizing local safety, distancing, and personal protective equipment conditions) augmented by individual or remote instruction, as necessary. The PA Integrator shall provide all training aids necessary and shall keep a log of all personnel receiving and completing training for each system and note the type of training received.

All training shall be completed a minimum of two weeks prior to system cut over. Training schedule is subject to the MAA Project Manager's approval and shall have sufficient flexibility to accommodate Airport operations and shift operations. Training shall be scheduled such that MAA and other relevant personnel can participate.

At least four weeks before the final training course is offered to MAA and airline personnel, PA Integrator shall provide the MAA Project Manager with a final course schedule and syllabus for review and approval.

PA Integrator will offer additional/refresher training sessions on new releases as part of the warranty/maintenance fee throughout the warranty period.

3.6 Warranty and Maintenance

The submission will include a proposal for a Service Level Agreement (SLA) addressing:

- Requirements for remote troubleshooting of minor and major PA system malfunctions
- Time (after calling for assistance) for technician to be on-site to resolve Tier 2 (minor) and Tier 3 (major) technical issues
- Availability of Integrator's installation and engineering staff during the warranty period to address any post cutover issues
- Availability and cost estimate for additional professional services available for enhancements and training
- Regularly scheduled maintenance of hardware and software

- Integrator shall provide monthly reports assessing the operational health of the PA system, including a log of trouble tickets submitted and resolved.

The PA Integrator shall provide minimum three years of warranty and maintenance service on all parts, software, and labor installed as a part of the PA Integrator scope. The three year Warranty Period shall start upon the "Date of Final System Acceptance" of the entire PA system. The date upon which the Airport received beneficial use of any or all portions of the PA system shall not trigger the Warranty Period for any portion of the PA system. Any hardware or software standard manufacturer warranties exceeding the three year period shall extend to MAA.

Warranty includes all products supplied as part of PA Integrator solution, including all product upgrades and new releases produced during the warranty period and their installation at no additional cost. For system fixes addressing trouble tickets, no additional costs will be incurred by MAA for the PA Integrator restoring the PA system to normal operations. Warranty service and repair work shall be performed by personnel who have been trained, certified by the PA Integrator to work on their installed products and experienced in the operation and maintenance of the installed system.

A list of all patches and updates, with PA Integrator recommendations, shall be submitted to MAA for review and approval prior to production installation. All updates must be tested and approved prior to installation. To avoid interruptions in service, all successfully tested patches must be scheduled for installation through MAA IT's change management process.

Critical and security patches shall be deployed as recommended by the PA equipment manufacturer. However, patches which are required to protect the systems from an imminent risk shall be reviewed and deployed as soon as possible. The PA Integrator shall provide MAA with a quarterly (more frequently if critical to operations) list of recommended updates, patches, and their criticality. All patches and updates which are not considered critical or security related shall be reviewed and applied to the system as soon as possible, but no later than 90 days after release. The application of critical or security related patches will be prioritized above all other updates.

3.6.1 Tier 1 Support

Tier 1 support will be performed by MAA personnel. Tier 1 support functions include answering trouble calls regarding the PA system and creating trouble tickets. If not resolved by Airport staff, 1st level maintenance will call the PA Integrator if it is a hardware and/or software problem. First level maintenance will pull and replace faulty user hardware (e.g. paging microphone stations and replacement paging microphones).

3.6.2 Tier 2 & 3 Maintenance/Trouble Tickets

Tier 2 and 3 support for technical issue resolution will be performed by the PA Integrator. The costs for Tier 2 support are to be included in software license fees. Tier 2 maintenance provides regularly scheduled tasks such as (but not limited to) equipment air intake filter cleaning/replacement, scheduled software updates/upgrades, and more. Tier 2 support for technical failures occurs when Tier 1 support has failed to resolve an issue and calls for higher levels of support. The PA Integrator shall be available 24x7 for handling trouble calls and shall attempt to diagnose and repair the problem remotely. Trouble calls will be divided into two categories:

1) ***Tier 2 - Minor Failures***: These are defined as failures or problems, which do not affect the overall safety, security, or operation of the Airport. For example, the loss of a redundant workstation would typically be considered non-critical. On a minor failure, the PA Integrator must respond within one hour to isolate and resolve the problem. The PA Integrator must close out the trouble ticket with their service manager within 24 hours or escalate to MAA support point of contact.
2) ***Tier 3 - Major Failures***: These are defined as failures or problems, which affect the overall safety, security, or operation of the Airport. The failure of a system interface resulting in the loss of functionality of the PA system would be an example of a critical item requiring immediate remedy. On a major failure, the PA Integrator must respond within 30 minutes on a 24x7x365 basis to troubleshoot. If the PA

Integrator cannot resolve the problem within 2 hours remotely, the PA Integrator must respond on-site to major failure calls within 4 hours of the initial call. All major failure repairs must be resolved prior to the technician leaving the site.

Escalation: If a major failure is not resolved within four hours, the PA Integrator must notify MAA management personnel verbally and in writing and provide status reports every two hours until the issue is resolved.

3.6.3 Software Maintenance

The PA Integrator must provide PA system software maintenance support during the warranty period. The PA Integrator is required to correct all known software bugs reported by 1st level maintenance. The PA Integrator will also implement a Software Problem/Change Request (SP/CR) process for reporting and correcting software issues.

The PA Integrator is required to maintain all application software, Commercial Off the Shelf (COTS) software and firmware at its most current release following system acceptance. This applies to all software products supplied by the PA Integrator.

Software updates must be scheduled with MAA IT ahead of time and must follow the approved MAA IT change management process. If they are downloaded, the Airport must be advised with two weeks advance written notice that a new software release is available and that notice must outline all of the enhancements, fixes, and remaining known problems. MAA may elect not to load one or more releases and exercising this option shall not void the software support warranty.

Security patches and other patches which effect stability and security of the PA system environment must be implemented within 30 days of release; however, patches which are required to protect the systems from an imminent risk shall be reviewed and deployed on an expedited basis.

The PA Integrator will maintain configuration management (CM) of all software currently in the production environment at all times. This includes application and COTS software CM.

Section 4 Public Address System Functional Requirements and Technical Specifications

1. System architecture guidelines:

    a. The new PA system will be IP-based

        i. The MLI LAN will be used as the backbone connectivity from sources to destinations, connections coordinated with MAA IT and Operations staff.
        ii. Digital audio protocols will be IP-based including CobraNet, Dante, QLAN, or AES67.
        iii. PA audio sources will include IP-connected paging microphone stations, the analog-based subscription music service, and DSP-managed server(s) storing pre-produced and ad hoc recorded messages.
        iv. Live voiced messages attempting to be delivered to a zone currently delivering another message will be automatically recorded and placed in queue to be delivered once the paging zone becomes available.
        v. Distribution to existing 70-volt paging zones will use audio amplifiers that can be directly fed from the Ethernet LAN or use a digital-to-analog audio interface – the PA Integrator will review the existing conditions to determine channel configuration and audio power output sizing requirements.

    b. With the recent (2016) addition of the Biamp Vocia message server (MS-1e) and associated output device VO-4e, MAA desires building upon these devices with additional Biamp Vocia components to create a complete Biamp Vocia PA system.

    c. New PA system will coordinate with the MLI EVIDs system for delivery of visual paging messages.

    d. New PA system shall provide for 99.99% site wide uptime.

2. Public Address Software

    a. PA software must, at a minimum, support the functionality as described below:
        i. Live voice pages
        ii. Paging zone selection
        iii. Recorded live voice pages
        iv. Scheduled playback of pre-produced messages including:
            1. Airport branding
            2. TSA
        v. Delivery of low-level background music
        vi. Provide MAA Operations access to manage message creation, storage, and playback
        vii. Capability for MAA Operations staff to initiate a page remotely (e.g., application, campus telephone or cell-phone dial-in)
        viii. Capability for MAA Operations staff to purposefully mute paging distribution zones on-demand

    b. Visual paging – display of text matching audible announcements – needs to be deployed in compliance with the Americans with Disabilities Act 2010 Standards for Public Accommodations and Commercial Facilities Title III, Section 810.7.

i. Visual paging displays text of the following audible messages:
   1. Produced general Airport messages displayed throughout the terminal
   2. Produced TSA announcements displayed within the Security Screening Checkpoints (SSCPs)
   3. Courtesy paging messages from the Airport Admin office displayed throughout the terminal
   4. Alert messages from the Airport Public Safety displayed throughout the terminal

ii. Coordination with EVIDs vendor is required

iii. Text of all Visual Paging messaging will be needed to be displayed upon Flight Information Displays (FIDs), Baggage Information Displays (BIDs), and Gate Information Displays (GIDs), messages in English

3. Servers

   a. Integration of the existing Biamp Vocia MS-1e message server is required.

4. Paging Stations and Centralized Interface

   a. PA system will allow Airport operations to easily add new messages and remove obsolete messages with capabilities discussed in the PA System Existing Conditions.

   b. All new paging stations are to offer easily accessible, minimal-touch-control playback of pre-produced paging messages as well as live-voiced messages

      i. Pre-produced messages produced in English language
      ii. Selection of paging zone for message distribution (as discussed in Current System Design section above)

5. Network Connectivity and Communications Protocols

   a. All PA system components will utilize the MLI LAN for IP connectivity

6. New paging zones will be created serving the gate-hold areas using surface-mounted speakers secured to exposed building structure throughout the Concourse A and B areas – refer to attached drawings

7. The new PA system will play-back professional pre-produced messages, and offer recording, storage and play-back of messages by Airport and Airline Operations

   a. The ability for professionally pre-produced messages to feature English language

8. Ambient Noise Sensing (ANS)

   a. ANS will be deployed throughout the Airport terminal to monitor ambient background noise to adjust the delivered audio at a proper sound pressure level (SPL)

9. All new paging system installations will follow industry standards from, but not limited to, the following standards organizations:

   a. National Fire Protection Association (NFPA)
   b. Telecommunications Industry Association (TIA)
   c. Audiovisual and Integrated Experience Association (AVIXA)

4.1 Performance Requirements

1. Delivered audio frequency response of 80Hz to 12KHz +/- 3dB
2. Speech transmission index (STI) minimum 0.65 throughout the entire terminal
3. Delivered audio corrected for ambient noise level +10dB
4. Total latency for live messaging will be less than 10 milliseconds

4.2 Estimated Equipment Quantities*

Description	Unit Estimated Totals
MLI PA - Core Equipment	
DSP core units	2
PA/Visual Paging Automation System	1
250W Power Amplifier Channel	5
100W Power Amplifier Channel	12
MLI PA - Paging Microphone Stations	
Full-Function Paging Mic Station	24

*These are estimated counts only and final quantities may vary upon final review and design of the PA system

Section 5 PA Integrator Qualifications and Submittal Requirements

Qualified respondents are invited to send proposals to address upgrading the described PA systems. Respondents will supply the following:

1. Respondent Qualifications:
    a. Have designed and deployed a minimum three PA systems of similar or larger scope within the past five years at a US Airport
    b. Have individuals on-staff with certifications of Registered Communications Distribution Designer (RCDD) and/or Certified Technology Specialist – Design/Installation (CTS-D/I)
    c. The installing Contractor shall have a minimum of 5 years of experience in the installation of large scale networked audio paging systems. The Contractor must be a factory authorized certified integrator of the manufacturer.
    d. The manufacturer of the audio and visual system components shall have been in business for a minimum of 10 years. The manufacturer shall have an ISO9001 Certification.

2. For post-commissioned system outage issues, provide the capability of having technical staff arrive on-site within two hours of Tier 2 service call, in addition to the ability to troubleshoot and intervene remotely.

5.1 Submittal and Documentation

5.1.1 Proposal Outline

Proposals will include at a minimum:

1. Narrative for Respondent's proposal presenting qualifications and project approach
2. Line-item schedules for:
    a. Equipment Bill of Materials
    b. Labor to deploy equipment, system programming, project management, all costs associated with deployment
    c. Costs and lead times for extended warranties for all equipment, programming, and installation
    d. Costs for software licensing
        i. Initial purchase
        ii. Ongoing software maintenance and upgrades
3. Proposal for SLA addressing warranty and ongoing maintenance
4. Estimates of useful life of new PA systems with recommended replacement schedule
    a. Servers
    b. DSPs
    c. Amplifiers
    d. Paging mic stations
5. Outline of proposed testing plan and process
6. Training plan outline and available training tools. Plans should target technical, operational and maintenance training for MAA IT and Operations staff and other established PA users.

7. Project management plan outline with proposed schedule
8. The proposal will include a drawing showing the proposed architecture.

5.2 Pricing Forms Examples

5.2.1 Hardware & Unit Costs

Description	Quantity	Unit Price	Total
MLI PA - Core Equipment			
DSP			
I/O Unit			
Failover Unit			
PA/Visual Paging Automation System			
500W Power Amplifier Channel			
MLI PA - Paging Microphone Stations			
Full-Function Paging Mic Station			
Total Hardware/Components Costs			

5.2.2 Software Costs

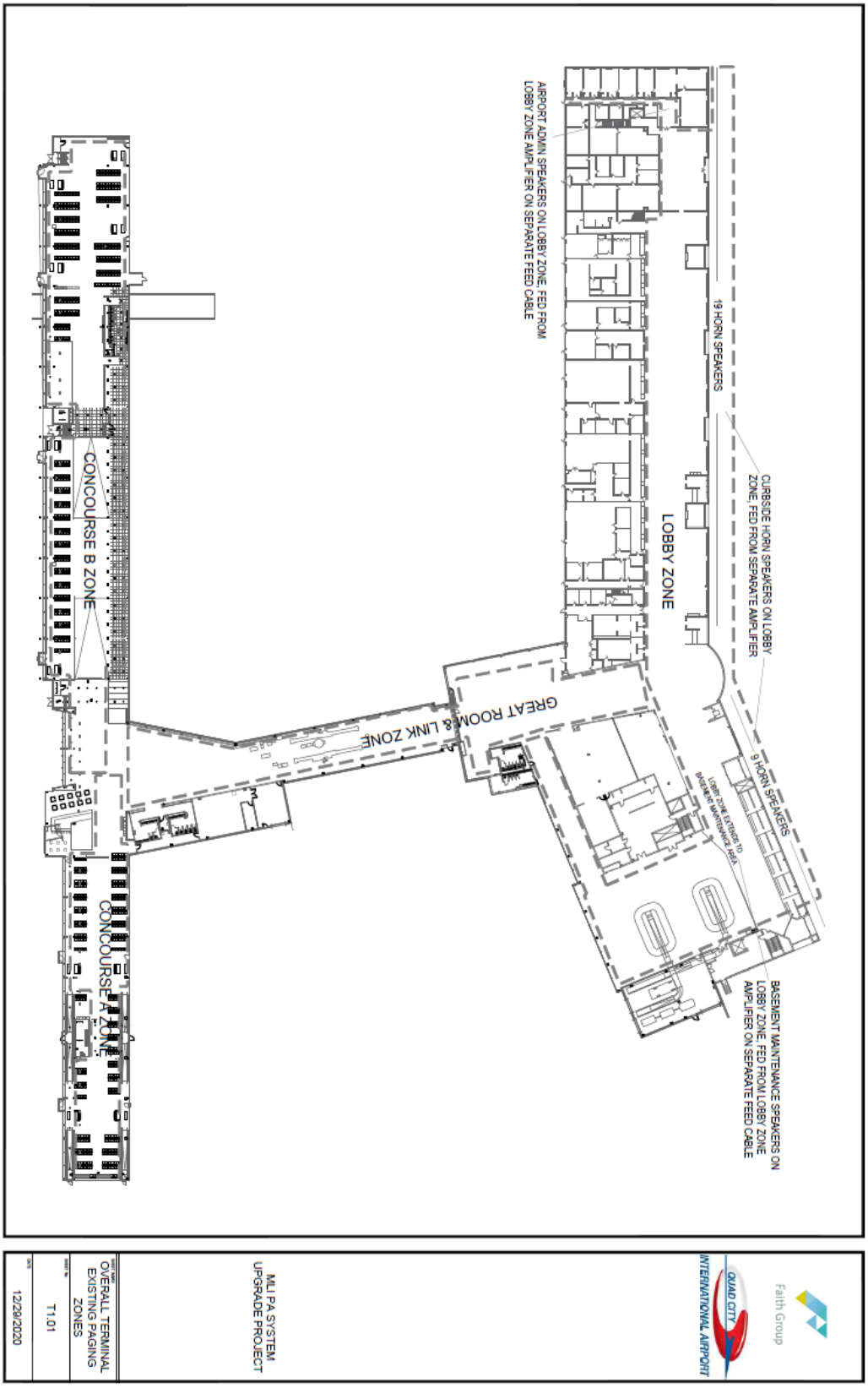
Description	Quantity	Unit Price	Total
Software Licenses for Server Environments			
Software Licenses for Database Environments			
COTS Software Licenses			
3rd Party Licenses			
Total Software Costs			

5.2.3 Onetime, Non-Reoccurring Costs

Description	Quantity	Unit Price	Total
Project Management			
System Design			
System Installation			
Testing			
Training			
Total Non-Recurring Costs			

5.2.4 Warranty & Maintenance

Device	Cost Yr. 1	Cost Yr. 2	Cost Yr. 3	Total
Hardware				
Software				
Professional Services				
Total				


AIRPORT ADMIN SPEAKERS ON LOBBY ZONE. FED FROM LOBBY ZONE AMPLIFIER ON SEPARATE FEED CABLE
19 HORN SPEAKERS
CURBSIDE HORN SPEAKERS ON LOBBY ZONE. FED FROM SEPARATE AMPLIFIER
LOBBY ZONE
CONCOURSE B ZONE
GREAT ROOM & LINK ZONE
9 HORN SPEAKERS
LOBBY ZONE EXTENDS TO BASEMENT MAINTENANCE AREA
BASEMENT MAINTENANCE SPEAKERS ON LOBBY ZONE. FED FROM LOBBY ZONE AMPLIFIER ON SEPARATE FEED CABLE
CONCOURSE A ZONE
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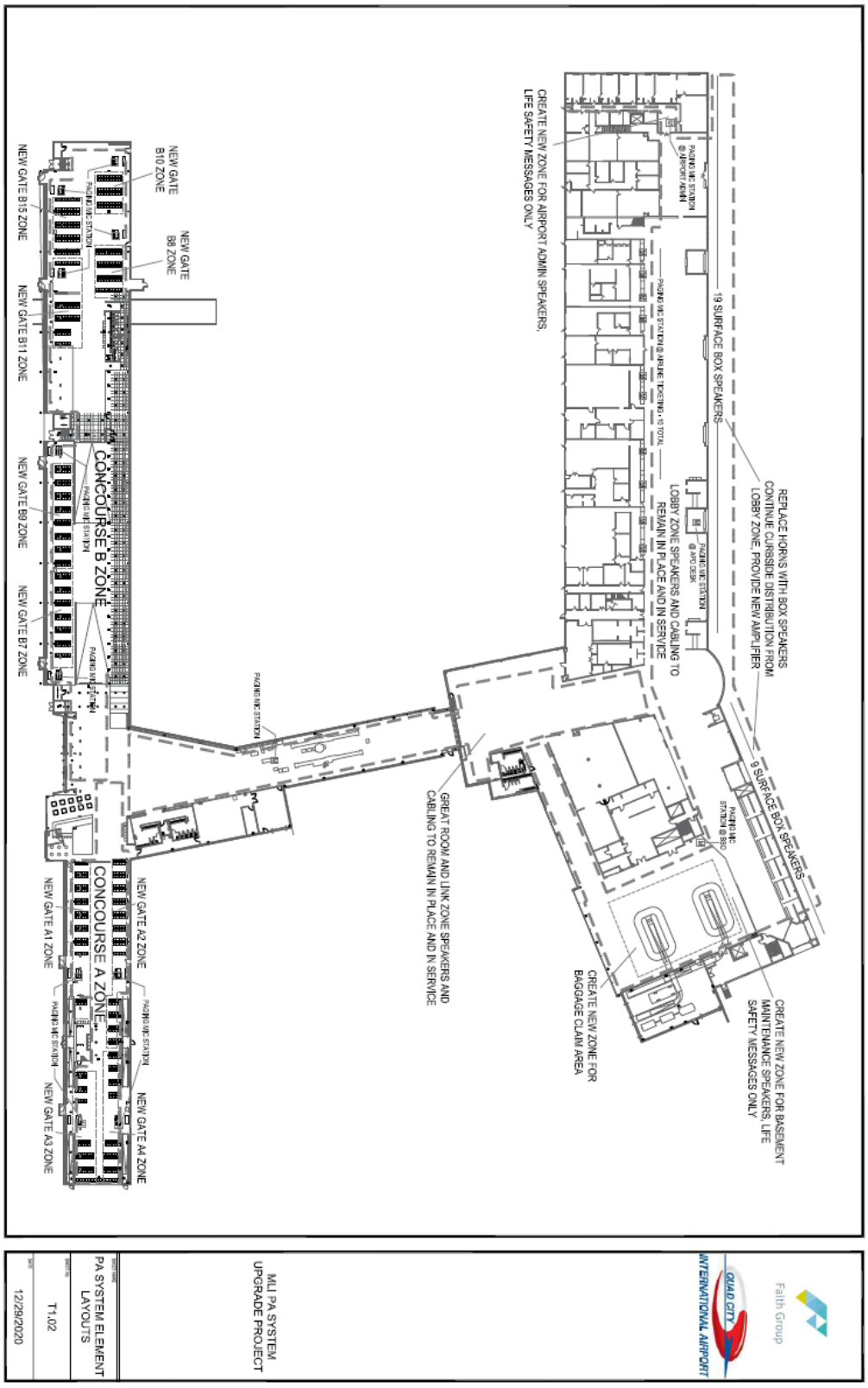
MLI PA SYSTEM UPGRADE PROJECT
OVERALL TERMINAL EXISTING PAGING ZONES
T1.01
12/29/2020


CREATE NEW ZONE FOR AIRPORT ADMIN SPEAKERS, LIFE SAFETY MESSAGES ONLY
19 SURFACE BOX SPEAKERS
REPLACE HORNS WITH BOX SPEAKERS CONTINUE CURBSIDE DISTRIBUTION FROM LOBBY ZONE, PROVIDE NEW AMPLIFIER
LOBBY ZONE SPEAKERS AND CABLING TO REMAIN IN PLACE AND IN SERVICE
9 SURFACE BOX SPEAKERS
CREATE NEW ZONE FOR BASEMENT MAINTENANCE SPEAKERS, LIFE SAFETY MESSAGES ONLY
CREATE NEW ZONE FOR BAGGAGE CLAIM AREA
GREAT ROOM AND LINK ZONE SPEAKERS AND CABLING TO REMAIN IN PLACE AND IN SERVICE
NEW GATE B10 ZONE
NEW GATE B8 ZONE
NEW GATE B15 ZONE
NEW GATE B11 ZONE
NEW GATE B9 ZONE
NEW GATE B7 ZONE
CONCOURSE B ZONE
CONCOURSE A ZONE
NEW GATE A1 ZONE
NEW GATE A2 ZONE
NEW GATE A4 ZONE
NEW GATE A3 ZONE
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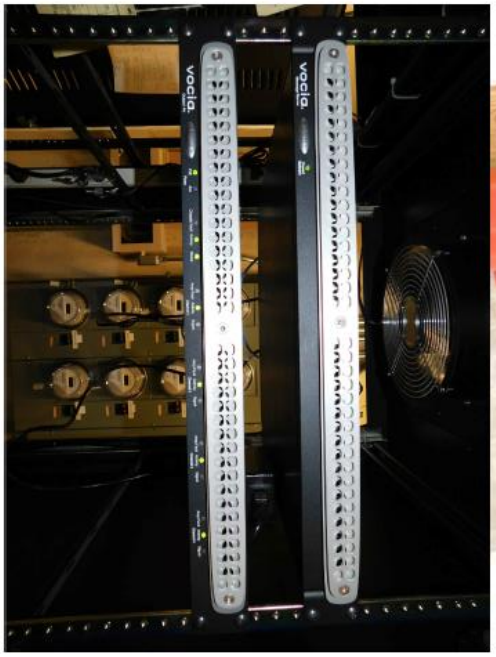
QUAD CITY INTERNATIONAL AIRPORT
MLI PA SYSTEM UPGRADE PROJECT
PA SYSTEM ELEMENT LAYOUTS
T1.02
12/29/2020

T1.03 - EXISTING PA SYSTEM CORE



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MLI PA SYSTEM UPGRADE PROJECT

EXISTING CONDITIONS

T1.03

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T1.04 - EXISTING PA SYSTEM CORE

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MLI PA SYSTEM UPGRADE PROJECT

EXISTING CONDITIONS

T1.04

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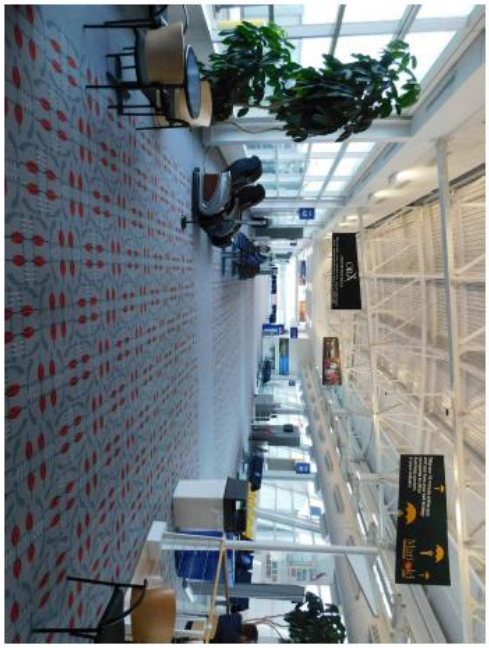
T1.05 - TYPICAL CONCOURSE AND GATE AREAS



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EXISTING CONDITIONS

T1.05

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T1.06 - TYPICAL TELECOM FACILITIES

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EXISTING CONDITIONS

T1.06

12/29/2020