25 September 2015 F500-L15-032

Lic. Alfonso Sarabia de la Garza Director General Aeropuertos y Servicios Auxiliares (ASA) Avenida 602, Número 161 15620 México, D.F. México

Subject: Technical Letter: Summary of Work During the Period 1 July 2015

through 30 September 2015

Dear Lic. Sarabia:

This letter respectfully submits to your attention a summary of the most significant project activities conducted by MITRE during the period 1 July 2015 through 30 September 2015.

# Reports

At the outset, before proceeding with a full description of activities, please find below a list of the documents that we are including along with this Technical Letter, some of which have been delivered to ASA and/or other parties throughout the concluding quarter.

While these documents include a large amount of important analytical material, probably the most important milestone of this delivery is MITRE's Category (CAT) II/III Instrument Landing (ILS) approach and Area Navigation (RNAV) departure procedure design results as, with these, MITRE has now delivered all required conventional and advanced procedure work to support triple independent operations at Nuevo Aeropuerto Internacional de la Ciudad de México (NAICM). Dual independent procedures will follow later in the project.

- Special Technical Letter: Pending Amendment to ICAO Annex 14 Taxiway Minimum Separation Standards (see MITRE letter F500-L15-027, dated 2 July 2015)
- Special Technical Letter: Assessment of Proposed Relocation of Fence at NAICM per CONAGUA's Request (see MITRE letter F500-L15-028, dated 17 July 2015)

The MITRE Corporation 7515 Colshire Drive McLean, Virginia 22102-7508, U.S.A.

- 3. Special Technical Letter: Fuerza Aérea Mexicana (FAM)-Proposed Special Use Airspace (see MITRE letter F500-L15-030, dated 25 September 2015)
- ASA Request for the Texcoco Satellite-Based Photogrammetric Survey (see MITRE letter F500-L15-033, dated 25 September 2015)
- Enclosure 1 to this Technical Letter (F500-L15-032): Nuevo Aeropuerto
   Internacional de la Ciudad de México—Feasibility of Independent Category II/III
   Approach and Area Navigation Departure Procedures, dated 25 September 2015
- Enclosure 2 to this Technical Letter (F500-L15-032): Cancún Airport Basemap, dated 25 September 2015
- 7. Enclosure 3 to this Technical Letter (F500-L15-032): Photogrammetric, Satellite-Based Survey of Toluca Airport and Its Surroundings, Site Assessment Report, dated 25 September 2015

The documents designated as Enclosures, are described below:

Feasibility of Independent Category II/III Approach and Area Navigation

Departure Procedures. This report describes MITRE's assessment of instrument approach and departure procedures for the opening-day runway configuration (consisting of three parallel runways) at NAICM based on the satellite-based photogrammetric survey received in late 2014. Specifically, the report describes MITRE's assessment of procedures for triple independent CAT II/III ILS approach and RNAV departure procedures.

It is important to note that final assessment of all approach and departure procedures cannot be completed until other actions that can affect procedure designs are conducted, such as:

- o Coordination with airlines and other key airport stakeholders
- Development of flight inspection activities by the Mexican aviation authorities to ensure that undetected obstacles and other safety and operational factors do not affect procedural designs, as well as the appropriateness of ILS signal reception.
- O Decision by the Mexican aviation authorities regarding grading (including to what extent) of the hills at Chiconautla and Chimalhuacán. Refer to MITRE's Technical Letter F500-L15-018, dated 26 March 2015 for information on MITRE's parametric analysis of runway threshold elevations that consider terrain at the two above-mentioned hills.
- o Final review of instrument procedures and other key aeronautical work by Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM) and other authorities must also be conducted before the procedures can be approved.

- o **IMPORTANT**: per MITRE's Technical Letter F500-L15-025, dated 24 June 2015, some exploration is being conducted by governmental authorities that may lead to a small lateral runway shift. As a result of this, an additional procedural reassessment may be required.
- Enclosure No. 2: <u>Cancún Airport Basemap</u>. This enclosure describes MITRE's development of the Cancún Airport basemap. A large multi-disciplinary team of experts in several fields has worked on the development of the basemap. Due to its nature, the basemap digitization is not susceptible to be included here. The enclosure, however, describes in detail the basemap work and the following lines briefly explain its contents and purpose.

The basemap provides a three-dimensional work environment within which MITRE can analyze a wide variety of important aeronautical matters. Construction of the basemap was a very labor-intensive, but essential effort. A properly created basemap enables better control, usage, and manipulation of data, more efficient and accurate analyses, and provides extensive visualization capabilities. MITRE will utilize the basemap to develop preliminary conventional dual independent approach and departure procedures for Cancún Airport, to be validated by SENEAM, which will later be utilized to support Human-in-the-Loop (HITL) simulations.

It is important to mention that available man-made obstacle information was provided to MITRE by the Mexican aviation authorities (as this work did not include specialized surveys).

• Enclosure No. 3: <u>Photogrammetric</u>, <u>Satellite Based Survey of Toluca Airport and Its Surroundings</u>, <u>Site Assessment Report</u>. MITRE is responsible for the procurement of a satellite-based survey of Toluca Airport and its surrounding areas. In the late August/early September timeframe, a team of survey experts from MDA Geospatial Services Inc. (MDA) visited Toluca for a two-week period to perform a survey project kick-off meeting with officials from ASA, as well as a site assessment. The purpose of the site assessment was to gather data, specifically Ground Control Points (GCPs), to assist in the development of the survey. MITRE pre-coordinated the visit details and its objectives. This enclosure describes that work.

MITRE wishes to express its thanks to you, as well as to Ing. Jorge Nevárez and his team for supporting this important work.

#### Activities

The following list describes activities conducted by MITRE during this reporting period:

 MITRE and MDA have been coordinating closely with the company responsible for acquiring the satellite-based imagery of Toluca Airport and its surroundings.
 Due to the delay in receiving authorization from ASA to order the survey, which caused satellite image acquisition to start very close to the rainy season in the Mexico City/Toluca area, only a few images have been acquired that meet project requirements. MDA is monitoring the weather situation closely to ensure that satellite acquisition attempts are made whenever possible. As a result, it will likely take longer to complete the overall survey and, in turn, cause some complications to MITRE's schedule. MITRE will, of course, try to minimize any impacts to its work schedule.

- Arup has recently proposed a number of alternatives to the MITRE-Recommended Runway Configuration (July 2012). The Arup-proposed options leverage reductions to the taxiway and taxilane clearances currently being recommended by the International Civil Aviation Organization (ICAO). As requested by Lic. y P.A. Gilberto López Meyer, Director General of Dirección General de Aeronáutica Civil (DGAC), MITRE assembled a team of specialized engineers to investigate the process, timeframe, and likelihood for ICAO adopting new taxiway and taxilane clearances being considered by Arup to support NAICM runway configuration options. That document is being sent as a reference along with this Technical Letter (see MITRE letter F500-L15-027).
- The Comisión Nacional del Agua (CONAGUA) asked Lic. y P.A. López Meyer if the currently planned fence running along the NAICM western property boundary could be relocated 100 m to the east (i.e., the fence closest to the westernmost runway) to allow for the development of new CONAGUA facilities west of the fence. As requested, MITRE evaluated the potential impact to aeronautical operations of the relocated fence, including the evaluation of key obstacle assessment surfaces in relation to the relocated fence. That document is being sent as a reference along with this Technical Letter (see MITRE letter F500-L15-028).

MITRE determined that if the fence were to be relocated 100 m to the east, the fence itself would not cause an aeronautical impact. MITRE also considered the potential development by CONAGUA of new facilities to the west of the relocated fence. Such an assessment, however, is very complicated because numerous obstacle assessment surfaces having varying slopes and dimensions must be considered. MITRE, therefore, advised that DGAC use great caution, as moving the fence can bring about secondary problems. MITRE also expressed concern that if the airport boundary (i.e., currently the fence itself) is also relocated 100 m to the east, it would be more difficult for aviation authorities to control new facility development in an area that would then be outside airport property.

Therefore, any development in this area should be closely coordinated with SENEAM and MITRE before any decisions are made to ensure compatibility with aircraft procedures and operations. It is also important to mention that MITRE recommends that airport planners (e.g., Arup) and other stakeholders consider the impact of any relocated fence plans as well as any CONAGUA-related facility development in this area on overall airport design plans.

• MITRE received a letter from Lic. Manuel Ángel Núñez, Director General of Grupo Aeroportuario de la Ciudad de México (GACM), which includes information provided by General Víctor Manuel Ruesga Ramírez, Fuerza Aérea Mexicana's (FAM) Chief of Staff, regarding FAM's proposed Special Use Airspace (SUA). Specifically, the letter describes the military Restricted Air Space (MMR) being proposed by FAM for fixed-wing aircraft and helicopter training and operations in relation to NAICM for review and consideration by MITRE in its airspace re-design work.

A specially assigned MITRE team reviewed the FAM-proposed SUAs to develop an understanding of the material. In addition, MITRE entered the FAM-provided coordinates of the proposed MMRs into its airspace design tool to compare the dimensions of the FAM-proposed MMRs with the MITRE-designed conceptual routes for NAICM.

MITRE's review of the information and data provided by FAM resulted in some very important questions that need to be answered and additional data that is required so that MITRE can continue with its review of the FAM-proposed MMRs in conjunction with the MITRE-developed airspace design concept of NAICM. The review and its questions are documented in Technical Letter F500-L15-030, included in this delivery. Notice that MITRE requests in that letter a reply no later than Friday 30 October 2015, and invites FAM to visit MITRE at the earliest mutual convenience.

MITRE is concerned because parts of FAM's proposal are in conflict with MITRE's and other aviation officials understanding of Santa Lucía SUA elimination and aircraft relocation matters that may create immediate issues for NAICM. It is important that MITRE work closely with both FAM and SENEAM to develop an airspace design for the Mexico City/Toluca Terminal Maneuvering Area (TMA) that accommodates the needs of its varied stakeholders as much as possible.

In anticipation of upcoming Mexico City airspace re-design efforts to support NAICM, MITRE's airspace design team has been examining arrival and departure routes, including interactions, in more detail. This work will allow the MITRE team to efficiently collaborate with SENEAM, airlines, FAM and other stakeholders in an informative and collaborative manner.

 MITRE's procedure design team spent a significant amount of time developing CAT II/III ILS approach and RNAV departure procedures considering the satellite-based photogrammetric survey data received towards the end of 2014.
 Refer to Enclosure 1 of this Technical Letter for details on MITRE's procedure design work. The development of procedures was very complicated due to the obstacle environment surrounding the NAICM site, including the presence of precipitous terrain. The MITRE team was able to determine the feasibility of CAT II/III ILS approach procedures. However, an Equivalent Level of Safety argument needs to be made by Mexican aviation authorities to mitigate the United States (U.S.) Federal Aviation Administration policy regarding the requirement for an unrestricted CAT I ILS approach procedure prior to developing a CAT II/III capability. Refer to Enclosure 1 of Technical Letter (F500-L15-021): Nuevo Aeropuerto Internacional de la Ciudad de México—Feasibility of Independent Approach and Departure Procedures, dated 24 June 2015 for details on MITRE's assessment of CAT I ILS approach procedures.

It is important to mention that CAT II/III weather conditions take place during a low percentage of all time and, therefore, Mexican aviation authorities should conduct a cost-benefit analysis regarding the establishment of CAT II/III ILS approach procedures at NAICM before making any final decisions. See the sub-bullet farther down in this Technical Letter for information regarding the need for Runway Visual Range (RVR) data to assist in this decision making process.

Next, MITRE also determined that independent RNAV departures are feasible. Also, with the exception of Runways 36L and 18R (i.e., the center runway), there are at least two departure procedures from each runway that allow for fanning.

With this delivery of MITRE's CAT II/III ILS approach and RNAV departure procedure design work, MITRE has now completed all required conventional and advanced procedure work to support triple independent operations at NAICM.

- MITRE's Air Traffic Management Laboratory engineers have been enhancing the existing Out-the-Window (OTW) computerized visualization and simulation model of NAICM and its contiguous area. For example, high-resolution imagery obtained from the Texcoco satellite-based survey are being incorporated into the model along with other three-dimensional features. Additionally, the model is being updated to take advantage of new software to improve quality and data processing. Using a high-performance, interactive virtual reality display system, the OTW model provides a realistic simulation of the view that would be seen from an aircraft, airport traffic control tower (ATCT), or any other desired location.
- MITRE has continued advancing on its modernization work, as per Task 6 of the ASA-MITRE agreement, to support the operation of NAICM as follows:
  - O A top former international aviation executive who has experience in the area of aviation organizational structures and best practices has begun preparation of an outline for a briefing to the DGAC and other interested parties.
  - MITRE will provide advice to Mexican authorities on regulatory additions and changes necessary to operate NAICM, in particular the DGAC. A MITRE team of experts has been formed and, through several brainstorming sessions, has started to identify key regulatory guidance and

authorization processes that may be required to operate NAICM, as well as key stakeholders that should be involved. In doing so, U.S. regulations and other material are being identified and reviewed to assist in determining what regulations Mexico may need to support independent operations at NAICM.

• The MITRE team has continued to conduct Cancún airspace related work. In early July 2015, MITRE received conceptual Cancún and Cozumel arrival and departure routes, holding locations, Visual Flight Rule (VFR) routes, and some altitude restrictions from SENEAM for MITRE to review. These routes were developed as the result of meetings between the SENEAM airspace designers at Mérida Area Control Center (ACC) and Cancún TMA, and are based on the airspace workshop that SENEAM and MITRE conducted in May 2015.

MITRE's review of the above-mentioned routes and information was conducted in two stages. The first stage was to examine the information that SENEAM provided. The second stage was to identify issues and formulate recommendations on possible improvements, such as reducing the track miles associated with the routes which is an important airline metric.

For the first stage, MITRE examined the SENEAM-provided routes, holding locations and altitudes, and altitude restrictions using the following criteria:

- Route definitions
  - Adequate departure divergence
  - Arrival and departure route pairs for the various directions
  - Conflict points with other routes
- Holding locations and altitudes
  - Containment within Mexican airspace
  - Location of proposed holding, on or near arrival routes
  - Confliction with other routes
- o VFR routes
  - Conflict points with Instrument Flight Rule routes
- Altitude restrictions
  - Ability of the aircraft to meet those restrictions
  - Achievability of the stated altitude restrictions
- Existing conventional routes
  - Conflict points with other routes
  - Feasibility to handle dual independent operations

MITRE found some items that need to be addressed, such as separation between routes, potential controller workload, inconsistencies in information, adequate departure divergence, holding containment issues and altitude restrictions.

In additional to reviewing and suggesting modifications to the Cancún and Cozumel routes, MITRE has been analyzing the SENEAM-provided flight plan data and current procedures from the Aeronautical Information Publication (AIP). The analysis' objectives are to uncover additional issues and to develop a baseline set of metrics that will be used in comparing the conceptual route design with the current airspace configuration. The comparison analysis will help show how the changes to the airspace affect metrics such as sector counts, flying distance and procedure interactions.

#### Contractual Matters

o Hidalgo-Related Work – Per ASA information, MITRE's Hidalgo-related work was stopped due to FAM interest in relocating its fixed-wing non-transport aircraft operations to Querétaro Airport. However, MITRE informed through Technical Letter F500-L15-007, dated 12 January 2015, that FAM operations at Querétaro Airport, along with the establishment of SUAs to support those operations, must be thoroughly examined to ensure that they are feasible and, more importantly, that they do not interfere with future operations at NAICM. Such investigation must be conducted in close coordination with FAM officials.

Since this work is not contained in MITRE's current contract, a modification of the contract will be required. This should be done after detailed discussions with officials from FAM are held to confirm their plans and priorities.

- Toluca-Related Work As mentioned before in this Technical Letter, ASA instructed MITRE not to consider a second parallel runway at Toluca Airport. ASA and MITRE need to discuss the process for handling this matter, including a modification of the contract. The most appropriate time to do this will be after the Toluca survey is completed in order to modify the contract on the basis of detailed, realistic, and recent information.
- Other important items to mention, which were also discussed in MITRE's previous Technical Letter, are described below. <u>MITRE again requests that ASA investigate the status of these items with the relevant Mexican aviation authorities and provide MITRE with feedback and an update on their status.</u>
  - o Parametric Analysis of Runway Threshold Elevations
    - The objective of MITRE's parametric analysis (see MITRE letter F500-L15-018, dated 26 March 2015) was to provide information to assist GACM and other stakeholders in making key decisions regarding potential runway threshold elevations, grading (and its

extent) of Chiconautla and Chimalhuacán, and in the preparation of cost/benefit analyses.

MITRE requests an update from ASA regarding the status of the situation regarding the hills since any decisions may affect critical aeronautical matters at NAICM, such as runway lengths, threshold locations, and instrument procedures.

- o NAICM RVR and Automated Weather Observing System (AWOS)
  - As was reported repeatedly, a vehicle struck the utility pole that provides commercial power to the AWOS and RVR that are installed at the NAICM site. This caused a power surge that damaged the AWOS.

MITRE was informed by SENEAM that the AWOS has been repaired. SENEAM, however, also informed MITRE that there is no commercial power to either the AWOS or RVR systems. They are currently both being powered by a generator, but are unstable.

It is essential that commercial power be restored to these systems as soon as possible. This is especially important for the RVR as its data is needed by MITRE to examine CAT III weather conditions. Therefore, please contact the appropriate entity as soon as possible to restore commercial power to the NAICM AWOS and RVR and let MITRE know about it.

## NAICM CAT II/III ILS Approach Procedures

It is important to reiterate that MITRE's weather analysis which is based on more than 5 years of detailed weather information, (see enclosure No. 1, Weather Analysis for the Nuevo Aeropuerto Internacional de la Ciudad de México Site to MITRE Technical Letter F500-L15-007, dated 12 January 2015) shows that CAT II/III weather is rare at the NAICM site, and when it occurs, would likely only be required for northerly operations. Therefore, it is not clear if all runways at NAICM should be equipped with CAT II/III approach procedures.

MITRE recommends that this subject be discussed in more detail with officials from SENEAM, GACM, and other stakeholders before a final decision is made regarding the need (and to what extent) of CAT II/III capabilities at NAICM. An analysis of RVR data, as mentioned above, is important to support this decision-making process.

### o NAICM ILS System

During an 11 December 2014 meeting at SENEAM's office in Mexico City, its former Director General, Ing. Claudio Arellano, informed MITRE that it would take between 9 and 12 months to acquire appropriate ILS equipment to conduct NAICM-related flight inspections (see next sub-bullet for additional information). Ing. Arellano also planned to investigate ways to obtain appropriate equipment sooner.

MITRE was informed by SENEAM that the ILS manufacturer has completed the construction of the equipment, but it has not been shipped to Mexico yet. It is important that the ILS equipment be shipped to Mexico as soon as possible so that it can be installed at the NAICM site to support flight inspection activities. It is also important that MITRE be consulted on the planned location and installation of the ILS equipment at the NAICM site before it is installed. Therefore, please keep MITRE informed of the status of the acquisition of the ILS equipment, as well as installation plans.

## NAICM Flight Inspections

The final approaches for NAICM are very long and exceed normal operating distances of localizer and glideslope equipment by significant amounts. Therefore, MITRE has recommended that the aviation authorities obtain and install ILS equipment as soon as possible at the NAICM site and conduct pre-commissioning flight inspection activities and other testing of the ILS equipment before runways are constructed to determine with confidence that the ILS equipment can meet operational signal reception requirements and to examine other technical matters. Other flight inspection activities to identify unknown obstacles or other aircraft operational issues should be investigated at this time, and before runways are constructed, as well. PBN-related flight inspections to support RNP AR procedures should also be conducted, which requires appropriately equipped flight inspection aircraft. (Note that NAICM will require level RNP 0.3.)

# o Comisión Federal de Electricidad (CFE) Powerlines

• In early May 2015, MITRE received from ASA information showing planned sections of the proposed CFE powerlines that would be below and above ground. However, ASA also informed MITRE that the plans for the sections of the powerlines that would be below ground are preliminary and are susceptible to adjustments based on soil conditions and other matters. (Note that MITRE also received similar feedback from SENEAM who are also aware of CFE's proposed powerline plans in the NAICM area.)

As a result, MITRE has not conducted any evaluations of the proposed CFE powerlines to determine their potential impact on operations at NAICM. It is critical that MITRE analyze any powerlines that are to be located above ground to determine their potential impact on operations at NAICM before they are constructed. SENEAM will surely want to conduct their own analyses.

Therefore, once CFE plans are formalized, please provide MITRE with the coordinates (based on World Geodetic System 1984) and the elevation (in meters Above Mean Sea Level) of all powerline towers that are to be above ground level for analysis by MITRE.

## Bird Mitigation

MITRE has been suggesting for several years that bird mitigation experimentation be conducted during the high-bird population periods of the winter months to ensure that a significant number of birds can be discouraged from using areas near NAICM. However, MITRE was informed by Ing. Nevárez that bird mitigation experiments could not be performed during the 2014-15 winter. The reason was that bird mitigation experiments would disrupt the results of a year-round survey currently being conducted that began in May 2014 regarding the population and distribution of birds within the water bodies of the metropolitan zone of the valley of Mexico and its habitat. Based on the results of this study, GACM will be able to determine the proper mitigation methods for bird attractant areas near NAICM, as well as the actions needed to attract birds to appropriate areas away from NAICM.

As the above-mentioned year-round survey should now be completed, please update MITRE on its results, as well as plans regarding future mitigation methods being considered, including experiments. The onset of the 2015-16 winter season will occur soon.

#### Arup Master Plan Status

As mentioned in MITRE's previous Technical Letter, MITRE has not received any feedback pertaining to its review of Arup's Pre-Master Plan (refer to Enclosure 6 of MITRE Technical Letter F500-L15-007, dated 12 January 2015). Therefore, MITRE does not know if its comments were considered in the development of the most recent Master Plan, which may have already been completed by now.

Some important considerations mentioned by MITRE in the above-mentioned document are described below.

Runway Configuration - The Pre-Master Plan states that the runway configuration will be based on the MITRE-Recommended Runway Configuration (July 2012); however, there are important differences between the two configurations. Most noticeably, Arup's runway 5 has been shifted 267 m to the south and has no displaced threshold. Also, Arup's runway 6, has a 500 m displaced threshold whereas MITRE's runway 6 has a tentative 427 m displaced threshold.

It is important to note that MITRE has not analyzed the aeronautical feasibility of these runway-related differences.

Runway Operations - It is not clear to MITRE if the opening-day runway configuration in the Pre-Master Plan limits the type of operation that can be conducted on runway 6 to non-commercial aircraft only (e.g., government, military, and General Aviation). Triple independent operations may be needed at times (e.g., during approach and departure peak periods) when the airport opens (~2021) and more frequently soon after. Therefore, it is essential that runway 6 be available for commercial operations.

Navigational Aid (NAVAID) - The Pre-Master Plan does not specify a location for a proposed on-airport Very High Frequency Omni Directional Range (VOR)/Distance Measuring Equipment (DME). Since the location of the VOR/DME affects procedure design work, the proposed location of the VOR/DME should be coordinated with MITRE. It may be worth recalling that MITRE located the VOR, notionally, in the southernmost area between runways 4 and 5.

On-Airport Facilities and Development - MITRE is concerned about the location of some proposed facilities shown in the Pre-Master Plan. These facilities, which include parking lots, buildings, and other structures, depending on their height and location, could be obstacles and, as a result, impact conventional and/or satellite-based procedures.

In particular, MITRE is concerned about proposed buildings located to the southeast of runway 6 that, depending on their height, could impact instrument approach procedures. MITRE is especially concerned regarding the impact of these proposed buildings on RNP AR procedures, which have more conservative obstacle clearance surfaces closer to the runway than conventional ILS approach procedures.

Therefore, MITRE requests to be provided with a drawing showing the location and heights of all facilities and structures being proposed on or near the airport (including the southeastern area of runway 6) in order to appropriately evaluate their impact on instrument approach and departure procedures.

NAVAID Interference - MITRE is concerned that a number of proposed facilities could potentially cause signal interference with NAVAIDs, in particular the ILS localizer and glideslope. The location of facilities and other airfield development should be closely coordinated with the companies responsible for installing NAVAIDs to ensure that facility locations do not cause issues (e.g., electromagnetic affects, reflections, etc.).

**End-Around Taxiways (EATs)** - MITRE recommends that consideration be given to the development of unrestricted "free-flow" EATs to avoid impacts on capacity.

ATCT(s) - MITRE requires detailed information to conduct an analysis of the impact of the location and height of ATCT(s) being proposed in the Pre-Master Plan on instrument procedures. This analysis needs to be conducted to determine if there are any impacts on instrument approach and departure procedures, and other aeronautical matters.

Please provide MITRE with an update on each of the above-mentioned matters as soon as possible. Also, please let MITRE know the status of the Final Master Plan being developed by Arup, and provide it to MITRE once it is completed.

Please do not hesitate to contact me if you need any clarification or any other assistance.

Sincerely,

Ing. Robert W. Kleinhans Project Technical Coordinator

Included with this letter:

Four Technical Letters and three Enclosures

cc: Dr. Bernardo Lisker

# This two-page return receipt (acuse de recibo) is to be scanned (both pages) and e-mailed to Ing. R. Kleinhans

## 1 OCTOBER 2015 TECHNICAL LETTER DISTRIBUTION

MITRE requests that the documents enclosed with this Technical Letter are distributed as follows.

- Special Technical Letter: Pending Amendment to ICAO Annex 14 Taxiway Minimum Separation Standards (see MITRE letter F500-L15-027, dated 2 July 2015)
  - ASA: 5 copiesGACM: 5 copies
  - SENEAM: 5 copies
  - DGAC: 5 copies
- Special Technical Letter: Assessment of Proposed Relocation of Fence at NAICM per CONAGUA's Request (see MITRE letter F500-L15-028, dated 17 July 2015)
  - ASA: 5 copies
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  - FAM: 6 copies
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7. Enclosure 3 to this Technical Letter (F500-L15-032): Photogrammetric, Satellite-Based Survey of Toluca Airport and Its Surroundings, Site Assessment Report, dated 25 September 2015

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The distribution of the seven, above-mentioned documents, was completed 
Ing. Jorge Nevárez Jacobo Date