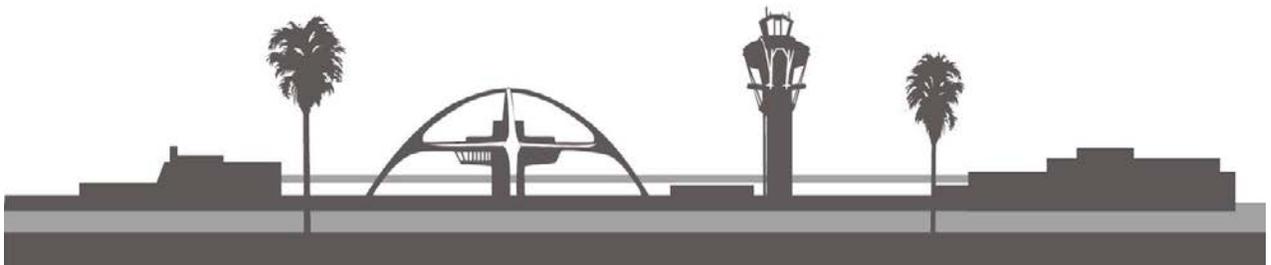


# Los Angeles World Airports Design and Construction Handbook

July 2016



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## INTRODUCTION

**All Projects are required to follow this Handbook.** Your project must be in compliance to the LAWA Design and Construction Handbook (DCH). This includes LAWA initiated Capital Improvement Projects and Tenant initiated projects, including, but not limited to:

- A. Buildings / Terminals
- B. Airside Projects (secure areas outside the terminals)
- C. Landside Projects (public areas outside the terminals)

Three (3) Airports are owned and operated by **Los Angeles World Airports (LAWA)**, a proprietary department of the City of Los Angeles. This includes: Los Angeles International Airport (LAX), LA/Ontario International (ONT), and Van Nuys general aviation (VNY).

**As outlined in the Table of Contents, this Handbook provides the following:**

- A. A brief overview of the lifecycle of a typical project
- B. References to commonly requested information
- C. LAWA Standards or General Conditions (CSI format) for working on LAWA property
  - 1. Please Note: **LAWA initiated projects** contain more extensive requirements, which are identified in project-specific Request for Proposals / Request for Bids.
- D. Design Standards and Technical Guide Specifications

### Extremely Busy

LAX is the seventh busiest airports in the world and the third busiest in the USA.

- A. In 2015, LAX served more than 74.9 million passengers,
- B. Processed nearly 2.1 million tons of air cargo, and
- C. Handled over 656,000 aircraft operations (landings and takeoffs).

**CAUTION:** Do not underestimate the requirements and challenges of working in an active airport environment of this size and magnitude.

In the midst of constant airport operations, an extensive capital improvement program is underway at LAX. The program's centerpiece, the \$1.5 billion Bradley West Project with new gates for the latest-generation aircraft, opened in September 2013. A new \$1 billion Midfield Satellite Concourse (MSC) is expected to start construction in 2016. There are also several major airfield and terminal facility projects, new taxiways and taxi lanes, and multi-million-dollar renovations undertaken by both LAWA and the airlines.

The purpose of the Design and Construction Handbook (DCH) is to provide guidance as you navigate your project through Planning, Design, Construction and Project Acceptance & Closeout.

We encourage you and your team to familiarize yourselves with the contents of this document as it illuminates major process considerations that will facilitate your project through design and construction activities.

The issues highlighted in this DCH are important to LAWA and will help you effectively and efficiently navigate through the required approvals and inspection protocols. We have written this Handbook to help you meet our expectations for:

- A. Achieving passenger and employee safety
- B. Limiting impact to airport operations
- C. Enhancing the overall LAWA service environment

### **Please Note**

As a guidance and reference tool, this document may not anticipate every requirement and authorization that your project may trigger. Therefore, the responsibility remains with you to check all the entitlements related to your project; satisfy all insurance, bonding and badging requirements; and address other specific needs related to your business and processes.

### **Codes and Regulations**

All construction and improvement projects at all LAWA sites must comply with all applicable federal, state, and municipal codes and regulations. This includes, but is not limited to, those of the Federal Aviation Administration (FAA), Transportation Security Administration (TSA), the State of California, the County of Los Angeles, the City of Los Angeles, the City of Ontario, and other regulatory authorities. LAWA **is not** a self-permitting agency. Your project may experience a complex entitlement and permitting process.

Following the LAWA DCH should allow your project to move seamlessly through the Planning, Design, and Construction approval processes. If you find an alternative approach to accomplish your project's objectives, please forward your proposal to your Business Relationship Manager (BRM) or LAWA Project Manager (see "*Construction*" section of the DCH: *To Request a Change or Exception*).

- A. Your design may require review or sign-off from the applicable jurisdictional agencies. Such agencies may include, but are not limited to: FAA, Los Angeles County Department of Health Services, City of Los Angeles and/or Ontario Permitting Agencies (Planning, Public Works, Building and Safety, Water and Power), South Coast Air Quality Management District, etc., each with separate processes and applications.
- B. Entitlements may be required on a planning or environmental level.

Your project may require a Certified Access Specialist (CASP) to comply with Americans with Disabilities Act (ADA) Compliance in California (see "*Planning*" section of the DCH: *ADA Compliance*).

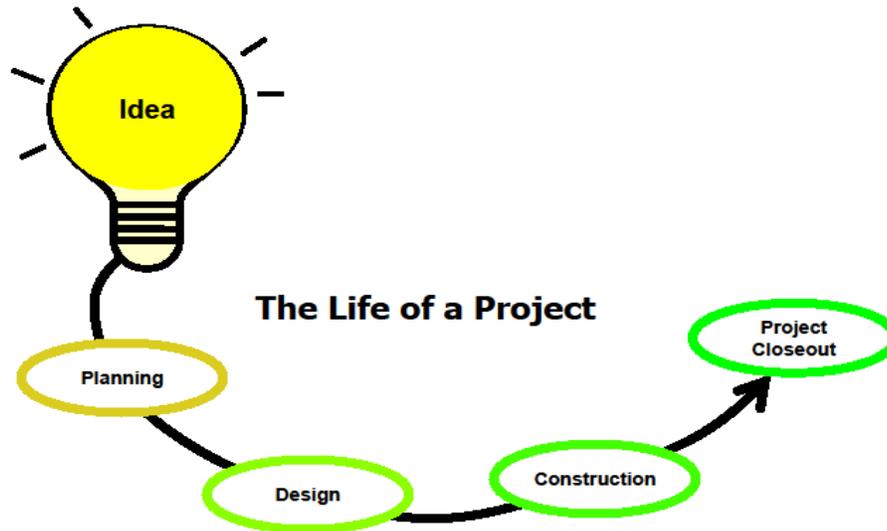
Sustainability requirements must be met per California and the City of Los Angeles California Green Building Code. This replaces our adherence to Leadership in Energy and Environmental Design (LEED) requirements (see "*Environmental*" section of the DCH: *Sustainability, CALGreen, and LEED*).

FAA reviews and approvals may be required and FAA established review periods should be factored into your construction schedule. (see "*Planning*" section of the DCH: *Permitting Agencies and the FAA*).

All Retail Food Facilities are required to submit drawings to Los Angeles County Environmental Health Department. The Permittee shall fulfill all other requirements of the: Certified Unified Program Agency (CUPA); the State Water Resources Control Board (SWRCB); the Air Quality Management District (AQMD); and the local city ordinances as cited in the City's Municipal Code.

It is important that your project is developed, constructed and operated in the best interest of the public we mutually serve at each of LAWA's three airports. Protecting and safeguarding the 24x7 operations of one of the busiest commercial airports in the world, requires us to partner with you as you develop your project.

## PROCESS OVERVIEW



During the Planning & Design stages, LAWA requires at least two reviews of your project.

- **5% Concept Review** (this is **mandatory** for all small, medium, and large projects)\*
- 30% Design Progress Review
- 60% Design Progress Review
- 90% Design Progress Review (code review)
- **100% Design (Construction Document) Review** (this is **mandatory** for all small, medium, and large projects)

The review process works to keep the size of the project in perspective by adopting a reasonable level of effort and oversight that is appropriate for the scope of the project.

\*A Tenant can elect to submit 100% Design Documents to LAWA on an “at risk basis,” meaning that the Tenant will be responsible for addressing and/or correcting non-compliant DCH project elements in addition to submittals to LAWA. Only providing 100% Design submittals are not recommended for large, complex, or projects affecting multiple Tenants. However, this approach is reasonable and encouraged for smaller Tenant projects.

The next few pages will walk you through all phases in the Life of a Project.

## Planning

### Required Review

All potential projects must be presented to LAWA at **5% Concept Review**. At this stage, the project concept is circulated to LAWA subject matter experts for review and initial comment. During this stage, the project is assessed from a business and planning perspective. LAWA also takes into consideration the feedback provided by other internal stakeholders. This initial stage will determine if the project will be approved conceptually, returned for modifications, or denied in its entirety. For the 5% Concept Review Checklist, see "*Planning*" section of the *DCH: 5% Concept Review Checklist*.

During this phase of the project lifecycle, LAWA will determine the level of review and the required submittal stages (e.g. 30%, 60%, 90% and 100%) for the project based on the scope and impact of the project. Projects that involve major renovations or are complex in nature will typically require submittals at all of the design milestones. However, most tenant projects bypass the 30% and 60% submittal requirements and advance directly to the 90% or 100% design stages. If your project is approved, it will be placed on the LAWA construction coordination calendar. This calendar is used to minimize construction related space and time conflicts. Therefore, it is imperative that this calendar contain the most up to date information available. Any changes to the construction start and end dates provided on your Concept Request Form should be immediately communicated to your BRM and/or designated Project Manager.

### Building Codes

If your project involves an existing facility, it may trigger mandatory upgrades required to bring the affected areas up to current building code standards. Therefore, your project may also need to include these required upgrades. For additional information, see "*Planning*" section of the *DCH: Notes to Design Team and Permitting Agencies and the FAA*.

### Maintenance Projects

Maintenance projects may be excused from the Tenant Improvement Approval Process and may be directly authorized by LAWA's Commercial Development Group. This evaluation will be performed at the time of the submission of a Concept Request Package. If it is determined that proposed scope of work is routine maintenance authorized by the terms of the tenant's lease/agreement, this work may be allowed to proceed without further submissions. This determination will be made on a case by case basis.

*Consult with your Business Relations Manager to get started on maintenance projects.*

## 5% CONCEPT REVIEW

Initializing a project begins with the *Concept Request Form*. This form provides LAWA a basic understanding of your proposed scope, work location, project impacts and anticipated duration of construction. In addition to this form, we require that the tenant provide a Master Lease Exhibit (MLE), marked up to indicate where the proposed work will take place and a drawing that illustrates the size and scope of the project. This Concept Request Package, which includes the (1) Concept Request Form; (2) MLE; and Project Drawing(s), should be concurrently submitted to [projectapprovals@lawa.org](mailto:projectapprovals@lawa.org). Once a completed Concept Request package has been received, it will be distributed to LAWA's **Project Approval Team (PAT)**. The PAT is comprised of subject matter experts from LAWA's Commercial Development Group (CDG); Planning and Development Group (PDG); Environmental Programs; Facilities Maintenance, Information Management Technology Group (IMTG), Airport Police, and Airport Operations, etc. The tenant is encouraged to work with their associated Business Relationship Manager to develop the Concept Request Form. **Environmental Reviews**

Certain projects may require more extensive environmental considerations based on scale, scope, location and other factors. Please see "*Environmental*" section of the DCH: CEQA – NEPA Reviews and check with your LAWA Project Manager for more information.

### **Low Impact Development (LID) & Standard Urban Stormwater Mitigation Plan (SUSMP)**

The LID Ordinance went into effect May, 2012. Project applicants **MUST** incorporate stormwater mitigation measures into their design plans and submit the plans to the City for review and approval. Please see "*Environmental*" section of DCH for the *Low Impact Development (LID)* and *Standard Urban Stormwater Mitigation Plan (SUSMP)* for more details on the City's website(s).

### **Construction Stormwater Discharges**

All construction activities at LAWA that disurb an acre or more of soil require preparation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be written by a qualified SWPPP Developer (QSD) in compliance with the State Water Resources Control Board Water Quality Order National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities; Order No. 2009-0009-DWQ NPDES No. CAS000002.

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/constpermits/wqo\\_2009\\_0009\\_complete.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf)

### **Concept Approval**

If the Concept Request Package is approved, a Concept Approval Letter will be issued. This letter will include CDG business conditions for the project, a preliminary CEQA review, a Comment Log reflecting comments based on the Concept Request Package and direction as to what additional submittals will be required and to whom they should be directed, for further processing.

The Tenant must respond to each of the comments in the log and provide that response with the next submittal package that they are required to provide. The Tenant should direct any questions regarding the Concept Review Letter to the LAWA Project Manager (PM) designated in the letter. The Tenant should expect to receive a Concept Response within 2-3 weeks of submitting a complete Concept Request Package. **A Concept Approval Letter does not authorize the commencement of construction.**

Concept Approvals are only valid for 180 days. If the additional required project submittal information is not provided to LAWA within the 180 day window, the project is subject to resubmittal and/or supplemental reviews.

### **Funding**

While developing projects, please note:

- A. None of the costs incurred on tenant projects will be reimbursable by LAWA, through rent or by any other means, unless otherwise stipulated in the Tenant's Lease, Concession, or Tariff Agreement or under a separate construction reimbursement agreement.
- B. Relocation and coordination with other affected Airlines, Concessionaires, and Tenants and their proprietary equipment is the responsibility of the tenant.
- C. Ownership of all improvements and alterations constructed or installed by the tenant, or at the tenant's direction, will become the property of and remain with the City of Los Angeles. The tenant understands that it may be required to remove its equipment, modifications, installations,

and alterations from any area, at any time, upon notice from LAWA.

- D. In the passenger terminals, any renovation, equipment, and conduit must be installed in a manner that will not interfere or interrupt the infrastructure of other occupants (including concessionaires) and equipment in the concourse. Any interference with other occupant's improvements caused by the proposed renovation, equipment, and/or conduit installation must be removed and/or relocated by the tenant at no cost to LAWA.

### Advertising

While developing projects, please note:

- A. No advertising of any kind will be permitted without explicit written approval from LAWA Commercial Development Group (CDG).
- B. The Permittee must provide in detail what content will be displayed on all monitors (Self Service Kiosk, Flight Information Display System, etc.) during the passive/active mode.
- C. No audio of any kind is permitted from any monitors at the pylons, gates, or back screen monitors without explicit written approval from LAWA CDG.

Tenants can request assistance from their **Business Relationship Manager (BRM)** if they have any questions.

For additional information, please see the *"Introduction" section of the DCH: Tenant Project Approval Process* OR go to the Tenant Project Approval Website:  
[http://www.lawa.org/welcome\\_LAWA.aspx?id=4162](http://www.lawa.org/welcome_LAWA.aspx?id=4162).

## Design

This is where your proposed project takes on 'definition'.

### Expectations

While we understand that many of our LAWA facilities at the airports are dated and several have corresponding levels of deferred maintenance, we expect that every Design will have a professional 'Wow' factor and will 'Raise the Bar' for others that follow.

### Resources

This DCH is set up in many sections. You are currently reading the Introduction / Process Overview. The "LAWA Standards for Construction Contracts and Closeout Documents" documents can be found in the "Construction" section of the DCH. You may recognize this as General Conditions as it includes CSI Sections 00, 01 and 02. The section entitled "Design Standards and Guide Specifications include more technical information. Please note that these documents do not constitute a contract or a complete set of Specifications. In instances where LAWA has no specific guidance/requirement, you will find no Guide Specification on the topic. We recommend you provide this information to your Design team members for use during the design process.

*We recognized the Guide Specifications developed and contained within the DCH were crafted with Terminal Buildings in mind and may not necessarily be appropriate for your construction*

*activities that take place out of LAX's Central Terminal Area; Should you feel that a requirement contained within the DCH, is not or should not be applicable to your project due to the location of your project or the use and function of your building, LAWA encourages you to submit a Tenant Request For Exemption to either your BRM or LAWA PM for review and consideration. (see "Construction" section of the DCH: To Request a Change or Exception).*

As you develop your design, please recognize that there are potentially seven (7) areas where submittals are required:

- A. Plans / Drawings
- B. Specifications
- C. Design Reports / Surveys
- D. Estimates
- E. Schedule
- F. Project-Specific Requirements
- G. Coordination and Logistics Management (CALM) – Work Site Plan / Work Phasing Plans

#### **Drawing/Specification Submittal Schedule (Required Submittal)**

Immediately after Concept Approval, you may be required to provide LAWA with a Drawing/Specification Submittal Schedule with the proposed submittal dates for all of the submittal packages required in your approval letter.

#### **Design Reviews**

Some projects will require technical reviews between the 5% Concept Review and 100% Construction Document Reviews. These will be at intervals that are appropriate for the scope of the project and that correspond to standard design development milestones. If these additional design progress reviews are required, it will be decided during the Concept Review and will be outlined in the Concept Approval Letter. For example, the larger projects may impact our electrical and mechanical systems. In this case, our engineering and maintenance teams need to understand the nature and scope of the proposed work. It is possible they will need to provide input to your project design team to allow the systems to operate in the most efficient manner possible. This includes Expedited or Multi-phased projects. Please see your PM with any questions.

#### **30% CONSTRUCTION DOCUMENT DESIGN REVIEW**

Design Criteria is established at this phase. If a 30% Construction Document Review is required by LAWA. The submittal package should address the comments and conditions outlined in the Concept Approval Letter.

You should submit three (3) full size copies (unless otherwise directed) and an electronic version of this 30% package (answers/responses, plans, specifications and other submittals) for a Conditional Review to:

Cynthia Guidry, Deputy Executive Director  
Planning and Development Group  
Los Angeles World Airports  
1 World Way, Room 219  
Los Angeles, California 90045

Upon receiving your submittal, LAWA's Planning and Development Group will lead an internal review with input from the **Project Approval Team**. We will document our review comments and send you a **30% Design Conditional Review Response Letter**.

## **60% CONSTRUCTION DOCUMENT DESIGN REVIEW**

The Design is developed at this phase. If a 60% Design Progress Review is required by LAWA, the submittal package should address the comments and conditions outline in the Concept Approval Letter. It must also include the applicable information from the "*Planning*" section of the *DCH: Design Submittals, Details*.

- Address the concerns and conditions outlined in the Concept Approval Letter and from the 30% Design Conditional Response Letter (where applicable)
- Include all information provided in previous submittal(s)
- Include annotated comments from previous submittal(s)
- Include the applicable information from the "*Planning*" section of the *DCH: Design Submittals, Details*.

When you are ready for the 60% Progress Review, please submit three (3) full size copies (unless otherwise directed) and an electronic version of this package (answers/responses, plans, specification and other submittals) for a Conditional Review to:

Matthew E. Brown, Senior Airports Engineer  
Development Group  
Los Angeles World Airports  
7301 World Way West, 8th Floor  
Los Angeles, California 90045

The Development Group (DG) will lead an internal review of the submittal with input from the **Project Approval Team**. Upon the conclusion of our review, 60% Comments will be returned to you.

At this phase, it is encouraged you contact the appropriate **permitting agencies** to inform them of your proposed project and to learn of permitting requirements. (See "*Planning*" section of the *DCH: Permitting Agencies and the FAA*)

## **90% CONSTRUCTION DOCUMENT DESIGN REVIEW**

This is (potentially) the Final Review before publishing the 100% Design Documents. This is the Permitting and LAWA courtesy construction document check. This submittal package should address the concerns and conditions outlined in all previous correspondence from LAWA. It must also include the applicable information from the "*Planning*" section of the *DCH: Design Submittals, Details*.

This level of plan development can also serve as your official plan check submittal to the Department of Building and Safety (Los Angeles or City of Ontario) and any other governing agencies with jurisdiction over your project.

**The Permitting Hurdle** If you submit your 90% Construction Document Progress submittal package to applicable permitting agencies, but not to LAWA you may be creating additional work for yourself. If LAWA does not review the 90% submittal and, instead, discover a needed change at the 100% review, then you are, in effect, back at this 90% review stage. Alternatively, when you submit a 90% Construction Document Package to LAWA, we will be familiar with the (near) final package and your project will receive an expedited (mandatory) 100% NTP Review

For LAX and VNY projects, all appropriate assemblies, components and equipment shall have corresponding Los Angeles Research Report (LARR), International Code Council Evaluation Services (ICC-ES), etc. numbers clearly identified on the drawings. This requirement is for both new and existing elements. See <http://netinfo.ladbs.org/rreports.nsf/>.

The Architect (or Engineer) of Record is to perform a quality control review of all drawings, checking and rectifying obvious errors, omissions and drawing conflicts between disciplines, and may be asked to certify the accuracy of these documents to LAWA.

When you are ready for the 90% Progress Review, please submit three (3) full size copies (unless otherwise directed) and an electronic version of this package (answers/responses, plans, specifications and other submittals) for a Conditional Review to:

Matthew E. Brown, Senior Airports Engineer  
Development Group  
Los Angeles World Airports  
7301 World Way West, 8th Floor  
Los Angeles, California 90045

The Development Group will lead an internal review of the submittal with input from **Project Approval Team**. Upon the conclusion of our review, 90% Comments will be returned to you.

Once the permitting agencies and LAWA provide comments to your (90%) design package, you can move to finalize the (100% design) Construction Contract Documents.

## **100% – CONSTRUCTION DOCUMENT DESIGN REVIEW**

This is the final required review for all improvement projects. This design submittal stage provides the opportunity to coordinate your anticipated phasing and schedule with all persons, offices, airlines, concessionaires and others that may be impacted by some or all of your proposed work.

This submittal package must include the Construction Document Plans and Specifications. They should include all information in previous submittals plus all annotated comments from previous submittals – including the comments and conditions set forth by LAWA in the Concept and Conditional Review Letter (and any subsequent reviews). They shall also bear a stamp of approval from the Los Angeles or Ontario Department of Building and Safety, as appropriate; shall include any other regulatory and code approvals related to the project; and shall reflect the standards and requirements of this Design and Construction Handbook. This includes items found in *“Planning” section of the DCH: Design Submittals, Details.*

When you are ready for the 100% Construction Contract Document Review, please submit three (3) full size copies and an electronic version of this package (answers/responses, plans, specifications and other submittals) for a Conditional Review to:

Matthew E. Brown, Senior Airports Engineer  
Development Group  
Los Angeles World Airports  
7301 World Way West, 8th Floor  
Los Angeles, California 90045

To get a **Notice to Proceed**, you will need to have your documents stamped by the code authority when such approval is needed.

DG will lead an internal review of the submittal with input from other key LAWA divisions. The package will be evaluated to ensure all prerequisite criteria, conditions and comments have been met and satisfied. Once the package is satisfactory, LAWA will issue a Notice to Proceed providing authorization to bid, select and/or finalize the agreement with the contractor(s).

### **Issued for Construction Submittal**

This submittal shall have all clouds and revision dates removed from the drawings and be stamped or signed by the governing authorities. The final approved specifications, material boards, and any other documents that are required for construction, including every sheet of the construction documents, shall be noted as “Issued for Construction” with the corresponding date of issue. *Please contact your designated Project Manager to confirm the official date of this issue.*

Upon determining that all comments from all stakeholders have been incorporated into the drawings, LAWA will approve or authorize the project.

*The documents at this point should be ready to be signed pending approval by the Project Manager. Once these documents are approved and signed, they can be provided to contractors for bidding purposes.*

A set of the approved and stamped construction drawings with corresponding specifications and material boards shall remain on the jobsite at all times during the entire duration of the project. Obtaining the Building Permit is the responsibility of the Contractor. A set of Building Permit Plans shall be kept at the job site at all times, as well as a copy of the permit.

### **Utility and Stakeholder**

Prior to any construction activities taking place, the Contractor and LAWA shall have a preconstruction meeting. The preconstruction meeting is a requirement of the LAWA NTP and shall discuss, at a minimum, the project scope, LADBS inspection process, phasing and logistics of the project and schedule for the project. See Section 3.0 Construction for NTP information.

## **Construction**

### **For Contractors**

If considering doing work at LAWA, become familiar with this Introduction, and please reference the **LAWA Standards for Construction Contracts** section. Corresponding to General Conditions, these standards provide the basis for our expectations before, during, and at the completion of the construction process. Also see *“Construction” section of the DCH: Notes to the Construction Team.*

## LAWA Expectations

All Contractors demonstrate a high regard for safety, quality of work, and a timely execution of the work:

- A. **Safety and Health.** The Development Group (DG) Construction Safety Policy Guidelines Manual has been developed by LAWA to promote safety by assisting in minimizing the hazards and risks associated with the construction projects. As such, LAWA expects the Contractor to place the highest importance and priority on safety, health and the protection of the project site during performance of work. In addition, LAWA and its agents have the right but not the obligation, to inspect the worksite and appropriate work records in order to ascertain Contractor and subcontractor compliance with safety and health requirements. However, neither the existence nor exercise of such right shall relieve the Contractor of its responsibility for monitoring its own and its subcontractor's compliance with the safety, health and project site protection requirements of their contract and applicable laws, rules, regulations and statutes."

Prior to commencing field construction, contractors will be required to submit a construction safety plan, for LAWA's review. LAWA will review the contractor's safety plan for conformance to the DG Construction Safety Policy Guidelines Manual and City/LAWA requirements. The Contractor safety plan shall be enforced strictly for the project to maintain a safe work environment. The safety plan shall include as a minimum the following items:

1. Policy statement clearly stating the objective of the safety plan and the scope of the project
2. Organization chart indicating the duties and responsibilities for the safety staff and the designated safety representative.
3. Safety program shall describe the services and facilities to be available for non-recordable illnesses or injuries as well as recordable illnesses or injuries.
4. The safety plan shall also set the procedures for all work site injury records and reports.
5. The safety plan shall set the procedures for compliance with all applicable laws and contract requirements.

Any activities or job-site conditions found to be hazardous by LAWA shall be corrected immediately. Any delay in the correction of a hazard to the life safety of any person may result in the closure by LAWA of the involved work site until the activity and/or condition is corrected. Should such condition cause an immediate safety threat, LAWA may close the work site immediately until the condition is corrected.

- B. **Quality.** Quality must be a continuing focus throughout the design and construction process. This starts with your design goals, the selection of the Design Team and the Contractor(s), and it includes 'how' you will operate the improvements when they are complete. Quality includes your project's ability to add value to the experience of the users of the airport, the flow and experience of people through your improved area, the selection of durable materials that can be easily maintained throughout their useful life, and the necessary *attention to detail* that minimizes accidents and other risks to all of us in the LAWA environment.

Prior to issuance of an NTP, contractors may be required to submit a Quality Control plan, for LAWA's review and approval. The quality plan shall include as a minimum the following:

1. Statement of purpose and the policy for the quality control plan.

2. Organization chart designating the quality staff for the project.
3. All quality control processes for the project including but not limited to:
  - a) All meetings associated with quality control including preparatory, mobilization and any other quality related meetings
  - b) All inspection processes and sign-off procedures including punch lists
  - c) Specialty inspections
  - d) Supplemental procedures to the quality plan
4. All testing required for the project including any independent testing agencies and their processes.
5. Documentation for the process including but not limited to:
  - a) Quality control reports and project logs
  - b) Action item logs
  - c) All forms required for the quality plan
  - d) Agenda and meeting minutes for all quality related meetings.

C. **Execution of the Work.** Efforts must include both Safety and Quality throughout the Construction process. This includes delivering a project that provides Safety and Quality to the airport users well after the work is complete, and a timely execution of the work (i.e., establishing and holding to construction schedules).

The Construction Team must possess a positive attitude and commitment to a highly professional work product, including:

1. Professional 'fit' and 'finished' work upon project completion.
2. A Construction Process that delivers on the 'Wow' factor developed during the Design phase.

D. **Contractor Selected.** Once the Tenant and/or LAWA have a winning Contractor, they can direct their Contractor to submit the necessary documents to obtain a Notice to Proceed (NTP).

## PROJECT COORDINATION AND LOGISTICS

Due to the extensive work underway at LAX today, we have a separate team focused on coordinating and minimizing the impact of your project to the LAX operations. They are the **Coordination and Logistics Management (CALM) Team**. It typically has a 7 working day review / approval process. Please allow for one draft and one final through this review process. Two terms you will encounter:

- A. The Logistics Plan: How the contractor intends to manage their work area **outside** the building footprint.
- B. The Phasing Plan: How the contractor intends to manage the work (area) **inside** the building footprint.

To receive a 'Notice to Proceed,' you must, at a minimum have **an approved Logistics Work Plan**.

The approved Logistics Work Plan must consist of, but not be limited to, the following:

- A. Logistics Work Plan
  - 1. Logistics Work Plan Checklist
  - 2. Site Logistics Plan
  - 3. Project Phasing Documents
- B. Updated Construction Schedule
- C. Updated Budget
- D. Temporary Barricade Plan
- E. Temporary Signage Plan
- F. Haul Routes and Construction Material Stockpiles

Your Plan should explain the operational impacts of your project, identify the laydown area, path of travel, construction barriers, etc., and indicate utility shutdowns and other planned impacts or disruptions to normal Airport / Tenant operations.

#### **Utility Shutdown Request (USR)**

Utility Shutdowns have become increasingly complex at LAX due to the increase in construction activity and the age of the facilities. By nature, utility shutdowns affect a variety of stakeholders, including tenants, airlines, security personnel, and various divisions within LAWA as well as the traveling public. Impacts to life safety and security systems are particularly critical when considering utility shutdowns. To minimize negative impacts, LAWA has developed procedures and guidelines for contractors to use when requesting a utility shutdown.

Contractor requested utility shutdowns are discretionary on LAWA's part. Not until LAWA has been fully apprised of the potential risks and impacts, and received necessary contingency plans, will the USR be granted. It shall be the sole responsibility of the Contractor to provide the above information, in accordance with the provisions in this section.

Shutdown Control Center periodically updates procedures as required to meet the constraints of our LAX Guest Experience and other operational considerations. Contractors and their subcontractors are expected to be familiar and make themselves familiar with the most current requirements. The procedures and guidelines provided herein may be changed at any time by LAWA for security, safety, and other operational reasons.

The only utility shutdowns exempt from this process are those emergency shutdowns identified by ARCC or Facilities Maintenance & Utilities.

For more information, see "[Construction](#)" section of the *DCH: Shutdown Control Center*.

#### **Area Shutdown Request (ASR)**

This is a shutdown of normal facility operating space for a set period of time that does not necessarily include the shutdown of a utility or system. See "[Construction](#)" section of the *DCH: Shutdown Control Center*.

### **Substitution / Contract Change Process**

Keep LAWA informed as the project progresses.. See "*Construction*" section of the DCH: *To Request a Change or Exception*.

### **Badging**

If your LAX or ONT project is a "landside" project only, that is – it does not require your construction team to enter a secure or controlled part of the airport, then you will not need to badge your team members. Where your project is located along the boundary separating the airside (controlled) and landside (uncontrolled) areas, it may be possible to secure your site and separate it from the controlled area(s). If so, during that stage, badging may not be required.

If your project is at VNY, special LAWA badging is not required, regardless if the project is on the airside or landside. However, if your project is on the airside, and will require some or all of your contractor's personnel to drive on the inside of the airport airfield boundary, then the personnel will require special training and a Motor Vehicle Operating Permit (MVOP), which can be processed through VNY Airfield Operations.

### **NOTICE TO PROCEED (NTP)**

In order to obtain a Construction Notice to Proceed (NTP) on a typical tenant project, the follow criteria may be required:

- A. Project will be reviewed for Lease or other Business Agreement compliance.
- B. Project will be reviewed for DCH compliance.
- C. All outstanding issues with LAWA's CDG / BRM are addressed and completed.
- D. California Environmental Quality Act / National Environmental Policy Act requirements are met.
- E. Work Plan (phasing & site logistics) is reviewed and approved.
- F. City issued Permits are secured, Plan Checks are complete, and documents are 'Issued for Construction'.
- G. A copy of the Contractor's insurance policy naming LAWA as an insured entity is with LAWA's Risk Management Division.
- H. A copy of your required Labor and Material Payment Bond(s) is on file.
- I. Construction site safety plan.
- J. Select and use the correct hold-harmless clause (see "*Planning*" section of the DCH: *Notes to the Design Team*).
- K. Please see Section **00 62 16 Certificate of Insurance Form** in the LAWA Standards for Construction Contracts. The minimum coverage will be specified by LAWA's Risk Management Division - Insurance Compliance Services. Also, no contractor's vehicles or equipment shall have access to the airfield unless the proper liability insurance has been provided. It is the responsibility of the Tenant to require and verify that the Tenant's Contractor has adequate insurance coverage. Refer to [http://www.lawa.org/welcome\\_LAWA.aspx?id=4162](http://www.lawa.org/welcome_LAWA.aspx?id=4162).
- L. For LAWA issued projects, an NTP for construction will be issued only after Board approval of the construction contract.
- M. If a partial NTP is needed to commence off-site work prior to your work at LAWA, discuss this with your LAWA PM.

- N. Once the Project Approval Letter is issued, you need to confirm the date of the Pre-Construction Meeting and ensure you will have the appropriate LAWA representation.

Your Design Consultant can and should participate during the construction phase.

Depending upon contract scope requirements, the design consultant may be responsible for:

- A. Assisting in the review of documents (shop drawings, submittals, requests for information, change orders).
- B. Attending periodic or regular construction progress meetings.
- C. On some projects, partnering sessions may be conducted.

### Getting Construction Started

The DG PM will serve as the single point of contact for all construction related matters during the construction process. The DG PM is responsible to ensure the interests of LAWA are satisfied during construction and will serve as the liaison between the project's stakeholders and the CALM office to ensure logistics (work plans) are coordinated and executed in compliance with established guidelines and procedures. The DG PM can also facilitate USRs (see "[Construction](#)" section of the *DCH: Shutdown Control Center*) with the various stakeholders to help ensure they are effectively implemented with minimum impact to the airport users, operations, and other Tenants. **Please note: the primary responsibility for successful utility shutdowns is with the Contractor.**

### Pre-Construction Meeting

This Pre-Con is the construction kick-off meeting and signals the start of site construction. The typical Pre-Con meeting agenda can be found in "[Construction](#)" section of the *DCH: Pre-Construction Conference Agenda*.

## Project Acceptance & Closeout

There are two processes to 'close out' or 'finish' your project.

Many of you are familiar with 'beneficial occupancy,' which is a term commonly used by the building departments. However, for projects at LAWA, **you must complete BOTH Project Acceptance and Project Close-Out BEFORE you can use your improvements.**

### Project Acceptance

Work with your PM to close out the technical issues. This includes, but is not limited to: completing and closing out all fire/life/safety, utility, and ADA items; all building department inspection items; completing and closing out all of the LAWA inspection items; and turning over all the equipment, training manuals, as-built drawings, and other related deliverables. Again, summarizing, there will be both City and LAWA closeout issues.

Project Acceptance activities include, but may not be limited to:

- A. Confirm completion of all punch list items and LAWA deviation logs.
- B. Confirm that appropriate warranty/guarantee information and technical manuals are obtained and provided to the right LAWA offices.

- C. Confirm all other outstanding submittals are received.
- D. Obtain any outstanding Building & Safety and other Regulatory agency sign-offs.
- E. Confirm all Commission/Activation related activities are complete.
- F. Ensure receipt of the contractor's as-built drawings and specifications.
- G. Obtain final record drawings from the Architect / Engineering Firm.
- H. Ensure contract required Spare Parts / Special Tools are received.
- I. Resolve all outstanding change orders, stop notices, claims, etc.
- J. Complete final project cost review and consolidation when needed.
- K. Confirm acquisition documents and back-up reviews are signed off – where appropriate

### **Project Close Out**

DG will ensure that all construction meets LAWA's expectations. When all conditions have been met (Project Acceptance), DG will notify CDG verifying that the project is ready for Closeout. Upon confirmation that all requisite contractual requirements are satisfied, CDG will issue a Project Closeout Letter. This letter will officially close the project (releasing the bonds, etc.). As the end of the project draws near, DG will ensure that all construction meets LAWA's expectations.

Your Design Consultant can and should participate at the completion of construction. Depending upon contract requirements, the consultant generally:

- A. Participates in a final project "walk-through" at the completion of construction.
- B. Reviews the contractor's certified as-built drawings and specifications submittal.
- C. Prepares the final record drawings for submittal to LAWA PM.

**ONTARIO and VAN NUYS** Some of this information may not apply to all LAWA sites. For additional site-related information, see the requirements throughout the DCH.

To propose changes to this document, please see the *"Introduction" section of the DCH: Procedures for Updating Handbook*.

## Design & Construction Handbook - Documents

### Introduction

Important Phone Numbers/Contact Information  
Tenant Project Approval Process  
Project Approval Flow Charts  
Glossary/Acronyms  
Procedures for Updating Handbook

### Planning

5% Concept Review Checklist  
Design Submittals, Details  
Building Space Naming Convention  
Door Numbering Guidelines  
Facilities/Systems/Components Naming Convention  
Notes to the Design Team  
Permitting Agencies and the FAA  
ADA Compliance  
Van Nuys (VNY) Operations Standard Conditions  
Tenant Requirements

### Environmental

CEQA - NEPA Reviews  
Sustainability, CALGreen and LEED  
LAWA Guidance Manual - Construction Storm Water Pollution Prevention  
Environmental / Land Use / CEQA  
Low Impact Development (LID) & Standard Urban Stormwater Mitigation Plan (SUSMP)

### Design Standards & Guide Specifications

Airport Electrical Design Standards  
Airport Mechanical Design Standards  
Airport Mechanical Equipment Standards  
Airport Plumbing Design Standards  
Airport Plumbing Equipment Standards  
Airport Structural Design Standards  
Public Restroom Design Intent  
Non-Public and Ramp Restroom Design Intent  
Terminal Pet Area Design Intent  
Protection of Historic Features  
Baggage Handling Systems - Notes to Designers  
LAWA Commissioning Requirements  
FMCS Briefing Booklet with Drawings

Division 5 - Metals  
Division 6 - Wood, Plastics and Composites  
Division 7 - Thermal and Moisture Protection

Division 8 - Openings  
Division 9 - Finishes  
Division 10 - Specialties  
Division 11 - Equipment  
Division 12 - Furnishings  
Division 14 - Conveying Equipment  
Division 21 - Fire Suppression  
Division 22 - Plumbing  
Division 23 - HVAC  
Division 25 - Integrated Automation  
Division 26 - Electrical

### **Construction & Closeout**

LAWA Standards for Construction Contracts & Closeout Requirements  
Pre-Construction Conference Agenda  
Notes to the Construction Team  
Hot Taps and Pipe Connections  
Welding Cutting Permit  
To Request a Change or Exception  
Tenant Request for Exemption Form  
LAWA Construction Safety Program Requirements

Shutdown Control Center

Coordination and Logistics Management CALM Checklist  
CALM Review Procedures TIAP Process  
Site Logistics Plan Graphic Examples  
Phasing Plan Graphic Example  
01 56 23 Temporary Barricade and Enclosure Standards  
01 58 00 Temporary Signage Standards

### **IT/Data Standards & Guide Specifications**

IT Infrastructure Standards of Practice, Volume 1  
IT Infrastructure Standards of Practice, Volume 2  
IT Infrastructure Standards of Practice, Volume 3  
IMTG - IT Design Guidelines Summary Document  
IMTG - Antenna Policy  
IMTG - Antenna Installation Application  
Division 27 - Communications  
Division 28 - Electronic Safety and Security

CAD Standards for LAWA Projects  
CAD Layer Assignment Table  
Title Block, Tenant  
Title Block, 11x17 format  
Title Block, 24x36 format  
BIM - Record File Standards  
GIS Standards for LAWA Projects

Data Waiver Form  
GIS Request for Variance  
LAWA Civil3D Standards  
Survey standard  
Survey Control Network (LAX)  
Survey Control Network (VNY)  
Survey Control Network (ONT)

### **Airfield Standards**

Special Provisions - Title and Introduction  
Special Provisions - Table of Contents  
Aircraft Terminal Parking Positions Striping Checklist  
Airfield Improvements, Standard Plans  
LAWA Standard Sections DRAFT  
Special Provisions - Sections 1 through 77

### **Signage Standards**

LAX Signage Standards  
LAX Wayfinding Standards  
VNY Signage Standards  
ONT Signage Standards

### **Archives**

2015 Design & Construction Handbook  
November 2012 Design & Construction Handbook  
May 2012 Design & Construction Handbook  
June 2011 Design & Construction Handbook