DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
AIR TRAFFIC ORGANIZATION
EASTERN SERVICE AREA
TECHNICAL OPERATIONS

CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

FOR THE
RUNWAY SAFETY AREA (RSA) PROJECTS

RELOCATE R/W 15 MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICTOR LIGHTS (MALSR) DISTRIBUTION LIGHTING PANEL

FRANGIBLE ANCHOR BOLT INSTALLATION AND CHANGING VEGA TOWERS TO LIR STRUCTURES FOR TWO NON-FRANGIBLE MALS STATIONS SERVING R/W 15

RETROFITTING THE R/W 33 PRECISON APPROACH PATH INDICATOR (PAPI)

AT THE
BURLINGTON INTERNATIONAL AIRPORT
BURLINGTON, VERMONT

PREPARED BY: BOSTON NAVAIDS ENGINEERING CENTER, AJW-E14A
NASHUA, NH

DATE: MAY 2012

Coordination

Operational safety shall be a subject of all meetings (Pre-bid, Pre-construction, etc.). Period meetings shall be established at the beginning of the project with operational safety as a standing item. Coordination of facility shutdowns and restarts shall be made with a minimal of 48 hours of notice.

Scope of Work

The runway safety area (RSA) projects include the relocation of the Runway 15 MALSR distribution lighting panel (presently located approximately 875 feet from Runway 15 threshold and 93 feet right of centerline extended on approach), installation of frangible anchor bolts and changing out existing VEGA towers to LIR structures at two non-frangible MALS stations within the RSA serving Runway 15, and retrofitting PAPI Lamp Housing Assemblies (LHA) to meet frangibility requirements at the Burlington International Airport in Burlington, Vermont. This work shall remedy current FAA NAVAID / RSA violations. The nature of the construction will not require the use of a crane. Construction equipment needed will be a backhoe, pick-up truck, and bobcat.

A copy of the project drawings are included in Appendix A of this Construction Safety and Phasing Plan.

A copy of the project specifications are included in Appendix B of this Construction Safety and Phasing Plan.

Phasing

Due to the minor nature of this work, each "project" shall be considered a phase. These phases are not dependent on one another and may be scheduled to best meet the operational needs of the Airport.

- Relocation of the Runway 15 MALSR distribution lighting panel – remove existing MALS distribution lighting panel and relocate beyond the 250 foot RSA as shown on the project drawings. This phase includes trenching, conduit and cable installation to the steady burning light stations. All work occurring within the 250 foot RSA, some of which shall be within 200 feet of the Runway 15/33 centerline shall be conducted while the runway is closed. In addition to moving the distribution panel, new disconnect switches will be installed at stations 89+00, 87+00 and 85+00. The contractor shall abide by all OSHA requirements as two of these stations are on tall steel towers. All construction within the RSA associated with this phase shall be conducted at night between approximately midnight and 5am. A soft closure shall be in effect, meaning that construction will not commence until after the last scheduled air carrier has landed and

cleared the runway. The runway will be returned to operations by 5am each morning. Work outside of the RSA may be conducted during daytime hours at the discretion of the Airport Authority, however, the MALSR system will have to be partially or completely shut down during the entirety of this phase. This phase of the project may take ten (10) days to complete and shall be completed in accordance with the FAA drawings and specifications.

- Installation of frangible anchor bolts and changing out existing VEGA towers to LIR structures at two non-frangible MALS stations (STA 91+00 and STA 93+00 on FAA drawing BTV-10000250-C001) serving Runway 15. This phase includes the removal of the existing VEGA towers, the installation of frangible anchor bolts, and the installation of Low Impact Resistant (LIR) structures at the above named stations. All work at these two MALSR light stations are within the 250 foot RSA along runway centerline extended, therefore, requires work to be performed while runway is closed. All construction within the RSA associated with this phase shall be conducted at night under the same parameters laid out for the relocation of the MALSR distribution panel. In addition to the work described in this phase, the center light bar of the 1000 foot light station shall be changed out from a VEGA tower to a LIR structure configuration (STA 89+00 on drawings), so all light stations will be the same. This station is outside of the RSA, therefore, work may be conducted during daytime hours. During this phase the MALSR system will be out of service. This phase of the project may take three (3) days to complete and shall be completed in accordance with the FAA drawings and specifications.

- Retrofitting the Runway 33 PAPI. Presently the incoming power and control to each individual PAPI Lamp Housing Assembly (LHA) is installed through non frangible LB condulets. This phase will retrofit these to a frangible configuration including a break away plug. The scope will include hand digging behind each LHA, cutting back existing conduit, installing new conduit and frangible couplings, installing break away plug connectors, and re-assembling PAPI power and control to each LHA. This work is within the RSA and will require the work to be performed while Runway 33 is shutdown. At the discretion of the Airport Authority this work may be required to be performed during night time hours as defined under parameters of the Runway 15 MALSR phase. This phase of the project may take two (2) days to complete and shall be completed in accordance with the FAA drawings and specifications.

Protection of Navigational Aids (NAVAIDS)

All work to and within proximity of the NAVAIDS will be coordinated with the local FAA System Support Center (SSC). Where required the NAVAID facilities will be "shut-down" temporarily during construction. All facilities affected will be recertified by the local FAA SSC technicians and returned to service.

In accordance with the project drawings and specifications, all trenching within proximity of NAVAIDS and their associated power and control cables shall be hand dug and immediately repaired should it be required.

Runway 15 MALSR: When relocating the distribution panel, the Runway 15 MALSR will be out of service. When installing the new disconnect switches at Stations 85+00, 87+00 and 89+00 will require either a full system shutdown or if phased correctly, this work can be accomplished with the MALSR still being operational. FAA Orders allow the MALSR to remain in operation if only one light station is not operating. With proper coordination, it would be feasible for the Runway 15 MALSR to remain in operation during the installation of the disconnect switches. The FAA SSC Point of Contact for this shutdown is Eddie Cyr (802)657-4456.

Changing out the VEGA towers to LIR structures can be accomplished on an individual basis, therefore if necessary the MALSR system can remain in operation as long as only one station is not in operation during the change out. Station 93+00 is in front of the Runway 33 Localizer and within the Localizer critical area. The Localizer may have to be out of service during work at Station 93+00. The FAA SSC Point of Contact is Kelly Larsen (802)657-4451.

Runway 33 PAPI: Work on the Runway 33 PAPI is within the RSA and will require the system to be out of operation. The FAA SSC Point of Contact to coordinate this shutdown is Eddie Cyr (802)657-4456.

Contractor Access

a. Location of Stockpiled Construction Materials: Due to the scope of work, there will be minimal need to stockpile construction materials. The only situation that may occur is when trenching from the old MALSR distribution panel site to the new location. The linear distance is 200 feet and should be able to be accomplished during one night. The contractor will keep the stockpile of excavated material while excavating the trench to a

minimal and will backfill the trench prior to the runway being returned to service the following morning.

b. Vehicle and Pedestrian Operations: In accordance with the Airport Authority, FAA and Contractor personnel shall be badged and in addition shall be escorted to and from the project areas. Access to the work areas within the RSAs will be coordinated with and approved by the Airport Authority and local Air Traffic and defined during the preconstruction meeting. A location will be specified where contractor's employees can park their vehicle.

c. Two-Way Radio Communications: All individuals/crews shall be equipped with a two way radio and shall monitor Common Traffic Advisory Frequency (CTAF) at 118.3 when on the AOA while the Air Traffic Control Tower (ATCT) is closed. When the ATCT is open Burlington Ground at 119.15 shall be monitored. To determine active Runway and airfield conditions, listen to ATIS at 123.8.

d. Airport Security: Security requirements shall be discussed at the pre-construction meeting. TSA requirements, security badging requirements, perimeter fence integrity, gate security, and other needs shall be discussed during this meeting. The contractor is responsible for meeting all requirements of the Airport Authority.

Wildlife Management

The Contractor shall be responsible for the management of wildlife in the designated work areas to the satisfaction of the Airport Authority.

No wildlife attractants such as food scraps, grass seeds or ponded water that are the results of the Contractor's activities shall remain on or near the designated work areas.

All areas of proposed work are located within defined RSA and ROFAs regularly disturbed and maintained by the Airport Authority and the disruption of existing wildlife habitat is not expected.

Foreign Object Debris (FOD) Management

The Contractor shall continuously monitor their activities to ensure no Foreign Object Debris (FOD) migrates from the proposed work areas to active aircraft movement areas. Actions to be taken by the Contractor shall include but not be limited to; continual monitoring, removal and securing of loose packaging materials, ensuring Contractor vehicles are free of dirt and debris prior to traveling on pavements, and shall clean/sweep pavement areas as needed. The

Contractor shall take any additional steps to remove FOD as directed by the FAA Resident Engineer (RE) and/or Airport Authority.

Hazardous Material (HAZMAT) Management

No existing on-site hazardous materials are anticipated to be encountered on this project.

However, the Contractor shall have a hazard communications (HAZCOM) program as specified by the FAA. The Contractor and each subcontractor shall submit a copy of their HAZCOM program as well as a copy of their current OSHA 200 form, if requested.

Although OSHA regulations and the Contractor's Safety Plan will usually apply, the FAA COTR may consider certain work practices to be unsafe in accordance with Public Law 91-596, Part 5a and 5b. The CO or COTR may stop any operation that is in violation of the OSHA standards or fails to comply with the safety plan or other safe work practices.

Notification of Construction Activities

- List of Responsible Representatives – Points of contact for all involved parties, along with procedures to contact them, including after hours, shall be prepared and provided to the Airport Authority and local FAA personnel.

- NOTAMs – The project will require that whenever construction activities impact aircraft operations or NAVAID operations a NOTAM will be issued. The Contractor shall be required to coordinate his/her construction activities with the Contracting Officer's Technical Representative (COTR), Airport Authority and local FAA SSC through the RE. All work which effects FAA or flight operations shall be coordinated and approved by both Airport Authority and FAA personnel through the COTR at least forty-eight (48) hours in advance of the scheduled work. Failure to notify and obtain the necessary approval may result in a rescheduling of the work. If weather conditions or aircraft operations preclude a scheduled shutdown of an existing FAA facility or runway, the Contractor shall reschedule the work. The Contractor will be required to coordinate all power shutdowns of existing facilities with the FAA SSC offices through the RE at least forty-eight (48) hours in advance.

- The project will not introduce any restrictions to Aircraft Rescue and Fire Fighting (ARFF) access routes. The Airport Fire Station is located north of Runway 15-33 and ARFF vehicles will be able to access any part of the airport property during the temporary

shutdown of Runway 15-33. There will be no interruption of utilities including water supplies for firefighting.

Inspection Requirements

Daily Inspections – At the end of each work period, the Contractor shall inspect the work area(s) for FOD or other items which pose a threat to safety. Any deficiencies encountered by the Contractor's inspection shall be remedied prior to the Contractor leaving the site. The Contractor shall be permitted to leave the work area(s) upon approval from the FAA RE and/or Airport Authority.

Final Inspection - Before final acceptance of the work, all GFM, CFM and debris shall be removed from the general site area.

Underground Utilities

Subsurface utilities and cables, whose existence is known to the FAA, are shown on the contract drawings in approximate locations. Other utilities may not be shown on the contract drawings. The Contractor shall field verify the location of underground utilities before excavating as stated in the FAA project specifications. Damage to any existing FAA, or airport related cables or equipment is unacceptable. Any and all precautions shall be undertaken by the Contractor to protect the National Airspace System (NAS). This shall be accomplished, in part, by coordinating with the local FAA SSC, Airport Authority and the COTR.

Hand excavation methods shall be used in locating all existing utilities. The Contractor, at no additional cost to the Government, shall repair any damage caused by the Contractor immediately to the satisfaction of the local FAA and Airport Authority. Repairs, if necessary, shall be in accordance with the specifications and conditions stipulated by the COTR.

Penalties

If the Contractor does not adhere to the safety procedures described here and in the project drawings and specifications, the COTR or Contracting Officer (CO) may suspend the activities until the issue is remedied.

Special Conditions

No special conditions are anticipated.

Runway and Taxiway Visual Aids

All work associated with these phases that is located within the RSA is required to be performed at night while the runway is temporarily closed. The contractor must abide by requirements in AC 150/5370-2F. The contractor will be required to place a lighted X at each end of the runway directly on or as near as practicable to the runway designation numbers (refer to AC 150/5345-55, Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure). In addition, low profile lighted barricades shall be placed at locations indicated on the attached drawing (see Appendix C). The Airport Authority possesses the Lighted X's and they will be provided to the contractor for use during the project. The contractor will be responsible for providing the low profile barricades. It will be the responsibility of the contractor to place these items in the appropriate locations at the beginning of each work night and then removed each morning so normal airport operations can resume. No runway access will be required during these temporary closures. All items shall be stored daily at a location determined by the Airport Authority and the lighted X's shall be returned to the Airport Authority at the end of the project.

The following is the requirement for the low profile barricades (see appendix C for barricade locations). The contractor shall provide submittals for approval prior to any barricades being installed.

- For taxiways: 9 sections of 8 foot long barricade shall be interconnected and have approved lights and flagging. The following taxiways shall have barricades: Taxiway Golf, Taxiway Bravo, Taxiway Charlie, and Taxiway Juliet as shown on drawing in Appendix C. The exact locations shall be determined by the Airport Authority.

- For runway barricades: 18 sections of 8 foot long barricade shall be interconnected and have approved lights and flagging. Barricades shall be placed across Runway 15-33 on each side of Runway 1-19. The barricades shall be installed outside of Runway 1-19 RSA (75 feet from runway centerline). The exact locations shall be determined by the Airport Authority.

Appendix A

FAA DRAWING PACKAGE

RUNWAY SAFETY AREA IMPROVEMENTS
RUNWAY 15 MALSR AND RUNWAY 33 PAPI

BURLINGTON INTERNATIONAL AIRPORT
BURLINGTON, VERMONT

Appendix B

TECHNICAL SPECIFICATIONS
FOR THE

RUNWAY SAFETY AREA IMPROVEMENTS
RUNWAY 15 MALSR AND RUNWAY 33 PAPI

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BURLINGTON, VERMONT

Appendix C

LOCATION OF LOW PROFILE BARRICADES
FOR THE

RUNWAY SAFETY AREA IMPROVEMENTS
RUNWAY 15 MALSR AND RUNWAY 33 PAPI

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