

**EXHIBIT 5**

**PDA WORK REQUIREMENTS**

PART A: SCOPE OF PDA WORK

ATTACHMENTS

PART B: KEY PERSONNEL FOR PDA WORK

PART C: PROJECT PERFORMANCE AND TECHNICAL REQUIREMENTS

PART D: ALIGNMENT CONSTRAINTS

## **PART A: SCOPE OF PDA WORK**

### **1. INTRODUCTION**

- 1.1 This Part A describes the specific obligations and tasks to be performed and Developer Submittals to be prepared by the Developer during each PDA Phase and, to the extent applicable and not otherwise addressed in Exhibit 3 (PDA Milestones and Deadlines), associated milestone dates.
- 1.2 The requirements for:
- (a) PDA Phase 1 are set out in Section 3 (Scope of PDA Phase 1 Work) of this Part A;
  - (b) PDA Phase 2 are set out in Section 4 (Scope of PDA Phase 2 Work) of this Part A; and
  - (c) PDA Phase 3 are set out in Section 5 (Scope of PDA Phase 3 Work) of this Part A.
- 1.3 The Parties acknowledge that, if the City accepts the Feasibility Validation Report in accordance with Section 2.3(c) of this Agreement, the Parties may execute the Validation Amendment to implement any changes to the scope of the PDA Phase 2 Work or PDA Phase 3 Work or the number of PDA Phases (including abridging or splitting PDA Phases) to reflect, among other things, the Transit Solution and the outcome of the Feasibility Validation as recorded in the Feasibility Validation Report.
- 1.4 The requirements in this Part A:
- (a) are not exhaustive nor prescriptive as to how the Developer performs the PDA Phase 2 Work and PDA Phase 3 Work nor the content and analysis that may be necessary to develop the Feasibility Validation Report; and
  - (b) do not limit any of the Developer's obligations under this Agreement.

### **2. PROJECT OVERVIEW**

#### **2.1 Project Definition**

- (a) The Project seeks to implement approximately a three to four mile dedicated guideway upon which an electrically propelled, automated driverless transit technology solution would be installed to operate between SJC Airport and Diridon Station. Any proposed alignment is subject to the alignment constraints set out in Part D (Alignment Constraints).
- (b) Subject to the terms of this Agreement, the PDA Work and Project may include an optional segment connecting Terminal B with Terminal A at SJC Airport by extending the Transit Solution and adding parking facilities at SJC Airport (the "**Intra-Terminal Airport Connection Option**").
- (c) The City is seeking a scalable transit solution. The City and the Developer may collaboratively define, negotiate and execute identified future extension routes within City limits.
- (d) In addition to the objectives set out in Section 2.2 (Project Objectives), the Project should advance local and regional sustainability goals and create a scalable transit service that enables future linkage of major sites within the City and other major sites in the Bay Area. The Project should support urban integration and human-scale

activation in the network by attracting users to walk, bike, and use transit to access stops on the network.

- (e) As further described in this Exhibit 5, the Project scope and features shall include:
  - (i) an off-line maintenance and storage facility;
  - (ii) defined right of way and modifications, sitework, utilities, station sites and facilities, and other work necessary to deliver the Project;
  - (iii) long-term operations and maintenance;
  - (iv) create intuitive transfers that integrate Diridon Station and SJC Airport as a single facility from a passenger perspective to create a seamless travel experience for all passengers including those with luggage and varied accessibility needs;
  - (v) incorporate inclusive design including, at a minimum, ADA requirements;
  - (vi) quick and level boarding for passengers with luggage; and
  - (vii) support and improve economic productivity through faster travel connections between downtown San José and SJC Airport.

## 2.2 **Project Objectives**

To develop a Project that:

- (a) is capable of being certified for passenger operations/revenue service and is ADA-accessible;
- (b) provides for operator flexibility for the City over the long term (i.e., an ability to repurpose the system and any permanent infrastructure from one operator to another);
- (c) is scalable to allow for future system growth;
- (d) provides safe, fast, frequent and reliable service for passengers that is separated from mixed traffic; and
- (e) integrates Diridon Station and SJC Airport as a single facility from the passenger's perspective and creates a seamless travel experience for passengers with luggage.

## 2.3 **Developer's and City's Key Roles**

- (a) Without limiting the scope of the PDA Work as described in this Agreement and without prejudice to any other provision of this Agreement, the key roles of the Developer during the Term include:
  - (i) conducting due diligence with respect to the Project, including site investigations of and engineering activities with respect to the Project Site;
  - (ii) performing all activities, analysis, investigation, preliminary engineering, stakeholder outreach, and other responsibilities as required to secure required Governmental Approvals for the Project;

- (iii) providing support to the City in obtaining any City-Provided Approvals and in carrying out the Environmental Approval Process as contemplated in this Agreement;
  - (iv) developing and submitting the Developer Submittals, including the design packages, for the City's review and approval;
  - (v) developing, in a transparent and collaborative manner, the detailed plans, estimates, schedules, and preliminary engineering for the design, construction, commissioning, operations, and maintenance of the Project;
  - (vi) competitively selecting Major Subcontractors for the Implementation Work, and developing detailed estimates and plans for performing the Implementation Work;
  - (vii) developing a comprehensive and cost efficient approach to the long term operations and maintenance of the Project, and developing detailed estimates and plans for performing such Implementation Work;
  - (viii) establishing a viable financial plan for the Project, and arranging and securing debt financing for the Project through a competitive process;
  - (ix) assisting the City in identifying possible sources of public funding or grants to support the costs of the Project and develop content for such applications as requested by the City;
  - (x) preparing a complete financial model for the Project, that shall include a data book and user guide, assumptions, sources and uses for construction and operations periods, a detailed cash flow model showing construction and operating periods, complete financial statements, and summary outputs, including payments by the City, if any, based on the Implementation Proposal;
  - (xi) negotiating and developing the Implementation Agreement Term Sheet and Implementation Agreement with the City, including the Technical Requirements and Implementation Work Schedule;
  - (xii) preparing an Implementation Proposal; and
  - (xiii) in coordination with the City, developing and implementing any stakeholder outreach or management required for the successful development of the Project.
- (b) Without prejudice to any other provision of this Agreement, the key roles of the City during the Term include:
- (i) in accordance with the terms of this Agreement, collaborating with the Developer to enable completion of the PDA Work;
  - (ii) to the extent contemplated in Article 3 (Exclusivity) of this Agreement, exclusively developing the Project with the Developer;
  - (iii) reviewing the Developer Submittals in accordance with the process set out in this Agreement;
  - (iv) providing access to information to advance the Project in accordance with this Agreement;

- (v) acting as lead agency in the Environmental Approval Process and performing all activities within the City's control to secure environmental approvals for the Project;
- (vi) identifying possible sources of public funding or grants to support the costs of the Project, managing the process, and developing applications which seek to secure any such funding to be pursued for the Project;
- (vii) leading in grant or other governmental funding applications which are determined to be pursued for the Project, including applying for grants or other governmental funding on behalf of the Project, for any sources which require or give preference to applicants that are public sector entities; and
- (viii) leading communication and coordination with public entities and communities at the State, county, and local levels, community engagement, and interfacing with the federal government with respect to federal programs and approvals.

### 3. SCOPE OF PDA PHASE 1 WORK

#### 3.1 Overview

- (a) This Section 3 of Part A sets out the City's minimum requirements for the PDA Phase 1 Work.
- (b) In addition to the other activities contemplated in this Section 3, the Developer must prepare and submit the following two key Developer Submittals to the City for review and evaluation during PDA Phase 1 and in accordance with the corresponding PDA Milestones defined in Exhibit 3 (PDA Milestones and Deadlines):
  - (i) the Outline Project Plan as further described in Section 3.2 (Outline Project Plan); and
  - (ii) the Feasibility Validation Report as further described in Section 3.3 (Feasibility Validation Report).
- (c) These Developer Submittals will be the basis for the City to determine whether to proceed to PDA Phase 2 with the Developer in accordance with Section 2.3 (PDA Phase 1) of this Agreement.
- (d) The overall intent of PDA Phase 1 is to:
  - (i) initiate procedures for administration and management so that the PDA Phase 2 Work and PDA Phase 3 Work proceeds smoothly; and
  - (ii) work collaboratively with the City to iteratively test and validate the commercial, technical and financial feasibility of the Feasibility Validation Report and associated assumptions.

#### 3.2 Outline Project Plan

- (a) The Developer shall prepare and submit an Outline Project Plan for review and approval by the City in accordance with Section 13.3 of this Agreement. The Outline Project Plan shall provide a succinct, concept-level plan to allow the City to evaluate the efficacy, clarity, transparency, completeness and fitness of the Developer's proposed approach to

work in partnership with the City to achieve the Project Objectives during each PDA Phase.

- (b) In addition, the Outline Project Plan will require the Developer to start considering and preparing plans, approaches and systems necessary for the management of the work streams involved in PDA Phase 2 and PDA Phase 3 as set out in Table A4.2.1 in Section 4.2 (Project Plan). During PDA Phase 2, the Outline Project Plan will be developed to include full detailed procedures and documents necessary to manage the Project's development for the remainder of the Term, as further contemplated in Section 4.2 (Project Plan).
- (c) The Outline Project Plan must be no more than 30 pages total in length and must include, at a minimum, the following:
  - (i) A summary PDA Management Plan that outlines the Developer's approach to managing the PDA Work and includes the Developer's proposed approach to addressing each requirement in Section 4.3(a) (PDA Management Plan). The summary PDA Management Plan must be a minimum of 10 and a maximum of 15 pages total in length.
  - (ii) A summary Quality Management Plan that outlines the Developer's approach to verifying compliance of the PDA Phase 2 Work and PDA Phase 3 Work with the requirements of this Agreement and includes the Developer's proposed approach to addressing the key requirements in Section 4.3(b) (Quality Management Plan (QMP)).
  - (iii) A summary Financing Management Plan that outlines the Developer's approach to developing the Finance Plan and includes the Developer's proposed approach to addressing the key requirements in Section 4.4(a) (Financing Management Plan).
  - (iv) A summary Design Management Plan that outlines the Developer's approach to developing the design of the Transit Solution and includes the Developer's proposed approach to addressing the key requirements in Section 4.5(a) (Design Management Plan).
  - (v) A summary O&M Development Plan that outlines the Developer's approach to developing the operations and maintenance plans for the Project and includes the Developer's proposed approach to addressing the key requirements in Section 4.5(c) (O&M Development).
  - (vi) A summary Ridership and Revenue Forecasting Plan that outlines the Developer's approach to developing ridership forecasts and revenue projections and includes the Developer's proposed approach to addressing the key requirements in Section 4.5(d) (Ridership and Revenue Forecasting).
  - (vii) A summary Cost and Risk Management Plan that outlines the Developer's approach to developing cost estimates, schedules and risk allocation for the Implementation Work and includes the Developer's proposed approach to addressing the key requirements in Section 4.5(e) (Cost Estimates and Risk Assessment).
  - (viii) A summary Government Entity Coordination Plan that outlines the Developer's approach to coordinating with Government Entities and includes the Developer's

proposed approach to addressing the key requirements in Section 4.6(d) (Government Entity Coordination Plan).

- (ix) A summary Public Outreach and Engagement Plan that outlines the Developer's approach to public outreach and includes the Developer's proposed approach to addressing the key requirements in Section 4.6(f) (Public Outreach and Engagement Plan).
  - (x) A summary Subcontractor Bidding and Selection Plan as required under Section 7.5(b) (Subcontractor Selection for the Implementation Work), that outlines the Developer's approach to subcontracting and selecting contractors to perform the Implementation Work and includes the Developer's proposed approach to addressing the requirements in Section 4.7 (Subcontractor Bidding and Selection) and otherwise under this Agreement.
- (d) The Outline Project Plan must build upon the Developer's submittals included in Tab 3 (Management and Partnering Approach) and Tab 4 (Approach to Community and Environment) of Volume 3 (Technical and Commercial Proposal) of the PDA Proposal. These documents are the basis for Developer's management of its PDA Phase 1 Work and are included in Exhibit 4 (Developer Commitments).

### 3.3 Feasibility Validation Report

The Developer shall prepare and submit a Feasibility Validation Report for review and approval by the City in accordance with Section 13.3 of this Agreement. The Feasibility Validation Report shall address the technical feasibility of the Transit Solution and the commercial and Financial Viability of the Business Case. The Feasibility Validation Report must include, at a minimum:

- a technical feasibility assessment in accordance with Section 3.3(a) (Technical Feasibility);
- the commercial structure in accordance with Section 3.3(b) (Commercial Structure);
- a financial feasibility assessment in accordance with Section 3.3(c) (Financial Feasibility); and
- a Benefit-Cost Analysis in accordance with Section 3.3(d) (Benefit-Cost Analysis).

#### (a) Technical Feasibility

The Developer must establish the technical feasibility of its proposed Transit Solution by developing the following Developer Submittals in accordance with the requirements of this Section 3.3(a). The technical feasibility deliverables must be developed to a sufficient level of detail to enable development of comprehensive CapEx and OpEx projections at a level of confidence suitable for establishing the financial feasibility of the Project as contemplated in Section 3.3(c) (Financial Feasibility).

The proposed Transit Solution's technical feasibility must be developed to address the Project Objectives and Technical Requirements and to conform to the Alignment Constraints.

#### (i) Summary of Transit Solution

Concise description of the following key characteristics of the proposed Transit Solution:

- (A) Transit Technology including system architecture, vehicles, and components;
- (B) concept of operations addressing user experience, operations model, safety and reliability, and operations and maintenance;
- (C) concept level design including alignment, station and vehicle storage and maintenance facility locations, and integration with existing and planned transportation systems (e.g., SJC Airport, existing transit (VTA, BART), high speed rail, etc.);
- (D) analysis demonstrating how the proposed Transit Solution supports the projected ridership projections both in terms of the throughput capacity of the guideway(s) and at the SJC Airport and Diridon Station stations;
- (E) integration with existing and planned urban infrastructure (e.g., streets, parks, etc.) and private developments (e.g., employment clusters, retail and entertainment centers, etc.);
- (F) explanation as to how the proposed Transit Solution is responsive to the challenges, opportunities and risks of the Project;
- (G) explanation as to how the proposed Transit Solution is responsive to the Technical Requirements and conforms with the Alignment Constraints; and
- (H) point-by-point explanation of how the proposed Transit Solution delivers across the Project Objectives.

The summary may be supported with diagrammatic illustrations, which need not be to scale, and should be cross-referenced to the documents described in this [Section 3.3\(a\)](#), with particular focus on the concept design plans.

(ii) **Transit Technology Maturity**

Documentation of the proposed Transit Technology's Technology Readiness Level as presented in the PDA Proposal, updated to reflect any material changes since submission.

(iii) **Compliance with Technical Requirements**

Documentation of the proposed Transit Technology's compliance with the Technical Requirements as presented in the PDA Proposal, updated to reflect any material changes since submission.

(iv) **Concept Design**

- (A) Concept design plans (to 10% design completion) as follows:
  - general layout of the entire proposed Transit Solution in a single sheet at the appropriate scale;
  - Transit Technology alignment plans;



- complementary civil, structural, architectural and right-of-way plans as needed to adequately support the technical and financial feasibility;
  - typical and representative cross-sections of each of the following, to the extent relevant to the proposed Transit Technology:
    - at-grade segment
    - elevated segment
    - below-grade segment
  - if the proposed design includes elevated guideways, a typical elevation of the proposed viaduct structure;
  - perspective renderings that illustrate the proposed Transit Solution, including at a minimum the following:
    - if an at-grade/ elevated system is proposed: one aerial view of the guideway in its urban context, and one street-level view of the Diridon Station and SJC Airport stations (three total)
    - if a below-grade system design is proposed: one interior view inside of the Diridon Station and SJC Airport underground stations, and one street-level view of their entrances (four total)
- (B) The concept design plans must illustrate the Transit Solution connecting SJC Airport to Diridon Station, and must:
- show the proposed alignment in plan and profile identifying the right-of-way requirements and potential impacts on public rights-of-way, public parks and open spaces, privately-owned properties, re-alignment or significant modifications to local streets and highways and requirements for major utility relocations (e.g., high-voltage transmission lines, sewer and stormwater trunk-lines, etc.);
  - identify vertical clearances and restrictions with respect to operational and/or physical constraints such as SJC Airport's airspace protection surfaces, existing utilities, existing transportation facilities (e.g., streets, highways, rail transit lines, etc), known easements (whether above, on, or below grade), the future footprint and envelope for the Diridon Integrated Station, and others;
  - identify the planned points of connection to the electricity grid (e.g., substations), the corresponding infrastructure, and any upgrades to existing systems and/or new infrastructure that may be required to support the proposed system;
  - show station locations, architectural layouts, connectivity with adjacent/nearby transportation facilities (existing and planned),

integration with the urban fabric, and their right-of-way requirements – as a minimum the station plans must include stations at SJC Airport and Diridon Station. The Diridon Station must operate under current conditions and be compatible with the future Diridon Integrated Station's adopted layout;

- show transit vehicle maintenance and storage facility location(s), layouts, access and their right-of-way requirements;
- clearly illustrate the proposed approach, at a concept level, for the design of the structural and civil engineering systems, foundations, materials, structure type, provisions for vehicle systems (e.g., power, signalling, communications, etc., each as applicable for the proposed system), drainage, utility distribution systems and emergency egress;
- document engineering assumptions, in report format, for the development of the concept design plans, including but not limited to geotechnical, seismic and others as necessary; and
- provide a CEQA and NEPA preliminary analysis to inform the Environmental Review Process and secure the Governmental Approvals.

(v) **System Expansion**

- (A) Proposed strategy for system expansion demonstrating how it serves projected transportation needs along the proposed corridor(s) and how it complements and supports the City's overall transportation systems.
- (B) Concept-level plans illustrating the Developer's envisioned layout for its system expansion strategy, including:
- plans with indicative alignments and station locations; and
  - additional vehicle storage and maintenance facilities.
- (C) Plans must identify key opportunities and challenges associated with the proposed system expansion layout.

(b) **Commercial Structure**

The Developer shall develop, document and submit its proposed commercial structure for delivery of the Project. The commercial structure must address the Project Objectives and must, at a minimum, address the following core elements:

(i) **Project Company and subsidiaries**

Identify the proposed Project Company, its anticipated capital structure and governance structure, as well as any anticipated subsidiaries and the anticipated commercial and contractual relationships among the subsidiaries, and between each of the subsidiaries and the Project Company.

(ii) **Risk allocation and Project Objectives**

Identify how the proposed commercial structure preserves the City's desired risk transfer, which shall be discussed at the risk management Working Groups, and complies with the Project Objectives both during construction and after completion during the operational phase.

(iii) **Risk management**

Include a plan for the management and mitigation of all risks assigned to the Project Company (and subsidiaries, if applicable) including expected security documents to be entered into with Subcontractors, members of the Project Company and/or its subsidiaries, guarantors and Lenders.

(iv) **Construction financing**

Description of how the Project Company will finance the construction of the Project, including expected capital structure (debt/equity gearing ratio), any construction or standby facilities available, and how the security package for the construction-phase Lenders will be structured.

(v) **Long-term financing**

Description of how the long-term financing will be implemented, public and private sources of financing, and any potential bifurcated refinancing of the construction financing upon Project completion. This includes expected capital structure (debt/equity gearing ratio), the potential risks and how they will be managed/mitigated, the potential pool of lenders, potential subordinated debt lenders, envisioned capital markets debt issuance and internally generated funds and how the security package for the long-term Lenders will be structured.

(vi) **Project Company Equity**

Identify the Equity Members, as well as in any of the Project Company's subsidiaries, as the case may be, along with their credit status and the amounts of funds and the timing of investment of such funds for each of them in the Project Company and/or Project Company's subsidiaries. The Developer is solely responsible for the completeness and correctness of these assumptions. The Developer will be solely responsible for obtaining and relying on tax advice from its own advisors and experts, including obtaining its own advance interpretations and rulings in relation to the Project (including in relation to their proposed commercial structure and its tax consequences) as it considers appropriate or necessary.

(vii) **Graphical Representation**

Include a graphical representation of the proposed commercial structure, including all contractual relationships of the Project Company, its subsidiaries, Subcontractors, partners, etc. and including the City and the proposed flow funds.

(c) **Financial Feasibility**

To demonstrate that the Project is Financially Viable and otherwise financially feasible, the Developer must develop a narrative (the "**Business Case**") summarizing the

commercial and financial feasibility of the proposed Transit Solution and commercial structure. The Business Case must:

- be no longer than 20 pages;
- be organized exactly as shown in [Table A3.3.1](#);
- include the Developer Submittals contemplated in, and meet the requirements of, this [Section 3.3\(c\)](#); and
- be prepared in accordance with [Attachment 1](#) and [Attachment 2](#) to this [Part A](#).

**Table A3.3.1 Table of Contents for Business Case**

<b>FINANCIAL FEASIBILITY CONTENT</b>	
<b>1.</b>	<b>Executive Summary of Financial Feasibility</b>
<b>2.</b>	<b>Project Due Diligence</b>
2.1	DBFOM delivery option explained
2.2	Site ownership, land acquisition and ROW availability
2.3	Legal and environmental issues and their impact on financial feasibility
<b>3.</b>	<b>Financial Assessment</b>
3.1	Allowed Costs (see <a href="#">Section 3.3(c)(i)</a> )
3.2	Design-Build Cost (direct and indirect) (see <a href="#">Section 3.3(c)(ii)</a> )
3.3	O&M Cost (direct and indirect) (see <a href="#">Section 3.3(c)(iii)</a> )
3.4	Cost of Capital and Financing Assumptions (see <a href="#">Section 3.3(c)(iv)</a> )
3.5	Project Revenue (Farebox and Other) (see <a href="#">Section 3.3(c)(v)</a> )
3.6	Risk Register and Risk Allocation (see <a href="#">Section 3.3(c)(vi)</a> )
3.7	Funding Analysis (see <a href="#">Section 3.3(c)(vii)</a> )

(i) **Allowed Costs**

Complete the below worksheets with full details of the costs expected to be incurred by the Developer during PDA Phase 2 and PDA Phase 3, as applicable, up to and including Commercial Close, that are associated with the Project as a whole. If the Developer's worksheet includes additional lines, then provide an additional copy of the worksheet for each line as well as a sum of the total Allowed Costs. See Attachment 2 for specific requirements and Exhibit 12 (Allowed Costs) for specific requirements related to Allowed Costs.

(A) **PDA Phase 2**

The Allowed Costs in Item 1 of the worksheet must not exceed the PDA Cost Cap (Design) for PDA Phase 2 set out in Section [●]<sup>1</sup> of the PDA Proposal except to the extent: (1) arising from a Relief Event or Change and expressly permitted under the Agreement or from an element of scope that is expressly excluded from the PDA Cost Cap (Design) and that the Developer is authorized to proceed with under the Agreement; or (2) arising from any amendments to the Term, the scope of PDA Phase 2 or otherwise to the terms applicable to PDA Phase 2 incorporated into the Feasibility Validation Report, provided that to the extent such change has not already been agreed or authorized under the Agreement, the Developer attaches its good faith analysis of how the relevant Relief Event, Change or other amendment is reasonably likely to require an increase in the Allowed Costs above the PDA Cost Cap (Design) for PDA Phase 2 set out in the PDA Proposal, together with any supporting information.

The Total Allowed Costs in this worksheet, as accepted by the City in the Feasibility Validation Report, shall be the PDA Cost Cap for PDA Phase 2 and will be incorporated in the Validation Amendment.

Description		Allowed Costs			
		Unit	QTY	Unit Cost	Sub Total
1	Design costs during PDA Phase 2 (incl. site due diligence and surveys)				
2	Advisors' costs (itemized e.g., financial, legal, tax and accounting)				
3	Financing related costs (e.g., financiers/lenders' fees, legal costs)				
4	NEPA/CEQA consultant and public outreach costs				
5	Other costs (provide itemized list e.g., insurance, Performance Security costs)				
<b>Total Allowed Costs =</b>					

<sup>1</sup> Reference to be inserted from Developer's PDA Proposal.

(B) **PDA Phase 3**

In addition to completing the worksheet below, the Developer shall identify its proposed closing fee percentage as contemplated in Section 17.2(a)(ii) (Permitted Payments to Developer on Financial Close) of the Agreement.

Description		Allowed Costs			
		Unit	QTY	Unit Cost	Sub Total
1	Design costs during PDA Phase 3 (incl. site due diligence and surveys)				
2	Advisors' costs (itemized e.g., financial, legal, tax and accounting)				
3	Financing related costs (e.g., financiers/lenders' fees, legal costs)				
4	NEPA/CEQA consultant and public outreach costs				
5	Other costs (provide itemized list e.g., insurance, Performance Security costs)				
<b>Total Allowed Costs =</b>					

(ii) **Design-Build Cost (direct and indirect)**

Complete the below worksheet with full details of the design-build (DB) costs expected to be incurred by the Developer from Commercial Close through substantial completion of the Project, associated with the Project as a whole. If the Developer's worksheet includes additional lines, then provide an additional copy of the worksheet for each line as well as a sum of total DB costs.

The Developer shall provide a detailed cost estimate as backup to the completed worksheet. See Attachment 2 for specific requirements.

Description		Total DB Cost			
		Unit	QTY	Unit Cost	Sub Total
<b>A</b>	<b>Guideway</b>				
<b>B</b>	<b>Stations</b>				
<b>C</b>	<b>Maintenance and storage facilities</b>				
<b>D</b>	<b>Utility relocations</b>				
<b>E</b>	<b>Traffic control</b>				
<b>H</b>	<b>Other site / civil costs (itemized e.g., demolition)</b>				
<b>I</b>	<b>Vehicles and systems</b>				
<b>J</b>	<b>Testing &amp; Commissioning</b>				
<b>Total Direct Cost =</b>					
<b>1</b>	<b>General Requirements / General Conditions</b>				
<b>2</b>	<b>Overhead &amp; Profit</b>				
<b>3</b>	<b>Design Cost (excluding design cost prior to Commercial Close)</b>				
<b>4</b>	<b>Other Soft Costs (provide list – for example, insurance)</b>				
<b>5</b>	<b>Design Contingency</b>				
<b>6</b>	<b>Construction Contingency and Market Risk</b>				
<b>7</b>	<b>Escalation</b>				
<b>Total DB Cost =</b>					

(iii) **O&M Cost (direct and indirect)**

Complete the below worksheet with full details of the operations and maintenance costs (O&M Costs) expected to be incurred by the Developer from substantial completion through to the end of the Project term, associated with the Project as a whole. If the Developer's worksheet includes additional lines, then provide an additional copy of the worksheet for each line as well as a sum of total O&M Costs.

The Developer shall provide a detailed cost estimate as backup to the completed worksheet. See [Attachment 2](#) for specific requirements.

O&M Cost				
Operating Year <sup>(1)</sup>	Operational Expenditure	Routine Maintenance Expenditure	Maintenance CapEx <sup>(2)</sup>	Total O&M Cost <sup>(3)</sup>
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
<b>Total 30-year O&amp;M Cost =</b>				



*Notes to O&M Cost worksheet:*

- (1) *Twelve-month periods, starting with the first twelve-month period following substantial completion of the Project*
- (2) *Sum of the annual OpEx, routine maintenance expenditure, and maintenance CapEx*
- (3) *All costs must be in dollars of the Base Date year in accordance with Attachment 2 to this Part A. Do not include inflation or escalation in the figures reported in this table*

(iv) **Cost of Capital and Financing Assumptions**

The Developer shall prepare a narrative including full details of the anticipated cost of capital for the Project and setting out its financing assumptions, including:

- (A) for each source of finance: the drawdown timetable; grace period; repayment schedules; debt maturity profile; costs of finance, including margins and fees and all success fees; and, any variations to margins or fees over the life of the loans;
- (B) macro-economic assumptions, including interest and inflation rates; and
- (C) taxation assumptions, including assumptions made in relation to applicable tax liabilities and recoverability.

The inputs and assumptions data must be consistent with, and reconcile to, the Initial Base Case Financial Model and Pro Forma, preserving the necessary transparency in terms of assumptions and returns.

(v) **Project Revenue (Farebox and Other)**

The Developer shall prepare Project revenue forecasts as contemplated below:

- (A) At the same time as, or shortly after, the issuance of NTP1, the City will provide the Developer with high-level ridership estimates for the Project or "Project Baseline Ridership". Due to ongoing disruption, the City intends to use pre-pandemic SJC Airport ridership estimates in the Project Baseline Ridership. The Developer shall use the Project Baseline Ridership as a baseline for the development of the Project revenue forecasts.
- (B) Notwithstanding Section 3.3(c)(v)(A), the Developer may elect to develop supplementary ridership estimates based on the characteristics of the Transit Solution or its own market research which shall be referred to as "Project Alternative Ridership", in which case, the Developer may refer to one Project Alternative Ridership scenario. If a Project Alternative Ridership scenario is included, it must be in the form of a sensitivity test to the Project Baseline Ridership and must provide a justification/rationale for the demand estimates.
- (C) The Developer must clearly state and explain assumptions, methodologies, data sources and outputs used in its Project revenue forecasts.
- (D) The Project Baseline Ridership is intended to inform the development of the Business Case by the Developer and is not intended to be a substitute for the bottom-up, investment-grade ridership projections, fare policy, fare

levels and revenue projections to be developed by the Developer for PDA Phase 2 and PDA Phase 3.

(vi) **Risk Register and Risk Allocation**

Develop a Risk Register in the form of a risk matrix including identification and quantification of Project risks according to the industry standards necessary to develop a "Value for Money" or "Public Sector Comparator" analysis for the Project. This matrix must identify all material risks, being those with high impact, high probability of occurrence or both. The initial risk allocation shall be in line with the City desired risk transfer, which shall be discussed at the risk management Working Groups, and the Project Objectives. This Risk Register will be utilized by the City in developing the Implementation Agreement Term Sheet.

(vii) **Funding Analysis**

Develop a funding gap analysis based on all Project related revenues, including but not limited to farebox for ridership, ancillary revenues for naming rights, vendors, infrastructure leasing, advertising or others and for joint development opportunities, if applicable.

The funding analysis must account for all public funding sources that may be accessed, including but not limited to State funds and Federal funds and grants.

(d) **Benefit-Cost Analysis**

The Developer shall conduct, document and submit a Benefit-Cost Analysis for the Project, taking into account its Transit Solution, in accordance with the methodology and requirements set out in this Section 3.3(d).

(i) **Travel Demand Study**

For the purpose of the BCA, it is understood that users currently use alternative modes such as rideshare (TNCs) or the bus network between both points, and that demand is sufficient to support commercial operation of the service. The City will provide the Developer travel demand forecasts for the no Project scenario (i.e., if the Project is not implemented) referred to as the "No Project Baseline" and the Project Baseline Ridership (as contemplated in Section 3.3(c)(v)(A)). The Developer may generate a Project Alternative Ridership as contemplated in Section 3.3(c)(v)(B)). As above, the Project Baseline Ridership is intended to inform the development of the Business Case by the Developer and is not intended to be a substitute for the bottom-up, investment-grade ridership projections, fare policy, fare levels and revenue projections to be developed by the Developer for PDA Phase 2 and PDA Phase 3.

(ii) **Economic BCA General Principles**

The BCA aims to assess the impacts of the Project on society's welfare and compares them to the costs of undertaking the Project over a determined period.

The Developer is required to follow standard economic BCA methodology, using the following steps:

- (A) **Definition of the "No Project Baseline Conditions"**. The baseline conditions describe a scenario in which the Project is not implemented and the consequences of not implementing the Project are assessed.
- (B) **Definition of the Project situation**. The consequences of the Project implementation are assessed in the Project situation.
- (C) **Benefits and costs**. Benefits and costs are clearly identified and quantified both under the baseline conditions and the Project situation.
- (D) **Benefit-cost analysis of comparing the Project situation with the baseline conditions**. All benefits and costs are discounted using a real discount rate. The outcome of the comparison is summarized using a benefit-cost ratio (BCR) and a Net Present Value (NPV).

The requirements for each step are further described below.

(iii) **Definition of the "No Project Baseline Conditions"**

- (A) The City will provide the Developer the definition of the No Project Baseline Conditions. The No Project Baseline Conditions will include data and descriptions of the following:
  - baseline economic development projections, including planned real estate development, jobs growth, population growth, capital investment, etc.;

- planning and infrastructure improvements not related to the Project that are expected to impact current travel demand patterns;
  - baseline travel demand and travel patterns, accounting for baseline economic development forecasts and other planning and infrastructure improvements; and
  - socio-economic analysis of the project context (population, income, equity, accessibility, etc.).
- (B) As part of the No Project Baseline Conditions a Travel Demand Study will be provided by the City. It is anticipated that the study will include person-trips (or vehicle-trips) arriving/departing at both SJC Airport and at Diridon Station, as well as:
- origin-destination (O-D) matrices;
  - weekday peak, off-peak and weekend demand;
  - purpose of trip (business/leisure);
  - travel mode;
  - travel times (vehicle-hours or person-hours); and
  - average cost per trip (operational cost).

(iv) **Definition of the Project Situation**

- (A) **Project Situation.** The Developer's definition of the Project shall be consistent with the description of the Project in the technical feasibility assessment section of the Feasibility Validation Report.
- (B) **Analysis Period.** USDOT guidance defines the analysis period as reflecting a project's economical useful life during which benefits associated with the project can be realized, typically extending over the duration of useful life of the proposed investment. While the useful life for the Project is likely to extend beyond 25 years, in the preparation of BCA the Developer shall use an analysis period of 25 years, starting on the first year of construction. The City may adjust the required analysis period to between 25 and 30 years to account for or align with planning horizons and travel demand forecasts.
- (C) **General Parameters**

In preparing the BCA, the Developer must use the parameters shown in [Table A3.3.2](#).

**Table A3.3.2 General BCA Parameters**

Parameter	Value	Source
Base year for real values	2021	Bureau of Economic Analysis

Parameter	Value	Source
(see <a href="#">Section 3.3(d)(vii)(A)</a> )		
Real discount rates (see <a href="#">Section 3.3(d)(vii)(B)</a> )	7% per year and 3% per year	OMB and USDOT
Analysis period	25 years, subject to City confirmation within a 25-30 year period	City

(v) **Benefits**

(A) **Identification of Benefits**

**Anticipated Quantifiable Benefits for BCA**

As further described in [Section 2 \(Project Overview\)](#), the objective of the Project is to provide a new direct transportation connection where there currently is none between Diridon Station and SJC Airport. The benefits to society related to the City's investment in the Project shall be monetized and recorded in the BCA. Reference methodologies and required parameters are detailed in the following sections.

The Developer is required to include at a minimum the benefits listed below. If additional benefits are identified, the Developer must support the analysis using clear evidence and industry best practice methodologies.

- Travel time savings resulting from mode shifting from existing/No Project Baseline Conditions transportation mode(s) to the new alternative.
- Emissions reductions from fewer vehicle trips due to mode shift from the No Project Baseline Conditions transportation mode(s) to the new alternative, calculated as social cost of carbon savings.
- Operational cost savings to users comparing the fee/fare of the alternative costs to users with the cost of the No Project Baseline Conditions mode(s).

**Other Benefits**

When developing the Project situation that depicts the strategic case for investment and the anticipated effects of the investment on the No Project Baseline Conditions, the Developer may include other impacts than those listed above.

The Developer must clearly articulate the linkages between the Project improvements and the described outcomes, and only account for incremental benefits to the No Project Baseline Conditions. The benefits must be quantified and monetized where possible. The benefits must not

be included in the BCR or NPV calculations, and must be addressed separately to those listed above.

Wider benefits may include:

- Additional airport customers and associated spend due to improved service convenience and reliability (note that new/additional trips are monetized in the BCR through value of time).
- Property value increases and value capture potential from properties within 0.5 to 3/5 of a mile from the station, due to improving connections between Diridon Station and SJC Airport; value capture typically is expressed as potential incremental fiscal revenue to the City.
- Wider economic development benefits, such as potential higher concentration and/or higher value of jobs at the SJC Airport, and airport and station vicinity due to the improved service.
- Improved service reliability tends to be closely correlated to travel time savings as potential travel delays improve because of the Project.
- Road safety improvements and reduced likelihood of fatality and crashes from fewer vehicles on the road and improved roadway conditions. This is not anticipated to be a major objective for this Project.
- Other qualitative benefits such as improved comfort, users perceived improved safety, quality of life of local residents and visitors (such as improved pedestrian connectivity), equity improvements from improved access to transit or affordable transport mode compared to the existing conditions, or resilience and sustainability improvements (other than emissions and GHG savings).

### **Negative Externalities**

The Developer is required to identify, quantify where possible and qualify otherwise negative externalities that are expected to occur due to the Project both during construction and operations. Mitigation strategies shall be provided to help address disbenefits to users and the economy. Negative externalities for the Project could include and but not limited to:

- Street closures, increased congestion and increased travel time, potential noise, and local air quality impact during construction and/or operations.
- Equity considerations related to proposed farebox.

### **(B) Travel Demand Forecasting**

The Developer must develop a travel demand forecast and travel demand model for the Project over the analysis period, independent from the Project Baseline Ridership study provided by the City. The forecast must

include comparable travel forecasting variables that will be developed and provided by the City for the No Project Baseline Conditions outlined in Section 3.3(d)(iii).

The Developer may only account for changes in demand against the No Project Baseline Conditions.

Future demand can include and must differentiate between:

- Mode shift demand: users estimated to shift mode from existing mode(s) to the Project.
- Additional or induced demand: new trips created because of the new service, users who would not otherwise have travelled to/from SJC Airport and Diridon Station.

Analytical assumptions such as mode shift and induced demand must be clearly documented and supported by appropriate evidence in the BCA.

**Travel Time Savings**

Given the nature of the Project, the primary type of anticipated benefit is travel time savings because of a new service between Diridon Station and SJC Airport compared to current travel patterns.

- The Project's travel forecast model must provide estimated travel times (expressed in person-hours) for passengers, which will be compared to the No Project Baseline Conditions travel times.
- The Developer must use the Value of Travel Time Savings (VTTS) presented in Table A3.3.3 to monetize Travel Time Savings for passengers for the Project.
- Trip purpose must be applied when monetizing VTTS: business trips are estimated to have a higher economic value than personal trips (leisure, tourism, non-work trips).
- If mix of personal and business travel remains unclear from the City's travel demand study, the blended rate can be used.

**Table A3.3.3 Hourly values of travel time savings (\$2019 per person hours, adjusted to City of San Jose median income per capita, 2019)**

Parameter	Value (\$2021)	Value (\$2021)
Local travel, surface modes	US average	City of San Jose adjusted
Personal (including commuting)	\$ 15.04	\$ 15.92
Business	\$ 25.43	\$ 26.91

Parameter	Value (\$2021)	Value (\$2021)
All purposes (weighted average)	\$ 16.32	\$ 16.42

### Average Vehicle Occupancy

Many travel time estimates are based on vehicle-hours. Average vehicle occupancy is needed to calculate person-hours for travel time savings. Occupancy factors for personal vehicles listed below include both overall value and separate factors that differentiate between weekday peak / off-peak and weekend travels.

**Table A3.3.4 Average vehicle occupancy rates**

Peak Time	Average Vehicle Occupancy <sup>(1)</sup>
Early AM	1.04
AM Peak	1.26
PM Peak	1.21
Evening	1.18
All day average	1.21

<sup>(1)</sup> Per peak period during weekdays, City of San Jose, excluding commercial vehicles (based on MTC Travel demand model for Plan Bay Area 2050, data in base year 2015).

### (C) Social Cost of Emissions

The Project will likely reduce the number of vehicle-trips from the road network, creating greenhouse gas emissions (GHG) savings and associated social cost savings. The Developer shall refer to the updated economic values by metric-ton of emissions between 2020 and 2050 in 'Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990' (Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, February 2021).

Benefits estimates for social cost of GHG savings must include:

- Carbon dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)

The economic value of reduced emissions during each year of the analysis period will be monetized as follows:



*Emission Reduction Benefit in given year = Quantity reduced (in metric ton) x Monetized value in given year*

**Calculating Reduced Quantity of Emissions**

The Project's travel demand forecast model will provide estimated vehicle-miles traveled (VMT) that can be compared to the No Project Baseline Conditions. This change in VMT can be used to calculate a reduction in quantity of emissions, using the parameters below.

<b>Parameter</b>	<b>Value</b>	<b>Source</b>
Conversion factor	8,887 gr. CO2 emissions / gallon	Federal Register 2010
Fuel economy, weighted average combined cars and light trucks	22.5 miles / gallon	FHWA 2020
Ratio of carbon dioxide emissions to total greenhouse gas emissions (including carbon dioxide, methane, and nitrous oxide, all expressed as carbon dioxide equivalents) for passenger vehicles	0.993	EPA 2020

**Monetized Values of Emissions**

The Developer must use the annual social cost estimates per metric ton of CO2, CH4 or N2O included in the tables A-1, A-2, A-3 (p 45-47) of the 'Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990' (Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, February 2021).

Annual values must be adjusted to 2021 dollars.

The tables include different estimates based on different discount rates. The Developer must use the following relevant data when calculating present value of emissions:

<b>BCA Scenario</b>	<b>SC-GHG Discount Rate Reference</b>
7% annual discount rate	5% average discount rate annual statistics
3% annual discount rate	3% average discount rate annual statistics

**(D) Operational Cost Savings**

Operational cost savings must differentiate between users in the following way:

User/ Travel Mode	Baseline Saving Description	Value
Personal vehicle owner	Savings observed from reduced use of personal vehicle associated with costs of owning and driving a personal vehicle; includes fuel, maintenance, ownership and depreciation savings.	\$ 0.49 / mile (\$2021)
TNC	Difference in average fare / trip at peak times	As determined in Baseline Conditions Travel Demand Study
Transit	Difference in average fare / trip at peak times	As determined in Baseline Conditions Travel Demand Study

(vi) **Cost Estimates**

Cost estimates shall be consistent with the requirements of [Section 3.3\(c\) \(Financial Feasibility\)](#).

Typical BCA methodology requires the preparer to only account for the net operations and maintenance costs compared to the baseline conditions. However, for this Project, the existing infrastructure (road network, and possibly the transit service) is expected to continue its current and forecasted level of service and operations even with the Project being implemented. The Developer is required to assume the Project will not create any operating and maintenance savings for the existing infrastructure, and all gross operations and maintenance costs for the Project are net, unless the City notifies the Developer otherwise.

(vii) **Presenting BCA Results**

(A) **Real Values**

All monetized values used in the BCA must be expressed in real values (i.e., constant dollars). Any nominal values (i.e., including inflation assumptions) must be adjusted to 2021 real values, based on the GDP Deflator included in [Appendix A](#).

(B) **Discounting**

Discounting is a second adjustment to account for the time value of money, as benefits and costs that occur sooner are more highly valued than those that occur in the future. As a result, future costs and benefits are all expressed in present value terms (PV). Present values are calculated from monetized values expressed in real terms with the effects of inflation removed.

The Developer shall use the following formula to discount future benefits and costs:

$$PV = FV (1 + i)^t$$

Where:

PV = Present discounted value of a future payment from year t

FV = Future value of payment in real dollars in year t

i = Real discount rate applied

t = Years in the future for payment (where base year of analysis is t = 0)

(C) **Results**

The outcome of the comparison is summarized using a Benefit-Cost Ratio (BCR) and a Net Present Value (NPV).

The Developer must calculate and present the costs, benefits and results using two real discount rates individually: a 7 percent per year (USDOT discount rates required for discretionary grants), and a 3 percent per year (OMB guidance).

- **Net Present Value** is the result of difference between the Present Value of the Benefits (PVB) and the Present Value of the Costs (PVC):

$$NPV = PVB - PVC$$

- The **Benefit-Cost Ratio** results from calculating the ratio between the PVB and PVC:

$$BC \text{ Ratio} = PVB/PVC$$

(viii) **Appendices** to this Section 3.3(d) of Part A.

**APPENDIX A: GDP DEFLATOR**

**Table A3.3.5 Inflation adjustment values**

(Source: Bureau of Economic Analysis, National Income and Products Accounts, Table 1.1.9, 'Implicit Price Deflators for Gross Domestic Product', January 2022)

<b>Base Year of Nominal Dollar</b>	<b>Multiplier to Adjust to Real \$2021</b>
2002	68.46
2003	71.81
2004	75.49
2005	78.61
2006	81.52
2007	83.79
2008	81.27
2009	78.73
2010	80.96
2011	82.73
2012	84.49
2013	87.15
2014	90.70
2015	95.02
2016	98.29
2017	102.08
2018	106.13
2019	109.70
2020	114.79

**APPENDIX B: SOCIAL COST OF GHG EMISSIONS**

Please refer to the following reference data that can be found in [https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument\\_SocialCostofCarbonMethaneNitrousOxide.pdf](https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf).

<b>Emissions</b>	<b>Table Reference</b>	<b>Page</b>
Annual social cost of CO <sub>2</sub> , 2020-2050	A-1	45
Annual social cost of CH <sub>4</sub> , 2020-2050	A-2	46
Annual social cost of N <sub>2</sub> O, 2020-2050	A-3	47

### 3.4 **Developer Submittal List**

In accordance with Section 13.3(a)(iii) of this Agreement, the Developer shall prepare and submit to the City for the City's review and acceptance the Developer Submittal List.

### 3.5 **Project Meetings and Stakeholder Engagement**

(a) The Developer must convene, attend and actively participate in all meetings of the Senior Project Group and Working Groups and any other meetings in accordance with Article 6 (Cooperation and Governance) of this Agreement, this Exhibit 5 and, during PDA Phase 2 and PDA Phase 3, the Project Plan.

#### (b) **Risk Management Meetings**

(i) The Developer acknowledges the importance of risk management as part of the PDA Work. Therefore, the Developer must convene, actively participate in and attend risk management Working Group meetings with the City's Representative on a monthly basis or as otherwise directed by the City's Representative.

(ii) At risk management Working Group meetings, the Developer shall actively manage the risks for the Project and shall:

(A) develop, review, and make updates to the Risk Register including identifying new risks and reflecting discussions and decisions made during the meeting, including with respect to the matters listed below;

(B) develop proposals and seek solutions for avoiding or mitigating the risks listed on the Risk Register;

(C) develop qualitative and quantitative analysis of the risks;

(D) consider different approaches to the risk allocation for the Implementation Work for the purposes of preparing the Implementation Proposal;

(E) suggest specific actions to be taken by the Parties in response to the risks listed on the Risk Register;

(F) remove from the Risk Register those risks which have been avoided or passed and document the resolution;

(G) otherwise assess, review, and monitor risks and risk response strategies as required under Section 4.5(e)(ii) or as otherwise required by this Exhibit 5; and

(H) together with the City, determine the risk allocation assumptions to be used for the purposes of preparing the Feasibility Validation Report (in the case of PDA Phase 1) and the Implementation Proposal (in the case of PDA Phase 2).

(c) The Developer shall support the City with technical stakeholder meetings and public and community meetings, as is necessary to test and validate the stakeholder or community-related assumptions to be included in the Feasibility Validation Report.

### 3.6 **Project Due Diligence**

The Developer is responsible for reviewing this Agreement and all Reference Documents and identifying and performing supplemental research, surveys and Site Investigations of the site conditions and utilities within the Project Site, and all other investigations related to the Project necessary to prepare the Feasibility Validation Report. All such research, surveys and investigations shall be performed in accordance with the terms of this Agreement including Section 10 (Project Site Access and Investigations) of this Agreement and all applicable requirements set out in Section 4 (Scope of PDA Phase 2 Work).

### 3.7 **All Other PDA Phase 1 Work**

The Developer shall perform all other activities and PDA Phase 1 Work:

- (a) that the Developer is required to perform during PDA Phase 1 under the terms of this Agreement and that is necessary to be performed to comply with its obligations under this Agreement; and
- (b) as may be required to satisfy the conditions to NTP2 set out in Section 2.2(d) (Phased Work and Notices to Proceed) of this Agreement.

### 3.8 **Feasibility Validation Criteria**

In evaluating and determining whether to accept the Feasibility Validation Report and to proceed to PDA Phase 2, the City will consider the extent to which:

- (a) the Developer has demonstrated the Financial Viability of the Business Case;
- (b) the Developer has demonstrated the technical viability of the Transit Solution;
- (c) the Transit Solution and Business Case achieve the Project Objectives;
- (d) the Developer has demonstrated that the Transit Solution and Business Case are responsive to the Technical Requirements;
- (e) the Transit Solution and Business Case offer the best value to the City and to the Project over the long term; and
- (f) the Developer has demonstrated a proposed approach to carrying out the PDA Phase 2 Work and PDA Phase 3 Work that is efficient, clear, transparent, complete and logical, has demonstrated an ability to effectively partner with the City during PDA Phase 2 and PDA Phase 3 and the PDA Cost Cap for subsequent PDA Phases is acceptable to the City.

#### 4. SCOPE OF PDA PHASE 2 WORK

##### 4.1 Overview

- (a) This Section 4 of Part A sets out the City's minimum requirements for the PDA Phase 2 Work.
- (b) The objective of PDA Phase 2 is to advance multiple work streams to satisfy the conditions set forth in Section 2.2(e) (Phased Work and Notices to Proceed) of this Agreement. An outline of the anticipated scope of the PDA Phase 2 Work follows:
  - (i) develop the concept design of the Transit Solution and to support the Environmental Approval Process, as further described in Section 11 (Environmental Approval Process) of this Agreement, and to a level that enables the Developer to provide a firm, fixed price for the Transit Solution during PDA Phase 3;
  - (ii) perform Site Investigations and further project due diligence to inform the risk analysis process;
  - (iii) develop cost estimates, schedule, business model and Financial Plan on an Open Book Basis;
  - (iv) develop the Implementation Agreement Term Sheet and Implementation Agreement (including the Technical Requirements) in accordance with Article 14 (Implementation Proposal Procedures and Implementation Agreement) of this Agreement;
  - (v) conduct community engagement activities;
  - (vi) if applicable, support the City in the advancement of the Environmental Approval Process including providing, at the City's direction, necessary technical and management resources and engineering plans, studies and other materials that may be required for the City to progress the Environmental Approval Process while minimizing the time taken to complete the Environmental Approval Process; and
  - (vii) support the City in other approval processes including federal and State grant programs and permit requirements.

##### 4.2 Project Plan

- (a) The Developer shall develop the Outline Project Plan into a comprehensive Project Plan containing sub-plans in accordance with this Section 4 for review and approval by the City. Following approval, the Developer shall comply with and implement the Project Plan during PDA Phase 2 and PDA Phase 3 and update the Project Plan as required under, and in accordance with and at the times required by, this Exhibit 5 (if specified) and otherwise in accordance with this Agreement and the approved Developer Submittal List.
- (b) The Project Plan shall categorize the PDA Phase 2 Work and PDA Phase 3 Work into the separate work streams contemplated in Table A4.2.1 and as further described in this Section 4.



**Table A4.2.1 PDA Phase Work Streams and Sub-plans**

<b>Work stream</b>	<b>Sub-plan</b>	<b>Summary of topic(s) addressed</b>
<b>PDA Management and Controls</b>  (See <a href="#">Section 4.3</a> )	PDA Management Plan	Overall approach and schedule for the Project's development during PDA Phase 2 and PDA Phase 3
	Quality Management Plan (QMP)	Approach to quality management
<b>Financial and Commercial Development</b>  (See <a href="#">Section 4.4</a> )	Financing Management Plan	Development of the Finance Plan
<b>Technical Development</b>  (See <a href="#">Section 4.5</a> )	Design Management Plan	Development of the engineering design, specifications, and related documents for the Transit Solution, including the plan to develop the Transit Solution during the PDA Phase to achieve Technical Readiness Level of 9
	O&M Development Plan	Development of the operations and maintenance plans and requirements for the Project
	Ridership and Revenue Forecasting Plan	Development of ridership forecasts and their corresponding farebox revenue projections as well as ancillary revenue projections
	Cost and Risk Management Plan	Development of cost estimates, schedules, and the risk management system

<b>Work stream</b>	<b>Sub-plan</b>	<b>Summary of topic(s) addressed</b>
<b>Environmental, Governmental Approvals and Outreach</b>  (See <a href="#">Section 4.6</a> )	Government Entity Coordination Plan	Approach to the Environmental Approval Process and coordination with Government Entities with respect to Governmental Approvals
	Public Outreach and Engagement Plan	Approach to public outreach and engagement and coordination with the City on outreach and engagement
<b>Subcontractor Bidding and Selection</b>  (See <a href="#">Section 4.7</a> )	Subcontractor Bidding and Selection Plan	Approach to subcontracting and selecting contractors to perform the Implementation Work
<b>Implementation Agreement</b>  (See <a href="#">Section 4.7</a> )	N/A	N/A

- (c) The management of the PDA Phase work streams must be carefully planned and organized within the Project Plan to reflect a clear understanding of the interdependencies among them and the Developer's ability to manage such interdependencies. The Project Plan should also demonstrate the interdependencies between the Developer Submittals described in this [Section 4](#) and the relevant PDA Milestones.
- (d) The Project Plan must incorporate and reflect lessons learned from the conduct of the PDA Phase 1 Work.

**4.3 PDA Management and Controls**

The Developer shall provide all necessary project management, labor, services and coordination throughout PDA Phase 2 and PDA Phase 3. This shall include the following Developer Submittals and subtasks:

- (a) **PDA Management Plan**
  - (i) The PDA Management Plan must describe the overall approach for the development of the Project during PDA Phase 2 and PDA Phase 3 and administration of the PDA Phase 2 Work and PDA Phase 3 Work, organized by the work streams shown in [Table A4.2.1](#).
  - (ii) At a minimum, the PDA Management Plan must:

- (A) include a complete description of the overall scope of the PDA Phase 2 Work and PDA Phase 3 Work;
  - (B) describe and distinguish between the roles and responsibilities, including the organizational structure, of the Developer and its development team to perform their corresponding scope of the PDA Phase 2 and PDA Phase 3 Work;
  - (C) describe how the Developer plans to collaborate and coordinate with the City for tasks led by the City, reviews, approvals, interfaces, and other actions required of the City for the Developer to perform the corresponding scope of the PDA Phase 2 Work and PDA Phase 3 Work;
  - (D) where applicable, include cross-references to Developer Submittals contemplated in the accepted Developer Submittal List;
  - (E) include a PDA Work Schedule that complies with the requirements in Section 4.3(a)(iv)(A), including the PDA Milestones and how the content of each Developer Submittal interrelates with one another;
  - (F) include a specific, actionable and measurable work plan that:
    - manages and organizes human and material resources for the Project, including the Developer's budget for Allowed Costs;
    - defines communication lines and methods, identifies communication roles and responsibilities, and frequency of communications, which communications tools and media will be used, and any specific factors for initiating communication;
    - delineates the progress reporting process including the specific requirements in Section 4.3(a)(iv)(B), including a methodology to manage requirements, and to create benchmarks and key performance indicators reflecting milestone achievement; and
    - details the Developer's approach to collaborate diligently, transparently, and in good faith with the City to achieve the Project Objectives and develop the Project in compliance with the Technical Requirements and the Alignment Constraints.
- (iii) The Developer is responsible for directing and monitoring Subcontractors' performance of the PDA Work, including requiring Subcontractors to conform to the approved PDA Management Plan. The Developer shall manage Subcontractors, monitor progress and costs and include progress reports on these matters in the Monthly Progress Reports or the Allowed Costs reports contemplated in Section 4 (Reporting of Allowed Costs for PDA Work) of Exhibit 12 (Allowed Costs), as applicable.
- (iv) Specific requirements for the PDA Work Schedule and progress reporting are set out below:

(A) **PDA Work Schedule**

The PDA Management Plan must include a PDA Work Schedule setting out the Developer's proposed schedule for carrying out the PDA Work. The PDA

Work Schedule must demonstrate how the Developer plans to: (1) achieve the PDA Milestones; and (2) manage progress of its activities throughout PDA Phase 2 and PDA Phase 3. The PDA Work Schedule will also be used to track the progress of the PDA Phase 2 Work and PDA Phase 3 Work and to help the City plan for and manage its corresponding activities.

The PDA Work Schedule must be organized according to the work streams shown in [Table A4.2.1](#).

The PDA Work Schedule must be developed using Primavera 6 (or any alternative software as may be agreed to by the City) and must be delivered in a printable document as well as in the native XER file (or any alternative format as may be agreed to by the City). The level of detail in the PDA Work Schedule must align with the project design development stage following best practices as defined by the Association for the Advance of Cost Engineering (AACE).

A one-page summary schedule, on a maximum 11x17 page size, must accompany each PDA Work Schedule submittal, summarizing each grouping of activities in overall durations, based on the work streams. The summary schedule must be at a high-level that easily defines the Project's phases and key milestones and must be suitable for the City to share with stakeholders. It must be in a format approved by the City.

At a minimum, the PDA Work Schedule must provide the means for:

- updating and submitting it to the City at regular intervals and according to the PDA Milestones;
- measuring progress against the planned schedule and how progress will be evaluated and reported;
- reporting "look ahead" information for upcoming activities;
- grouping milestones, including but not limited to the PDA Milestone, with interdependencies to maintain schedule efficiencies and completeness;
- managing schedule risk;
- managing the process to obtain approvals, including Governmental Approvals, approvals for funding and/or financing sources, and, to the extent applicable, approvals necessary to acquire the Project's right-of-way and/or secure right-of-way agreements with third parties, each as needed to implement the Project; and
- an appropriate basis to prepare cost estimates, resourcing plans, and to assess time-related costs and risks.

**(B) Progress Reporting**

The PDA Management Plan must describe the Developer's approach to submitting Monthly Progress Reports to update the City on a monthly basis (or at another reporting interval, as may be otherwise agreed by the

Parties) on progress of the various aspects of the PDA Phase 2 Work and PDA Phase 3 Work.

At a minimum, the Developer's approach must address:

- progress status of each of the work streams defined in Table A4.2.1;
- updates to the PDA Work Schedule, including actual progress of the PDA Phase 2 Work and PDA Phase 3 Work during the prior 90-day period and progress forecasted for the next 90-day period, which may include recovery of time, as needed;
- quality control checklists and status update, including any Developer-led quality audits, including status reports to the City on any non-compliance actions with the Developer's obligations under this Agreement;
- an update of the Developer's compliance with the Developer Submittal List; and
- other pertinent and timely discussion topics, as needed.

(b) **Quality Management Plan (QMP)**

- (i) The QMP must describe the controls, processes and procedures the Developer will implement to verify compliance of the PDA Phase 2 Work and PDA Phase 3 Work with applicable requirements under this Agreement.
- (ii) The QMP must identify and describe the responsibilities of the Developer's quality assurance manager. At a minimum, the quality assurance manager must be dedicated to the Project, be responsible for the Developer's overall quality-assurance program (which must cover the PDA Phase 2 Work and PDA Phase 3 Work performed by the Developer or any Subcontractor), work separately and independently from the Developer and report directly to the Developer Project Director and Developer Project Manager.
- (iii) At a minimum, the QMP must:
  - (A) require the Developer to perform all quality management tasks required to ensure compliance with the requirements of this Agreement, including the requirements of any Government Entity;
  - (B) describe the Developer's responsibilities for performance, oversight, and verification of the PDA Phase 2 Work and PDA Phase 3 Work;
  - (C) describe the overall approach to manage the quality of: (x) all the activities carried out by the Developer and the other development team members during PDA Phase 2 and PDA Phase 3; and (y) the Developer Submittals;
  - (D) describe the process for quality checkpoints and regular reviews, independent checks and balances, and full quality audits, which must be conducted when required by the City;

- (E) document progress related to the PDA Milestones during PDA Phase 2 and PDA Phase 3;
  - (F) report the Developer's quality assurance activities conducted with each significant deliverable to demonstrate verifiable and objective evidence of compliance with the requirements of this Agreement, including this Part A; and
  - (G) clearly differentiate among the different work streams and provide customized and appropriate quality management systems for each (e.g., engineering vs. ridership forecasting vs. financial modeling, etc.).
- (iv) The QMP must be prepared and implemented in accordance with ISO 9001: "Quality Management Systems – Requirements."

(c) **Project Meetings**

- (i) The Developer must continue to convene, attend and actively participate in all meetings of the Senior Project Group and Working Groups (including risk management Work Groups) and any other meetings in accordance with Article 6 (Cooperation and Governance) of this Agreement, this Exhibit 5 and the Project Plan.
- (ii) The Developer must continue to support the City with technical stakeholder meetings and public and community meetings, as further described in the applicable sections of the Project Plan.

#### 4.4 **Financial and Commercial Development**

The Developer shall refine the Business Case and commercial structure proposed in the Feasibility Validation Report during PDA Phase 2 to detail its approach to financing and structuring the Project and achieving Commercial Close and Financial Close. This will involve updating assumptions and projections used in the Feasibility Validation Report based on the updated Project scope, design, cost estimates, City funding and financial market conditions, where applicable in accordance with Attachment 1 and Attachment 2 of this Part A unless otherwise specified by the City. This shall include the following Developer Submittals and subtasks:

(a) **Financing Management Plan**

- (i) The Financing Management Plan must describe the Developer's processes and procedures to develop the Finance Plan during PDA Phase 2 and PDA Phase 3.
- (ii) The Financing Management Plan must clearly identify the proposed timelines and due dates for the City to review and approve the Finance Plan.
- (iii) At a minimum, the processes and procedures established in the Financing Management Plan must describe:
  - (A) the process to determine and promptly disclose to the City any materially adverse changes in the financial strength information previously submitted to the City in connection with the Project for each of the Equity Members, which disclosures must be accompanied by the applicable financial statements for the periods since those most recently submitted to the City;

- (B) a plan to develop revenue streams generated by the Project, such as but not limited to from transit farebox, and how these revenues support its Finance Plan;
- (C) if the accepted Feasibility Validation Report contemplates joint development or similar real estate components as part of the Finance Plan to support the Project's financing, include: (1) the process and schedule to develop such applicable elements of the Finance Plan, such as market studies, feasibility analyses, application for and securing of funding sources, development of revenue streams to support the Project, and other relevant matters; and (2) the pro forma(s) for such components ("**Pro Forma**"). This process must identify the Developer's and the City's roles, interaction with third parties, processes to secure entitlements, and other relevant instances of coordination and approvals by the City and/or any other third parties;
- (D) a process to identify, develop, and secure public funding sources for the Project to supplement revenue streams generated by the Project and, if contemplated in the Feasibility Validation Report, working in collaboration and coordinated with the City to develop joint developments;
- (E) a process to competitively select and negotiate with debt providers to ensure that the Project's debt is procured on the most favorable terms possible;
- (F) a process to submit to the City for review and endorsement progressive versions of a debt financing plan, in accordance with the applicable PDA Milestones, which plan must describe the debt instruments and determine their amount, tenor, principal terms and conditions (interest rate, fees, drawdown schedule, covenants, conditions precedent, any hedging and/or monoline insurance, among others), lead arrangers/managers, underwriters and/or private placement agents, credit rating needs, as applicable (the "**Debt Financing Plan**");
- (G) a process to confirm commitments from Equity Members, identifying each investor (including new Equity Members, which must meet the same financial strength and experience requirements of the Equity Members the Developer identified in PDA Proposal), the amount of funds committed by each Equity Member, and supporting documentation, including the terms and conditions of their subscription, and the time horizon of their investment in the Project Company;
- (H) a process to update and develop the Initial Base Case Financial Model included in the accepted Feasibility Validation Report, which shall be included in the Finance Plan, including the procedures and timing for auditing by an independent financial model auditor;
- (I) procedures to ensure the Finance Plan, Initial Base Case Financial Model and Pro Forma, if necessary, are prepared according to the requirements set out in Attachment 1 of this Part A including their corresponding data books, user guides, assumptions, sources and uses, and detailed cash flow models showing all relevant Project stages following Commercial Close;

- (J) procedures to update progressive versions of the Initial Base Case Financial Model, which must be submitted to the City as part of the Finance Plan at the relevant PDA Milestones and how the Initial Base Case Financial Model will produce any outputs that are required by the City;
- (K) a process to obtain an opinion letter prepared by the Developer's financial advisor stating that the Finance Plan is reasonable, achievable, and sufficient to fully fund the obligations expected under the Implementation Agreement for the Project Company. The opinion letter must also identify any material assumptions and risks associated with their opinion; and
- (L) procedures for reporting of quarterly cost audits of the Developer's Allowed Costs, as required in Exhibit 12, and status updates of any other audits performed by the Developer or required by the City.

(b) **Finance Plan**

- (i) The Developer shall develop a Finance Plan for the Project for the City's review and approval as further described in, and in accordance with the requirements of, the Financing Management Plan.
- (ii) The Finance Plan must:
  - (A) be consistent in content and format with the accepted Feasibility Validation Report;
  - (B) be prepared in accordance with Attachment 1 and Attachment 2 to this Part A; and
  - (C) include a summary of the Developer's approach to reaching Commercial Close and Financial Close.
- (iii) The Developer shall continue to refine the Finance Plan throughout PDA Phase 2 and resubmit the revised Finance Plan for the City's review and approval at times required by the Financing Management Plan and Developer Submittal List. Each revised Finance Plan shall include a revised Initial Base Case Financial Model.

(c) **Initial Base Case Financial Model**

- (i) The Finance Plan shall include an Initial Base Case Financial Model clearly identifying any proposed revenues sources as well as anticipated operations and maintenance costs, reserve deposits and major maintenance/lifecycle costs as further described in, and in accordance with the requirements of, the Financing Management Plan.
- (ii) Each submission of the Initial Base Case Financial Model shall be prepared in electronic format using MS Excel and be based on the form included in the approved Feasibility Validation Report.

(d) **Funding and Financing Programs**

The Developer shall support the City with applications for local/State/federal grants and financing as determined by the City. This may include the provision of specific data, preparation of certain plans and/or engineering data required by the grantor as part of the application processes.



## 4.5 Technical Development

The purpose of this work stream is to develop the Transit Solution and the design, costs, schedule, Governmental Approvals and risk allocation for the Project, consistent with the Technical Requirements and the Alignment Constraints. The Developer Submittals contemplated in this [Section 4.5](#) shall be consistent with the technical feasibility sections of the accepted Feasibility Validation Report.

### (a) Design Management

- (i) The Developer shall collaboratively manage the design process and prepare a basis of design report ("**BOD Report**") unique to its Transit Solution. The BOD Report shall be used as the basis of the Developer's design (including alignment geometry, structure selection, station design and operational control systems), comparison of options, and for assessing the ability of the design to perform in accordance with the Technical Requirements and the other requirements of this Agreement.
- (ii) The BOD Report shall also incorporate requirements from environmental documentation, federal, state and local jurisdictions, utility districts, and any other relevant Third Party or Government Entity. Where no applicable standard exists, the Developer shall propose a standard within the BOD Report.
- (iii) Where any design-related Developer Submittal does not meet every requirement of the BOD Report, the Developer shall make an annotation identifying applicable changes and including a description of the design variances and deviations associated with the design.
- (iv) The BOD Report shall include a sub-section containing the specific operational and performance requirements for transit service design, including: (A) travel times, operational headways and overall system capacity in terms of passengers and vehicles per hour that are consistent with the Technical Requirements and the other requirements of this Agreement; and (B) the safety and security requirements for the Project.

### (b) Design Development and Engineering Management

The Developer shall design and submit, at a minimum, design packages to the City for review and approval at agreed levels of completion and in accordance with the requirements of this Agreement and at the times required in this [Exhibit 5](#) and the Developer Submittal List. The design shall comply with the requirements of [Section 3.3\(a\)](#) and shall separately address each element of the Project, including: guideway; stations; structure design and associated infrastructure; maintenance and storage facilities; vehicles; systems; utility relocations; street improvements (if applicable); and, landscaping. Specific design requirements for each element of the Project will be incorporated in any Validation Amendment.

#### (i) Design Management Plan

The Design Management Plan must describe the Developer's plan to develop all engineering-related aspects of the Transit Technology and the Transit Infrastructure such that they are:

- capable of delivering a complete and fully integrated Transit Solution;

- developed to achieve the Implementation Work Schedule submitted by the Developer and approved by the City; and
- sufficiently developed to enable fixed-price, date-certain pricing for the Implementation Work.

At a minimum, the Design Management Plan must:

- (A) describe how the Developer will develop the design and engineering of the Transit Technology, including its development, testing, and other tasks needed to achieve a Technology Readiness Level of 8, including securing all required regulatory permits for operations;
- (B) describe how the Developer will plan ongoing development of the Transit Technology after start of revenue service to deliver value-added operational enhancements beyond those defined in the Technical Requirements;
- (C) describe how the Developer will develop the engineering of the Transit Infrastructure to address the constraints and opportunities of the right-of-way (including satisfaction of the Alignment Constraints), integration with Diridon Station and SJC Airport and facilities, as applicable, and integration with the City of San José's urban infrastructure, while addressing the wide range of related issues including but not limited to multi-modal integration, streets and local transportation, utilities, parks, etc.;
- (D) address how the Developer will ensure that the Transit Solution can satisfy the Developer's projections for ridership demand with a service that meets or exceeds the user-centered performance requirements defined in the Technical Requirements, including addressing future ridership growth and expansion opportunities;
- (E) address how the engineering work will be managed to achieve the PDA Milestones, including reviews and/or approvals by the City and third parties as contemplated in the Developer Submittal List;
- (F) address how engineering reviews by the City will be managed by the Developer, including resolution and record-keeping of City design review comments;
- (G) address the Developer's approach and procedures for change management, including how changes to any Developer Submittal will be recorded, tracked and communicated to the City;
- (H) describe how design and engineering development will be coordinated with the Environmental and Outreach work stream described in Section 4.6, and describe how the Developer must incorporate input or feedback received through the Environmental Approval Process and public outreach processes.

(ii) **Design Reviews**

- (A) The Design Management Plan must include a section that describes the Developer's procedures to obtain reviews and, as applicable, approval of

design deliverables from the City and other Government Entities ("**Design Reviews**").

- (B) The Design Reviews section must highlight where and how these procedures vary between the City and other Government Entities. If reviews by other third parties, such as private landowners, are necessary these must be addressed in the Design Management Plan.
- (C) At a minimum, the procedures in the Design Reviews section of the Design Management Plan and, to the extent applicable, the Developer Submittal List must contemplate the following:
  - must be consistent with Section 13.3 (Developer Submittals) of this Agreement;
  - the Developer must submit to the City for review and approval changes made to the Project design in connection with or after major milestones related to the development of the Technology Solution and other relevant milestones (e.g., the Developer's procurement of the construction contractor, as applicable);
  - the Developer must work with Government Entities to complete reviews of design deliverables as required under any applicable Third Party Agreement or to obtain any applicable Governmental Approval;
  - the Developer must be solely responsible for coordinating, scheduling and facilitating timely meetings with Government Entities and Third Parties, make necessary submittals and obtain reviews and approvals (if applicable), as required to comply with this Agreement;
  - the Developer must provide a minimum of 7 days' notice to the City before the Developer makes submittals to Government Entities; and
  - the Developer shall request assistance from the City's Representative to collaborate regarding contact with Government Entities, if necessary.

(c) **O&M Development**

The Developer is responsible for developing operations and maintenance plans that define how the Project will be operated and maintained ("**O&M Plans**"). The Developer shall prepare a plan (the "**O&M Development Plan**") describing the Developer's approach to developing O&M Plans, procedures, standards and costs for operations and maintenance during PDA Phase 2 and PDA Phase 3 that comply with the Technical Requirements and are unique to its Transit Solution. At a minimum, this approach must describe how the Developer will:

- (i) ensure consistency with the operational and performance elements of the BOD Report and otherwise achieve the Technical Requirements and other requirements of this Agreement;

- (ii) seek input from, submit Developer Submittals for review to, and obtain approvals from the City, as applicable and in accordance with Section 13.3 (Developer Submittals) of this Agreement;
- (iii) coordinate the O&M Plans with the Airport and the Diridon Station operations;
- (iv) develop the final scope and details of the O&M Plan based on the Developer's:
  - (A) ridership and revenue forecast;
  - (B) plans to accommodate the City's and regional fare integration and equity policies and requirements, subject to the City's review and approval;
  - (C) final Technical Requirements for the Transit Technology;
  - (D) final design for the Transit Infrastructure; and
  - (E) handback provisions, as applicable, subject to the City's review and approval; and
- (v) develop a commissioning and operational readiness plan.

(d) **Ridership and Revenue Forecasting**

The Developer shall prepare a plan (the "**Ridership and Revenue Forecasting Plan**") describing the Developer's approach and methodology to develop bottom-up, investment-grade ridership projections, fare policy, fare levels, and revenue projections. The Developer is responsible for conducting ridership and revenue forecasting in accordance with the Ridership and Revenue Forecasting Plan and consistent with, but developing upon, the ridership and revenue analysis conducted during PDA Phase 1. The Ridership and Revenue Forecasting Plan must:

- (i) describe how the ridership and revenue plan is integrated with the Project's commercial operations and must be supported by market revenues, detail assumptions and methodologies (including but not limited to data collection, modelling, model calibration, sensitivity analysis, and risk analysis);
- (ii) describe how it addresses transit access equity; and
- (iii) describe how the Developer will address a potential City role in setting fares (should the City choose to do so).

(e) **Cost Estimates and Risk Assessment**

The Developer is responsible for:

- preparing and providing cost estimates for the CapEx, OpEx and capital asset replacement costs of the Project, a cost estimate methodology report and preparing a transparent approach to managing costs for the Implementation Work; and
- working collaboratively with the City to develop and refine the Risk Register and develop the risk allocation for the Implementation Agreement,

in each case, in accordance with this Section 4.5(e) and the other requirements of this Agreement. This work stream must be coordinated with the PDA Work Schedule. This work stream shall include the following Developer Submittals and subtasks:

(i) **Cost Estimates**

- (A) The Developer must prepare a cost estimating methodology and cost estimate classification system in accordance with Section 1.1 (Estimate Methodology) of Attachment 2 to this Part A which shall be used to prepare cost estimates in accordance with, and at the times required by, this Exhibit 5 and the Developer Submittal List. If required by the City, the Developer shall document this methodology in a report and attend Working Group meetings to establish the applicable cost estimating methodology.
- (B) The Developer shall develop and provide cost estimates for the Implementation Work on an Open Book Basis so that assumptions, contingency, risk and the approach to the cost estimates are fully identified, delineated and understood by the City.
- (C) Where applicable, and unless otherwise specified by the City, each cost estimate submitted to the City shall be in accordance with Attachment 1 and Attachment 2 of this Part A and a revised cost estimate shall shortly follow each design-related Developer Submittal.
- (D) Unless otherwise agreed by the Parties or directed by the City, the basis for the Implementation Work price will be a firm fixed price.
- (E) The Developer shall prepare, submit and negotiate the Implementation Proposal in accordance with the requirements of this Agreement. The price proposal incorporated in the Implementation Proposal shall be prepared in accordance with the requirements of this Exhibit 5 and the other requirements of this Agreement.

(ii) **Risk Assessment**

The Developer must attend the risk management Working Group meetings in accordance with Section 3.5(b). The Developer must perform all other risk management activities described in this Exhibit 5 and otherwise under this Agreement. The Developer shall lead the development of the Risk Register that was included in the Feasibility Validation Report. The Developer shall collaboratively identify and evaluate, in terms of probability of occurrence, the cost and schedule risk impacts associated with the Project. The Developer shall propose risk responses and control strategies for each risk identified for the technology development, design, construction and operations phases of the Project. The Developer shall work with the City to review and update the Risk Register at appropriate stages during the PDA Phases, including concurrently with the appropriate design deliverable packages, with each updated version of the Finance Plan and according to the PDA Milestones. The Developer shall prepare suitable presentation materials for the City to use in stakeholder and/or community meetings, which must be in a format approved by the City.

The Implementation Agreement Term Sheet and Implementation Agreement will be developed on the basis of the Risk Register and risk allocation for the Project, as agreed between the Parties during PDA Phase 2.

(iii) **Cost and Risk Management Plan**

The Developer shall prepare a plan (the "**Cost and Risk Management Plan**") describing the Developer's approach to achieving the applicable PDA Milestones, submitting relevant Developer Submittals, coordinating with the City with respect to this work stream and otherwise complying with the requirements of this Section 4.5(e).

(f) **Site Investigations**

The Developer is responsible for reviewing this Agreement and all Reference Documents and identifying and performing supplemental research, surveys and Site Investigations of the site conditions and utilities within the Project Site necessary to prepare the Implementation Proposal. All such research, surveys and Site Investigations shall be performed in accordance with the terms of this Agreement including Section 10 (Project Site Access and Investigations) of this Agreement. In accordance with Section 13.3(b) (Submittal and Review) of the Agreement, the City will have the right to review any Developer Submittals under this section (F) for compliance with the Agreement. This work stream shall include, at a minimum, the following subtasks and Developer Submittals:

(i) **Survey and Mapping**

The Developer shall review all survey Reference Documents and identify supplemental surveys that it deems necessary to prepare the Implementation Proposal and understand the risks associated with the Implementation Work. The Developer shall develop a survey work plan detailing the survey work to be undertaken and shall perform such survey work and any additional surveys as it deems necessary to prepare the Implementation Proposal and understand the risks associated with the Implementation Work. The Developer shall utilize the results of the survey work undertaken when developing the Project design and Implementation Proposal Without prejudice to Section 5.3 (City's Rights Don't Affect Risk Allocation) of the Agreement, the Developer will submit its survey work plan to the City together with: any request to access the Project Site for Site Investigations under Article 10 (Project Site Access and Investigations) of the Agreement; its Implementation Proposal (which shall also include the results from any such survey work); as supporting evidence for Allowed Costs; and otherwise as may be requested by the City.

(ii) **Geotechnical Investigations**

(iii) To support design, the Developer shall consider the type of structures and construction planned for the Project, unique to its Transit Solution, and the significant geologic properties of the Project Site. The Developer shall assemble and review existing available geotechnical data for the area and evaluate the Technical Requirements to determine what additional measurements are required. The Developer shall develop a geotechnical planning report, including an exploration and testing program. If determined necessary by the Parties, the Developer will prepare a geotechnical data report and geotechnical design report describing tests performed and summarizing the field subsurface investigations and results from the laboratory tests, field testing, and observation program. The Developer shall submit the report to the City and shall use the report when developing the Project design and Implementation Proposal, and it will be discussed in risk management Working Groups. **Utility Investigations**

The Developer shall be responsible for reviewing all utility investigations provided as Reference Documents and for developing and maintaining a utility conflict report. The Developer shall identify supplemental worksite investigations, such as potholing, that it deems necessary to prepare the Implementation Proposal and understand the risks associated with the Implementation Work. The Developer shall develop and implement a utility investigation work plan detailing the proposed additional work and why it is required . The Developer shall be responsible for coordinating with utility owners on the design and construction of utility relocation work being performed by the Developer or the utility owner on behalf of the Project. With a minimum of a weeks' prior notice to the City, the Developer shall conduct meetings with the City and utility owners as needed to clarify information within the utility conflict report, preliminary design and any follow-on investigations. Without prejudice to Section 5.3 (City's Rights Don't Affect Risk Allocation) of the Agreement, the Developer will submit its utility investigation work plan and then current utility conflict report to the City together with: any request to access the Project Site for Site Investigations under Article 10 (Project Site Access and Investigations) of the Agreement; any request for meetings with the City and utility owners; its Implementation Proposal (which shall also include the results from any such utility investigation work); as supporting evidence for Allowed Costs; and otherwise as may be requested by the City.

(g) **Implementation Work Schedule**

The Developer shall prepare an Implementation Work Schedule and update the Implementation Work Schedule at regular intervals. Each submittal of the Implementation Work Schedule shall include the appropriate level of detail for the Project's stage of development. The Implementation Work Schedule must be organized according to the Project's major phases and milestones, which include but are not limited to: (i) Commercial Close; (ii) completion of detailed design and construction documents; (iii) permits; (iv) construction; (v) Project commissioning, substantial completion, and operational readiness; (vi) operational start-up through final acceptance; and (vii) asset management phase, inclusive of hand-back provisions, as applicable. Further Implementation Work Schedule requirements will be incorporated in any Validation Amendment.

(h) **System Expansion**

If requested by the City, the Developer must work collaboratively with the City to develop the system expansion strategy included in the technical feasibility section of the accepted Feasibility Validation Report.

Costs associated with this section are not part of the PDA Cost Cap (Design) for Phase 2 set out in the PDA Proposal.

4.6 **Environmental, Governmental Approvals and Outreach**

(a) The purpose of the environmental, Governmental Approval and outreach work stream is to assist the City in progressing the Environmental Approval Process, obtain the Governmental Approvals and to work with stakeholders and the community. The City highly values the integration and collaboration with key stakeholders during the design process. This work stream includes the following Developer Submittals and subtasks:

(b) **Support of Environmental Approval Process**

As contemplated in Section 11 (Environmental Approval Process) of this Agreement, the Developer shall support the City in progressing the Environmental Approval Process. Table A7.1 in Section 7 (Overview of Key Roles and Responsibilities under Environmental Approval Process) outlines each Parties' and the City-appointed environmental consultant's key roles in the Environmental Approval Process. Without limiting Section 11 (Environmental Approval Process) of this Agreement, the Developer shall, to the extent applicable to the Environmental Approval Process and as requested by the City:

- (i) provide any materials requested by the City for the DEIR and/or DEIS and FEIR and/or FEIS as it relates to the Transit Solution in the alternative analysis process;
- (ii) update its prior Developer Submittals as needed to comply with Applicable Law, and particularly State or federal regulations applicable to the Environmental Approval Process;
- (iii) review the initial and final draft of the DEIR and/or DEIS and FEIR and/or FEIS and provide comments to the City for consideration; and
- (iv) as requested by the City, assist with drafting responses to any comments as they relate to the Transit Solution alternative included in the environmental documents.

(c) **Governmental Approvals Management**

The Developer shall develop a Governmental Approvals matrix that identifies all Governmental Approvals required for the successful completion of Implementation Work and allocates responsibility for those Governmental Approvals. The City and the Developer will collaborate in considering and evaluating potential adjustments to the allocation of responsibility for Governmental Approvals for the Implementation Work. The Developer shall submit the Governmental Approvals matrix at each design submission.

(d) **Government Entity Coordination Plan**

- (i) The Government Entity Coordination Plan must describe the Developer's approach to coordinate with applicable Government Entities to obtain required information, approvals, certifications and/or permits, with the goal to successfully develop the Project and to reach Commercial Close.
- (ii) At a minimum, the Government Entity Coordination Plan must describe the Developer's approach to coordinate with:
  - (A) the Government Entities (including CPUC), the City, the Airport, and other entities to procure the Governmental Approvals that the Developer is responsible for, and where any relevant design work would be prepared by such parties, describe how the Developer will coordinate their designs with the Project design, and incorporate their designs into the design deliverables; and
  - (B) to the extent necessary and reasonably requested by the City, Government Entities involved in the Environmental Approval Process.

(e) **Stakeholder Engagement**



Community and stakeholder engagement for the Project will be a continuous and collaborative effort between the City and Developer. The purpose of the engagement is to maintain an open line of communication with the Project-adjacent stakeholders, institutional partners and general public.

The Developer must work with the City to develop an approach to community and stakeholder engagement that is inclusive and that incorporates best practices for engaging diverse constituencies and strategies to address racial equity for communities that have historically been marginalized in public processes. The outreach and engagement approach and objectives shall include the standards of the International Association of Public Participation – Spectrum of Public Participation ([https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum\\_8.5x11\\_Print.pdf](https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf)).

The Developer shall engage a communications consultant, who will work in coordination with the City to ensure that public feedback informs Project decisions and other milestones. The Developer should also engage consultants as necessary to perform outreach, environmental, and other activities as necessary to develop the Project.

The Developer shall work with the City to develop and expand on the preliminary outreach conducted by the City (refer to the Community Reach section of the Project website for a timeline of previous stakeholder engagement, past presentations and videos of the public meetings). In addition, the Developer shall review the letters received from major landholders in the Project vicinity expressing their level of interest and communication preferences.

Set out below are additional requirements related to stakeholder engagement:

- (i) all online materials, including PDFs, shall be compliant with Web Content Accessibility Guidelines (<https://www.w3.org/WAI/standards-guidelines/wcag/>);
- (ii) outreach materials shall be translated into Spanish, Vietnamese, and other languages as determined by the target audience for any individual outreach effort;
- (iii) outreach events, presentations, and public meetings shall offer interpretation into commonly spoken languages and American Sign Language at least three weeks in advance. Interpretation shall be provided if requested at least ten business days in advance for American Sign Language and five business days for all other languages; and
- (iv) the use of all written and visual materials shall comply with copyright and intellectual property law. Images shall be owned or properly licensed for use without attribution.

(f) **Public Outreach and Engagement Plan**

- (i) The Developer must develop a plan (the "**Public Outreach and Engagement Plan**") describing its approach to achieving the requirements of this Agreement with respect to public outreach and stakeholder engagement. At a minimum, the Public Outreach and Engagement Plan must:
  - (A) contemplate working in coordination with the City, identify community stakeholders and describe planned engagement with the relevant stakeholders, including but not limited to:

- Local residents
  - Neighborhood and merchant groups
  - Businesses
  - Property owners and business improvement districts
  - Faith-based institutions
  - Cultural organizations
  - Community-based organizations
- (B) identify opportunities for community stakeholders to provide input and influence the Project, including in developing alternatives and formulating solutions;
- (C) detail outreach and engagement techniques that will be used to inform the public and solicit stakeholder input that could affect the Project, including multi-channel, multilingual communications tactics, community meetings, and other outreach methods;
- (D) develop key messages for both general and specific audiences; and
- (E) establish a schedule for public outreach and engagement activities and tasks.

#### 4.7 **Subcontractor Bidding and Selection**

- (a) The purpose of the subcontractor bidding and selection work stream is to develop and implement the process to competitively procure subcontractors for the Implementation Work (that will not be self-performed), including any early works agreements if applicable and if approved by the City.
- (b) As part of this work stream, the Developer must prepare and submit to the City, for its review and approval, the Subcontractor Bidding and Selection Plan. The Developer must submit the Subcontractor Bidding and Selection Plan to the City concurrently with the PDA Management Plan and may propose a revised plan at a later stage of PDA Phase 2 to reflect any changes in its procurement approach as the Project is developed.
- (c) The Subcontractor Bidding and Selection Plan must, at a minimum:
- (i) identify the Developer's procedures for solicitation and selection of subcontractors for the Implementation Work including time periods for each step of the process, and identification of the basis of award (lowest responsive bid by a responsible bidder, or best value);
  - (ii) provide for involvement by the City in the solicitation, bidding, and selection process; and
  - (iii) identify the Implementation Work that the Developer proposes to self-perform with its own forces and how the Developer will ensure that the pricing of self-performed Implementation Work supports the financial viability of the Project;

- (iv) approach to developing the appropriate procurement documents following industry best practice for fair, transparent, best-value, and competitive procurements;
  - (v) ensure selection of proposals for fixed prices and certain completion dates consistent with the Finance Plan to ensure the Project can be successfully delivered and financed and to deliver the Project Objectives; and
  - (vi) ensure compliance with all Technical Requirements and align with all prior approvals (including Governmental Approvals), stakeholder expectations, and design reviews.
- (d) The requirements for the Subcontractor Bidding and Selection Plan described in this Section 4.7 can be modified by the Developer, with the City's written approval, depending on:
- (i) the role of the lead designer that is proposed by the Developer;
  - (ii) if the Developer intends for the Project Company to self-perform certain elements of the Implementation Work or to competitively procure them; and/or
  - (iii) the Developer's approach for construction contracting for other related components of the Project such as joint development components.

#### 4.8 **Implementation Agreement**

The Developer shall work collaboratively with the City to develop the Implementation Agreement in accordance with Article 14 (Implementation Proposal Procedures and Implementation Agreement) of this Agreement.

#### 4.9 **All Other PDA Phase 2 Work**

The Developer shall perform all other activities and PDA Phase 2 Work:

- (a) that the Developer is required to perform during PDA Phase 2 under the terms of this Agreement and that is necessary to be performed to comply with its obligations under this Agreement; and
- (b) as may be required to satisfy the conditions to NTP3 set out in Section 2.2(e) (Phased Work and Notices to Proceed) of this Agreement.

## 5. SCOPE OF PDA PHASE 3 WORK

### 5.1 Overview

- (a) Following the City's issuance of NTP3, the Developer shall prepare the Implementation Proposal in accordance with the requirements of Exhibit 11 (Form of Implementation Proposal) and Article 14 (Implementation Proposal Procedures and Implementation Agreement). The Implementation Proposal should include a firm fixed price for the Implementation Work. Other than the materials required as part of the Implementation Proposal and requests for information associated with the City's evaluation of the Implementation Proposal, no other Developer Submittals are specifically required as part of PDA Phase 3.
- (b) During PDA Phase 3, the City may be in the process of completing or advancing activities prior to Commercial Close, including: completing final environmental documentation; securing grant funds or Project financing; and, drafting or completing Third Party Agreements. The Developer shall be available to the City in support of these activities, including: attending requested meetings; responding to questions regarding previous Developer Submittals; revising prior Developer Submittals; and providing feedback on revisions to documents previously reviewed by the Developer.

### 5.2 All Other PDA Phase 3 Work

The Developer shall perform all other activities and PDA Phase 3 Work:

- (a) that the Developer is required to perform during PDA Phase 3 under the terms of this Agreement and that is necessary to be performed to comply with its obligations under this Agreement; and
- (b) as may be required to negotiate the Implementation Proposal and, if applicable, execute the Implementation Agreement and achieve Commercial Close.

## 6. **DOCUMENT CONTROLS AND MANAGEMENT OF DEVELOPER SUBMITTALS**

- 6.1 The Developer must utilize a document control system to share information, manage flow of documents and establish protocols for communications and the review and approval of Developer Submittals. The Developer must provide licenses to allow all City users to access and use the document control system.
- 6.2 The document control system must be secure, accessible to the City and include a document control log for all Developer Submittals that is also accessible to the City and records the following for each Developer Submittal:
- (a) dates and descriptions of revisions; and
  - (b) dates of their review and approval by the City.
- 6.3 The document control log must be updated at least weekly.
- 6.4 The City may provide the Developer with certain templates, artwork and style guidelines and other relevant instructions for preparing and submitting the Developer Submittals. The Developer must ensure that all Developer Submittals comply with any applicable templates, artwork or guidelines Notified to the Developer by the City.
- 6.5 The Developer must deliver to the City one electronic copy of each Developer Submittal via the document control system. The City may request hard copies of Developer Submittals, in which case the Developer shall promptly print and deliver the relevant Developer Submittal to the City.
- 6.6 The City strongly encourages the use of electronic submittals. Where hard copies are requested by the City, the Developer shall endeavor to use recycled materials and double-sided printing. The Developer is responsible for the quality management of these printed deliverables, including print quality and quantity, in accordance with the requirements of the QMP.
- 6.7 The Developer must submit Developer Submittals electronically in the original format of all products and in supplemental formats for specific types of deliverables, as follows, unless noted otherwise in this Part A or unless otherwise directed by Notice from the City:
- (a) drawing files in PDF (searchable, bookmarked, non-scanned) 34 x 22 (full size) or 17 x 11 (half size) page format, as applicable;
  - (b) e-mail, letters, spreadsheets, and charts in Microsoft Office format (Outlook, Word, Excel, PowerPoint) and PDF (searchable, non-scanned) format; and
  - (c) other documents, pictures, graphs, and like items, in PDF (searchable, non-scanned) format (TIF or JPEG as an alternative).
- 6.8 All printed materials submitted must have a corresponding electronic file submitted to the document control system.

7. **OVERVIEW OF KEY ROLES AND RESPONSIBILITIES UNDER ENVIRONMENTAL APPROVAL PROCESS**

**Table A7.1 Overview of Key Roles and Responsibilities under Environmental Approval Process**

<b>CITY (OR ITS ENVIRONMENTAL CONSULTANT OR OTHER DELEGATE)</b>	<b>DEVELOPER</b>
<b>PDA Phase 1</b>	
Prepare schedule of Environmental Approval Process activities	
Develop draft project alternatives report	Provide all required information regarding Developer's proposed Transit Solution including preparing concept designs and typical sections, geometric alignments, structure designs, and other design elements) and conducting and providing results of Site Investigations and other studies  Review and provide comments on project alternatives report, including feedback on cost and revenue assumptions used
Schedule public meetings	Support public involvement activities
<b>PDA Phase 2</b>	
Finalize project alternatives report	Provide any updates to the required information to include the Developer's proposed Transit Solution as part of the Environmental Approval Process, to reflect the final Feasibility Validation Report accepted by the City in accordance with this Agreement  Review and provide comments on final draft project alternatives report, including feedback on cost and revenue assumptions used
Update schedule of Environmental Approval activities	Develop design and conducting and providing results of studies including Site Investigations
Schedule public meetings	Support public involvement activities
Develop preliminary draft DEIS/DEIR	Review and provide comments on preliminary draft DEIS/DEIR, including feedback on cost and revenue assumptions used.
Develop final draft DEIS/DEIR	Review and provide comments on preliminary draft DEIS/DEIR, including feedback on cost and revenue assumptions used
Analyze comments and develop responses and additional analyses	Assist in analyzing comments and developing responses and additional analyses as they relate to the Transit Solution alternative
Refine LPA based on board decision	

<b>CITY (OR ITS ENVIRONMENTAL CONSULTANT OR OTHER DELEGATE)</b>		<b>DEVELOPER</b>
<b>PDA Phase 3</b>		
Develop draft FEIS/FEIR	Review and comment on draft FEIS/FEIR, including feedback on cost and revenue assumptions used	
Release final FEIS/FEIR		

## ATTACHMENTS TO PART A

### ATTACHMENT 1 – BASIS FOR SUBMITTAL OF THE INITIAL BASE CASE FINANCIAL MODEL

The Developer must adopt the assumptions in [Table A1.1](#) and [Table A1.2](#) as a basis for the Initial Base Case Financial Model and, if applicable, the Pro Forma. The Developer is required to confirm that these assumptions have been used in the Business Case and, if applicable, list these assumptions in the Implementation Proposal.

**Table A1.1 Basis for the Initial Base Case Financial Model**

Title	Contents
<b>Base Date</b>	The base date to be assumed for various inputs in the Initial Base Case Financial Model is the due date for the PDA Proposal under the RFP.
<b>Financial Closing Date</b>	The financial closing date to be assumed for the Initial Base Case Financial Model is January 31, 2025.
<b>Scheduled Substantial Completion Date for the Project</b>	The scheduled substantial completion date for the Project to be assumed in the Initial Base Case Financial Model is no more than 36 months after the financial closing date.
<b>First Operating Year</b>	First operating year to be assumed in the Initial Base Case Financial Model starts at the scheduled substantial completion date and ends 12 months later.
<b>Project Term</b>	The Implementation Agreement has an expiration date of 30 years from the scheduled substantial completion date.
<b>Currency</b>	Prices are to be submitted in United States Dollars.
<b>General Reporting Requirements</b>	The Developer may be asked to provide summary materials/reports as extracts from the Initial Base Case Financial Model to assist the City with the approval process for the Project and/or its reporting obligations during PDA Phase 2 and PDA Phase 3.



**Table A1.2 Initial Base Case Financial Model Requirements**

<b>Title</b>	<b>Contents</b>
<p><b>1. General Requirements</b></p>	<p>The Initial Base Case Financial Model requirements are as follows:</p> <ul style="list-style-type: none"> <li>a. provide financial projections (cost and revenue projections) on a monthly basis from the financial closing date to the scheduled substantial completion date for the Project and on a quarterly basis from the scheduled substantial completion date to the end of the term of the Implementation Agreement;</li> <li>b. assume fiscal year for financial projections consistent with the scheduled substantial completion date for the Project;</li> <li>c. be expressed in United States Dollars;</li> <li>d. include a print option macro;</li> <li>e. do not incorporate any password protection (or the password protection must be disclosed to the City);</li> <li>f. do not include hidden sheets or areas;</li> <li>g. must not contain any circular references or balancing numbers and no input numbers in the calculation worksheets; and</li> <li>h. use a start date for the Project that corresponds to the base date.</li> </ul>
<p><b>2. Specific Requirements</b></p>	<p>The preliminary Initial Base Case Financial Model must show the following:</p> <ul style="list-style-type: none"> <li>a. details of sources and uses of funds during construction, both in nominal and NPV terms; and</li> <li>b. details of sources and uses of funds during operations, both in total nominal and NPV terms.</li> </ul> <p>The final Initial Base Case Financial Model must, at a minimum, include the following:</p> <ul style="list-style-type: none"> <li>a. assumption schedules;</li> <li>b. all costs;</li> <li>c. taxation;</li> </ul>

Title	Contents
	<ul style="list-style-type: none"> <li>d. construction payment;</li> <li>e. revenue collection; and</li> <li>f. a scenario control sheet.</li> </ul> <p>Outputs are as follows:</p> <ul style="list-style-type: none"> <li>a. in a separate sheet, the proposed funding structure, with funding schedules that specify the expected debt financing, refinancing, and/or repayment dates, and the associated amounts of debt service (broken down by principal, interest, and other fees), in nominal terms only;</li> <li>b. the calculation of Project returns;</li> <li>c. projected income statements;</li> <li>d. projected balance sheet;</li> <li>e. cash flow projections; and</li> <li>f. comprehensive cash waterfall in order of seniority (which must be consistent with any funding term sheets).</li> </ul>
<p><b>3. Outputs</b></p>	<p>The Initial Base Case Financial Model must, at a minimum, produce the following outputs:</p> <ul style="list-style-type: none"> <li>a. Project internal rate of return, in both real terms and nominal terms, on a pre-tax and post-tax basis;</li> <li>b. return on equity and sub-debt, in both real terms and nominal terms, and a blended equity return, that incorporates all sub-senior debt finance;</li> <li>c. debt-to-equity ratio at the time of the Financial Close and at the scheduled substantial completion date, defined as total financial debt divided by total shareholders' funds;</li> <li>d. drawdown schedule, including dates and amounts for all sources of finance on a monthly basis;</li> <li>e. weighted average cost of capital at the Financial Close;</li> </ul>

Title	Contents
	<ul style="list-style-type: none"> <li>f. annual debt service coverage ratio and loan life cover ratio for each year of the debt term, with minimum and average ratios;</li> <li>g. the precise timing of equity investments and details of the phasing, if appropriate;</li> <li>h. the NPV over the term; and</li> <li>i. summary financial statements, in nominal terms only, for each year of the term, in accordance with Generally Accepted Accounting Practice (GAAP).</li> </ul>

## ATTACHMENT 2 – BASIS AND FORMAT FOR COST SUBMITTALS

The base date for all cost estimates will be the same as shown in Table A1.1 in Attachment 1 (Basis for Submittal of the Initial Base Case Financial Model).

### 1. **Design-Build Costs**

The Developer will prepare the design-build (DB) costs addressing the content requirements set out in this Attachment 2.

#### 1.1 **Estimate Methodology**

The Developer must provide a narrative explaining the cost estimating methodology and cost estimate classification system to be used for the PDA Work based on the AACE International recommended practice No. 56R-08 (most recent edition). All terminology shall be consistent with AACE International Recommended Practice 10S-90: Cost Engineering Terminology (most recent edition).

The estimate structure will clearly identify the following cost elements:

- direct costs, including labor, materials, and equipment;
- general conditions and general requirements, design costs, insurance, and other soft costs;
- escalation (incl. the methodology for estimating escalation – as a minimum, escalation shall be estimated and provided for DB costs to the mid-point of the construction phase); and
- contingency, subject to the limitations set out in Section 1.7.

#### 1.2 **Scope**

Provide an overview of the scope of the Project as presented in the technical feasibility section of the Feasibility Validation Report and how the estimates capture the scope. The estimate shall clearly state that it is for a full turn-key delivery of the Project, including all elements of the Transit Technology (e.g., rolling stock/vehicles, systems software, ancillary equipment, etc.) and the Transit Infrastructure necessary to achieve a fully-functioning Transit Solution.

#### 1.3 **Construction Approach**

Provide an overview of the Project's construction process and how the Developer will manage the Project to scope, schedule, and budget.

#### 1.4 **Implementation Work Schedule**

Provide a critical path schedule and narrative explaining key milestones, critical path, and schedule logic that support the Project cost. Include a narrative explaining how the Developer will manage construction schedule risks through final acceptance of the Project. The narrative shall address, among other topics, the process for operational readiness, and project activation, culminating in operational readiness.

1.5 **Basis of Pricing and Direct Costs**

Provide a narrative explaining how the estimates of direct costs were developed and what they are based on. Direct costs shall not include contingency, escalation, etc.

1.6 **General Conditions/General Requirements, Design Costs, Insurance and other Soft Costs**

Provide a narrative explaining how the general conditions/general requirements were developed and what they are based on, as well as all other "Below-the-Line" costs including insurance, design, and other soft costs.

1.7 **Construction Risk, Risk Register and Contingency**

Provide an approach to Project risk management and analysis of the Project's risks based on the then-current Risk Register. Explain how contingency is calculated and managed based on the proposed quantitative risk analysis method – the narrative should distinguish between "design contingency" and "construction contingency".

Include contingency in the Project cost, as applicable to the applicable Project component.

The approach to determine the contingency line items in the cost submittal forms shall be a bottom-up, risk-based estimate using industry-standard risk analysis methods. Present the Risk Register, risk analysis method and assumptions, and quantitative results of the risk analysis, with a clear linkage to the contingency line items. Proposals shall not have contingency based on a percentage of the direct cost of work. Provide a narrative of the proposed approach to risk mitigation.

1.8 **Detailed cost estimate documentation**

Basis of estimate report:

- in narrative form; and
- addressing the content and requirements set out in this [Attachment 2](#).

Detailed estimate based on the UNIFORMAT II classification system (unless otherwise agreed by the City):

- provide in electronic format only; and
- minimum level of detail is UNIFORMAT II Level 5.

2. **O&M Costs**

The Developer must prepare the O&M costs addressing the content requirements set out in this [Attachment 2](#). Include full details of the annual O&M costs expected to be incurred after Financial Close.

2.1 **Estimate Methodology**

Provide a narrative explaining the cost estimating methodology. The estimate structure will clearly identify the following cost elements over the full duration of the Implementation Agreement term:

- Operational costs (OpEx)
- Routine maintenance costs (OpEx)
- Capital maintenance costs (Maintenance CapEx)

Maintenance CapEx refers to capital expenses necessary to maintain the operating capacity or asset base of the Project on a life-cycle basis, inclusive of capital expenses necessary for any handback requirements.

## 2.2 **Schedule for Capital Maintenance**

Provide a schedule narrative explaining the approach and assumptions for the schedule of capital maintenance expenditures.

## 2.3 **Basis of Pricing**

Provide a narrative explaining how the costs were developed and what they are based on. Present the O&M costs in constant dollars as of the base date.

## 2.4 **Project Maintenance Risk, Risk Register and Contingency**

Provide an analysis of the Project's O&M risks based on the then-current Risk Register. Explain how contingency is calculated and managed based on the proposed quantitative risk analysis method. Include contingency within the estimates, as applicable to the respective Project components. The approach will be a risk-based estimate using industry-standard risk analysis methods. Present the Risk Register, risk analysis method and assumptions, and quantitative results of the risk analysis. Include a proposed risk mitigation strategy.

## 2.5 **Detailed cost estimate documentation**

Basis of estimate report:

- in narrative form; and
- addressing the content and requirements set out in this [Attachment 2](#).

Detailed estimate based on the UNIFORMAT II classification system (unless otherwise agreed by the City):

- provide in electronic format only; and
- minimum level of detail UNIFORMAT II Level 5.

## 3. **Allowed Costs**

The Developer will develop the financial submittals for the its Allowed Costs in accordance with [Exhibit 12 \(Allowed Costs\)](#).

**PART B: KEY PERSONNEL FOR PDA WORK**

<b>POSITION TITLE</b>	<b>PRIMARY DUTIES</b>	<b>FUNCTIONS/ PERIOD DURING WHICH POSITION IS TO BE FILLED</b>	<b>MINIMUM YEARS OF PROFESSIONAL EXPERIENCE (1)</b>
<b>Developer Project Director</b>	The Developer Project Director shall be the person principally responsible for overseeing the contractual relationships with the City and the Developer's team. The Developer Project Director shall be an individual with minimum 10 years of project development/delivery experience with at least 5 of which as an infrastructure developer.	PDA Phase 2 and PDA Phase 3	10
<b>Developer Project Manager</b>	The Developer Project Manager shall be the person principally responsible for managing the day-to-day activities of the Project on a full-time basis, including ongoing communications and coordination with the City and acting as the main point of contact between the City and the Developer. The Developer Project Manager shall be an individual with minimum 8 years of project development/delivery experience with at least 3 of which as an infrastructure developer.	PDA Phase 2 and PDA Phase 3	8
<b>Equity Member's Project Principal</b>	The person each Equity Member proposes as their representative principally responsible for that Equity Member's role on the	PDA Phase 2 and PDA Phase 3	15

POSITION TITLE	PRIMARY DUTIES	FUNCTIONS/ PERIOD DURING WHICH POSITION IS TO BE FILLED	MINIMUM YEARS OF PROFESSIONAL EXPERIENCE (1)
	development team. If the Equity Member's Project Principal will also serve as the Developer's Project Director, that Equity Member's Project Principal must have a minimum of 20 years of professional experience.		
<b>Transit Technology Provider's Project Manager</b>	The Transit Technology Provider's Project Manager shall be the person responsible for coordinating the different designing, engineering and implementation workstreams in the scope of the Transit Technology provider. This individual may be a transit technology engineer and must have demonstrated experience managing and coordinating the work of multi-disciplinary engineering teams to design within a budget as well as managing and delivering the Transit Technology in coordination with the Transit Solution.	PDA Phase 2 and PDA Phase 3	15
<b>Transit Infrastructure Designer Principal-in-Charge</b>	The Transit Infrastructure Designer Principal-in-Charge shall be the person responsible for the overall performance and resourcing of design and related contract administration activities on behalf of the Transit	PDA Phase 2 and PDA Phase 3	20



POSITION TITLE	PRIMARY DUTIES	FUNCTIONS/ PERIOD DURING WHICH POSITION IS TO BE FILLED	MINIMUM YEARS OF PROFESSIONAL EXPERIENCE (1)
	Technology designer, as well as for facilitating the integration of multiple design disciplines, integration with the Transit Technology, and designing within a budget, managing interactions with City representatives and user groups (as applicable for design reviews and related activities), and for coordination with the Developer Project Director.		
<b>Transit Infrastructure Designer's Design Manager</b>	The Transit Infrastructure Designer's Design Manager shall be the person principally responsible for managing the day-to-day activities of the Project's Transit Technology on a full-time basis, including ongoing communications and coordination with the Developer and the Transit Technology provider, and acting as the main point of contact with the Developer. This person must have demonstrated experience in managing multi-disciplinary design teams; managing integration of transit infrastructure and technology, of the same type or similar to those of the proposed Transit Solution; managing project construction and life-cycle budgets and schedules; designing within a	PDA Phase 2 and PDA Phase 3	15

POSITION TITLE	PRIMARY DUTIES	FUNCTIONS/ PERIOD DURING WHICH POSITION IS TO BE FILLED	MINIMUM YEARS OF PROFESSIONAL EXPERIENCE (1)
	budget; and managing and delivering building sustainability objectives.		
<b>Lead Finance Manager</b>	The Lead Finance Manager shall be the person responsible for coordinating the different funding and financing workstreams as outlined in the financing plan. This individual may have a BA degree or graduate degree and must have demonstrated experience managing and coordinating the work of multi-disciplinary teams to design and implement the financing plan.*	PDA Phase 2 and PDA Phase 3	15
<b>Lead Scheduler</b>	The Lead Scheduler shall be the person responsible for coordinating the different scheduling workstreams for the Project and for the Project's implementation (i.e., final design, permitting, and construction). This individual must have demonstrated experience in project scheduling.	PDA Phase 2 and PDA Phase 3	15
<b>Lead Cost Estimator</b>	The Lead Cost Estimator shall be the person responsible for coordinating the different cost estimate workstreams for the Project and for the Project's implementation (i.e., final design,	PDA Phase 2 and PDA Phase 3	15

POSITION TITLE	PRIMARY DUTIES	FUNCTIONS/ PERIOD DURING WHICH POSITION IS TO BE FILLED	MINIMUM YEARS OF PROFESSIONAL EXPERIENCE (1)
	<p>permitting, and construction). This individual must have demonstrated experience in cost estimating, cost control, and risk identification and mitigation.</p>		
<p><b>Lead Construction Manager</b></p>	<p>The Lead Construction Manager shall be the person responsible for the performance and resourcing of pre-construction management services, in coordination with the Lead Scheduler and the Lead Cost Estimator, such as cost control and cost estimating, schedule certainty, risk identification and mitigation, and constructability assessment; the management of interactions with City representatives; and coordination with the Developer Project Manager. During the PDA Phase, this person would provide guidance on controlling construction costs to fit within the Project's budget, schedule assessment and validation to fit within the project schedule, value engineering, and risk management measures, working with the lead designer, the Transit Technology provider, and the O&amp;M Provider.</p>	<p>PDA Phase 2 and PDA Phase 3</p>	<p>20</p>

POSITION TITLE	PRIMARY DUTIES	FUNCTIONS/ PERIOD DURING WHICH POSITION IS TO BE FILLED	MINIMUM YEARS OF PROFESSIONAL EXPERIENCE (1)
<b>O&amp;M Provider's Manager</b>	The O&M Provider's Manager shall be the person responsible for the development of and resourcing for the Project's operations and maintenance program and life-cycle cost estimates; the management of interactions with City representatives; and coordination with the Developer Project Manager. During the PDA Phase, this person would provide guidance on life-cycle cost estimates that influence design decisions made by the lead designer, the Transit Technology Provider's Project Management, and work with the Developer to develop the scope and documentation for the Project's asset management program.	PDA Phase 2 and PDA Phase 3	15

<sup>(1)</sup> The City may, at its sole discretion, waive the minimum years of professional experience requirements, or any other requirements set out in this Part B.

**PART C: PROJECT PERFORMANCE AND TECHNICAL REQUIREMENTS**

**1. OPERATIONAL PERFORMANCE REQUIREMENTS**

1.1 **Overview.** This Section 1 contains the following operational performance requirements:

- (a) System Operations (see Section 1.3); and
- (b) User Experience (see Section 1.4); and
- (c) System Monitoring and Other KPIs (see Section 1.5).

1.2 Additional or alternate operational performance requirements may be incorporated in any Validation Amendment.

1.3 **System Operations**

#	REQUIREMENT/METRIC	DESCRIPTION	THRESHOLD (MINIMUM, EXCEPT WHERE NOTED)
1.	Complies with applicable design standards, codes, and regulations for public transit and automated people mover systems as it pertains to "Passenger Comfort, Ride Quality" (7.7.3), which include vehicle acceleration and "jerk" limits, maximum sustained acceleration, interior noise levels - see note (a)	Comply with relevant portions of Automated People Mover Standards, ANSI/ASCE/T&DI 21-21; NFPA 130; ADA	Must comply, or provide justification or alternative technical concepts
2.	Total travel time (minutes) from ride request at origin station to arrival at destination station: Diridon station to Airport Terminal B stations – see note (b)	Travel time including average passenger wait time, dwell time at stations, and in-vehicle time	11 minutes (maximum)
3.	Total travel time (minutes) from ride request at origin station to arrival at destination station: Airport Terminal B station to Terminal A stations – see note (c)	Travel time including average passenger wait time, dwell time at stations, and in-vehicle time	6 minutes (maximum)
4.	Daily span of service (hours) weekday and weekend/holidays	Total hours in an operating day	20 hours
5.	Peak hour line capacity (persons per hour per direction (pphpd)) – Diridon to Airport Terminal B and between Terminals A and B – see note (d)	Peak hour capacity. Include specification regarding percentage of seated passengers	1,500 pphpd (minimum)
6.	Peak hour line capacity, (persons per hour per direction (pphpd)) – Diridon to future expansion segment (with system expansion) – see note (e)	Peak hour capacity. Include specification regarding percentage of seated passengers	4,500 pphpd (minimum)

7.	Headways (seconds)	Time between vehicles. Influences capacity and rider wait times	5 minutes (maximum), all times of day
8.	Passenger wait time (minutes), throughout the span of service on weekdays and weekends/holidays	Measurement of the time from when the passenger requests a ride or arrives at the station (whichever is earlier) until they board the vehicle	3 minutes (maximum), 99% of trips

- a) The applicable design standards are:
  - a. Automated People Mover Standards, ANSI/ASCE/T&DI 21-21
  - b. Standard for Fixed Guideway Transit and Passenger Rail Systems, NFPA 130
  - c. Americans with Disabilities Act (ADA) Standards for Transportation Facilities, US Department of Transportation as well as all applicable regulations and guidelines
- b) Assume an alignment distance from Diridon to Airport Terminal B stations of 3.0 miles. Travel time includes average passenger wait time, dwell time at stations, and in-vehicle time.
- c) Assume an alignment distance from Airport Terminal B to Terminal A stations of 1.0 miles. Travel time includes average passenger wait time, dwell time at stations, and in-vehicle time.
- d) For Airport Connector peak hour line capacity:
  - a. 1,500 pphpd minimum
  - b. 1,000 pphpd seating minimum. For standees, must assume minimum of 5.4 sq ft/standee pax, excluding seating areas (4.5 sq ft/seat, per ASCE 21-21)
  - c. If assuming standees, must meet ASCE 21-21 standards for passenger comfort for vehicles with standees and describe comfort level and accommodations for standing passengers
- e) For system expansion peak hour line capacity:
  - a. 4,500 pphpd minimum
  - b. 1,800 pphpd seating minimum. For standees, must assume minimum of 4.3 sq ft/standee pax, excluding seating areas (4.5 sq ft/seat, per ASCE 21-21)
  - c. If assuming standees, must meet ASCE 21-21 standards for passenger comfort for vehicles with standees and describe comfort level and accommodations for standing passengers

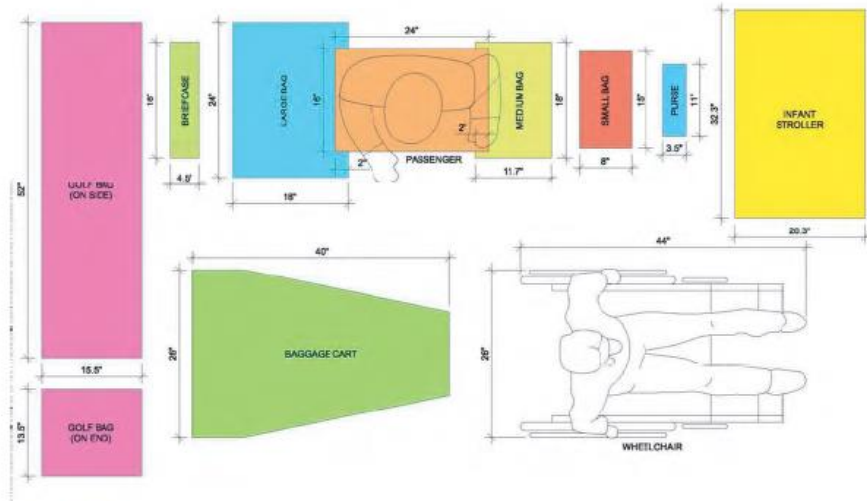
1.4 **User Experience**

#	REQUIREMENT/METRIC	DESCRIPTION	THRESHOLD (MINIMUM, EXCEPT WHERE NOTED)
9.	Meet comfort standards for vehicle ride	Meet ASCE 21 APM standards for acceleration/deceleration and alignment curves	Must comply, or provide justification or alternative technical concepts
10	Fare payment shall be integrated with payment systems for surrounding transit networks	The Metropolitan Commission's Clipper transit payment system State's "California Mobility Marketplace"	Must comply
11.	Mitigation of irregular operations caused by disruptions	Irregular Operation mitigations (e.g., announcements, signage, wayfinding, Customer Service Agent placement)	Must comply, or provide justification or alternative technical concepts
12.	All vehicle interiors shall comply with ADA accessibility requirements and accommodate at least one wheelchair – see note (a)	Incorporate Universal Design including, at a minimum, ADA requirements	Must comply, or provide justification or alternative technical concepts
13.	Minimum per vehicle capacity – see note (b)	Number of seated adult riders per vehicle, excluding luggage and excluding ADA considerations ( <i>see #12 above</i> )	4 (minimum)
14.	Users must be able to use the service without a smartphone app	While a smartphone app ride request option may be a beneficial user feature, users without smartphones must be able to use the system. Note that fixed headway systems inherently meet this requirement	Must comply
15.	Fare system must be integrated into the regional low-income reduced fare program	The Metropolitan Commission is currently piloting a regional system for providing reduced fare access to transit for low-income residents of the Bay Area	Must Comply

a) Code of Federal Regulations, Part 37 – Transportation Services for Individuals with Disabilities (ADA)



- b) Guidebook for Planning and Implementing Automated People Mover Systems at Airports (Airport Cooperative Research Program (ACRP) Report 37, 2010) provides passenger space allocations. Each vehicle must be able to accommodate at least one wheelchair. Wheelchair, baggage carts (for travel between terminals) and luggage, can vary in size.



Source: Lea+Elliot, Inc.

Figure 8.4.2-1. Passenger space allocations.

1.5 **System Monitoring and Other KPIs**

#	REQUIREMENT/METRIC	DESCRIPTION	THRESHOLD (MINIMUM, EXCEPT WHERE NOTED)
16	Percent of services operated "on-time"	Measure of reliability, benchmark would consist of the average travel time from (2) and (3)	95% of trips completed within 1 min of travel time threshold
17	Customer service (score)	Specification to maintain level of service. Positive overall monthly score based on random joint survey between the City and the Developer	80%
18	Vehicle and station cleanliness (score)	Cleanliness of vehicles and stations. Positive overall monthly score based on random joint survey between the City and the Developer	80%
19	Restroom availability and cleanliness (score)	Availability and cleanliness of restrooms. Positive overall monthly score based on random joint survey between the City and the Developer	80%
20	Vehicle and station comfort (score)	Rider comfort on vehicles and in stations. Positive overall monthly score based on random joint survey between the City and the Developer	80%
21	Availability and quality of ancillary services (score)	Availability and quality of Wi-Fi, traveler information, wayfinding, convenience services. Positive overall monthly score based on random joint survey between the City and the Developer	80%
22	Service availability	Percentage of scheduled trips operated per day	To be incorporated in any Validation Amendment
23	Safety incidents per 1,000 vehicle service miles	Rate of safety incidents (evacuation of passengers, derailment, property damage, injury or fatality, application of emergency brakes)	To be incorporated in any Validation Amendment

2. **DESIGN REQUIREMENTS**

2.1 **Overview.** This Section 2 contains the design requirements for the following elements of the Transit Solution:

(a) Stations (see Section 2.3).

2.2 Additional or alternate design requirements for stations and other elements of the Project, such as guideway, maintenance facilities, utility relocations, vehicles and systems (in each case, to the extent applicable to the Transit Solution), will be incorporated in any Validation Amendment.

2.3 **Stations**

#	REQUIREMENT/METRIC	DESCRIPTION	THRESHOLD (MINIMUM, EXCEPT WHERE NOTED)
24	Station walkshed - the maximum walk distance (miles) from platform to the closest security checkpoint for each airport terminal and to Diridon Caltrain and BART rail platforms	Stations should be short distances to airport terminals and other transit	800 feet (maximum)
25	Comfort and safety of station access path of travel	Primary paths of travel to stations from major trip generators (airport security, baggage claim, Caltrain rail platforms, BART station platforms), including ADA accessible paths of travel, must not cross a roadway/drive aisle or other modal conflict point at-grade. For Diridon Station this requirement can be satisfied under the assumption that the Diridon Integrated Station concept layout is built out.	Must comply or provide alternative solution with similar pedestrian comfort
26	Platform crowding at stations (sf per person)	Square feet per person for LOS	15 ft2 per person
27	Availability and walk distance, from station entrance to vehicle boarding including any form of vertical or horizontal conveyance, in stations with multiple levels	Convenience of vertical circulation facilities	500 feet if stations have multiple levels
28	Stations and vehicles must meet federal accessibility standards and comply with the City's policies for universal access and design	Incorporate Universal Design including, at a minimum, ADA requirements	Must comply
29	Station must provide level boarding for passengers – see note (a)	Passengers should be able to board vehicles with minimal horizontal or vertical gap or steps	Must comply

a) FTA Circular 4710.1 – Americans with Disabilities Act Guidance – with level boarding, the platform height is coordinated with the height of the vehicle floor and gaps are minimized, ideally allowing persons who use wheelchairs to board independently. 38.95(c) and 38.125(c)“ (§ 37.42(f)).

### 3. **INTERFACE REQUIREMENTS**

3.1 Management of interfaces is critical to the success of the Project.

3.2 During PDA Phase 2, the Developer will be required to participate in Working Group meetings to identify relevant Project interfaces. Following identification of interfacing projects or assets, the Developer will work in conjunction with the City at Working Group meetings to identify key interface elements and determine an approach to managing the interfaces. Interfacing elements may include:

- (a) landscaping;
- (b) traffic signals;
- (c) transit infrastructure;
- (d) signage;
- (e) power;
- (f) streetlighting;
- (g) construction staging and storage;
- (h) design and construction coordination; and
- (i) schedule coordination and access.

3.3 The Developer shall:

- (a) develop a design and construction interface management plan for construction integration;
- (b) develop design and construction interface matrices for systems integration; and
- (c) produce a comprehensive test program to demonstrate successful integration of the Project.

3.4 Further interface requirements will be incorporated in any Validation Amendment.

**PART D: ALIGNMENT CONSTRAINTS**

The following table outlines the technical requirements associated with constraints for route alignment.

**Table D.1 Alignment Constraints**

CONSTRAINT		DESCRIPTION	CRITERIA
Design Standards, Regulations and Codes			
Design Standards		Appropriate design standards for the technology have been used.	Design standards have been clearly defined.
Regulations and Codes		Regulations and codes are clearly identified based on the technology used and regulatory authority requirements.	Regulations and code requirements are clearly outlined, with any exceptions clearly noted.
Public and Private Parcels			
Private ROW		Eliminate or minimize the impacts and land-take for private / 3rd party stakeholders. Identify extents of land-take on private ROW.	Identification of impacts to private rights-of-way.
Public ROW		Identify the extents of land required within the public ROW. Identify mitigation measures for any operational or physical impacts.	Identification of impacts to public rights-of-way.
Horizontal or Vertical Clearance Requirements			
Height Impacts		Identify sections of alignment that are at-grade / below-grade / elevated. Ensuring that all physical and operational height requirements are considered.	Any structures and operating height limits are clearly defined and within the height restriction guidance, including airspace protection surfaces.
Alignment and Station Locations			
Station Locations (Terminus)		Stations located to minimize walking distances for convenient access and minimizing the number of vertical transfers. Diridon station provides convenient access to future services including CAHSR, Caltrain / Amtrak / ACE, VTA light rail, and bus services. The location of the station must consider current	Clearly identified station terminus locations, with connections to transfer services.

CONSTRAINT	DESCRIPTION	CRITERIA
	terminus site layout and be flexible enough to integrate into future Diridon Integrated Station layout of the terminus site.	
Station Locations (Intermediate)	Number and location of intermediate stations and areas / markets served.	Clearly identified intermediate stations.
Construction/ Staging/Maintenance	Locations of any staging/maintenance areas. This should include requirements during construction and operations.	Clearly identified staging and maintenance areas.
Station Parking	Parking for the public at terminus stations will not be required. Parking for operational services should be clearly identified. Operational parking includes emergency service vehicles, goods equipment access and maintenance and service vehicles.	Operational service vehicle parking locations clearly identified.
Public Parks and Open Spaces	Minimize impacts on public parks and open spaces. Any impacts to public parks and open spaces are mitigated.	Identify areas of alignment that impact public parks or open spaces.
Utilities/Easements		
High Voltage Transmission Lines	Avoid impacts to HV transmission lines, or demonstrate suitable mitigations.	Identify crossings of High Voltage transmission lines including demonstrating adequate clearances as required.
Sanitary Sewer System	Avoid impacts to major sanitary sewer networks.	Mitigations shown for any impacts to Sanitary Sewer network.
Storm Sewer System	Avoid impacts to major storm sewer networks.	Mitigations shown for any impacts to Storm Sewer network.
Major Gas Pipelines	Minimize the impacts to major gas pipelines, ensuring that pipelines can remain 100% operational.	Mitigations shown for any impacts to gas pipelines.
Major Fiber Comms	Minimize the impacts to fiber communications networks.	Mitigations shown for any impacts to fiber networks.
Fuel Pipelines	Eliminate impacts to airport fuel pipelines, ensuring that pipelines can remain 100% operational.	Design clearly mitigates any impacts to fuel pipelines to ensure 100% operation.

CONSTRAINT	DESCRIPTION	CRITERIA
Airport Information		
Airport Utilities	Any development in airport ROW will need to consider impacts to all utility lines and applicable restrictions on Airport Boulevard, including City's Riparian Corridor (see rivers, creeks and open water) and existing easements such as PGE and Valley Water's Guadalupe River Easement.	Design that clearly mitigates all impacts to airport property.
Health and Safety Restrictions	The proposed alignment must adhere to all FAA regulations, guidance and grant assurances on airport property (which includes all of Guadalupe Gardens).	Alignments must comply with the FAA's Height restrictions for development on-airport property, avoidance of safety surfaces (including the Runway Protection Zone-RPZ) must be considered (or a below-grade or tunnelled alignment when passing through the RPZ).
Light Emissions	Alignment needs to consider possible light emission and glare from any portion of the proposed infrastructure, including vehicles.	Provide suitable mitigations to avoid light emission or glare from infrastructure.
Frequency Emitting Devices	Project needs to consider the impacts of frequency emitting devices and technologies near the airport.	Project needs to demonstrate adherence to appropriate regulations and guidance including but not limited to Advisory Circular 150/5345-49D Specification L-854, Radio Control Equipment.
Consistency with City Master Plans	Alignment needs to be consistent with other city master plans.	Project demonstrates consistency with The Airport Master Plan, Airport Layout Plan, Diridon Integrated Station Concept Plan, and the Guadalupe Gardens Master Plan, including any amendments needed, prior to construction of the Airport Connector project.
Environmental Impacts	The project will need Phase 1 / Phase 2 environmental assessment by the environmental consultant for any areas the Guadalupe Gardens are affected by the alignment.	Identify needs for environmental assessment for areas impacted by the proposed alignment.



CONSTRAINT	DESCRIPTION	CRITERIA
NEPA Environmental Impacts	For any part of the alignment on airport property it will require NEPA environmental assessment / documentation and coordinated with FAA.	Project will demonstrate NEPA environmental assessment / documentation.
Other		
Known Contaminated Sites	Alignment avoids contaminated sites or proposes mitigations. Area of note includes Guadalupe Gardens area which has a history of contaminated soils.	Project avoids any known contaminated sites in the area.
100 Year Flood Zone	Avoid or demonstrate suitable mitigation for alignments that pass through 100-year flood zone.	
Rivers, Creeks and Open Water	Minimize land take adjacent and within rivers, creeks and areas of open water.	Design avoids or mitigates impacts to rivers, creeks and open water. Need to avoid Guadalupe Riparian Corridor and Valley Water Easements along Guadalupe River.