

1. MANAGEMENT/ADMINISTRATION

1.1 PRELIMINARY PROJECT MANAGEMENT PLAN

The Presidio Parkway Project (Project) is a high-profile, world-class project and the first transportation P3 in the State. It is imperative the Department select a qualified, experienced team not only to deliver high-quality infrastructure but also to commit to serving as a long-term steward of the Project. Golden Link Partners (GLP) represents an exemplary consortium that possesses all of the necessary attributes required to fulfill the Departments' goals and objectives for the Project.

GLP is a team comprised of Equity Leads (Developer) and Lead Operations and Maintenance Firm (O&M Firm) HOCHTIEF PPP Solutions North America Inc. (HOCHTIEF) and MINA USA, LLC (Meridiam); Lead Contractor (Design-Build Joint Venture {DBJV}) Flatiron West, Inc. and Kiewit Infrastructure West Co.; and Lead Engineering Firm HNTB Corporation (HNTB).

Figure 1 illustrates GLP's contractual structure. Volume 2, Appendix 1 provides a detailed organizational chart of GLP's management team.

GLP's project management structure provides overarching coordination and control of project development through the seamless delivery of all phases of the Project. We formed our team with an emphasis on maintaining continuity between development and delivery management teams.

GLP's key personnel will be involved in both development and delivery of the Project. As a result, we will implement efficiencies, including an effective knowledge transfer, an intimate familiarity with all of the contractual obligations, and a keen understanding of the Department's goals.

Development Phase (Bid through Financial Close)

1 1.1.C.a HOCHTIEF and Meridiam lead the Developer's management team. They have overall responsibility for the management of the development process. During this phase, task forces comprised of members of the Developer, Lead O&M Firm, DBJV, and Lead Engineering Firm will provide input for the Project. Once the Department selects GLP as the Preferred Proposer, we will maintain regular contact to ensure successful Commercial and Financial Close.

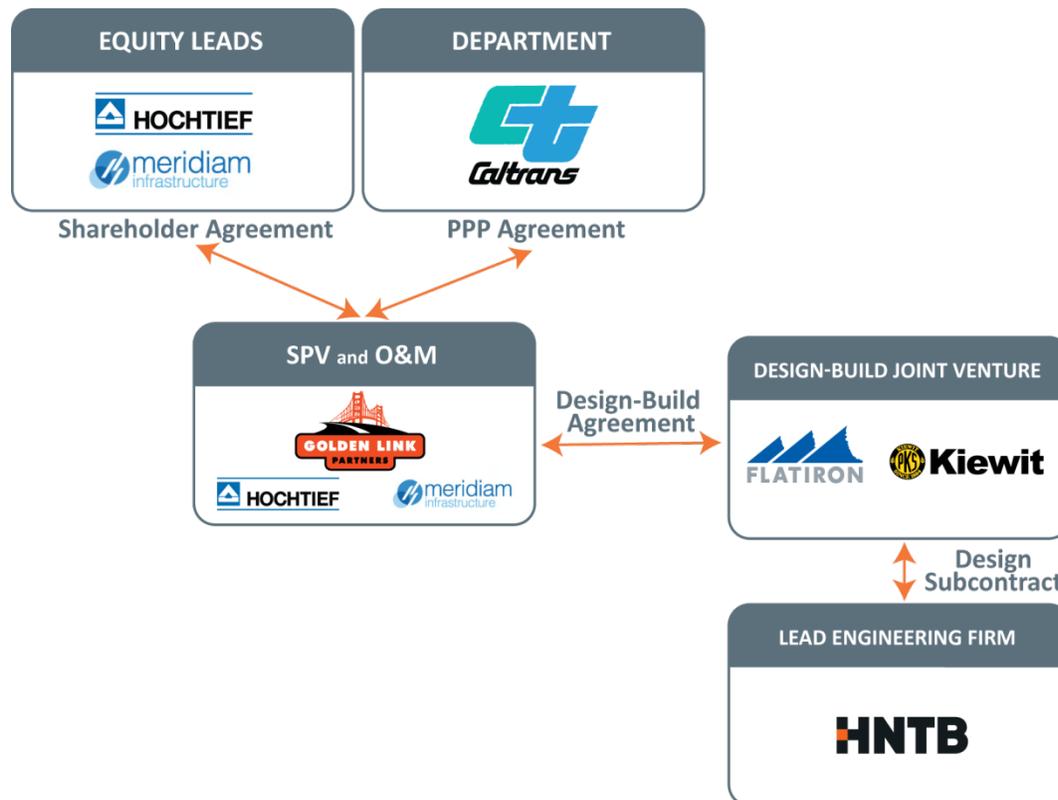
Delivery Phase (NTP 1 through Handback)

Developer

As the Preferred Proposer, HOCHTIEF and Meridiam will form a Special Purpose Vehicle (SPV) for the management of the Project and the O&M. The SPV and Department will enter into the Agreement with established contractual obligations for the Project. GLP's Developer Project

Director Steve Perfect (HOCHTIEF) will be responsible for ensuring that throughout the Term we meet all contractual obligations in accordance with the Agreement.

Figure 1: GLP’s Contractual Structure Organizational Chart



The Developer will maintain a direct line of communication with the Department throughout the Project. A Developer on-site representative will perform the day-to-day management and monitoring of GLP’s contractual requirements. The Developer on-site representative will report directly to the Developer project director. Both the Developer on-site representative and the Developer project director, however, will engage the Department in dialogue throughout the Project.

Design-Build Joint Venture

1 1.1.A.b

Flatiron/Kiewit comprises a fully integrated DBJV, licensed and registered to operate in the State. HNTB supports the DBJV. Upon issuance of NTP 1, the DBJV will mobilize the design-build management team led by Lead Contractor Project Manager (Project Manager) Frank Daams in order to commence design and preconstruction activities. Upon issuance of NTP 3, the DBJV will mobilize a construction field office to the Project site to begin construction.

We provide further detail regarding GLP’s design and construction management approach in Sections 1.1.a through 1.1.i. Flatiron, Kiewit, and HNTB have successfully implemented this same design-build management approach on other successful projects for the Department.

O&M Team

Commencing at NTP 2 until the end of the Term, HOCHTIEF and Meridiam will manage the O&M of the infrastructure and will be supported by specialized contractors responsible for O&M related work and rehabilitation activities. To achieve the Department’s objectives, the O&M team is comprised of experienced personnel who possess expertise in managing contracts and providing routine maintenance, rehabilitation, traffic operations, and incident response.

1.1.a Design Management Concept

1 1.1.B.a As GLP’s Lead Engineering Firm, HNTB has drawn from its extensive experience with similar, complex projects to specifically tailor the approach to management of design activities for this Project. In fact, design leads collectively bring more than 300 years of design experience with the Department on some of the most complex projects along the State’s highway system.

The foundation for our design management approach is the development of a Project-specific work plan to complete all design tasks and to produce required deliverables by achieving quality standards on time to meet construction schedule requirements. Through the development of this work plan, GLP will identify all design criteria for each element of design and construction and will compile these design criteria in a comprehensive set of documents available for use by every design discipline and Project team member. We will review and approve any required changes to the design criteria or Project scope through standard proven change control process. No additional design exceptions are currently planned.

1 1.1.B.a Volume 2, Appendix 1 provides GLP’s design organizational chart. Design Manager Liz Wiecha, PE, brings extensive experience managing design activities for large design-build projects for the Department, and she will be responsible for directing design activities completed by design discipline leads to effectively integrate all design components for each stage of the Project.

1 1.1.B.b Each discipline lead will review the progress of work with their assigned construction team counterpart to review progress of work; address constructability, means, methods, and construction sequencing; and resolve issues related to completion of design tasks. In addition, each task lead will ensure that the design addresses the aesthetic requirements and values of the Project. The design manager will ensure proper planning of resources by reviewing work progress and providing adequate staff resources and experienced personnel to complete quality work on time, on schedule, and within budget.

Design Interface with Construction and O&M

GLP will establish task forces during the design process. These task forces will include Department staff; GLP team members, including designers, field constructors, and O&M personnel; and third party stakeholders as needed. As demonstrated through GLP’s collective track record of success on complex design-build assignments and other projects for the Department, the use of these task forces will ensure effective interface between the construction and O&M organizations. Task force leads will enhance and expedite the design process in accordance with the preliminary quality plan and will allocate the resources needed to meet the project requirements and implement the Phasing/Sequencing Plan.

1 1.1.B.b

Task Forces

GLP will establish the following task force disciplines for the Project:

<ul style="list-style-type: none">• Earthwork and roadway• Traffic management• Utilities and drainage• Geotechnical and foundations• Bridge structures and retaining walls	<ul style="list-style-type: none">• Tunnel structures• Tunnel systems• Signals and lighting• Environmental and permitting• Lifecycle
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The task forces will serve as the foundation for the design review and integration processes. Benefits of task forces include facilitating a collaborative environment, enabling brainstorming to address technical issues, reviewing design schedule status, developing design solutions, developing work means and methods, and addressing constructibility and material selection.

1 1.1.B.e

An important function of the task forces is to review assets with respect to lifecycle expectations to ensure optimization of Project components and integration during design development. A major benefit of Construction personnel participation in the task forces ensures the design accounts for the interrelationship between temporary and permanent works throughout the Project.

1 1.1.B.f

During the majority of the design phase, each task force will meet weekly. Participants will track the design activities and monitor the schedule, including required permits. Since task forces will include representatives from all phases of the Project, we will develop solutions to identified issues to meet the overall needs of the Project. Task forces will present the opportunity for all involved to become knowledgeable about the design efforts in advance of formal design submittals.

1 1.1.B.a

Interdisciplinary Design Coordination

Another critical aspect of successful design delivery is timely and comprehensive integration of the various technical and schedule interfaces between disciplines. To accomplish this, Engineer



of Record (EOR) Mike Zabaneh, PE, will support GLP’s design manager He brings significant engineering and management experience from several successful projects completed for the Department.

Seamless interface between disciplines is essential to developing a successful design and construction schedule. Formal and informal meetings will occur between design discipline leads, construction staff, environmental team members, and Project stakeholders. GLP will manage design interfaces through a database to ensure proper and complete resolution of issues and to implement design solutions that best address Project and permitting requirements.

1 1.1.B.c

Design Reviews

GLP will hold formal design review meetings for each design submittal. Design reviews will serve to confirm the design as discussed during task forces so participants have previewed the submittals. Once a task force has prepared a package for submittal, the plans will be sent out for review and a design review meeting will be set. Reviewers will provide comments on the design using a design review form.

Reviewers will use the design review form to give each comment a disposition during the meeting with an indication whether a comment is accepted, declined, or needs further review. Participation by design, construction, O&M, and the Department is critical to the success of design review meetings and ensures comment resolution in the best interest of the entire Project.

1 1.1.C.a

Integration with Construction Phasing and Sequencing

The process of addressing construction issues begins with developing the construction schedule, developing the phasing and traffic handling plans, and identifying any early construction packages. GLP’s design manager and EOR will develop a work plan for the design schedule, sequence of deliverables, and plan resources in coordination with the construction schedule developed by the DBJV.

Design Quality

Quality management is an essential component of the design development process. GLP will include, but are not limited to, the items listed below as part of the QA/QC program for design work:

1 1.1.C.b

<ul style="list-style-type: none">• Detailed design checks of every plan sheet or report• Independent design check of significant structural elements• Interdisciplinary review• Constructibility review	<ul style="list-style-type: none">• O&M review• Oversight review by Caltrans and, if needed, third parties• Final package reviews before construction commences
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Section 1.1.i. QA/QC Program for Design and Construction elaborates on these elements.

1.1.b Construction Management Concept

1 1.1.A.a GLP’s general construction management concept is to divide the Project into well-defined, manageable stages and to assign capable, experienced personnel to manage each stage. GLP’s Project Manager Frank Daams will oversee each manager to ensure clear communication and that each Project stage proceeds in compatibility with all other Project components.

Our construction management plan utilizes the best practices of the DBJV members, who have a successful history of working together on large and complex transportation projects, both for the Department and across the U.S. Our strong local presence with a large craft following will provide flexibility and will allow rapid mobilization of resources needed to meet the Project schedule.

1 1.1.C.b GLP’s project manager will interface with the QA/QC organization through use of open communication including weekly meetings and regular testing and inspection reviews. After safety, quality is the number one priority of the DBJV. We will communicate problems or concerns quickly and develop solutions that will be carried out quickly and efficiently.

GLP will hold the following meetings to ensure that the Project proceeds properly and to facilitate communication during the period between NTP 1 and NTP 3:

- Weekly meetings with the Department
- Weekly task force meetings
- Third party and utility meetings as required

In addition, NTP 3 through Final Acceptance, GLP will hold the following meetings:

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|---|---|
| <ul style="list-style-type: none">• Weekly meetings with the Department• Weekly task force meetings• Weekly construction team meetings• Third party and utility meetings as required | <ul style="list-style-type: none">• Quarterly executive committee meetings• Construction and O&M asset transition meetings (will begin several months prior to Substantial Completion) |
|---|---|

Organizational Structure

1 1.1.A.a We provide GLP’s proposed construction organizational chart in Volume 2, Appendix 1. GLP’s Project Manager Frank Daams will report to the Developer project director. Frank brings nearly 20 years of management experience on complex projects

for the Department. GLP’s project manager will have full responsibility and authority for the management of the following DBJV project components:

- Contractual responsibilities
- Design
- Construction
- QA/QC and safety

Contractual Responsibilities

Deputy Project Manager Robert Ferrouge will report directly to the project manager and oversee schedule management and updates, cost reporting, subcontractor management, document control, submittals, environmental compliance, noise/vibration monitoring, cultural resources, water pollution control, procurement, business accounting, DBE outreach and compliance, and all other administrative functions. DBE outreach activities include creating DBE opportunities, performing good faith efforts, and managing the DBE solicitation process.

Design

Both the Design Manager, Liz Wiecha, PE, and Design-Build Coordinator Walter Quincy, PE, will report directly to the project manager. The design-build coordinator will coordinate with the design manager and the Lead Contractor Superintendent/Construction Manager (Construction Manager) Dan Sherlock to ensure the design is constructible and is delivered in a timely manner.

1 1.1.B.f

In addition, the design-build coordinator will assist in resolving conflicts and changes between design and construction; as a result, the design will accurately reflect GLP’s Construction Phasing/Sequencing Plan and provides solutions for temporary works required during design and construction of the permanent work.

1 1.1.B.a

Construction

The construction manager will report directly to the project manager and will allocate the resources necessary to efficiently build the Project, ensuring conformance of construction activities per GLP’s Phasing/Sequencing Plan and Project Schedule.

1 1.1.A.b

QA/QC and Safety

The project manager will be accountable to GLP’s DBJV Steering Committee led by Curt Weltz, Flatiron’s Western Region President; John Jansen, Kiewit’s Senior Vice President and Division Manager; and Keith Rosbury, HNTB’s Corporate Venture’s Division President. Committee members will meet quarterly with the purpose of providing guidance and support to GLP throughout the Project. Together with the project manager, the DBJV Steering

1 1.1.A.b

Committee will ensure that all necessary resources are provided to meet the Project requirements, Project schedule, and implement the Construction Phasing/Sequencing Plan.

The committee will serve in oversight roles for both Project QA/QC and safety. Design Quality Manager Devang Desai, PE will ensure quality compliance during design while the construction quality manager, Louis (Corkey) Bates, will ensure quality compliance during construction.

GLP will ensure quality through stringent planning, process control, training, and monitoring at the production level to deliver compliant results through the development of design, testing, inspections, and documentation. Section 1.1.i QA/QC Program for Design and Construction describes the integration of the DBJV's Construction Quality Management Plan with the overall Project's QA/QC program.

Safety Manager Terry Willsey will be responsible for the Project's development and implementation of the Project's comprehensive Safety Plan, coordinating with Department's Owner Controlled Insurance Program (OCIP) Manager and ensuring the safety of GLP staff and the traveling public.

1 1.1.A.c

We include further details regarding safety in Section 1.1.d. Approach to Safety.

1.1.c Interrelationship Between Design and Construction

1 1.1.C.a

Extensive coordination between design and construction personnel is critical to delivering a successful Project to the Department. The DBJV and Lead Engineering Firm will co-locate in GLP's Project offices. This will ensure constant and immediate communications between design, construction, and the O&M personnel. Flatiron, Kiewit, and HNTB bring a strong local presence and extensive experience in designing and building projects for the Department. We will develop the best design solutions to serve the Department's unique needs for this Project.

Allocation of Staff to Implement the Construction Phasing/Sequencing Plan

Effective and efficient interfacing between design and construction in order to implement GLP's Construction Phasing/Sequencing Plan happens throughout the DBJV organization. At a managerial level, our Design-Build Coordinator Walter Quincy serves as an important conduit between the design and construction organizations. Our design-build coordinator brings complex project management experience working with the Department and successfully implementing the design-build method. This individual coordinates regularly with the design manager and construction manager. This coordinator will ensure that GLP's Construction

1 1.1.B.a

Phasing/Sequencing Plan accurately reflects the design plans and will communicate the design intent to field crews during construction.

Task Forces

1 1.1.C.a The DBJV uses task forces to achieve effective interfacing at a staff level. Allocating design, construction, and operations personnel to interface in each task force during the critical design phase will ensure we develop the most efficient design while best limiting impacts to the Department and key stakeholders. This will transfer knowledge of design and cost considerations from the DBJV to the O&M team through the cross-discipline of staff participation during design development.

1 1.1.C.b We will organize task forces by discipline, as previously described in Section 1.1.a Design Management Concept, and establish them to develop the most cost-effective designs. Each task force will consist of experienced design and construction personnel, each well-versed in their area of expertise. Task forces will analyze constructibility, public impact, safety, quality, and access with the goal of maintaining the Construction Phasing/Sequencing Plan. To ensure effective cross-communication between disciplines, we will hold weekly meetings to capture innovations between task force groups and to ensure design consistency.

GLP encourages the Department to participate in the task forces to provide feedback and conduct over-the-shoulder reviews during design development. As design progresses, task forces will focus on defining construction document packages. As the design nears completion for each discipline, construction personnel within the task forces will transition back to the construction team.

1.1.d Approach to Safety

1 1.1.A.c Safety is GLP's number one priority. As depicted in Figure 2, our comprehensive approach to safety incorporates a core philosophy that proper and effective Project safety is the responsibility of each team member. To achieve successful safety performance, we involve and empower all staff to take responsibility for all matters of safety right from the start.



Figure 2: GLP's Number One Priority Is Safety

Our best tool for getting our employees started off on the right foot is to train and supervise staff, and to measure and hold accountable all individuals involved in the Project, including individuals at the jobsite. We back our safety approach with a goal of zero accidents, an achievable objective with the participation of all of our Project personnel.

Our Safety Plan involves a layered system of safety inspections to allow each level of management to serve in integral roles during daily administration of the Project. We



will implement formal and informal on-site safety reviews that allow for open communication. Our focus will ensure a safe work environment for Project staff and surrounding public areas.

1 1.1.C.a We will place significant emphasis on safety throughout all phases, including design, construction, commissioning, O&M, and Handback. Figure 3 shows our proven commitment to safety. Members of the DBJV consistently report National Counsel Compensation Insurance (NCCI) Experience Modification Ratings (EMR) lower than the industry average of 1.0.

Figure 3: Flatiron and Kiewit NCCI Experience Modification Ratings

Company	EMR by Year		
	2007	2008	2009
Flatiron	0.76	0.71	0.73
Kiewit	0.57	0.56	0.56

The construction industry has recognized both Flatiron and Kiewit for our safety achievements. Flatiron achieved zero lost-time incidents in 2009 across the nation with more than 4.5 million man-hours worked, an extraordinary accomplishment in the industry. The Associated General Contractors of America recently recognized the company as having the best safety program in the country.

1 1.1.A.c GLP’s Safety Plan will contain the following minimum components:

<ul style="list-style-type: none"> • Comprehensive safe working procedures and policies • Emergency response procedures • Project safety orientation and indoctrination procedures for all personnel having access to the site • A system to communicate and update rules, regulations, procedures, and policies • Employee training program for hazard identification and mitigation 	<ul style="list-style-type: none"> • Personal protective equipment requirements • Procedures for safety inspections and audits • Accident reporting and investigation procedures • Hazardous Waste Operations, Safety, and Health Plan developed by a qualified Certified Industrial Hygienist • Continuous communication with the Department’s OCIP representatives
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Daily tools, including an activity hazard analysis for every construction operation, including those performed by other Project contractors will support the Safety Plan. Through effective planning of our work, we will control risks to reduce or avoid jobsite accidents.

Commitment to Public Safety

1 1.1.A.c Our Safety Plan will provide guidance and detailed procedures for GLP personnel. Many of these guidelines, however, extend to members of the public. GLP will



protect the public by securing our jobsite, including properly storing equipment, tools, and hazardous materials.

Health, Safety, and Emergency Procedures

To ensure sufficient and required information is available and accessible during emergencies, in the event of a spill in the work area or the Project right-of-way, we will make available the following information to local health and jurisdictional authorities as required:

<ul style="list-style-type: none"> • Material Safety Data Sheets for products on-site • Location of stored chemical products if the amount is equal to 30 GAL or 300 pounds or more • Special procedures for spill control and/or clean up for specific chemical substances 	<ul style="list-style-type: none"> • Health hazards, including symptoms of exposure and/or any recognizable medical conditions • Environmental hazards to air and/or water that may result from the release of specific quantities of chemical substance(s)
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Traffic/Transit Security

1 1.1.D

GLP will take a proactive approach to addressing traffic management during the construction and Operating Periods in order to minimize impacts to transit and the travelling public.

<ul style="list-style-type: none"> • Access to transit stops affected by construction will be maintained including coordination with the transit provider for any temporary relocation • A full-time certified maintenance of traffic supervisor will be on-site during lane closures to respond to incidents • As part of our O&M during construction GLP will provide available resources to respond to incidents 	<ul style="list-style-type: none"> • GLP will provide detailed procedures and processes for communicating traffic management activities to the public • GLP will provide advanced notice of any work affecting vehicular and pedestrian traffic and will operate and maintain CMSs to ensure maintenance of traffic • GLP will provide advanced notice to CHP for lane closures
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GLP’s approach to safety during the Operating Period is located in Section 3.1.j Safety.

1.1.e Interface with the Department and Project Stakeholders

GLP understands numerous agencies and organizations have vested interests in this Project. We commit to developing and maintaining positive relationships with these stakeholders throughout the Term to ensure success. As part of this commitment, GLP will create a successful P3 legacy for the Project, the first of its kind in the Western U.S.

GLP will implement a collaborative approach to partnering with the Department, Authority, the Presidio Trust and other stakeholders throughout the 33-year Term. All firms comprising GLP’s DBJV and Lead Engineering Firm have extensive work

1 1.1.C.d



performance with the Department in the San Francisco Bay Area, knowledge of local agencies and processes, and demonstrated accomplishments in successfully partnering with multiple stakeholders to achieve award-winning project delivery. We will leverage our strong existing relationships with these same Project stakeholders to achieve project success for all parties and support the project vision of becoming “San Francisco’s Gateway”.

The Developer will take a long-term approach to equity investment; both HOCHTEIF and Meridiam understand the importance of establishing and maintaining an excellent working relationship with key stakeholders. We are committed to working closely with the Department to ensure that the public is well informed throughout all phases of the Project.

GLP will implement a comprehensive communication plan that addresses stakeholders concerns within the context of potential Project impacts. Activities addressed within this plan include:

<p>Stakeholders Identification</p> <p>Representative parties chosen to examine and discuss issues</p>	<ul style="list-style-type: none"> • Solicit names from the Department, existing contractors, regulatory agencies, utility agency owners, the Presidio Trust, and other stakeholders
<p>Issues Identification and Management</p> <p>Forms the basis of public involvement during the Project</p>	<ul style="list-style-type: none"> • Identify issues through dialogue with stakeholders and understand how each may impact successful Project development • Review issues and concerns on a regular basis and discuss during weekly Project meetings • Maintain an issues list documenting how and when specific issues were raised and addressed
<p>Information Exchange</p> <p>Stakeholders and the community must have an opportunity to learn about the Project</p>	<ul style="list-style-type: none"> • Assist the Department in public information and outreach activities • Hold public workshops to resolve outstanding issues raised during public outreach meetings • Host three partnering sessions plus distribute quarterly updates • Provide timely information to the Department regarding lane closures and construction activities affecting the public

The following section discusses how we will implement these strategies to effectively interface with the Department and Project stakeholders.

Approach to Interfacing with the Department, Existing Contractors, and Stakeholders

1 1.1.C.e Following NTP 1, GLP will hold separate meetings with each entity, including the existing Contractors, which will provide details regarding each stakeholder’s interests. After meeting with the stakeholders separately, we will hold a combined meeting to reinforce common goals and resolve conflicting issues.

GLP and the Department will continue to hold weekly meetings throughout the Project to resolve and track safety, quality, schedule, submittals, and monitor third party and other outstanding issues. On a monthly basis, or as needed, third party stakeholders will attend the meeting with the Department to help further resolve any outstanding issues. We will also hold meetings with the Department’s O&M teams to discuss issues within the Project area, ongoing contracts as well as turnover of the O&M at the appropriate time.

1 1.1.C.f

Plan for Addressing Right of Way Agreement with Presidio Trust

1 1.1.A.d

GLP recognizes that there are limitations contained in the right-of-way agreement between the Department and the Presidio Trust. GLP, in an effort to serve as a good neighbor, will foster our commitment to positive relationships. We have already planned for limitations specified in the agreement. We will also hold regular update meetings with Presidio Trust to keep members informed regarding Project progress and to understand and address their concerns as possible. We provide further detail of GLP’s plan to address each of these limitations in Section 1.2 Project Schedule and Construction Phasing/Sequencing Plans.

Plan and Permits Review and Progress

1 1.1.C.b

Upon issuance of NTP 1, GLP’s design will commence at HNTB’s Oakland office. GLP will establish task forces with design and construction personnel and Department staff. Task forces will meet on a weekly basis to review the design progress, QA/QC, schedule, contract compliance, and other relevant topics. GLP encourages the Department to participate in task force meetings to perform over-the-shoulder reviews of the design and review permit status for the Project. The task force will track progress of the design work and permits along the Project schedule to ensure timely completion.

Workshop

Both the Department and the GLP will have representatives present at public outreach meetings. The goal of these meetings will be to keep the public informed of the Project and to allow interested parties to provide input directly to the Project management team. This forum will identify potential issues and allow tracking of community perceptions regarding the Project. Additional workshops may be held to resolve outstanding issues that require interdisciplinary action.

Partnering

1 1.1.C.d

GLP strongly believes partnering facilitates success during P3 and design-build projects; therefore, we will hold three partnering workshops plus distribute quarterly updates. The first workshop will occur before the design process begins (NTP 1). We will invite the Department, Authority, Presidio Trust, City of San Francisco, Golden Gate Bridge, Highway and Transportation District (GGBHTD) and representatives from permitting and utility agencies to develop a list of common goals and key success factors, and a dispute resolution

process. In this workshop we will introduce the points of contact and the roles each participant will have through the design and permitting period.

1 1.1.C.d The second workshop will be held at NTP 3 and will precede the commencement of construction operations. We will invite the previously listed participants plus major Contractors. The goals and results are similar to the design partnering workshop, but the participants may change with the transition to construction operations. After the initial workshops, we will distribute monthly surveys to participants to be reviewed by the project managers for the Department and GLP. This process will assess the level of success of the partnering efforts.

Stakeholders related to the Project's O&M will attend the third partnering workshop prior to the start of O&M occurring at approximately the Substantial Completion milestone. This meeting will ensure a smooth transition from construction to operations and facilitate the handover of specific work, such as landscaping, to the Presidio Trust.

In addition, GLP recognizes that the Phase 1 contractors will be completing ongoing contract work while GLP is developing Phase 2 plans and that these existing contractors will need to work with minimal disruption. To foster a solid partnering relationship, during the period following NTP 1 but before NTP 2, GLP will access the Project right-of-way to conduct a baseline investigation, inspect existing work conditions, provide surveying, take borings, and prepare a construction field office. GLP will coordinate closely with the existing Phase 1 contractors to complete our activities with minimal interruption to their work.

Utility Coordination Meetings

GLP acknowledges that utility coordination will be a key element to the success of this Project. As such, we will establish a design and construction utility coordinator for the Project responsible for holding weekly meetings with the Presidio Trust and other utility agencies to coordinate schedules and to facilitate design requirements, relocations, required permits, and inspection of work. These meetings will start prior to completion of NTP 1, if possible, or immediately following issuance of NTP 1 and will be held in addition to the weekly design meeting and weekly meetings with the Department.

Construction Engineering and Inspection

1 1.1.C.d GLP will develop concepts for methods and work plans as part of our construction engineering process. GLP's engineers will meet with the Department's engineers to review the concepts before GLP's engineers complete plans. The reviews will consider safety, quality, and feasibility. For any utility-related plan, the Presidio Trust will be invited to participate in the review process.

As the Developer, GLP has the primary responsibility for QA/QC with regard to construction inspection. GLP will regularly perform QA/QC inspections to document Project quality and ensure that the Project meets all specification requirements.

Public Involvement and Community Input

Proactive public partnerships will be a hallmark of the Project. GLP’s commitment to civic responsibility is about more than good business sense or compliance with government regulations; it’s about building strong communities. GLP will work to address and resolve Project impact issues identified by San Francisco residents, including noise and traffic congestion. GLP will preserve and enhance the aesthetics, which are highly valued by the community. GLP will assist the Department in its public involvement and outreach activities, including attending public outreach meetings in coordination with the Department to keep the public informed of the Project and allowing interested parties to provide input directly to the Project management team. In addition, GLP will provide communication on a regular basis regarding temporary closures and construction activities that will affect the public for inclusion in the Department’s public outreach strategies.

1.1.f Construction and O&M Personnel Interface During Project Commissioning

1 1.1.C.b As indicated throughout GLP’s Project Management Plan, we will operate as a fully integrated team allowing for efficient transition from development through NTP 1, NTP 2, NTP 3, and into the Operating Period. This integration, beginning with the development of the Proposal, involves key discipline leads in design, construction, and O&M along with advisors on rehabilitation and technology operability and renewal. The participation of these individuals early and continually in the Project will provide for optimization of system assets, including lifecycle and Handback requirements.

Upon award, GLP will continue to meet during key Project milestones throughout final design and construction. The O&M Team will review the design plans for accessibility, discuss selection of materials for maintainability where applicable, review technology for operability, and analyze and update the rehabilitation schedules as final decisions occur. As construction progresses, the Developer and O&M Team will perform a field review of the construction. Commissioning will start at Substantial Completion when the Project is fully available to traffic.

1 1.1.C.c Both the Developer and the O&M Team will participate in the inspections leading to commissioning to document the system’s conformity to outcome requirements for maintenance. GLP will review the rehabilitation schedule with the actual in-place structures to ensure the assumptions and final build agree.

1 1.1.C.b The integration of the team from initial design and development through to Final Acceptance provides for a fluid transition from construction to operations. We will

augment maintenance activities performed during construction with additional resources for the Operating Period. The Safety and Quality plans adhered to during construction for maintenance will provide the base for the plans for the Operating Period with additional specific maintenance requirements added.

1.1.g Traffic Management Approach

Approach During Construction

1 1.1.G.d GLP will design and maintain traffic in accordance with the Contract Documents, and will perform the work in compliance with the standards listed in the Agreement. Throughout the design, implementation, and management of traffic during the Project, GLP’s approach to Construction Phasing/Sequencing Plan and Traffic Management Plan will result in fewer impacts during construction to the traveling public.

1 1.1.D GLP’s traffic management approach applies an efficient solution to maintaining traffic during the Construction Period and O&M Period. Figure 4 details GLP’s traffic management approach which includes four stages of work. GLP’s preliminary Traffic Management Plan, included in Volume 2, Appendix 3, depicts the Construction Staging/Phasing plans for the Project.

Figure 4: GLP Traffic Management Approach: Four Stages of Work

Stage	Description of Work	Project Schedule Dates
Stage 1 (Phases 1 – 5)	Begins construction with the widening of the Highway 1/U.S. 101 Interchange by completing the ramp widening and mainline reconstruction including new pavement and addition of final number of lanes through the west end of the Project.	May 7, 2012 – December 4, 2012
Stage 2	Construct the tunnels, Presidio Viaduct, Girard Interchange structures, and the intermediate pavement without reconfiguring the traffic patterns.	October 15, 2012 – June 30, 2014
Stage 3	Construct the east tie-in at Richardson Avenue and northbound mainline during a 3-day or holiday weekend closure. During this time, GLP will detour traffic around the work zones during this compressed Construction Period.	June 30, 2014 – September 25, 2014
Stage 4	Opens the ramps and mainline traffic to the final configuration while landscaping and construction work along Halleck Street are completed.	September 25, 2014

Upon receiving NTP 1, GLP will develop a Traffic Management Plan that will provide a more detailed traffic management approach. The plan will address traffic management activities with

regard to construction phasing, drainage, signalization, lighting, front and back slopes, clear zones, emergency access, and passage through the work.

The Traffic Management Plan will also address the major traffic stages and phases and include the location and use of CMSs, glare screen and/or temporary barrier placement, temporary asphalt overlays, temporary traffic signals, signalization, and provide a review of overall safety for the traveling public.

GLP will develop traffic control plans for each separate maintenance of traffic activity throughout the duration of the Project. In addition, GLP will prepare plan sheets, notes, and details per the Department’s Highway Design Manual and the California Manual of Uniform Traffic Control Devices. We will prepare additional plan sheets, including cross sections, profiles, drainage structures, retaining wall detail, and temporary works as necessary for proper construction and implementation of the Traffic Management Plan.

1 1.1.D GLP will continue to research alternative staging approaches to minimize the impact to traffic and the public in and around the Presidio of San Francisco. One such approach will eliminate the need for a three-day holiday weekend closure of U.S. 101 from Richardson Avenue to the Golden Gate Bridge by shifting northbound and southbound traffic along U.S. 101 to share the new southbound Presidio Parkway for a short span between Richardson Avenue and the southbound Presidio Parkway completed in the Phase 1 Contract. This traffic routing would be in place for a few weeks while we complete the final tie-in work. This will require a two-to-four-day closure of traffic from U.S. 101 from Marina Boulevard during construction of the last section of the new northbound Presidio Parkway.

1 1.1.G.d

Approach during O&M Period

1 1.1.D We will perform traffic management during the O&M Period in accordance with the California Manual on Uniform Traffic Control Devices and Caltrans Standard Specifications and Design Standards. Additionally, we will perform routine maintenance activities requiring lane closures at night and during weekends. Lane closure plans will include contingencies for early reopening of lanes should traffic exceed the analysis for that closure. The Department will pre-approve lane closures of more than one lane, should they be necessary.

Project staff will have vehicles containing traffic control devices. Incident responders, under the direction of the CHP, will be trained in the appropriate traffic control methods for securing an area after an incident and safely reopening the site to traffic.

1.1.h Approach to Utilizing DBE/UDBE/SBE/DVBE/LBE Firms

GLP encourages the participation of DBEs as contractors, consultants, and suppliers. GLP will develop and implement a formal, comprehensive DBE utilization program compliant with all

State and federal laws, and consistent with the Contract Documents, and we will implement the Department’s Best Practices, in an effort to maximize DBE utilization on this Project. The outline of GLP’s DBE Plan follows.

Policy Statement

GLP’s DBE Plan will include a policy statement pledging to utilize DBEs in all aspects of work including the design, construction, and O&M phases. This policy statement will affirm that it is the policy of the GLP to ensure that DBEs, as defined in 49 CFR Part 26, have an equal opportunity to receive and participate in our subcontracts.

GLP will work in good faith to find and provide opportunities for DBEs on the Project. It is also our policy to ensure nondiscrimination in the award and administration of subcontracts, to create a level playing field on which DBEs can compete fairly for subcontracts, service contracts, and material supply agreements, and to help remove barriers to the participation of DBEs in subcontracts.

The policy statement within our DBE Plan will report on the Project’s DBE participation percentages and good faith efforts. GLP will obtain written confirmation from all team members of their commitment to comply with GLP’s DBE Plan policy statement.

DBE Liaison Officer

GLP will appoint a DBE liaison officer responsible for developing and administering GLP’s DBE Plan. This individual will report to the deputy project manager and will implement the DBE Plan on a day-to-day basis to ensure work packages encourage DBE participation and GLP follows established procedures including the equal consideration of DBEs. The DBE liaison officer will perform the outreach actions discussed in the following subsections to facilitate DBE participation and will report on the success of achieving Project DBE goals on a quarterly basis.

Actions to Facilitate DBE Participation

To obtain maximum DBE participation, GLP will follow a consistent set of outreach procedures during all phases of the Project including design, construction, and O&M. These outreach efforts include:

- | |
|---|
| <p>1. Meet with the Department’s DBE representative to develop a strategic plan for each work type and review goals, available firms, strategies, and means to overcome obstacles.</p> |
| <p>2. Determine items of work:</p> <ul style="list-style-type: none">• Select portions of the contract that facilitate DBE participation to reach the individual DBE contract goal. The selection of work, supplies and services should be greater than what is expected to meet the individual DBE contract goal.• Break down bid packages into smaller packages for select work types to target DBE participation.• Make work available to DBEs that GLP might otherwise perform with its own forces.• Break down larger portions of work into economically feasible units to facilitate DBE participation. |

3. Solicit qualified DBE firms:

- Use California Unified Certification Program (CUCP) database to build list of subcontractors and suppliers to solicit bids.
- Send letters by fax to DBEs with the following information:
 - a. List of subcontractor and suppliers trades available
 - b. Information regarding obtaining plans and specifications
 - c. Offer of assistance for obtaining bonds and insurance, assistance regarding equipment, materials, and supplies
- Send follow up letters by FAX to all non-responsive DBEs to verify bidding status.
- Follow up phone calls (up to two calls per company) to all non-responsive DBEs to verify bidding status.
- Utilize Caltrans CUCP database to build list of subcontractors and suppliers to solicit bids.

4. Solicit DBE sub-bids and offer assistance:

- Analyze DBE sub-bids to determine price competitiveness by comparing the price difference between the DBE and the selected sub-bid. GLP will not reject any DBE quotation unless the price difference is excessive or unreasonable.
- Where feasible, offer bonding, lines of credit, insurance, necessary equipment, supplies, and materials, excluding supplies and equipment that the DBE subcontractor purchases or leases from the prime contractor or its affiliate.
- Identify bonding requirements and provide suggestions on where the DBE can obtain bonding assistance.

5. Place advertisements:

- Include the contract description, bid opening date, items of work available for sub-bids, GLP contact name, and assistance available to DBEs.
- Identify assistance in bonding, insurance, lines of credit and equipment, supplies, and materials will be provided.
- Publish in:
 - a. Minority Bidder's Bulletin and Construction Update
 - b. <http://www.dbegoodfaith.com/>
 - c. Department opt-in service located on the Office Engineer web site (<http://www.dot.ca.gov/hq/esc/oe/>)
 - d. Minority/women business trade papers; organization/chamber newsletters; business development center web sites (U.S. Small Business Administration: sba.gov/localresources/district/ca/index.html and the Federal Technology Center: www.theftc.org)
- Advertise in publications that are near the contract location (San Francisco).
- Provide interested DBEs with adequate information about plans, specifications, and requirements of the contract to assist them in responding to a solicitation.

6. Utilize assistance agencies:

- Caltrans California Unified Certification Program website (<http://www.californiaucp.com/5.html>).
- Department opt-in service located on the Office Engineer website (<http://www.dot.ca.gov/hq/esc/oe/>).



- Refer to past projects and in-house databases to build DBE list.
- Local and regional DBE and trade-specific contractor associations with in the San Francisco Bay Area including San Francisco, Santa Clara, Alameda, Contra Costa, Solano, Napa, Sonoma, and Marin counties.

7. Perform additional outreach efforts:

Identify others efforts and implement when applicable, such as:

- Conduct bid-item specific outreach meetings in coordination with the Department’s designee for DBE firms to highlight current and upcoming appropriate sub-contracting opportunities.
- Conduct pre-bid meetings and make contact with DBEs.
- Attend Department-sponsored outreach events and make contact with DBEs.
- Attend minority/women business organization meetings.
- Use DBE business support services (i.e., advertisements, temporary help, janitorial services, printing services, drug testing services, and courier services).
- Participate as a mentor in the Department’s DBE mentor protégé program (Flatiron, Kiewit, and HNTB are participants).
- Encourage first time subcontractors to use and report DBEs as lower tier subcontractors.
- Perform ongoing outreach to meet the Bidder’s unobligated work or supplies.

1.1.i.1 QA/QC Program for Design and Construction

GLP will employ an ISO 9001:2008 and LOS 2000 compliant Quality Management System to ensure all aspects of the Project are performed in accordance with the Technical Requirements and meet the Department’s goals and stakeholder needs throughout the Term.

Quality Management System

The GLP Quality Management System is a three-tier structure hierarchy of multiple documents as described below that will be finalized and submitted to the Department for review and input as indicated in the Contract. We will review and revise these documents as necessary during the execution of the work to ensure successful Project completion.

<p>Tier 1</p>	<ul style="list-style-type: none"> • Quality Manual – Top-tier document providing overall guidance for developing, implementing, maintaining, evaluating, and continually improving all aspects of the Quality Management Plan.
<p>Tier 2</p>	<ul style="list-style-type: none"> • Design Quality Management Plan – The document containing methodology for planning, executing, monitoring, and evaluating adherence to quality requirements for all design activities and processes. • Traffic Quality Management Plan – The document containing methodology for planning, executing, monitoring, and evaluating adherence to quality requirements for all traffic-related activities and processes. • Environmental Quality Management Plan – The document containing methodology for overall planning, executing, monitoring, and evaluating adherence to quality requirements for all environmental activities and processes. • Construction Quality Management Plan – The document containing methodology for planning, executing, monitoring, and evaluating adherence to quality requirements for all

	<p>major construction activities and processes. Outputs of management review will be incorporated into the QMP.</p> <ul style="list-style-type: none"> • O&M Quality Management Plan – The document containing methodology for overall planning, executing, monitoring, and evaluating adherence to the contract quality requirements for O&M activities and processes. This document will follow LOS 2000 guidelines.
<p>Tier 3</p>	<ul style="list-style-type: none"> • Quality Procedures Manual – The document containing task or process-specific quality procedures for monitoring and documenting design activities, non-physical activities, and construction activities such as control of documents, control of permanent materials, and audits. • Inspection and Test Plan – A document delineating all contract required inspections and tests, notification points, witness and/or control points along with their frequencies, responsible organization (i.e., QC, QA, Department, Engineer) as well as the required documentation providing objective evidence as to the acceptability of the item, activity, or process.

Quality Organization

GLP structures our quality organization to ensure adequate QA/QC procedures and staffing during the design, construction, and O&M work and that activities performed by different firms are coordinated to ensure consistency of quality. In addition to the quality organization provided by the DBJV and O&M team, the Developer will also implement periodic third party quality verification and quality auditing throughout the Term in order to ensure the performance of the DBJV and O&M quality organizations.

1 1.1.E.b

Overview

GLP will implement a Project quality organization that functions independently of the rest of the design and construction organization. The DBJV Steering Committee will provide oversight to this Project quality organization. Reporting directly to the DBJV Steering Committee are the design quality manager, Devang Desai, PE, responsible for ensuring QA/QC compliance during design and the construction quality manager, Corkey Bates, responsible for ensuring QA/QC compliance during construction.

1 1.1.C.b

As Construction Quality Manager Corkey Bates brings nearly 30 years of construction, QA and QC experience on large design-build roadway and bridge transportation projects for the Department and across the U.S. He will use this extensive and multi-disciplined experience to oversee GLP’s Quality Management System, ensuring all aspects of the Project are performed in accordance with Technical Requirements. The construction quality manager will communicate with the project manager, but not be directed by him. This independence from the Project management structure will maintain the role’s objectivity and impartiality while ensuring effective and efficient interface between the construction and QA/QC organizations.

1 1.1.C.b

As Design Quality Manager, Devang Desai, PE, has more than 20 years of design, construction, and quality management experience on various highway projects within the Department's right-of-way and designed and constructed to the Department's standards. The design quality manager will oversee the design QA management and will perform or coordinate design reviews performed by others at each stage of the design development and will be available to assist the Department with required reviews. This role will communicate regularly with the design manager, but not be directed by her to maintain objectivity and impartiality, while ensuring effective and efficient interface between the design and QA/QC organizations.

1 1.1.C.b

The construction QC manager and a construction QA Manager will report to the construction quality manager. The construction QC manager will oversee a team of inspectors and technicians who conduct the inspection, sampling, testing, document review, and recording activities performed throughout the Project to control, check, and verify materials used meet specification requirements.

The construction QA manager will oversee a team of auditors who will verify that the level of inspection and testing conducted properly control and document the work or process to ensure we meet contract requirements. Together, the construction QC and QA staff will verify

1 1.1.D

construction activities performed by different firms adhere to the consistent high level of quality throughout the Project.

1 1.1.E.a

The design manager will oversee the design QC management performed by task leads and the design QA management performed by senior engineers and auditors independent of design production who will follow written procedures to verify compliance with contract requirements and design criteria. Together, they will verify that design activities performed by different firms adhere to the

1 1.1.E.b

consistent high level of quality throughout the Project.

1 1.1.E.a

Throughout all phases of the Project, the Developer on-site representative, Developer compliance advisors (including lifecycle), and O&M quality manager will report functionally through the Developer project director to the Department to ensure the necessary independence to ensure the performance of GLP's processes. During rehabilitation activities, GLP will provide oversight QA for subcontracted work activities.

Organizational charts depicting GLP's quality management organization for design, construction, and O&M work are included in Volume 2, Appendix 1. Additionally, resumes for all of the key QA/QC personnel listed in the organizational chart are included in Volume 2, Appendix 2.



QA/QC for Design Work

As the Lead Engineering Firm, HNTB will draw upon its experience from previous large-scale highway design-build projects and corporate-wide quality initiatives to develop a quality management approach that meets the Department’s expectations and deliver a high-quality design.

The design quality organization is supported by HNTB’s corporate policies and objectives for quality, knowledge of Project requirements, designs that meet the Department’s expectations, and continuous improvement of quality programs and processes.

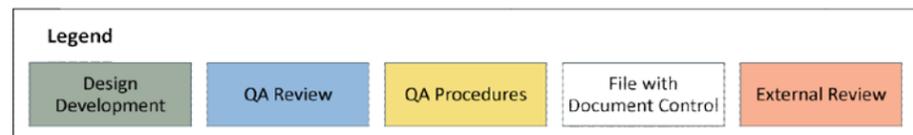
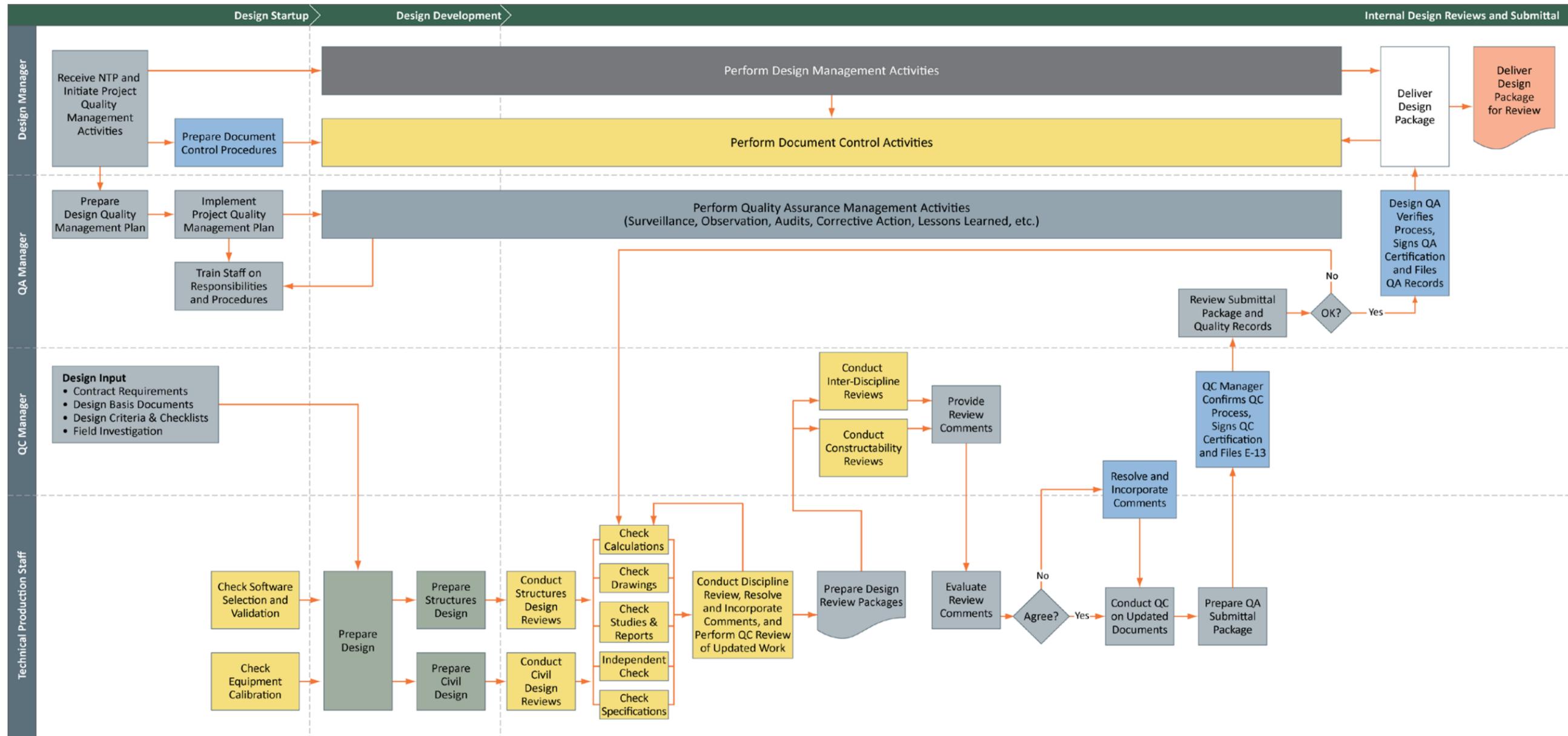
Key features of this organization include:

<ul style="list-style-type: none">• Direct reporting and accountability to project leadership• QA audit procedures for the Quality Management Plan• Training• Transparency of quality records	<ul style="list-style-type: none">• Issue resolution, non-compliance corrections, tracking, and reporting procedures• Comprehensive documentation of all Quality Management Plan activities• Subcontractor quality control• Processes to promote continuous improvement
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Design Quality Management Plan

During design, GLP will develop and implement a Design Quality Management Plan addressing functional objectives, discipline-specific standards, various policies and procedures required to ensure design drawings, specifications, and other documents comply with the Agreement and Technical Requirements. We will ensure design staff are trained on all elements of the plan, including the execution of the design review procedures. Figure 5 illustrates this process.

Figure 5: QA/QC Process Flowchart





Our comprehensive Design Quality Management Plan includes the following features:

<ul style="list-style-type: none"> • Thorough and detailed design review procedures to ensure compliance with Project goals and Technical Requirements • Flowcharts for each procedure to ensure accurate communication and implementation • A nonconformance resolution procedure requiring controlled sign-offs and tracking of final disposition 	<ul style="list-style-type: none"> • A clear separation of QA and QC roles, responsibilities and accountabilities • Self-performed QA verifications and audits to provide a higher level of performance and accountability • Independent auditing of Design Quality Management Plan processes • Process training for design professionals emphasizing accountability for QC prior to QA verifications and audits
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Design Criteria

The design team’s review process includes checks performed by senior engineers independent of design production. The checks will follow written procedures to verify compliance with contract requirements and design criteria, including the following:

<ul style="list-style-type: none"> • Applicable codes and standards • Methods of analysis • Computer software and information technology validation • Interface requirement 	<ul style="list-style-type: none"> • Constructibility • Lifecycle and design life requirements • Maintenance requirements • Aesthetics • Environmental compliance
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QC Checks

Before GLP submits design packages for review, we will conduct a thorough QC check of all plans, calculations, specifications, and reports using the procedures outlined in the Design Quality Management Plan. As part of this checking procedure, the design discipline leader will assign an experienced senior engineer to verify that the design deliverables meet all design criteria and contractual requirements. This individual will update checked documents and re-verify. At a minimum, the documents will be checked to confirm the following:

<ul style="list-style-type: none"> • Assumptions and methods, including models, are consistent with design criteria, design input, and accepted practices • Calculations are legible and checked independently • Calculations are performed in accordance with design task protocols • Calculations are traceable to the originator, signed, and dated with revisions • Input data is identified and has been taken from reviewed and accepted sources 	<ul style="list-style-type: none"> • Correct and consistent dimensions • Conformance with the Department’s drafting standards and plan preparations guidelines • Compliance with design decisions and approved design exceptions • Conformance with applicable Department standards • Comments to the latest check prints have been incorporated into the completed drawing
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GLP will perform additional reviews of the Project documents as follows:

Design Discipline Leader Approval	<ul style="list-style-type: none"> Once the checking procedures are completed for each discipline, the design discipline leader will review them to ensure that all comments have been addressed and the quality process has been followed. The design discipline leader will then sign-off on the review check list.
Interdisciplinary Review	<ul style="list-style-type: none"> Once the discipline review is complete, copies of the package will be distributed to each design discipline leader who will assign an appropriate reviewer. The interdisciplinary review will be signed off by each design discipline leader.
Technical Coordination Review	<ul style="list-style-type: none"> Specific technical experts will complete interdisciplinary reviews to check for conflicts between disciplines, environmental mitigation compliance reviews, and review of other technical aspects of the Project to ensure plans and specification meet Project objectives.
Design Manager Approval	<ul style="list-style-type: none"> Once all QC reviews have been completed, the design discipline leader will submit the original checked and corrected documents along with the verified and signed design team document review checklist to the design manager for approval.
Environmental Mitigation	<ul style="list-style-type: none"> GLP is committed to full compliance with the Environmental Compliance Plan and commitments made during the environmental clearance phase of the Project. To deliver this commitment, we will incorporate the Environmental Compliance Plan into our Design Quality Management Plan and monitor activities related to this effort along with all other design quality activities.

QA/QC for Construction

GLP’s Construction Quality Management Plan and associated QA and QC plans for construction will emphasize the following fundamental principles:

<ul style="list-style-type: none"> Document control procedures Management roles and responsibilities Resource management and training Construction inspection, verification, checking, control, and testing Materials inspection, verification, checking, control, and testing 	<ul style="list-style-type: none"> Design development review, control, checking, and certification Internal and external communication and interface protocols Reporting protocols Internal audit schedule
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Resource Management and Training

1 1.1.E.a GLP will staff construction QA and QC personnel at the levels necessary to perform inspections and tests to fully document all aspects of design, construction, and O&M are performed and completed in accordance with the Contract Documents and meet stakeholders needs.

We will ensure that all quality personnel, including the Developer’s Consultants responsible for quality verification and quality audits, have the necessary certifications for their assigned tasks

and attend required training to properly perform their duties. At all levels, training will include formal certification, on-the-job training, or a combination of both. GLP will maintain and update training records in accordance with the Construction Quality Management Plan. The construction quality manager will periodically audit the records and forward to the DBJV Steering Committee and project management team for recommendations.

Construction Inspection, Verification, Checking, Control, and Testing

GLP will conduct QA and QC inspections in accordance with the approved Quality Procedures Manual and the Inspection and Test Plan to verify conformance to Contract specifications. These inspections may be performed jointly or separately depending on the nature of the task as outlined in the Quality Procedures Manual or Inspection and Test Plan, as applicable. We will conduct QA inspections on a less frequent basis than QC to verify that the level of inspection and testing properly control and document the work or process to assure contract requirements are being met. The frequencies outlined in these documents are a minimum and may be increased at any time. The Department will be given the opportunity to attend all inspections and tests.

GLP's Construction Quality Management Plan will detail procedures for inspecting, sampling, testing, reviewing, and recording to be performed throughout the Project in order to control, check, and verify that all permanent materials used on the project meet specification requirements. The Construction Quality Management Plan will list all required inspection and testing frequencies to ensure all necessary inspection is conducted to ensure effective control of accepted materials. GLP will maintain detailed, accurate records of all inspections with information including date of inspection, sampling and testing undertaken, and obtain other pertinent documentation.

GLP will complete all testing, inspecting, and reporting in accordance with the Department's referenced standards. Tests or inspections that require specialized individuals will only be performed by personnel who possess current certification. As a supplement, the Developer's compliance advisor as well as the lender's technical advisor will also perform periodic inspections of the Project throughout the Construction Period.

Communication and Interface Protocols

GLP's regular interface with the Department will enhance communication to ensure confidence in the quality of the work performed. GLP will incorporate the following list of items into the Construction Quality Management Plan. GLP's project management team and the DBJV Steering Committee will review for effectiveness and improvement during the execution of the work.



<ul style="list-style-type: none"> • Invite the Department to participate in management reviews of both QA and QC activities • Send management review reports to the Department • Notify the Department of control point reviews, to include time and date of inspection(s) 	<ul style="list-style-type: none"> • Incorporate control point inspections into the two-week look-ahead schedule updates to allow the Department full involvement in the process • Include the Department in GLP task force meetings
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Reporting Protocols

The Construction Quality Management Plan will delineate the documents, data, and methods required to be compiled, completed, reviewed, and maintained as objective evidence that all activities comply with the quality requirements for design, construction, and O&M for the Project as outlined in the Contract Documents. GLP will file these records for easy retrieval and review during all phases of the Project. These documents include but are not limited to the following:

<ul style="list-style-type: none"> • Results of QA inspection, tests, and audit records of operations conducted by GLP or its Contractors or suppliers • Results of QC inspection, tests, and records of GLP operations or its Contractors or suppliers 	<ul style="list-style-type: none"> • Internal and external audit reports generated by GLP QA or its authorized representatives for off-site activities
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The construction quality manager will prepare an inclusive monthly summary of all QC and QA activities for delivery to GLP project management team, DBJV Steering Committee, the Department, and other parties outlined in the Contract Documents and Construction Quality Management Plan.

The construction quality manager will compile and review QC inspection and test reports daily and distribute to the Department and any other parties outlined in the approved document control procedures.

Internal and External Audits

GLP’s audit program will evaluate the implementation and effectiveness of the Quality Management System and quality management plans for all aspects associated with the permanent work. We will develop internal and external audit procedures for approval by the construction quality manager.

The construction QA manager will be responsible for performing internal audits of quality management plans for construction-related activities performed by the GLP, its Contractors or suppliers. He will develop annual audit schedules that may be subject to revision as necessary.

The construction QA manager will forward audit reports to the construction quality manager and include the results, any nonconformities, and opportunities for improvement as they pertain to the item, system, process, or organization audited. After review, the construction quality manager will provide any recommendations to the audited party necessary, file, and distribute the reports to GLP project management team, DBJV Steering Committee, the Department and other parties outlined in the Construction Quality Management Plan in accordance with the approved procedures.

Document Control Procedures

The construction quality manager will establish a document control system as well as approve the procedures necessary to control design-build related documents. GLP will maintain drawings, submittals, and RFIs through a dedicated document controller responsible for ensuring project documents are identified, stored, retrieved, protected, retained and/or disposed of in the appropriate manner and that quality records are properly protected and maintained. These records will provide evidence of product compliance to the Contract.

The document control system will implement procedures to ensure that the Project team has the most current documents. We will control changes to the Project documents through the revisions control process. Revised documents will undergo the same level of internal review and approvals as the original document. We will control previous versions of the documents to prevent inadvertent use. As an example, if we revise drawings the drawing number will be updated with an R* designation. GLP will apply a similar numbering control system to the Request for Information and Field Change Notice documents.

GLP's document control system will define a work process for the review and approval of external documents. The document control manager will distribute copies of the external documentation to involved parties and retain the original external documents in document control system for records.

Throughout the Project, GLP will maintain all public documents and records in a central electronic location with varying levels of access to share with Project team members. To ensure the system is compliant with the tenants of ISO 9001:2008, we will audit the web-based filing system on an annual basis. The document control library will contain a complete and accurate index and record of all Project documents and provide the ability to track changes to documents such as design drawings, specifications, RFIs, and as-built drawings.

1.1.i.2 QA/QC O&M Plan During and After Construction

The O&M Quality Management Plan will ensure GLP achieves the performance requirements of the Project for O&M, both during the Construction Period and the Operating Period whereby an independent consultant will perform the quality management. The main responsibility of the

O&M quality manager will be to ensure sufficient procedures are in place to assess effective work performance and to ensure desired outcomes are met.

The O&M Quality Management Plan will include a quarterly rating process for the duration of the Operating Period that will adhere to the Department's LOS 2000. Once per quarter, the O&M Quality Manager will be responsible for assessing both the Quality Management System, and the actual roadway assets against work orders in the Maintenance Management System. A rating for the assets based on the performances standards will be derived from the inspection. Based on these results, the O&M Quality Manager will make recommendations to the Project for areas of improvements or changes.

In addition to the quality management provided by the O&M Team, the Developer's technical advisors will perform periodic inspections and audits of specific items. Furthermore, the Developer's advisors will perform periodic audits of the O&M Team's documentation and performance of quality responsibilities and the results will be available for the Department to review.

The Developer's technical advisors will assist in the inspection of certain critical elements of the work, such as the pavement and bridge decks. The lender's technical advisor will also provide a random review of O&M activities as part of his QA responsibilities. Primary control will be based upon a QA audit of the QC produced by the respective contractors supplemented with field inspection as warranted. The Developer will provide an external auditor for the annual audits of Project quality processes. The process will be consistent with LOS 2000 as outlined above.

1.1.i.3 GLP Team Organizational Charts

Organizational Charts are located in Volume 2, Appendix 1.



1.2 PROJECT SCHEDULE AND CONSTRUCTION PHASING/SEQUENCING PLANS

GLP has developed a logic-based Critical Path Method (CPM) schedule in Primavera format in accordance with the requirements of the ITP Appendix C, Section 1.2. This schedule is located in Volume 2, Appendix 4. The schedule demonstrates our comprehensive understanding of the entire project by resulting in a final completion date that exceeds the project requirements. The methodology used to create this schedule is based on the Contract Requirements, our experience, production histories, and our comprehensive understanding of the project. The project schedule includes 50 working days of anticipated weather delays as well as 90 days for Deductible Relief Event Delays.

1 1.1.G.a

Our schedule integrates both design and construction activities by incorporating early design packages and review processes. This allows for early release of critical design packages so that critical path construction can proceed without delay. Other design packages will be released in sufficient time as not to affect construction. GLP anticipates design work to advance after issuance of NTP 1. A 15-day review period by the Department is included for each submittal per Volume II, Division I, Section 2 Submittals.

1 1.1.G.b

GLP has prepared an aggressive, yet realistic schedule for the construction work. This is evidenced by the fact that GLP has scheduled preparatory subsurface investigation, utility potholing, and field survey control to occur prior to NTP 3. Furthermore, included in the schedule, GLP has accounted for 90 days of Deductible Relief Event Delays as well as 50 working days of anticipated weather delays on the critical path. With both of these events included in the schedule, GLP complies with the required Substantial Completion date of December 31, 2014. Furthermore, GLP anticipated Final Acceptance on April 30, 2015, which is before the required Final Acceptance Deadline of June 30, 2015.

A Work Breakdown Schedule (WBS) is included in Volume 2, Appendix 4, which details key activities by location, type, and task. The following is a list of key dates, schedule assumptions, and other information consistent with the requirements in Appendix C of the ITP that were used to generate the Project Schedule and Construction Phasing/Sequencing Plan, demonstrating GLP’s comprehensive understanding of the activities necessary to achieve final completion of the project.

Key Dates:

<ul style="list-style-type: none"> • Fully Executed Agreement – December 31, 2010 • NTP 1 – March 30, 2011 • NTP 2 – September 5, 2011 • NTP 3 – October 31, 2011 • Construction Commencement – October 31, 2011 • Construction Closures/Final Tie-ins – 3rd Quarter 2014 	<ul style="list-style-type: none"> • Scheduled Substantial Completion – December 31, 2014 • Required Substantial Completion – December 31, 2014 • Scheduled Final Acceptance – April 30, 2015 • Final Acceptance Deadline – June 30, 2015
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<p>Major Permits – Approval Deadline:</p> <ul style="list-style-type: none"> • RWQCB - 401 Water Quality Cert – September 19, 2011 • Army Corp - 404 Nationwide Permit - September 19, 2011 • National Historic Preservation - September 19, 2011 	<ul style="list-style-type: none"> • SWQCB - General Permit – September 19, 2011 • SWRCB - NPDES MS4 Permit – September 19, 2011
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1 1.1.F The project schedule sets forth 1,158 days between NTP 3 and the Final Acceptance Date.

CPM Calendars:

Each activity in the CPM schedule has been assigned one of four Calendars. The four Calendars are:

1. Five-day Work Week with Holidays
2. Five-day Work Week with Holidays, anticipated weather days and restricted work days
3. Five-day Work Week with Holidays for Design Work
4. Seven-day week with No Holidays, weather days or work restrictions (i.e., Calendar Days)

Anticipated Critical Path:

Award and Execution of Agreement – NTP 1 – Financial Close – Subsurface Investigation & Survey – Design of Main Post Tunnel & Ground Improvements – NTP 3 – Mobilization – Construction of Main Post Tunnel – Tunnel Commissioning – Final Roadway Tie-ins – Remove Temporary Roadway – 90 days for Deductible Relief Event Delays – Substantial Completion – Final Landscape and Punch & Clean – Final Acceptance

Schedule Assumptions & Contingencies:

1 1.1.G.c A reasonable contingency that has been contemplated and accommodated in the schedule is the assumption of 50 working days of anticipated weather delays. These anticipated weather delays have been incorporated into the schedule through the use of assigned Calendars. Another assumption is that most work is expected to be completed using a standard five-day work week with minimal overtime. Design periods have been scheduled to allow sufficient review time without delay to the Critical Path. Additionally, the project schedule contemplates and accommodates 90 days of Deductible Relief Events as per Section 9.2.2.3 of the Agreement.

Potential Problem Areas:

The completion by the Phase 1 contractor is critical to the issuance of NTP 3 by October 31, 2011 so that construction may begin. During construction, problem areas may potentially include the discovery of unknown utilities or the discovery of extensive pre-existing hazardous material within the Project right-of-way that exceed the specified allowances. The

rearrangement of utilities may also be a problem that we have addressed by including sufficient time for subsurface investigation, design, review, and construction work. Lastly, obtaining final design approval from the Presidio Trust will be necessary prior to beginning Landscape work.

Anticipated Delays:

During the construction period, GLP has anticipated and has incorporated the following allowances for these potential delays (GLP considers these days to be for the sole use of the DBJV):

- 90 days for Deductible Relief Event Delays
- 50 working days for anticipated wet weather delays

Permits:

All required permits are included in the CPM Schedule. These permits will be acquired and in place during the design period (i.e., prior to the start of construction, NTP 3). In the unlikely event of permit delays, 90 days of Deductible Relief Event Delays activity is included in the project schedule. The Key Dates Table on pages 1 and 2 of this section provides a list of Major Permits required and the deadline to achieve each one.

Temporary Closures, Night Work Activities, and Non-Work Days Including Holidays:

To minimize the impact to traffic along the Presidio Parkway throughout the construction period, GLP intends to perform most work during a standard five-day work week, whereby routine closures are not expected. However, certain incidental closures will be required for activities that cannot be completed during normal working hours (i.e., concrete pours where a construction joint would be detrimental to the completed work). Additionally, the final roadway tie-ins may require a three-day shutdown of Doyle Drive (i.e., Holiday Weekend) as outlined in both the Presidio Parkway Transportation Management Plan (February 2010) and GLP's TMP for this contract, although alternative concepts are being considered to perform these tie-ins over a standard weekend closure, or simply during weekday night time closures. These dates are reflected in our proposed project schedule.

Project Segmentation:

GLP's project segmentation is congruent with our Phasing/Sequencing Plan, detailed later in this volume. Interfaces for each segment will be coordinated to ensure maintenance of traffic and resource allocation is preserved throughout the entire construction period.

Timing and Phasing of Design and Construction

Design will begin after issuance of NTP 1. Work on early design packages has been identified as a result of the construction sequencing. The design for the critical elements such as tunnel ground improvements, and tunnel structures, are the first design packages that will be completed. This will allow for the design and review process to be completed so as not to affect the critical path of the construction work. Other design packages will be released in sufficient

time as not to affect later construction. It is anticipated that design work on later packages will be ongoing as construction is proceeding.

Utility Relocations

The project has several locations that require utility relocations. Utility relocations include Presidio's sanitary sewer and water lines, PG&E's gas and electric lines, and AT&T's communication lines. The schedule includes durations for subsurface investigation for utilities, design work for relocations, review of each design submittal, and construction of the relocated utilities.

Coordination With Phase 1 Construction

To realize a successful project closeout for the Phase 1 contractors, and ensure a successful project startup of Phase 2 contractors, coordination between the two groups will be essential. GLP respects the need for the Phase 1 contractors to use portions of the site for their work, laydown, and staging areas. The realistic strategy for coordination with Phase 1 Construction includes conducting partnering sessions with Phase 1 contractors and GLP after NTP 1 in order to coordinate the need for GLP to access the site for the purposes of site investigation, soil sampling, geotechnical investigation, utility location, and cultural resource assessments. These activities can and will be performed without interruption to their work. Together with partnering sessions, regular coordination meetings will be scheduled to address the Phase 1 construction schedule and needs and the minimal site access requirements of GLP.

1 1.1.G.f

Prior to NTP 2, GLP will coordinate with the Department and its Phase 1 contractors for an on-site location for the temporary storage of materials and equipment to respond to the facility maintenance and traffic operations. The likely location for this site is on the west end of the project where Contract 3 work is demobilized and access to the roadway will be available.

Use of Properties for Staging and Laydown Activities

GLP's anticipated laydown areas are all within the Project right-of-way and within the temporary construction easements. GLP will make efficient use of all available space for our equipment, materials, and project trailers. Agreements with landowners for additional areas will be investigated after NTP 1.

Phase 1 contractors will be complete prior to NTP 3, when GLP commences its construction operations. GLP will mobilize and occupy the entire easement for purposes of the construction of the project. We will stockpile excavated materials for testing and storage for later re-use into the project and process re-cycled materials from our demolition operations for use in the roadway pavement sections. The high viaduct requires laydown areas for the foundation construction equipment as well as the falsework and formwork materials for the superstructure. With the demobilization of the Phase 1 contractors upon their project completion prior to NTP 3, the site should become available for staging and laydown activities without conflict.

Accommodation of Restrictions in Specifications

The schedule accommodates the restrictions within the Specifications:

- The scheduled Substantial Completion Date occurs on the specified Substantial Completion Deadline of December 31, 2014.
- The scheduled Project Acceptance date of December 31, 2014 is before the specified Project Acceptance Deadline of June 30, 2015.
- The work hours are within the normal work hours defined by the agreement, except for special shift activities, which will require work done outside of the normal work hours and under lane closures. For those special operations which require work done outside of normal work hours, GLP will provide two-weeks advance notice.
- No work is scheduled for the Special Event Days.

Strategy to Alleviate Traffic Congestion



The construction work has been scheduled to continually alleviate traffic along the Parkway throughout the construction period. This strategy is described in the following four Stages:

- Stage 1 (Phase 1 – 5) starts construction and widening on the Highway 1/U.S. 101 interchange by completing the ramp widening and mainline re-construction at the project onset. We will complete the work, place the traffic onto the finish pavement, and provide the final number of lanes through the west end of the project.
- Stage 2 is to construct the tunnels, high viaduct and Girard interchange structures, and the intermediate pavement without re-configuring the traffic patterns.
- Stage 3 will construct the East tie-in at Richardson Avenue and northbound mainline during a three-day closure (or weekend closure). The traffic will be detoured around the work zones during this compressed construction period.
- Stage 4 opens the ramps and mainline traffic to its final configuration while landscaping and Halleck are completed.

The traffic will only be exposed to three major changes or disruptions. The community will be notified of the impending changes in advance of the change. By informing the community, we will reduce the congestion caused by traffic slowing to negotiate unexpected changes.

For details regarding GLP's specific staging/phasing of the project, please refer GLP's Phasing/Sequencing Plan of this volume.

Limitations in Presidio Trust Right-of-Entry Agreement

1 1.1.G.e The schedule is based on the limitations contained in the Presidio Trust’s Right-of-Entry Agreement with Caltrans and are managed within our schedule. GLP will work to coordinate and accommodate necessary limitations with the Presidio Trust.

- The term for the agreement is valid through December 15, 2015, and the project will be completed before that expiration.
- The work hours are generally within the normal work hours defined by the agreement, except for special shift activities, which will require work done outside of the normal work hours. For those special operations which require work done outside of normal work hours, GLP will provide two weeks advance notice.
- No work is scheduled for the Special Event Days as noted in Exhibit E.

Construction Phasing/Sequencing Plan

GLP’s Construction Phasing/Sequencing Plan is consistent with our Transportation Management Plan, located in Volume 2, Appendix 3, and our Preliminary Master Design Submittal, located in Section 2. Our strategy to progressively and continually alleviate traffic congestion along the Presidio Parkway throughout the construction period consists of constructing the work with minimal traffic impacts by avoiding excessive lane, ramp, and mainline closures. As described in our management of traffic plan in Section 1.1 of this volume, innovative alternatives and enhancements will be continually developed during the design phase of the project to enhance public access and traffic management while maintaining compliance with all contractual and stakeholder requirements. GLP’s Construction Phasing/Sequencing Plan considers all of the relevant factors that will be present throughout the Project duration while maintaining an aggressive but realistic time frame for the required completion, management, and mitigation of all construction work.

A summary of GLP’s phasing and sequencing of the Project is described below. Volume 2, Appendix 3, the Traffic Management, also includes a consistent graphical illustration of this plan.

Stage 1: Construction of Mainline Ramps at the Highway 1/U.S. 101 Interchange

Stage 1, Phase 1 and 2

Construct the Highway 1 to U.S. 101 onramp, detour work for future lane shifts on U.S. 101, and permanent work on U.S. 101, maintaining two open lanes of traffic separated by a concrete K-rail barrier.

Stage 1, Phase 3

Continue constructing segments of the ramp from northbound Highway 1 to northbound U.S. 101 and construct permanent work in the center of U.S. 101. Traffic will be split on U.S. 101

around the work area by a concrete K-rail barrier. Northbound U.S. 101 traffic will be partially on the newly paved detour constructed in Stage 1, Phases 1 and 2.

Stage 1, Phase 4

Complete permanent work on southbound U.S. 101. Traffic will no longer be split between northbound and southbound on U.S. 101 around the work area and will be separated by a concrete K-rail barrier.

Stage 1, Phase 5

Demolish existing Doyle Drive. Night closures of Crissy Field Avenue, Lincoln Avenue, and northbound Highway 1 to northbound U.S. 101 ramp for demolition of existing Doyle Drive Viaduct.

Stage 2: Construct New Tunnels, Retaining Walls, Structures, and Mainline Roadways

Construct new northbound Presidio Parkway, southbound Presidio Parkway, retaining walls, and Girard Boulevard. Street closures on Halleck, Girard, Gorgas, parts of Banks and Lincoln, Marshall, Crook, and Vallejo will be ongoing from the Phase 1 traffic configuration.

Stage 3: Tie In New Roadway at Richardson and Girard

Tie in the new northbound and southbound Presidio Parkway to Richardson Avenue and Marina Boulevard during a three-day weekend closure (or weekend closure). Demolish Contract 4 detour section conflicting with new northbound Presidio Parkway and finish Presidio Parkway northbound between the Main Post and Battery Tunnels. Traffic will be rerouted on the already established detour of Lombard, Van Ness, and Geary.

Stage 4: Remove Mainline Detour, Construct Halleck, and Landscaping

Demolish the remainder of the Contract 4 detour and construct Halleck Street over the Main Post Tunnel.



1.3 ENVIRONMENTAL COMPLIANCE PLAN

Golden Link Partners (GLP) will comply with all applicable CEQA/NEPA, Section 106, and Section 4(f) commitments and permitting requirements during performance of the design, construction, and O&M work. We provide a cost effective environmental and regulatory compliance program that respects existing agreements and relationships established during the Presidio Parkway Project’s (Project) environmental and permitting process. GLP predicates our approach to addressing the environmental requirements on our experience managing the environmental process from project initiation through to closeout. Our approach will create operational efficiencies and support on-time Project delivery to result in successful environmental compliance throughout the lifespan of the Project.

The key elements of GLP’s Environmental Compliance Plan follow:

Design	Construction	Operation
<ul style="list-style-type: none"> Ensure design is consistent with mitigation commitments and final permit conditions 	<ul style="list-style-type: none"> Monitor and report compliance during construction Bring solutions forward to address in-field conditions 	<ul style="list-style-type: none"> Document long-term mitigation success

1 1.1.H.c The Department and its partners have defined a Project with specific design features and mitigation requirements. We understand the care required to construct a major facility within a National Historic Landmark District containing multiple Section 106 and Section 4(f) resources. We will leverage our team’s experts, local knowledge, and experience in communicating with the many agencies involved in this Project to achieve environmental compliance. Through our Environmental Compliance Plan, we clearly articulate the requirements to allow understanding for all Project team members; provide a plan for consistent and transparent communication with the Department, its partners, and regulatory agencies (Department and agencies) to build trust; and have a keen understanding of existing agreements to be respected and maintained. These key aspects of the plan will result in successful project delivery.

Environmental Compliance Plan Components

A discussion of GLP’s Environmental Compliance Plan components follows.

Environmental Compliance Tracking Tool

1 1.1.H.b To most effectively capitalize on work done by others and kick-start the implementation process, GLP will use an environmental compliance tracking tool, providing a means of connection with the Department and agencies and previous efforts to organize, understand, and communicate environmental commitments to the Project team. Our on-site staff will use this tool as the initial basis of our coordination and communication with the Project team, the Department, and agencies.



Communication Protocols

GLP will establish communication protocols and points of contact between the Project team and Department and agency staff. This is a key step in building relationships, clarifying roles, and verifying responsibilities and expectations among all parties. We understand that the Department retains all authority for maintaining and negotiating the Section 106 agreements (Programmatic Agreement and Treatment Plans). Our architectural historian/cultural resource compliance lead will identify issues and develop solutions in coordination with the Department’s cultural resources manager for resolution.

GLP will establish protocols for Department approval for regular communication and communication for any unforeseen circumstances, and designated emergency contacts. We will establish review protocols for the outstanding monitoring plans and aspects of the environmental compliance tasks that continue to evolve as the design progresses (e.g., identify a process and schedule for review and approval of the Environmental and Cultural Resources Management Plan).

Integration of Environmental Team

1 1.1.H.e GLP will integrate the environmental team into the design and construction teams using the value engineering process method as a model. We will include environmental team leads in key and applicable design and construction review meetings. In addition, they will learn of new or innovative designs at key points during refinement of the Project design. Key points of environmental integration include design submittals and the pre-construction activities led by the DBJV. Environmental staff will participate by presenting applicable permit specifications, season restrictions, sensitive resources, or CEQA/NEPA requirements that apply. This participation will ensure incorporation of environmental requirements for CEQA/NEPA, permits into the design, and will address any conflict with existing management or treatment plans.

Environmental Compliance Binders

GLP will create and provide binders specific to environmental compliance to each of the technical leads on the Project. These binders will form the basis of the internal team communication and compliance coordination efforts and serve as an integral part of our Contractor Training Program. Binders will include the following:

<ul style="list-style-type: none">• Copies of permits and pertinent specifications referenced in the permits• Environmentally sensitive areas requirements	<ul style="list-style-type: none">• Contact information and communication protocols• Maps depicting the location of resources• Weekly briefing memo indicating current environmental activities
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Link the Environmental Compliance Tool with Evidence

We will link the environmental compliance tracking tool with documents or evidence of compliance and to the Project QA/QC process. By integrating the environmental compliance

tasks and components in the QA/QC process, we will ensure transparent tracking of documentation through the Project. This tool will become a defensible digital record of successful environmental compliance for the lifespan of the Project.

Efficient and Easy Implementation

As a result of our key team members' demonstrated positive working relationships with agencies and project owners here in the Bay Area and throughout California, our implementation will be efficient. In particular, our highly qualified staff will be key to successful environmental compliance because they will set the appropriate tone and quality of relationships with oversight agencies.

CEQA/NEPA Compliance for Design, Construction, and O&M

We will refine the Project design during the design phase and modify it during the Construction Period. To ensure that NEPA and CEQA compliance stay at the forefront of importance during the life of the Project, GLP will track compliance for requirements in two different ways.

1. On a regular (approximately monthly) basis, GLP's our CEQA/NEPA compliance lead will review Project plans to ensure that these refinements still meet the conditions and intent of the environmental clearance documents, including the EIR/EIS, Section 4(f) Statement, permits, and agreements. This review will include discussions with each of the section leads to get a descriptive walk through of the refinements to ensure compliance.
2. During the design, there is potential to take advantage of design innovations to reduce impacts, shorten the construction timeline, improve the lifespan of different elements, or incorporate new techniques to enhance sustainability or operations. Large-scale innovations can provide substantive benefits. They also have, however, the potential to open the door to revisit the environmental document; may require preparation of an addendum to a permit, renegotiation of a mitigation agreement; or re-initiate formal resource agency consultation. GLP will carefully consider schedule risks associated with each of these items within the context of the design and construction elements and ongoing O&M.

When we identify design innovations or propose new conditions, the CEQA/NEPA compliance lead will discuss these changes with the environmental team to assess risk and determine impacts (if any) to consistency with the environmental clearance documents, permits, and agreements. The team will provide a recommendation whether to pursue the design innovation and how it could be modified to remain complaint.

For each major design innovation we pursue, members of the environmental team will meet with the Department environmental specialists to explain the proposed change, discuss the benefits, provide an assessment of the risks, and provide recommendations on how to proceed.

The environmental team will provide feedback from the Department to the design team and work with them to further refine the proposed innovation while keeping approvals and permits intact.

1.3.a. Environmental Compliance Leaders

1 **1.1.H.a** The following key environmental compliance task leaders will be responsible for ensuring that GLP implements and adheres to commitments and mitigation measures during final design, construction, and O&M. We provide below a brief biography of each team member. Volume 2, Appendix 2 contains full resumes for all of the following team members.

Mike Davis, CEQA/NEPA Compliance

Mike served as the environmental task leader for the initial Doyle Drive Replacement Project EIS/EIR during the scoping and alternatives development process. The project later retained him to conduct an FHWA NEPA Readiness Review of the Draft EIS/EIR prior to public circulation. He is widely regarded as an expert in CEQA/NEPA compliance for transportation projects and, he has spent the majority of his career managing projects in the Bay Area. He is known and respected by local environmental professionals, agency staff, and members of the Doyle Drive team.

Patricia Berryhill, Environmental Permitting

Patricia is HNTB's environmental lead for the I-405 Sepulveda Pass Widening design-build project. She coordinated with the Department, regulatory agencies, and the design team to prepare and negotiate Section 404 permit and mitigation requirements, allowing the project to maintain construction schedule. San Francisco Public Utilities Commission (SFPUC) chose her environmental permitting and compliance strategy for one of five Bay Division tunnel projects. For this effort, Patricia prepared permit applications for each of the five contracts that comprised the San Francisco-Oakland Bay Bridge project, working with the Department and project stakeholders to manage the environmental and permitting process within the design-build project delivery method.

Jason Minton, Biological Monitoring

Jason has assisted the Department's District 4 staff implement a number of major transportation construction projects in the San Francisco Bay Area, including the Devil's Slide Tunnels, the San Francisco-Oakland Bay Bridge Seismic Safety, the SR 92/I-880 Interchange, and the Caldecott Tunnel assignments. Jason conducted varied activities ranging from nest surveys, behavioral monitoring, permitting, and impact assessments for construction noise while coordinating with project engineers during the design and construction phases. He has served as deputy project manager for a contract to provide on-call environmental services to the Department's District 4 in Alameda and Contra Costa counties.

Meta Bunse, Architectural Historian/Cultural Resource Compliance

Meta brings significant experience in architectural history evaluations on the Doyle Drive Replacement and the Golden Gate Bridge Suicide Deterrent System projects. Tasks included development of conceptual mitigation strategies, preparation of the treatment plan for historic architectural resources, and close coordination with multiple federal, state, and local agencies and organizations, including the Department and the Golden Gate National Recreation Area.

Barry Roth, Noise/Vibration Monitoring and Analysis

Barry, a recognized authority on construction vibration effects and monitoring with more than 45 years experience in the field, is a registered civil engineer based in San Francisco. He is currently performing noise and vibration monitoring on the Doyle Drive Contract 4 Southbound Battery Tunnel project for the Department near the adjacent historic buildings. Barry has prepared noise control plans, conducted research, and provided monitoring activities for a wide variety of roadway, tunnel, bridge, and seismic retrofit transportation projects throughout the San Francisco Bay Area.

Han Bin Liang, Water Pollution Control/Stormwater/Erosion Control

Han has a strong background in civil engineering, water resources, environmental hydrology, and coastal engineering. During his career, he has been involved in more than 500 infrastructure and water resources projects in the State. Han manages the Caltrans District 4 Water Quality Studies and Hydraulic on-call contracts and recently prepared the I-580 Eastbound HOV hydrology analyses. Han is responsible for the interconnection and balance between project drainage requirements and the resultant effects this will have on the environment.

Jeriann Alexander, Hazardous/Contaminated Materials Management

Jeriann brings extensive experience on roadway design and construction projects for the Department where aerially deposited lead and naturally occurring asbestos were present, such as the State Route 154 Santa Barbara projects. She has also consulted for projects with severe contaminant issues, including the East West Connector project in Fremont and the I-238 Widening project in Alameda County. She is particularly aware of the benefits of segregating materials to minimize costs associated with spoils treatment and disposal.

1.3.b. Delineation of How We Meet Requirements and Commitments

GLP will identify and track requirements and commitments in the various technical sections, including the Record of Decision, the Mitigation Monitoring Plan, Section 106 of the Programmatic Agreement, and associated treatment plans, as well as any additional requirements and commitments that may arise during the Phase II. We will verify that the Project meets the requirements and commitments through the following means:

<ul style="list-style-type: none">• Develop an Environmental Mitigation Monitoring Plan and track implementation of environmental mitigation measures and commitments during design• Train the design team on the Environmental Mitigation Monitoring Plan content and implementation• Track status of permits and monitor compliance with permit requirements during design	<ul style="list-style-type: none">• Dedicate a multidiscipline team, including a biologic, archeological, historical, and acoustical and vibration specialists, to address specific issues and perform required monitoring activities• Conduct design reviews with the environmental compliance manager and the Environmental team to encourage innovative ideas and designs that address environmental commitments
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Take Advantage of Existing Knowledge and Relationships

Through GLP’s study of the existing environmental guidance documents, we have developed a working understanding of complex interrelationship between completing the Project and being responsible stewards of the environmental commitments and mitigation measures. The commitments and mitigation measures are multifaceted and address multiple environmental topics. They are scheduled to be conducted during a number of stages of Project development and operation.

After NTP 1, we will schedule a project kickoff meeting with the Department’s branch chief environmental planner to discuss general progress on different aspects of the mitigation requirements, address communication protocols, confirm a contact list, communicate with Department technical specialists, and inquire about pending modifications to any mitigation measures resulting from initial construction oversight.

GLP’s environmental compliance team leads implemented CEQA/NEPA and environmental permitting for the SFOBB East Span project.

This kickoff meeting will also include Department staff and any of the environmental leads from the Presidio Trust, other stakeholders/agencies, and other firms working on Contracts 1 through 4. GLP will provide general progress reports for different elements of the Project’s environmental compliance along with a summary review of lessons learned to-date reviewed, and a list of specific questions to discuss at the meeting. Meetings may occur frequently and as-needed, leading to regularly scheduled monthly sessions with the environmental team to discuss progress, share experiences and challenges with the Project’s environmental compliance program, and continue to build upon the collaborative atmosphere that will define the Project.

No Surprises – Robust Tracking and Reporting

The initial environmental management and mitigation phase set a strong foundation for tracking compliance for the Project. GLP will continue to build upon these best practices while adding new tools to enhance effort such as checklists, effective schedules, and new fields in the existing environmental commitments database. Integration with the engineering team and

construction team efforts will include look-ahead schedules to anticipate seasonal survey requirements, such as avoiding last-minute delays due to removal of habitat during the nesting season. GLP will organize, track, and compare management plans that include pre-construction work against the design and construction schedules as they continue to evolve.

Many of the major elements of the Project’s environmental compliance program have been initiated under other contracts, such as wetland creation and monitoring, plant propagation, and the preparation of building stabilization and relocation plans (Contract 1). Implementation of other elements such as wetland mitigation will remain independent of Contracts 5 through 8, yet will require coordination to ensure that construction areas, staging and access, adhere to best practices protecting environmentally sensitive areas. Other elements such as assessing, monitoring, and protecting historic buildings, included in the Project’s environmental compliance program, will require enhancement to accommodate construction.

1 1.1.H.d During the design phase, the goal is to provide constant review of design activities and provide advance warning of any potential monitoring requirements, avoidance requirements, or sensitivities that may delay progress. The CEQA/NEPA compliance lead will continuously update the existing environmental commitments database with the requirements of new permits, approvals, and the mitigation plans created during pre-construction and in Contracts 1 through 4. The lead will add fields to enhance the database to provide greater indications of responsible parties and temporal considerations, including seasonal work and different construction phases.

During the construction phase, we will expand the commitments database to develop additional reporting capabilities and incorporate additional data and information developed as the Project progresses. Immediately before and during construction, GLP’s CEQA/NEPA compliance lead will be responsible for confirming compliance, checking logs, monitoring reports, and maintaining digital records of materials, including the environmental compliance database. We will manage information on-site to ensure we readily address specific questions are readily addressed. The CEQA/NEPA compliance lead will prepare and submit monthly, semi-annual, and annual mitigation compliance reports to the Department.

During operations, GLP will track the limited mitigation monitoring requirements to ensure we meet success criteria such as the five-year success monitoring requirement for wetlands and requirements of the SFPUC Groundwater Discharge Batch Permit and SWQCB Waste Discharge Permit. We discuss permit requirements and timelines on the following page.

Integration of Mitigation Plans, Pre-Construction Permits and Approvals

Multiple parties and agencies will need to approve construction phase approvals, permits, and mitigation plans during the final design process. The key to avoiding project delays will be to develop these agreements as soon as feasible and obtain consensus. Our integrated environmental team will work directly with engineers and contractors to prioritize development

and provision of the details so construction can begin immediately.

Figure 7 identifies permits and approvals to be submitted prior to construction. These represent GLP’s understanding at this time and are not exhaustive or all-inclusive.

The design-build delivery method lets us focus first on designing components needed for permits to compress schedule on long-lead environmental approval items.

Figure 7: Project Permits and Approval Necessary to Construct the Work

Permit or Approval Needed	Basis for Requirement	Timeline for Issuance	Estimated Timeline to Issue or Approve/Notes
Department Lead Compliance Plan	Structures to be demolished contain lead paint and soils containing ADL	Pre-construction	1-2 months
San Francisco Bay Conservation and Development Commission (BCDC) Design Review Committee (DRC) Approval	Plan review by the BCDC (DRC) as part of Coastal Consistency Determination	Pre-construction	2-3 months for DRC review and approval, not including time needed for inclusion on DRC meeting agenda
SFPUC Groundwater Discharge Batch Permit	Discharge of groundwater seepage into tunnels	Operation	<ul style="list-style-type: none"> • Minimum 45 days to obtain • All waters proposed for discharge must be pre-tested and again interim tested for hazardous materials • Must fall below “most stringent regulatory limit”
State Water Resources Control Board Waste Discharge Permit	Groundwater discharge to the Bay through storm water outfall pipes from groundwater seepage into tunnels	Operation	<ul style="list-style-type: none"> • 30 days • If water contains man-made pollutants above regulatory limits, water will have to be pre-treated before discharge
Presidio Trust Approval	For any utility relocations not covered under Contract 2	Pre-construction	Any additional relocations to be confirmed during design
Presidio Trust Approval	For discharge of groundwater seepage into tunnels to the local sanitary sewer system	Operation	Coordination with SFPUC Groundwater Discharge Batch Permit
Presidio Trust Dig Permit	For grading and excavating within Presidio of San Francisco limits	Pre-construction	Confirmed as part of design coordination with Department and agencies



Permit or Approval Needed	Basis for Requirement	Timeline for Issuance	Estimated Timeline to Issue or Approve/Notes
Presidio Trust Hot Work Permit	For any cutting, welding, or heat gun work	Pre-construction	Needed for approval to use open flame torches
Bay Area Air Quality Management District (BAAQMD) Demolition and Renovation Notification	For demolition of existing viaduct and buildings to be removed	Pre-construction	<ul style="list-style-type: none"> • At least 10 days prior to buildings removal • Asbestos survey required prior to submission
BAAQMD Approval of Naturally-Occurring Asbestos Dust Mitigation Plan	Naturally occurring asbestos in rock formations near Battery Tunnel	<ul style="list-style-type: none"> • Final design • Pre-construction 	Notify at least 14 days prior to construction activities

1.3.c. Mitigation Plans to be Developed

In addition to the permits and agreements, there are a number of plans that GLP will create prior to construction or revise to address the next phase of work. The environmental team will work with designers to draft the following plans and reports and submit them to the Department for review and revision such that they are all approved and in place concurrent with the finalization of the design.

Update or amend plans, programs or manuals: <ul style="list-style-type: none"> • 2009 Mitigation Implementation Plan • 2009 Historic Property Treatment Plan for the Built Environment 	<ul style="list-style-type: none"> • 2009 Biological Resources Monitoring Plan • 2010 Biological Monitoring Program • 2010 Cultural Resources Monitoring Manual
Create new plans or reports: <ul style="list-style-type: none"> • Environment and Cultural Resource Management Plan • Hazardous Materials Assessment Report/Summary of Conditions for Planned Construction based on existing conditions. Soil sampling and testing to be conducted in the construction phase • Site Management Program/Contingency Plan for Contaminated and Hazardous Materials 	<ul style="list-style-type: none"> • Site Specific Health and Safety Program Plan including a Lead Compliance Plan, an Asbestos Compliance Plan and Dust Control Plan, prepared under the oversight of a Certified Industrial Hygienist • Construction Noise Plan • Vibration Monitoring Plan • Cultural Resource Training Plans • Hazards Plan to address hazards that may arise (e.g., unexploded ordnance or undisclosed landfill)

PRESIDIO PARKWAY

TECHNICAL PROPOSAL



<ul style="list-style-type: none">• SWPPP and final, post-construction storm water treatment plans for Contracts 4 through 7• Tree Management Plan• Vegetation Restoration Plan for the re-vegetation of all disturbed areas• Deconstruction/Stabilization plans for Buildings 201, 204, 228, 230, including hazard abatement plans• Viaduct structure demolition abatement plans	<ul style="list-style-type: none">• Pre-construction condition assessment reports for historic buildings and batteries within the Project area on an as-needed basis, including the Gorgas Warehouse Buildings• Well Abandonment Plan• Project Management Plan elements pertaining to environmental issues• Waste Minimization and Diversion Plan
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Once approved, we will add new procedures and stipulations to the Project design pertaining to plans, permits, and agreements listed above and monitor and record them in the environmental compliance database for the life of the Project.



1.4 DRAFT SUSTAINABILITY MANAGEMENT PLAN

Golden Link Partners' (GLP) Draft Sustainability Management Plan for the Presidio Parkway Project (Project) describes our approach to sustainability and how we will meet the technical requirements outlined in RFP Volume II and addresses the goals identified in the Doyle Drive Sustainability Program document (December 2007).

Located within a National Historic Landmark District as a gateway to the Golden Gate Bridge, this Project has the opportunity to lead the nation in responsible, sustainable, and innovative transportation design, construction, and O&M. GLP leverages our team's collective expertise in engineering, construction, public planning, and commissioning as demonstrated by our extensive project experience and industry recognition to meet sustainable practices.

The guiding principles of our Sustainability Management Plan aim to protect the natural, historical, and cultural attributes of the Project to conserve resources, protect wildlife and vegetation, enhance cultural and community needs, and maintain access to safe and convenient transportation options. In conformance with the 23 goals set forth in the Doyle Drive Sustainability Program, and as listed in the Volume II Technical Requirements, GLP's Sustainability Management Plan is organized to:

<ul style="list-style-type: none">• Improve energy efficiency• Reduce dependence on oil• Reduce greenhouse gas emissions	<ul style="list-style-type: none">• Reduce other transportation-related impacts on ecosystems• Manage materials and resources• Manage waste
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Sustainability Management Plan Approach

The foundation for a successful sustainability management approach is to match Project commitments with proven standards and ensure measurable results. GLP models our Sustainability Management Plan after two leading national sustainability programs, the Greenroads Manual's sustainability performance metrics for sustainable roadway design and construction, and the U.S. House Subcommittee on Technology and Innovation's Green Highways Partnership (GHP). In addition, we will use available reference documents cited in the RFP Technical Requirements such as the General Reporting Protocol from the Climate Registry for the development of the measurement, monitoring and reporting of greenhouse gas emissions; San Francisco Ordinance No. 27-06 for development of waste management practices; and Caltrans Standard Specifications for development of sustainable material and resource use practices.

Ability and Creativity to Comply/Exceed Requirements

GLP will interweave our Sustainability Management Plan concepts Project-wide to ensure work completed for all phases – including design, construction, and O&M – executes sustainable principals. We will extend this approach to every team member involved in the Project with the expectation that they will participate in the steps required to meet sustainability goals specific

to their scope of work. This total approach to integration demonstrates GLP’s commitment to sustainability.

To demonstrate our ability and creativity to comply with or exceed sustainability requirements GLP will submit the Project for a Greenroads project review prior to NTP 2 and for formal Greenroads certification prior to Final Acceptance to result in the first “green” certified transportation project in the State. GLP will also seek recognition from the GHP, which is supported by leading governmental and industry agencies including the EPA, FHWA, Industrial Resources Council, National Asphalt Pavement Association, and National Ready Mixed Concrete Association.

Figure 8 outlines the potential methods and strategies GLP may implement during the Project’s design, construction, and O&M phases in an effort to achieve Greenroads certification. In this figure we identify the performance criteria and reporting requirements, correlating the Greenroads credits and potential points associated with each method to achieve formal project certification. We also correlate each of these potential strategies to specific goals as identified in the Doyle Drive Sustainability Program. We will evaluate opportunities to add new or refine existing strategies in order to increase our score as the Project progresses.

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Figure 8: Potential Strategies to Achieve Greenroads Certification

Greenroads Manual Project Requirements and Voluntary Credits				Performance Criteria and Reporting Requirements	Project Goal Addressed
No.	Title	Points	Brief Description		
PR-1	Environmental Review Process	Required	Complete an environmental review process	Document environmental review of project including key players, impacts, purpose, and expectations using NEPA	<i>Community</i>
PR-2	Lifecycle Cost Analysis (LCCA)	Required	Perform LCCA for pavement section	LCCA based on Life-Cycle Cost Analysis in Pavement Design (1998) by FHWA	<i>Materials and Waste: Apply Life-Cycle Approach to Material Selection</i>
PR-3	Life Cycle Inventory (LCI)	Required	Perform LCI of pavement section with computer tool	Final pavement design alternative using PaLATE v2.0 modified for Greenroads	<i>Materials and Waste: Apply Life-Cycle Approach to Material Selection</i>
PR-4	Quality Control Plan	Required	Have a formal Construction Quality Control Plan	Construction Quality Control Plan	<i>Quality Control Plan</i>
PR-5	Noise Mitigation Plan	Required	Have a Construction Noise Mitigation Plan	Construction Noise Mitigation Plan	<i>Community: Minimize Noise</i>
PR-6	Waste Management Plan	Required	Have a formal Construction and Demolition Waste Management Plan to divert construction and demolition waste from landfill	Establish, implement, and maintain a formal Construction and Demolition Waste Management Plan	<i>Materials and Waste: Maximize Recycling and Reuse of Construction Waste</i>
PR-7	Pollution Prevention Plan	Required	Have Temporary Erosion and Sediment Control and Stormwater Pollution and Prevention Plans (SWPPP)	SWPPP	<i>Water: Improve Water Quality</i>
PR-8	Low-Impact Development (LID)	Required	Perform a feasibility study for LID techniques for stormwater management	LID Hydraulic Analysis (1999)	<i>Water: Improve Water Quality</i>
PR-9	Pavement Management System	Required	Have a pavement management system	Pavement management system measures, documents, records, stores, and displays pavement system information	<i>Materials and Waste: Maximize Recycling and Reuse of Construction Waste</i>

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Figure 8: Potential Strategies to Achieve Greenroads Certification *(continued)*

Greenroads Manual Project Requirements and Voluntary Credits				Performance Criteria and Reporting Requirements	Project Goal Addressed
No.	Title	Points	Brief Description		
PR-10	Site Maintenance Plan	Required	Have a maintenance plan for environment and utilities	On-going site maintenance plan for roadway, stormwater, vegetation, traffic control, and cleaning	<i>Community</i>
PR-11	Educational Outreach	Required	Publicize sustainability information to the community	Incorporate at least three educational elements about sustainability for public knowledge	<i>Community</i>
EW-4	Stormwater Cost Analysis	1	Conduct an LCCA for stormwater Best Management Practices/LID selection	National Cooperative Highway Research Program Report 565	<i>Water: Minimize Surface Water Runoff</i>
EW-5	Site Vegetation	2	Use native low/no water vegetation	Select site vegetation accordingly: <ul style="list-style-type: none"> • Use non-invasive species only (1 point) • Do not use water (no irrigation) after the plant establishment period (1 point) • Use native plant species only (1 point) 	<i>Water: Minimize Water Use</i> <i>Landscape: Foster Restoration of Native Species</i>
EW-7	Ecological Connectivity	1	Connect habitat across roadways (fish/wildlife passage)	Conduct a site-specific wildlife assessment for the project and improve wildlife ecosystem: <ul style="list-style-type: none"> • Replace in-kind, retrofit, or upgrade any and all existing culverts and wildlife fencing structures deemed insufficient (1 point) • Install new wildlife crossing structures and protective fencing in addition to the above for existing alignments (3 points) 	<i>Habitat: Protect Existing Habitat/ Support Wildlife Corridors/Promote Creation of New Habitat</i>
AE-1	Safety Audit	2	Perform roadway safety audit	Conduct a roadway safety audit based on FHWA's guidelines for up to two phases: <ul style="list-style-type: none"> -Preconstruction -Construction -Post construction 	<i>Community</i>

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Figure 8: Potential Strategies to Achieve Greenroads Certification *(continued)*

Greenroads Manual Project Requirements and Voluntary Credits				Performance Criteria and Reporting Requirements	Project Goal Addressed
No.	Title	Points	Brief Description		
AE-2	ITS	5	Implement ITS solutions	Include various ITS applications listed in FHWA's Research and Innovative Technology Administration: <ul style="list-style-type: none"> • Install at least one application in two separate categories (2 points) • Install at least one application in three separate categories (3 points) • Install at least one application in four separate categories (4 points) • Install at least one application in five separate categories (5 points) 	<i>Energy:</i> Minimize Greenhouse Gas Emissions
AE-3	Context Sensitive Solutions	5	Plan for context sensitive solutions (required for AE-4 to AE-9)	Design the project according to the principles of context sensitive solutions and create a short narrative describing purpose, plan, and alternatives	<i>Community:</i> Enhance Aesthetics and User Experience
AE-5	Pedestrian Access	2	Provide/improve pedestrian accessibility	Describe the need, purpose, appropriateness for pedestrian facilities: <ul style="list-style-type: none"> • Implement new (or improve existing) operations or technologies for pedestrian facilities (1 point) • Implement physical or constructed changes that provide pedestrian access within the right of way (2 points) 	<i>Community:</i> Enhance Aesthetics and User Experience

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Figure 8: Potential Strategies to Achieve Greenroads Certification *(continued)*

Greenroads Manual Project Requirements and Voluntary Credits				Performance Criteria and Reporting Requirements	Project Goal Addressed
No.	Title	Points	Brief Description		
AE-6	Bicycle Access	2	Provide/improve bicycle accessibility	Describe the need, purpose, appropriateness for bicycle facilities: <ul style="list-style-type: none"> Implement new (or improve existing) operations or technologies for bicycle facilities (1 point) Implement physical or constructed changes that provide bicycle access within the right of way (2 points) 	<i>Community:</i> Enhance Aesthetics and User Experience
AE-8	Scenic Views	2	Provide views of scenery or vistas	Ensure participation in the National Scenic Byways Program, National Scenic Byway or All-American Road designation, or provide vehicle exits to scenic viewpoints	<i>Community:</i> Enhance Aesthetics and User Experience
AE-9	Cultural Outreach	2	Promote art/culture/community values along roadway	Promote cultural awareness by: <ul style="list-style-type: none"> Project is within 10 miles of U.S. National Register of Historic Places and install information infrastructure (1 point) Dedicate 1 percent of total project budget, not to exceed \$200,000, to art or community culture installations (2 points) 	<i>Community:</i> Enhance Aesthetics and User Experience
CA-1	Quality Management System	2	ISO 9001 certification or equivalent for general contractor	Project Quality Assurance Plan to meet ISO 9001:2008 or ISO 9001:2000	<i>Community</i>
CA-2	Environmental Training	1	Provide environmental training	Project Workforce Development and Training Program	<i>Community</i>
CA-3	Site Recycling Plan	1	Provide plan for on-site recycling and trash collection	Establish, implement, and maintain a formal Construction and Demolition Waste Management Plan	<i>Materials and Waste:</i> Maximize Recycling and Reuse of Construction Waste

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Figure 8: Potential Strategies to Achieve Greenroads Certification *(continued)*

Greenroads Manual Project Requirements and Voluntary Credits				Performance Criteria and Reporting Requirements	Project Goal Addressed
No.	Title	Points	Brief Description		
CA-4	Fossil Fuel Use Reduction	1	Use alternative fuels in construction equipment	Reduce fossil fuel requirements of non-road construction equipment by: <ul style="list-style-type: none"> • 15 percent (1 point) • 25 percent (2 points) 	<i>Energy:</i> Minimize Greenhouse Gas Emissions
CA-6	Paving Emissions Reduction	1	Use pavers that meet National Institute for Occupational Safety and Health (NIOSH) requirements	Place at least 90 percent of hot mix asphalt on the project using a paver certified to meet NIOSH emission guidelines	<i>Energy:</i> Minimize Greenhouse Gas Emissions
MR-1	Life Cycle Assessment (LCA)	2	Conduct a detailed LCA of the entire Project	Conduct a ISO-LCA or hybrid economic input-output lifecycle assessment according to ISO 14040, choosing at least three EPA impact categories to report on	<i>Materials and Waste:</i> Apply Life-Cycle Approach to Material Selection
MR-4	Recycled Materials	2	Use recycled materials for new pavement	Use a percentage of recycled materials in lieu of virgin materials by weight (1 - 5 points)	<i>Materials and Waste:</i> Maximize Use of Recycled, Sustainable Materials with Low-Embodied Energy
MR-5	Regional Materials	2	Use regional materials or reduce effects of transportation	Use materials within a 50-mile radius of geographic center of Project of varying percent of total cost: <ul style="list-style-type: none"> • 60 percent (1 point) • 75 percent (2 points) • 84 percent 3 points) • 90 percent (4 points) • 95 percent (5 points) 	<i>Materials and Waste:</i> Seek Local Material Sources
PT-1	Long Life Pavement	5	Design pavements for long life	Design at least 75 percent of total new or reconstructed pavement surface area for regularly trafficked lanes to meet long-life pavement design criteria is described in Greenroads PT-1.1	<i>Materials and Waste:</i> Apply Life-Cycle Approach to Material Selection

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Figure 8: Potential Strategies to Achieve Greenroads Certification *(continued)*

Greenroads Manual Project Requirements and Voluntary Credits				Performance Criteria and Reporting Requirements	Project Goal Addressed
No.	Title	Points	Brief Description		
PT-6	Pavement Performance Tracking	1	Relate construction performance to data	Long-term pavement performance measurements that are spatially located and correlated to one another	<i>Materials and Waste:</i> Apply Life-Cycle Approach to Material Selection
CC-1	Heat Island Effect (Non-Roof)	5	Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat	Limit the amount of impervious hardscape areas on the site in order to limit heat island effect Tunnel "green roofs" greatly improve permeable surface area of the site from existing conditions (Adapted from LEED for NC Version 2.2 Sustainable Sites Credit 7.1)	<i>Energy:</i> Reduce Heat Island Effect
CC-2	Brownfield Redevelopment	5	Rehabilitate damaged sites where development is complicated by environmental contamination, reducing pressure on undeveloped land	Redevelop contaminated site(s) Coordinate site development plans (Toxic Waste Management System, Environmental Compliance Plan, Waste Management Plan, and Demolition Plans) (Adapted from LEED for NC Version 2.2 Sustainable Sites Credit 3)	<i>Habitat/Community/ Materials and Waste</i>
		TOTAL = 52 Greenroads Silver Certification			

Organizational Structure

GLP's sustainability organization during design and construction phases is led by Mitigation Planning and Sustainability Lead, Joshua Channell, LEED-AP®. He will draw on the expertise of team members knowledgeable with sustainable design and construction, and O&M practices. The expertise of these individuals will be drawn upon as requested by the Design-Build Joint Venture. Team members consist of LEED® Accredited Professionals and other experts who specialize in the preservation of historic and cultural mitigation. This expertise will ensure the Project implements the most current sustainability practices, while leveraging the latest sustainable transportation technologies and research available. Once the Project reaches Substantial Completion, the Developer will assume primary responsibility for updates to the Sustainability Management Plan through the Operating Period.

Resumes for the staff members described above are included in the Volume 2, Appendix 2.

Training

In addition to GLP's extensive training for all craft workers involved with the Project, our team's commitment to sustainability extends to enhancing the community and public safety. As part of our Workforce Development and Training Program Plan consisting of community outreach, job training, and progress monitoring, GLP will collaboratively work with community-based organizations including San Francisco's CityBuild Program, the San Francisco One-Stop system, and various building trades and unions to forge meaningful partnerships with the surrounding community and to provide exemplary skills and knowledge on green building practices. Special training capacity will be directed towards safety, hazardous materials handling, green building practices, and environmental sampling and monitoring.

Monitoring, Reporting, and Deviations

The Project commitments as outlined previously in Figure 8 include sustainability items that are measurable and under the control and management of the GLP. Key project individuals will monitor and report on the sustainable aspects of the Project at appropriate intervals, ensuring all standards set forth in the Sustainability Management Plan are met or exceeded. The monitoring reports will provide evidence that implemented measures have the desired positive effect on sustainability performance.

These same reports will also detail any deviations from the original Project commitments and provide recommendations for remediation. GLP will review and implement approved recommendations and further monitor strategies for effectiveness. If necessary, GLP will assign additional resources to ensure the new or amended Project commitments are met.