REQUEST FOR INFORMATION

NEW TRANSIT OPTIONS **AIRPORT-DIRIDON-STEVENS CREEK** TRANSIT CONNECTION

RFI 2019-DOT-PPD-4

September 30, 2019

City of San José
Department of Transportation, 8th Floor
200 E. Santa Clara Street
San José, CA 95113

ATTENTION: Maricela Avila

Dear Maricela Avila:

Re: RFI 2019-DOT-PPD-4, New Transit Options: Airport-Diridon-Stevens Creek Transit Connection

Plenary Glydways Transit Solutions ("PGTS") is pleased to submit a response to the Request for Information ("RFI") relating to the New Transit Options: Airport-Diridon-Stevens Creek Transit Connection.

PGTS is a team that comprises Plenary as the developer, equity provider and long-term project manager for the City; Glydways, which will be deploying its flexible group or personal rapid transit solution for the identified corridors; and, the highly experienced global and Bay Area constructors Webcor and Obayashi to deliver the facilities. Our team would add additional expertise as required, should the project be taken beyond the RFI stage.

Our proposed system is an innovative ATN-based solution that brings connectivity to the City of San José, specifically from Diridon station to San José International Airport (Airport Connector), and from Diridon Station to De Anza College (Stevens Creek Line). By merging off-the-shelf autonomous technologies with established construction techniques, the PGTS solution seeks to offer the City a sustainable, adaptable, and incrementally scalable pathway to deliver transit that will win over pedestrians, bicyclists, drivers, and others alike. As further detailed in the following RFI response, we believe this system provides significant benefits to the City, including lower cost for delivery and operations, and a more personalized, yet still public transit option.

We are also proposing to deliver the project via a design, build, finance, operate, and maintain ("DBFOM") model, using a mix of farebox revenues and availability payments. Led by Plenary Group, North America's preeminent Public-Private Partnership ("P3") infrastructure developer and manager, we are able to bring the most experience in developing and delivering public infrastructure to this project, and believe the DBFOM model will provide the best value for money to the City.

Additionally, we have brought Webcor/Obayashi to the team, who will leverage the strengths of their combined global expertise in vertical construction and horizontal infrastructure transportation projects to deliver this project. Obayashi (parent company of Webcor) has constructed hundreds of miles of transportation projects worldwide under the P3 model, and together Webcor/Obayashi has completed significant transportation/infrastructure projects in California.

We recognize that new connectivity solutions of this magnitude rely not only on garnering support from the public and public sector, but also the endorsement and partnership of private stakeholders. With that goal in mind, we have begun engaging major employers in the area, such as Google, to share our vision of collaborative connectivity and how they can play a part in making history. Google has expressed particular interest in this solution and we continue to progress conversations for the two routes discussed in this RFI, as well as additional transit options.

With this RFI, we see a bold desire to move beyond the dated transportation solutions from the past to explore new ideas that promote affordable mobility and freedom from congestion. We applaud the courage it takes to create an equitable, sustainable, and enjoyable life for all who work and live in the region. We hope that the ideas presented within this RFI can help San José open a new path of intelligent urban development and connected mobility, and that the ideas presented in our response can play a part in shaping the City's dynamic future.

Sincerely,

PLENARY GLYDWAYS TRANSIT SOLUTIONS

Eliot Jamison
Senior Vice President

CONFIDENTIAL, PROPRIETARY AND PRIVILEGED INFORMATION INDEX

Below are a list of locations within this response that may contain confidential, proprietary, or privileged information regarding PGTS's solution that are exempt from public disclosure based on California Public Records Act, section 6250 et seq. Such information shall be used or disclosed only for the purposes described in this RFI. The government may use or disclose any information that is not appropriately marked or otherwise restricted.

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A

RESPONDENT PROFILE

A. RESPONDENT PROFILE

PLENARY GLYDWAYS TRANSIT SOLUTIONS	
(i) Legal Name of the Company	Plenary Glydways Transit Solutions ("PGTS")
(ii) Address	555 West 5th Street, Suite 3150 Los Angeles, California 90013
(iii) Legal Status	Unincorporated Joint Venture
(iv) Contact Name and Title	Eliot Jamison, Senior Vice President
(v) Contact Email Address	Eliot.Jamison@plenarygroup.com
(vi) Contact Phone Number	(424) 653-5186
(vii) High Level Description of Concept	Plenary Glydways Transit Solutions is proposing a phased, ATN-based transportation solution that brings mass transit connectivity to the City of San José, specifically from Diridon Station to San José International Airport (Phase 1 - Airport Connector), and from Diridon Station to De Anza College along the Stevens Creek Blvd corridor (Phase 2 - Stevens Creek Line). The system consists of fleets of electric vehicles operating on-demand on a dedicated, paved, bicycle-lane-sized rights-of-way. The operating space can be created from repurposed existing roads or built anew in a dedicated structure. The vehicles are autonomous and independent yet orchestrated by local and central control as a “system of systems” to provide high capacities (up to 10,000 persons/hour in each direction) with low unit economics not present today in the mass transportation industry. A Glydways system accomplishes this with pragmatic, existing, off-the-shelf, technologies and construction techniques with a clear path towards regulatory certification over the next 24 months.
(viii) High Level Description of Business Plan	PGTS propose a Design, Build, Finance, Operate, and Maintain (“DBFOM”) structure, where PGTS would take on full responsibility for the design and construction, operations and maintenance, as well as financing of the project for a 30 to 40 year term. Ownership of the system will remain with the City at all times. Financing will consist of a mix of debt and equity, providing certainty of delivery, as well as a focus on delivering a system that will operate for the long-term. The PGTS team would be reimbursed by the City for its upfront design and construction financing, as well as for operations and maintenance via a combination of ridership revenue, other project revenue streams and recurring availability payments for the term of the agreement.

B

PROPOSED CONCEPT

B. PROPOSED CONCEPT

(i) High-Level Description of PGTS' Concept

Plenary Glydways Transit Solutions ("PGTS") is proposing a phased, ATN-based transportation solution that brings mass transit connectivity to the City of San José, specifically from Diridon Station to San José International Airport ("SJC") as Phase 1, and from Diridon Station to De Anza College along the Stevens Creek Blvd corridor as Phase 2.

This solution consists of narrow, autonomous, battery-operated vehicles traveling on dedicated, bicycle lane-sized rights-of-way. Conceived as a “system of systems,” Glydways delivers high capacity mass transit, up to 10,000 persons per hour per direction ("pphd"), through a given corridor. Orchestrated through its local and central control systems, autonomous vehicles are guided along dedicated corridors to deliver riders in a small electric vehicle directly from originating boarding zone to destination boarding zone, with no stops along the way. The low unit economics of this system allows for scalable incremental shared vehicle implementation, as well as the option for a private journey experience that will entice riders to opt out of driving or reliance on Transit Network Companies (“TNCs”).

Glydways is designed using bicycle lane sized rights-of-way and flexible implementation in mind to attempt to avoid many of the cost, EIR and schedule pitfalls of large mass transportation systems. The Glydways system delivers a scalable transit solution by leveraging existing, off-the-shelf technologies and established construction techniques. Additionally, Glydways has proactively identified a path towards regulatory certification framework to facilitate execution. As a mass transit solution, Glydways will not only allow a city to meet the transit demand of today, but also prepare a pathway for future growth along a corridor.

Concept Introduction

The Automated Transit Network ("ATN") concept, in which fully-automated vehicles on exclusive, grade-separated guideways providing on-demand, primarily non-stop, origin-to-destination service over an area network, has been around since the 1950s. Notable past examples include the MorganTown PRT system (1975) and UltraPRT Heathrow System (2011).

However, long held back by technological limitations, ATNs have not been able to play a significant role in our national transportation framework. With the advent of autonomous EV technology and low cost computers/ computing, an opportunity to develop an ATN “system of systems” with the potential to empower communities is now possible.

Glydways is a dynamic ATN solution that offers both group rapid transit ("GRT") and personal rapid transit ("PRT") services within the same system. Glydways unit economics allows [redacted] for high capacity, [redacted] to those customers who would otherwise choose TNCs over existing mass transit options.

As a holistic ATN solution, Glydways provides substantially greater flexibility to city planners and offers distinct benefits to connected communities. The successful implementation of a Glydways system will move larger numbers of riders from place to place more comfortably, sustainably, and affordably than ever. It will also greatly reduce private automobile vehicle miles traveled and invigorate the entire VTA transit system. By delivering scalable connectivity, Glydways will empower the City of San José to grow economically and culturally, and to further cement Silicon Valley’s legacy as a place where big challenges are solved by bold innovations.

Route Overview and System Capabilities

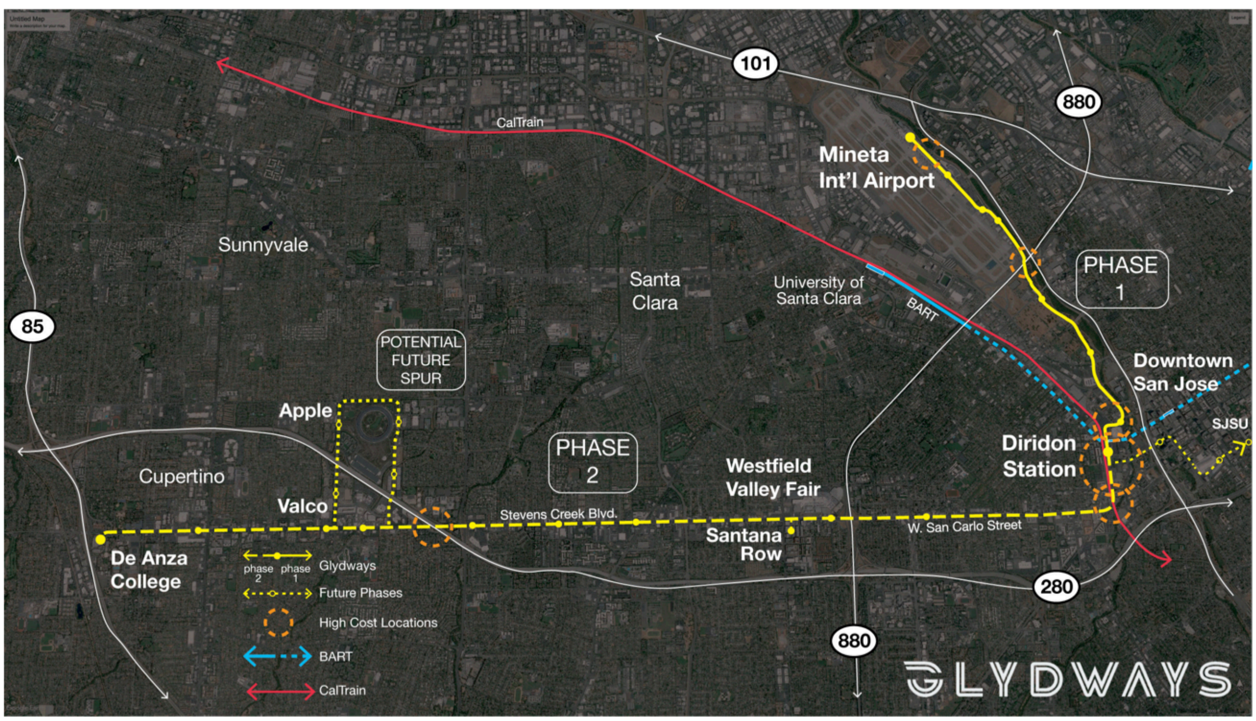
The system proposed by PGTS as a response to San Jose's RFI comprises of two phases: Phase 1 connects Diridon station to SJC Mineta Airport (Airport Connector), and Phase 2 connects Diridon Station to De Anza College, along the Stevens Creek Blvd corridor (Stevens Creek Line).

Though the system is capable of providing significantly higher ridership capacity (up to 10,000 persons/hour in each direction), for the purposes of this RFI, the performance/capacity model herein is based upon the following assumptions:

1. System capacity target of 1,250 ppl/hr for Phase 1 Airport Connector, between Diridon Station and San José International Airport.[1]
2. System capacity target of 5,000 ppl/hr for the Stevens Creek Line, between Diridon Station and De Anza College along the Stevens Creek Blvd corridor; [2]
3. Commuting Load Factor: 1.25 passenger/vehicle-trip with the ability to upgrade to 3-5 passengers/vehicle-trip;[3]
4. Airport and Special Event shared-load factor: 2.5 passengers/vehicle-trip.[4]
5. Both phases feature completely grade-separated dedicated guideways with fully elevated and partially elevated configurations;
6. Optimally-located offline vehicle garage/maintenance facilities to leverage currently underutilized parking real-estate at SJC airport or along Stevens Creek Blvd.

By offering a private origin-to-destination journey with no transfers, the security and safety of the experience will entice drivers to choose this form of mass transit over private vehicle journeys.

Figure B.1: Concept Route Map Phase 1: Airport Connector & Phase 2: Stevens Creek Line.



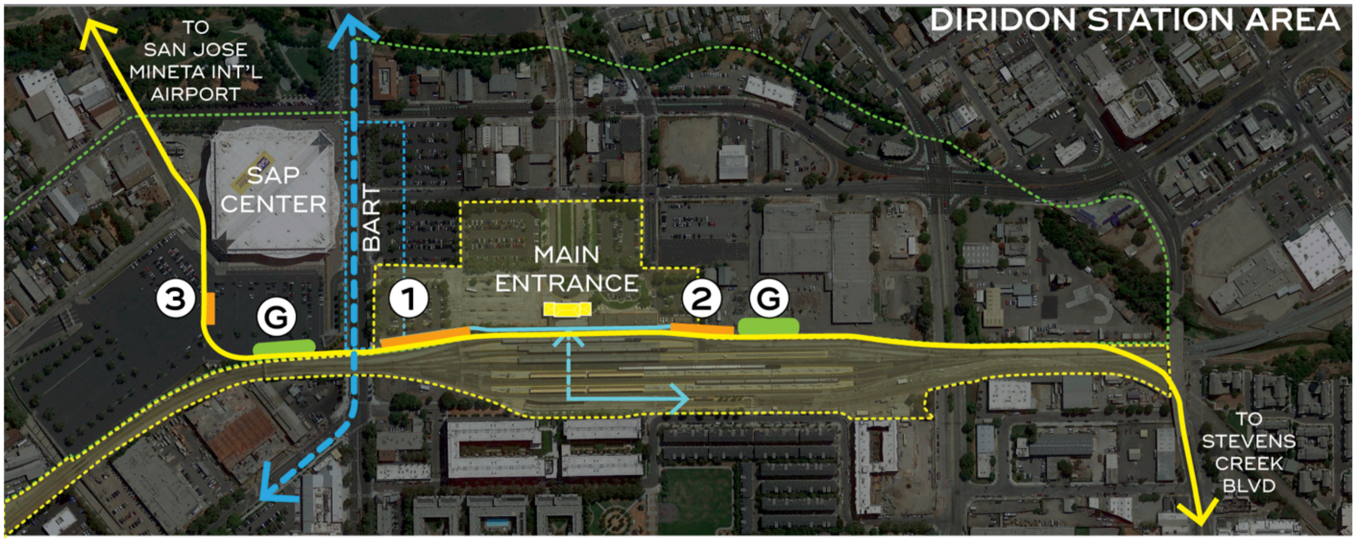
[1, 2, 3, 4] *Reference: System capacity and load-factor references figures within: San Jose International Airport Automated Transit Network Feasibility Study, ARUP, 2012.*

Proposal by Phases

Phase I: Airport Connector - Diridon Station to SJC Airport

The proposed route from Diridon station to the SJC airport will include up to five boarding zones at the airport and potentially others located strategically along the route.

Figure B.2: Glydways Integration within Diridon Station: route alignment, boarding zone locations, and garage location.



STATION AREA ACCESS

① DIRIDON NORTH Boarding Zone: 8 spots/ capacity: 720/hour

② DIRIDON SOUTH Boarding Zone: 8 spots/ capacity: 720/hour

③ SAP CENTER Boarding Zone: 8 spots/ capacity: 720/hour

Ⓖ Garage: charging, maintenance, calibration/ controls

GLYDWAYS Route

Boarding Zone

Garage

Three boarding zones in Diridon Station Area are provided to allow convenient access from both the north and south side of the station. Station 1 and 2 are strategically located adjacent to the new BART station, the bus depot, and the train platforms. Station 3 on the north side of the SAP Center arena will provide added access for event attendees away from the congestion of the station itself.

Table B.1: Phase 1 - Airport Connector System Specifics

PHASE 1: AIRPORT CONNECTOR SYSTEM SPECIFICS		
System Distance	3.5	miles elevated
Boarding Zones	7	number
Peak Throughput	1,250[1]	pphd
Fleet Size	168	vehicles
Rides (weekday)	8,400	rides
Passenger miles (weekday)	14,620	miles
Passengers miles (year)	4.91	miles (millions)

Phase II: Stevens Creek Line Diridon Station to De Anza College via Stevens Creek Blvd

The second phase will expand the system west along Stevens Creek Blvd corridor, terminating at De Anza College. This route will provide convenient on-demand transit service to residents and other constituents of the affluent mixed use commercial, residential and entertainment district that surround the route. Boarding zones at key locations along the route provide easy access to prime destinations like Santana Row, Valley Fair Mall, and De Anza College. In the future as land-use patterns and the whole corridor transforms, new boarding zones can be added incrementally where developments like Vallco, Adobe and Apple are completed or seek to connect their own properties to the system. These would be privately funded, but provide public riders access to the new lines, but perhaps not all new boarding zones. The new extensions would tie in directly to the public system.

Table B.2: Phase 2 - Stevens Creek Line System Specifics

PHASE 2: STEVENS CREEK LINE SYSTEM SPECIFICS		
System Distance	8.5	miles elevated
Boarding Zones	10	number
Peak Throughput	5,000[2]	pphd
Fleet Size	1,632	vehicles
Rides (weekday)	33,600	rides
Passenger miles (weekday)	142,000	miles
Passengers miles (year)	47.55	miles (millions)

[1,2] *Reference: System capacity for Airport Connector and Stevens Creek Line references figures within: San Jose International Airport Automated Transit Network Feasibility Study, ARUP, 2012*

C

PHYSICAL ELEMENTS

C. PHYSICAL ELEMENTS

(a) The Guideways

(i) Person Walking By and System Users

Figure C.1: Side-by-side Glydways system above a ground-level boarding zone.

The proposed system consists of elevated Trunk lanes for main vehicle fleet throughput, with boarding zones at ground level which connect to the main line by ramped service lanes. Glydways guideways can be positioned along the side of a street allowing the boarding zone and bays to be directly accessed from the sidewalk.

Dimensions:

- The clear height below the Glydways guideways is a minimum of 16 feet above grade, but can be set higher or lower per local requirements. This allows excellent pedestrian level visibility below the system to the other side of the street. It also aligns well with typical ground floor heights, preserving visibility of storefronts from a distance.
- In an elevated orientation such as the proposed solution for SJC-Diridon Airport Connector, the guideway includes guideways of 5'-0" width for each lane, which are attached to support pylons at approximately every 100'.
- Each Glydways guideway consists of a main Trunk lane and one Utility lane. This allows all Glydways vehicles to continuously move within the system along the Trunk lane, using the Utility lane to navigate into boarding zones.

- Where the guideway is at-grade, like at a boarding zone, fencing or other approved, appropriate barrier are used to maintain right-of-way integrity.
- The full width of the right-of-way is only required at the boarding zones, leaving up to 26’-0” of width for landscaping, pedestrian paths and other uses.

Materials and Usage:

- The elevated sections of the Glydways system are made of stainless steel and can be painted. Additional elements can be attached to facilitate overall system operations.
- In most situations, photovoltaic panels mounted onto a continuous canopy over the top level of the Glydways guideways can generate a significant portion of the system’s electricity needs while providing beneficial weather protection of the running surface. The canopy also shades the vehicles, lowering their cooling needs providing a valuable secondary benefit for the energy needs of the system. They also reduce the rain and dirt accumulation on the running surface.
- The bottom soffit is typically dovetail steel deck to facilitate temporary and permanent attachments like lighting and signage, creating safe, appealing, and usable public spaces at all hours.
- On the sides of the Glydways guideways, steel cables serve as the safety guards for the Glydways vehicles and in case of emergency exiting.
- The pylons are stainless steel and can also be painted to match the surrounding urban aesthetics.
- Plants can be integrated into the system in several different locations providing a number of different benefits:
  - Planting in the pylon impact barriers can be a part of the stormwater run-off;
  - Planters along the edge of the guideways provide an attractive visual feature and contribute to the water run-off management system;
  - Cabling or green screen can also allow plants to climb up the pylons and ramps; and
  - Green walls can wrap the ramp sections turning potential visual obstructions into attractive planted surfaces.
- The Glydways sections can also support a wide variety of claddings and attachment opening the possibilities for public art and installations.

(ii) Grade Separation

The Glydways guideway can be implemented above, at, or below grade (trenched or tunneled) and is exclusively grade/barrier-separated. In an elevated orientation such as the proposed solution for the SJC-Diridon Airport Connector, the guideway includes guideways of 5 feet width for each lane, which are attached to support pylons at approximately every 100 feet. Where the guideway is at-grade, like at a boarding zone, fencing or other approved, appropriate barriers are used to maintain right-of-way integrity.

See Figures C.2 and C.3 for grade separation configuration examples.

[redacted]

[redacted]

(iii) Right-of-Way Needs

[redacted]

[redacted]

- [redacted]
- [redacted]

[redacted]

[redacted]

[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Figure C.4: Stacked Glydways guideways above a ground-level boarding station. Each guideway provides for vehicles traveling in one direction.

(b) Stations / Passengers Access Points

Figure C.5: Boarding Zone showing ticket kiosk and numbered individual boarding bays

Boarding Zones: Glydways passengers access the system via boarding zones. The boarding zone consists of a simple concrete platform, the array of boarding bays, and canopy structures that serve as cover for the boarding zone space, as well as opportunities to incorporate lighting, wayfinding, and system signage.

Positioning: The boarding zones are designed to be positioned offline from the main Trunk and Utility lanes, and separated by level or by a spur connection. [redacted]. The number of boarding bays at each location varies according to access demand/capacity each given location. Because vehicles arrive on-demand, the need for waiting areas and associated service facilities is reduced.

Rider Access: The boarding platform and bays are on the same level as the surrounding pedestrian surfaces, eliminating the need for vertical circulation such as stairs, ramps or elevators that is required for vehicle access. [redacted]

Design: Simple canopy are installed over boarding zones to provide weather protection for passengers boarding and exiting the vehicles, as well as the interior of the vehicles. The canopy can be free-standing or integrated into the Glydways track structures overhead. The canopies also represent an excellent opportunity to integrate local design features, images, etc.

[redacted]

[redacted]

Figure C.7: Human-scaled vehicles, simple architecture and material refinements create a welcoming atmosphere at each boarding zone. Convenient ticket kiosks make riding without a smartphone easy.

Ticketing: Each boarding zone is designed to house kiosks and an array of boarding bays that allows passengers to board vehicles. Kiosks located at each end of the boarding zone provide cash or card paid ride access in the form of printed, graphically coded tickets. A mobile app will also be used for booking a ride on the system for those passengers with a smartphone.

Staffing: In addition to self-service kiosks, busy boarding zones can be staffed by roving Glydways Ambassadors that will travel to multiple locations providing user assistance and passive security.

(i) Person Walking By and System Users

Figure C.8: Grade-level Boarding Zone - Streetside Alignment

To person using the system as well as passerbys, the boarding zone resembles a traditional multi-bus boarding zone in layout with a much smaller footprint—each diminished boarding bay conforms to the dimensions of the narrow Glydways vehicles featured in the fleet.

Passengers enter the boarding zone, located at ground level, via many different access points as the location is open to the surrounding neighborhood. The boarding zone is identifiable by signage, easily spotted from a distance by the canopy coverings on the boarding zones themselves.

The boarding zone is at ground level, [redacted] All boarding zones will feature location appropriate landscaping and lighting, to provide an attractive and safe environment.

There will be a kiosk located in close proximity to the boarding bays to facilitate system access on-site. Passengers would be able to identify their personal vehicle via the signage on the vehicle that is associated with that on their smartphone or at a proximate kiosk.

[redacted]

[redacted]

Both the kiosk ticketing and phone app provide exclusive ride reservation. Once the ride is reserved, instructions guiding the passengers to the correct boarding zone and boarding bay are provided. At the designated boarding bay, with vehicle present and ready for boarding, the passenger presents a unique identifier (printed on the ticket or shown in the phone app) to the vehicle's external camera which upon recognizing the identifier opens its doors and welcomes the passenger to board.

For popular routes with higher capacity demands, (SJC direct to Diridon Station, for example), riders have the option to take shared rides at a lower fare. Unique lines, kiosks and boarding bays will be provided for such rapid access, boarding and alighting. In this scenario, the user does not reserve the ride, rather joins a select line based on the destination and scans in directly at the boarding access point.

Where the Glydways system is elevated, the clear height below the structure is typically a minimum of 16 feet above the ground. This allows excellent pedestrian level visibility below the system to the other side of the street. It also aligns well with typical ground floor heights preserving visibility of storefronts from a distance.

Canopy structures offering weather cover for the boarding zone incorporate added design features, such as signage and lighting. Individual stations can also incorporate materials, public art and other design features as well as services (such as restrooms) specific to each location.

Away from the boarding zones, planting, lighting, materials and other elements to enhance the public space can easily be incorporated to create welcoming, safe public spaces enhancing the pedestrian experience.

When the boarding zones are aligned over the edge of a street, parking and loading zones vehicles of all kinds can be incorporated. Glydways overhead can provide weather protection for the sidewalk, encouraging both commercial and public sidewalk activities.

(ii) Right-of-Way and Land Needs of a Station/Access Point

The floor area of an 8-bay boarding zone is 2,500 square feet, including pedestrian areas, vehicle bays and maneuvering space, and the 5' walkway running the length of the boarding zone. The bike parking and seating areas comprise another 450 square feet, exclusive of the walkway. The full footprint of the boarding zone inclusive of the areas listed above is 3,300 square feet.

[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

[redacted]

In order to maintain continuous flow of the Trunk lanes past an on-grade boarding zone, at least one Trunk lane must pass over or under the level of the boarding zone. This allows passengers to approach the boarding spots at the same level as the vehicles. One Trunk lane can bypass on the opposite side of the Utility/maneuvering lanes, but the inboard Trunk lane must go over or under the boarding zone.

For an elevated Glydways alignment (either side-by-side or stacked) the Trunk lanes continue overhead to bypass the boarding zone while vehicles accessing the boarding zone descend on ramps to grade level.

[redacted]

[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

(iii) Integration with Surrounding Urban Fabric on the Stevens Creek Line

The Stevens Creek Blvd represents an an ideal corridor for the placement of a Glydways system, in both the elevated or at-grade solution configurations, as it provides sufficient room for construction of the guideways within the median, with minimal impact to the existing uses of the corridor. Based on the capacity demands provided within the context of the

RFI, 10 boarding zones are considered along the route for this phase of the proposal. Specific boarding zone locations recommendations will be based on developmental strategies to meet the connectivity demands driven by current and future major retail centers and employers in the area. Santana Row, The Valley Fair Mall and the future development at Vallco all represent excellent locations for such system expansion.

For an alignment running over the median, boarding zones along the elevated Trunk line would be at-grade, providing access for pedestrians either at intersection crossings or at mid-block crossings. Trunk lines will continue overhead unimpeded by intersections and the exiting and entering of vehicles accessing the boarding zones at ground level.

Figure C.11: Glydways infrastructure and pedestrian greenway situated in the median, extending into Santana Row

The elevated configuration has the added advantage of simplifying the addition of future spurs of the main Trunk line into new higher density developments. A streetside alignment is also an option.

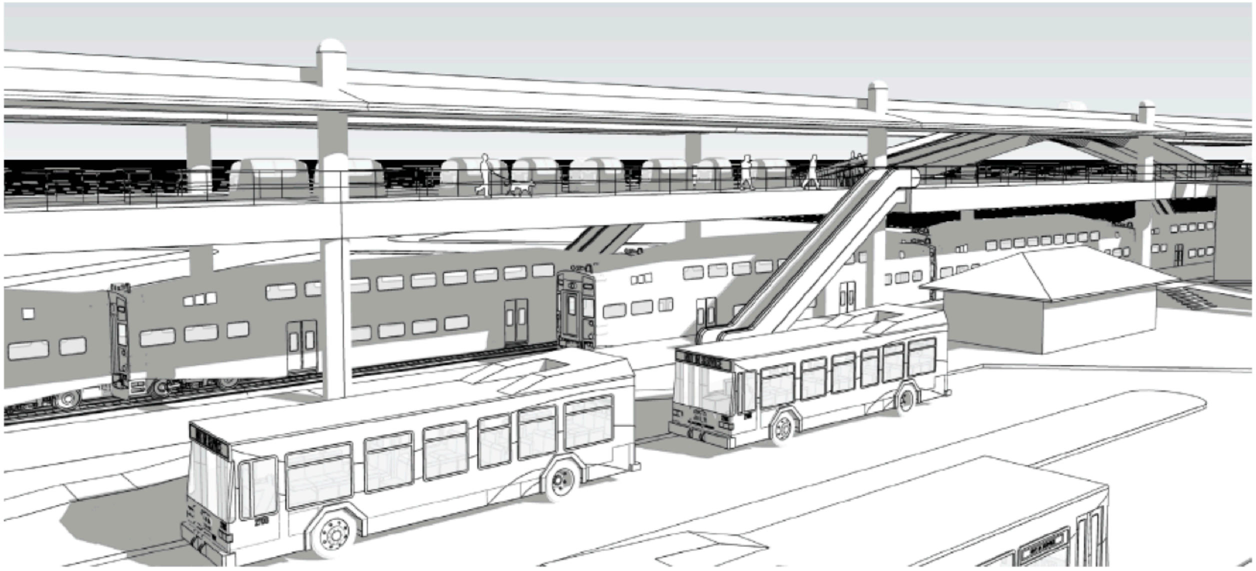
Boarding zones connected to the spurs extending into properties along the boulevard can be either at-grade or built into new or retrofitted multi-story buildings. The low density, large parcels lining typical suburban boulevards like Stevens Creek provide excellent spaces for higher density mixed-use projects of a scale capable of funding new, public/private boarding zones all connected to the main public line running down the center of the corridor. The spurs branch off from the main Trunk line elevated, above traffic. Boarding zones can be positioned immediately at the front of the private parcel or be built as an integrated space within new construction or at grade deeper into the parcel.

(iv) Systen Integration with Existing Transit Systems

The narrow profile, lightweight nature of the elevated system allows Glydways guideways to be built over existing rail tracks, station platforms, bus lanes or adjacent to multimodal stations. Bus stops on city streets can be accessed at-grade at boarding zones.

Where the Glydways boarding zone must occupy airspace above an existing rail station platform (an option at Diridon Station), conventional vertical circulation (ramps, stairs, escalators and elevators) can provide access to all the boarding bays on a single floor. Bridges connect each side of the platforms maximizing utilization of available capacity. When ground level space is available, boarding zones can be positioned at ground level and ramps will provide vehicle access to the Glydways above.

Figure C.12: Example of High Capacity Intermodal Boarding Zone above heavy rail. Where the Glydways boarding zone must occupy airspace above an existing rail station platform (an option at Diridon Station), conventional vertical circulation (ramps, stairs, escalators and elevators) can provide access to all the boarding bays on a single floor

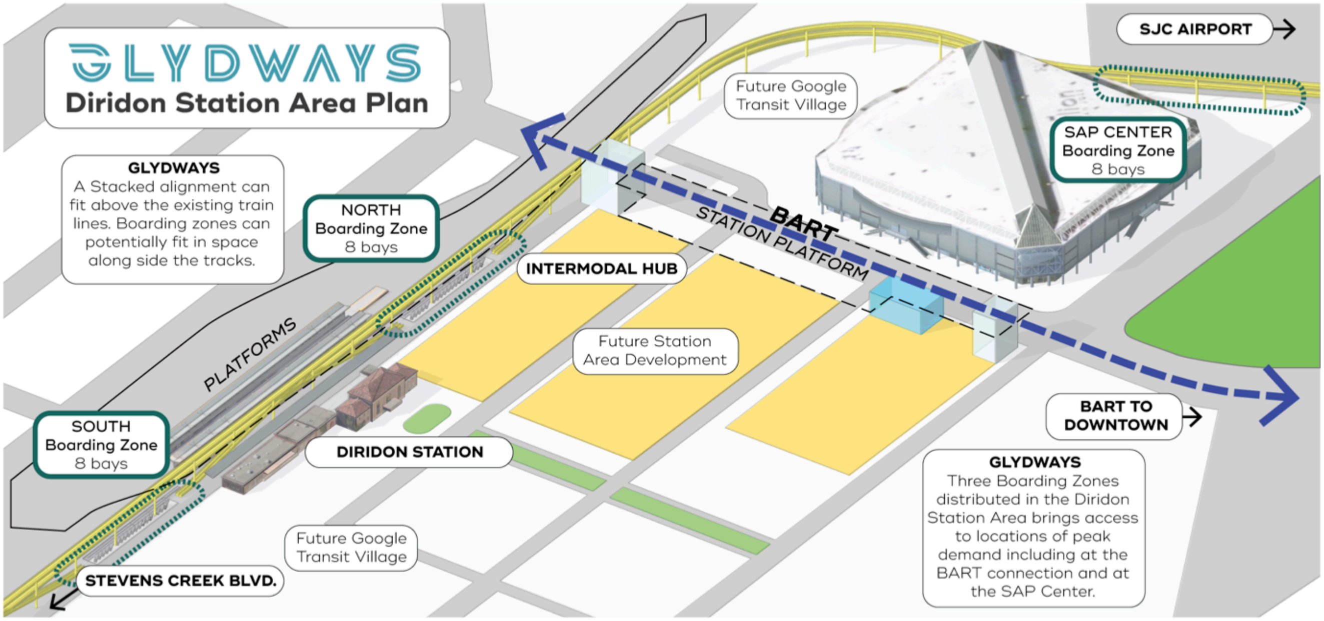


[redacted]

(v) Connecting with Rail Platforms (BART or Other Heavy Rail) at Diridon Station

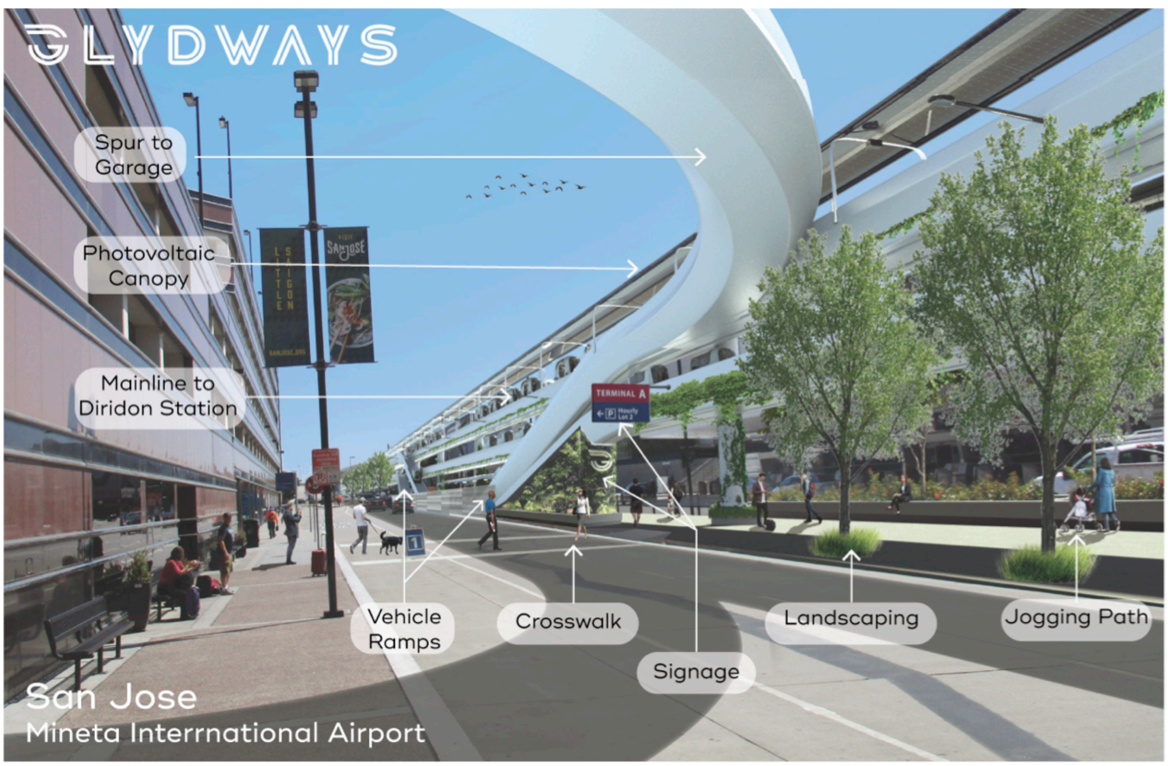
In the diagram below (Figure C.14), a vertically stacked, two-directional alignment is built in the airspace above the inboard platform of Track #1 at Diridon Station. Two boarding zones at the platform level to the North and South of the station entrance provide multiple access points for travelers. The North boarding zone provides direct access for travelers transferring from the BART station, the bus plaza and also provides an additional access point for event attendees coming from SAP Center. The elevated system can then continue across Alameda St, either over the street or across/around the SAP Center parcel providing another direct boarding zone for events on the arena's north side. As the Google Transit Village is built out, additional integrated boarding zones can also be added incrementally.

Figure C.14: Diridon Station Area - Glydways Alignment/ Integration



(vi) Connecting with Airport Facilities and Parking at SJC

Figure C.15: San Jose Airport, Terminal A, Garage spur from main line - view facing south

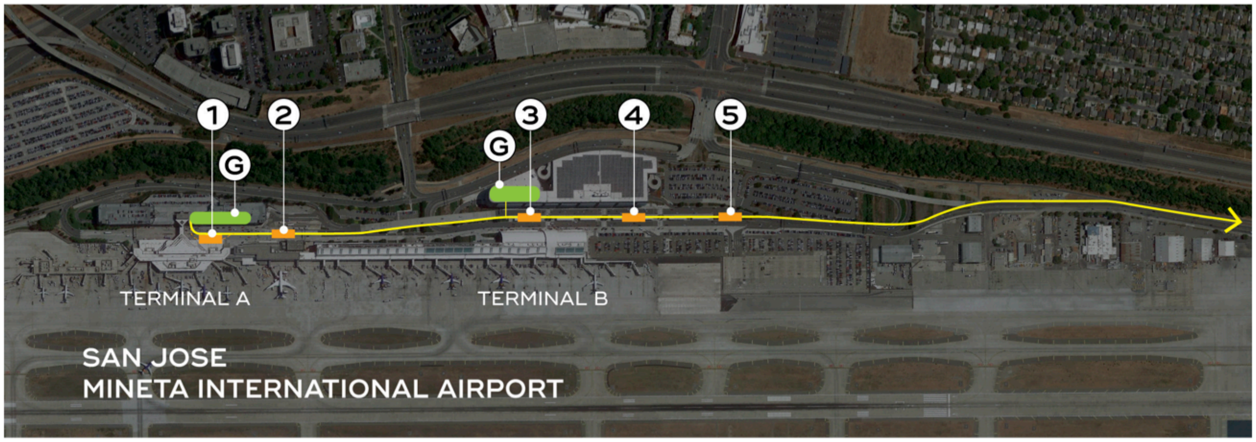


Terminal A (NORTH): The best alignment for Glydways will be above the roadway between the terminals and the parking garages - both North and South. In the North, the guideway will turn into the parking structure south of the pedestrian bridge passing over the traffic below. Inside, a few hundred square feet can be allocated to the system's charging and servicing needs. One boarding zone can be placed at-grade outside the terminal and another can be built directly into the upper floor of Terminal A, providing weather-protected access to the Glydways system.

Terminal B (SOUTH): The Glydways system will fit well over the existing shuttle loading median in front of Terminal B. Multiple boarding zones in this zone can be accessed by both crosswalks directly from the terminal and from crosswalks connecting the terminal to the parking structure. The parking structure could provide additional space for the Glydways charging/service garage functions.

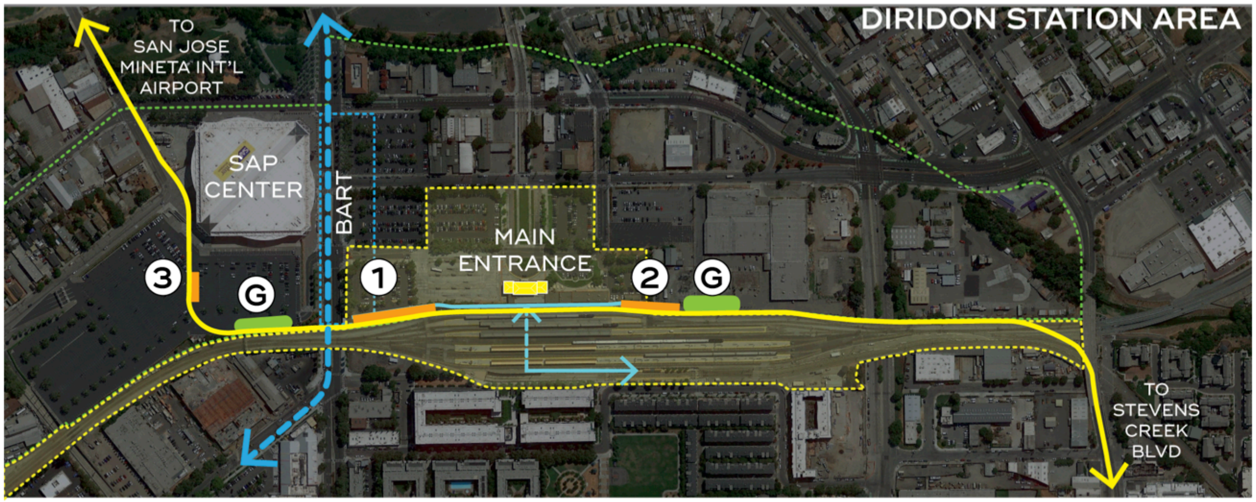
Similar to our approach to the Diridon Station configuration, our team will work with the City, the airport, and the community to design a final solution that best serves the needs of users.

Figure C.16: SJC Mineta International Airport Map & Ridership



GLYD SOLO (INDIVIDUAL RIDER) (LOAD FACTOR: 1.25PX/TRIP)	GLYD SHARED (SHARED VEHICLE) (LOAD FACTOR: 2.5PX/TRIP)
North Terminal (1440/hour total) • #1 Boarding Zone/ 8 bays/ capacity: 720/hour • #2 Boarding Zone/ 8 bays/ capacity: 720/hour • "G" Garage/ charging, maintenance, calibration/ controls	North Terminal (2880/hour total) • #1 Boarding Zone/ 8 bays/ capacity: 1440/hour • #2 Boarding Zone/ 8 bays/ capacity: 1440/hour • "G" Garage/ charging, maintenance, calibration/ controls
South Terminal (2160/hour total) • #3 Boarding Zone/ 8 bays/ capacity: 720/hour • #4 Boarding Zone/ 8 bays/ capacity: 720/hour • #5 Boarding Zone/ 8 bays/ capacity: 720/hour • "G" Garage/ charging, maintenance, calibration/ controls	South Terminal (4320/hour total) • #3 Boarding Zone/ 8 bays/ capacity: 1440/hour • #4 Boarding Zone/ 8 bays/ capacity: 1440/hour • #5 Boarding Zone/ 8 bays/ capacity: 1440/hour • "G" Garage/ charging, maintenance, calibration/ controls

Figure C.17: Diridon Station Map & Ridership



STATION AREA ACCESS

1. DIRIDON NORTH Boarding Zone: 8 spots/ capacity: 720/hour
2. DIRIDON SOUTH Boarding Zone: 8 spots/ capacity: 720/hour
3. SAP CENTER Boarding Zone: 8 spots/ capacity: 720/hour

(G) Garage: charging, maintenance, calibration/ controls

GLYDWAYS Route

Boarding Zone

Garage

GLYD SOLO (INDIVIDUAL RIDER) (LOAD FACTOR: 1.25PX/TRIP)	GLYD SHARED (SHARED VEHICLE) (LOAD FACTOR: 2.5PX/TRIP)
Diridon Station (2160/hour total) • #1 Boarding Zone/ 8 bays/ capacity: 720/hour • #2 Boarding Zone/ 8 bays/ capacity: 720/hour • #3 Boarding Zone/ 8 bays/ capacity: 720/hour • "G" Garage/ charging, maintenance, calibration/ controls	Diridon Station (4500/hour total) • #1 Boarding Zone/ 8 bays/ capacity: 1500/hour • #2 Boarding Zone/ 8 bays/ capacity: 1500/hour • #3 Boarding Zone/ 8 bays/ capacity: 1500/hour • "G" Garage/ charging, maintenance, calibration/ controls
Assumptions: • Boarding events/ hour: **90**	Assumptions: • Boarding events/ hour: **75**

(vii) Operating within the Network

Each Glydways vehicle operates autonomously. [redacted]

The vehicles pick up passengers at pre-designated bays within boarding zones, then deliver the non-stop/no-transfer journey via the main trunk lane and end the trip by exiting the main Trunk lane through the Utility lane, which ramps down to a destination boarding zone.

While the central command advertises speed limits, etc. so as to optimize flow, each vehicle is ultimately an independent autonomous agent that is responsible for its own motion. Shared vehicles perform within the same parameters but between select, predetermined destinations.

(viii) Level Boarding

[redacted]

All boarding zones and their associated boarding bays are either at-grade for exterior locations or at floor level for interior locations. [redacted]

Figure C.18: Accessible Vehicle Boarding

(ix) Compatibility with "Complete Streets" if System is Aerial

The Glydways system is designed to integrate readily with other transit modes: walking, cycling, and micro-modes (e.g. electric scooters). Furthermore, Glydways main Trunk lanes take away less spaces from other modes, since, at 5'-0" (59") width for each lane, its footprint is limited compared to existing mass transit modes. Additionally, the open, porous nature of the Glydways boarding zones enables easy transfer from one travel mode to Glydways, including but not limited to: walking onto the Glydways system from the sidewalk; from a bicycle or micro-transit vehicle [redacted] or from a car.

To facilitate the free movement of crossing traffic of all modes, boarding zones are all either at grade some distance from cross street intersections or connected by aerial spurs to properties along the corridor. For intersections without an adjacent boarding zone, new pedestrian-oriented public spaces can occupy the space below the elevated tracks.

Figure C.19: Complete Street - The elevated side-by-side Glydways guideway configuration, shown here, integrates readily with other transit modes, and creates a new pedestrian-oriented public space in the space below the elevated tracks.

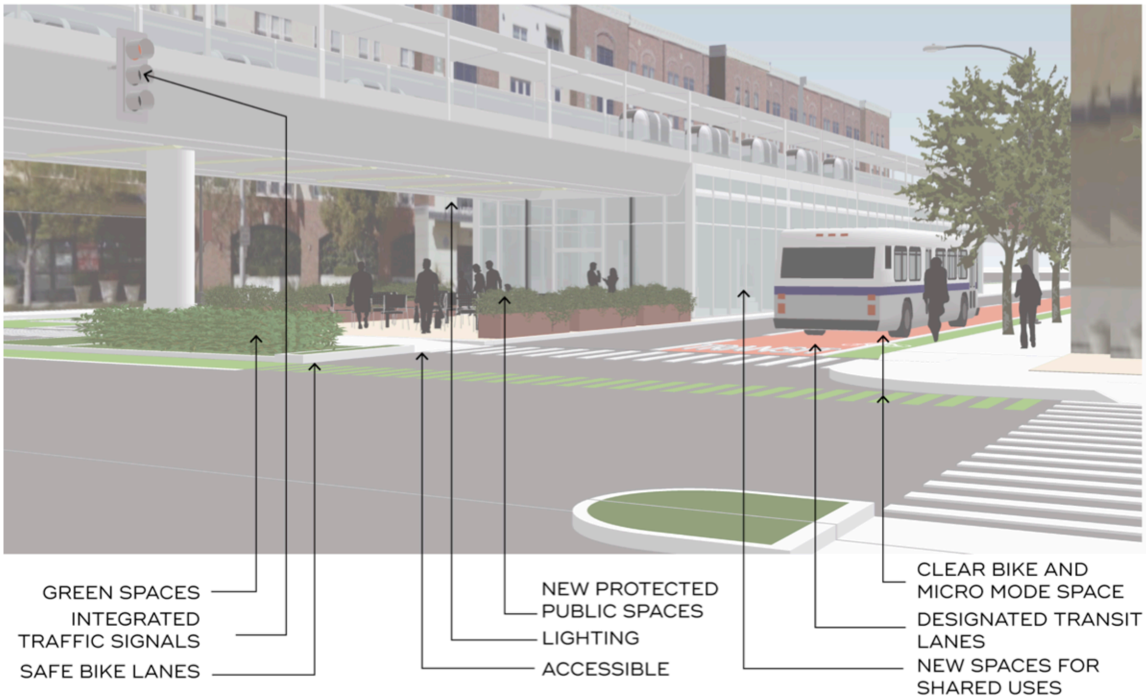
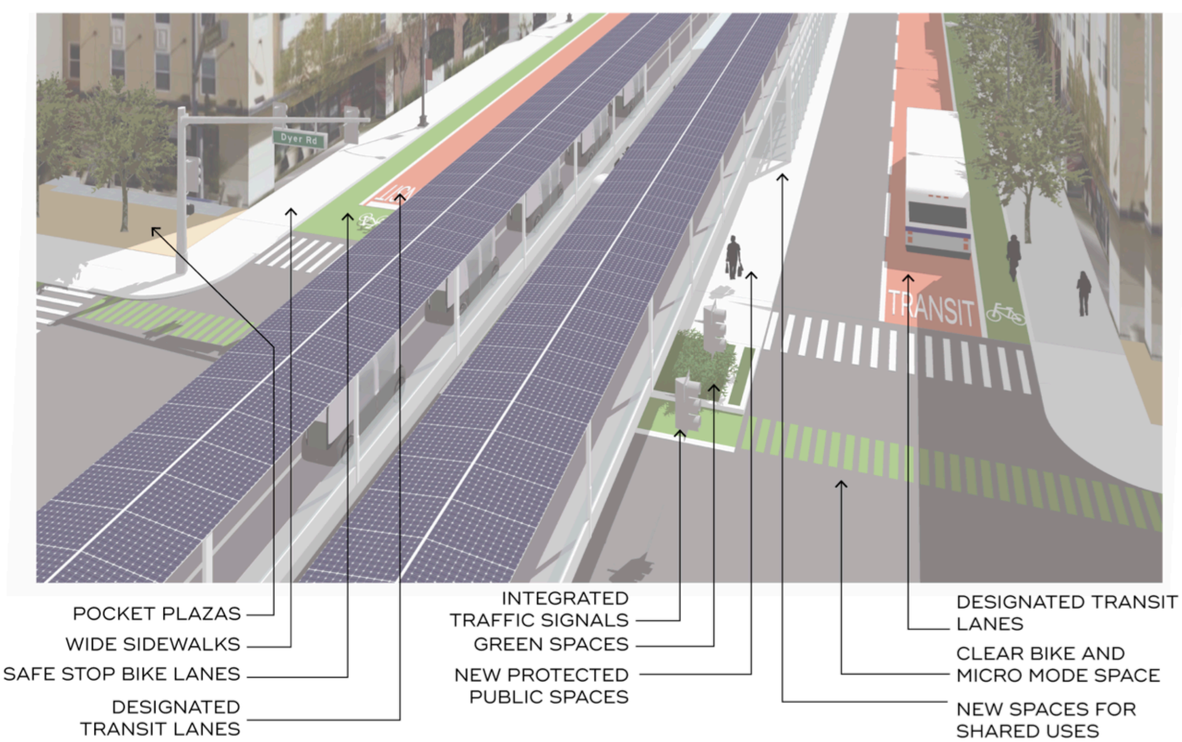


Figure C.20: Complete Street - Overhead view, with photovoltaic canopy



(x) Accessing and Vehicles

Where the boarding zone position is located above or below the level of a main Trunk line, vehicles accessing the boarding zone from the Trunk line by first shifting to a Utility lane to slow down to 10 mph before accessing a gently sloped ramp of no more than 15% grade, to change levels. Once at boarding zone level, vehicles maneuver to their designated boarding bay to complete their journey. The sequence is reversed after the new passenger has initiated their ride.

Figure C.21: At-grade Boarding Zone in an Elevated Glydway

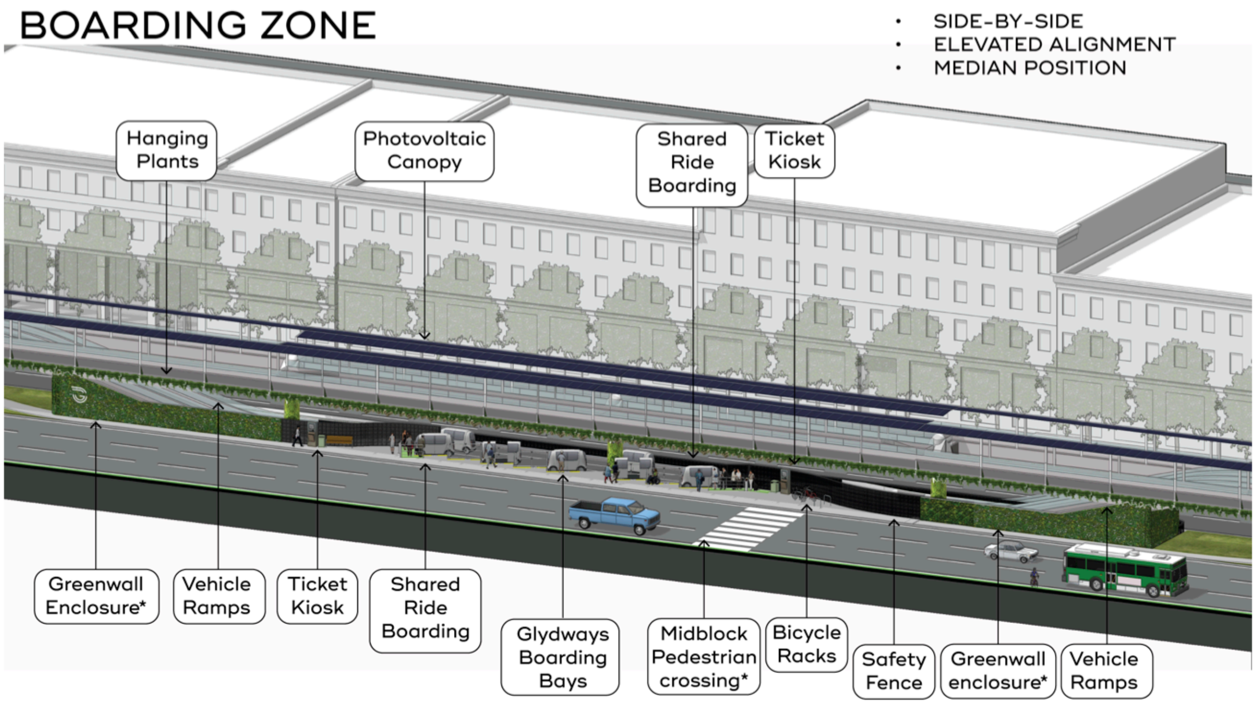
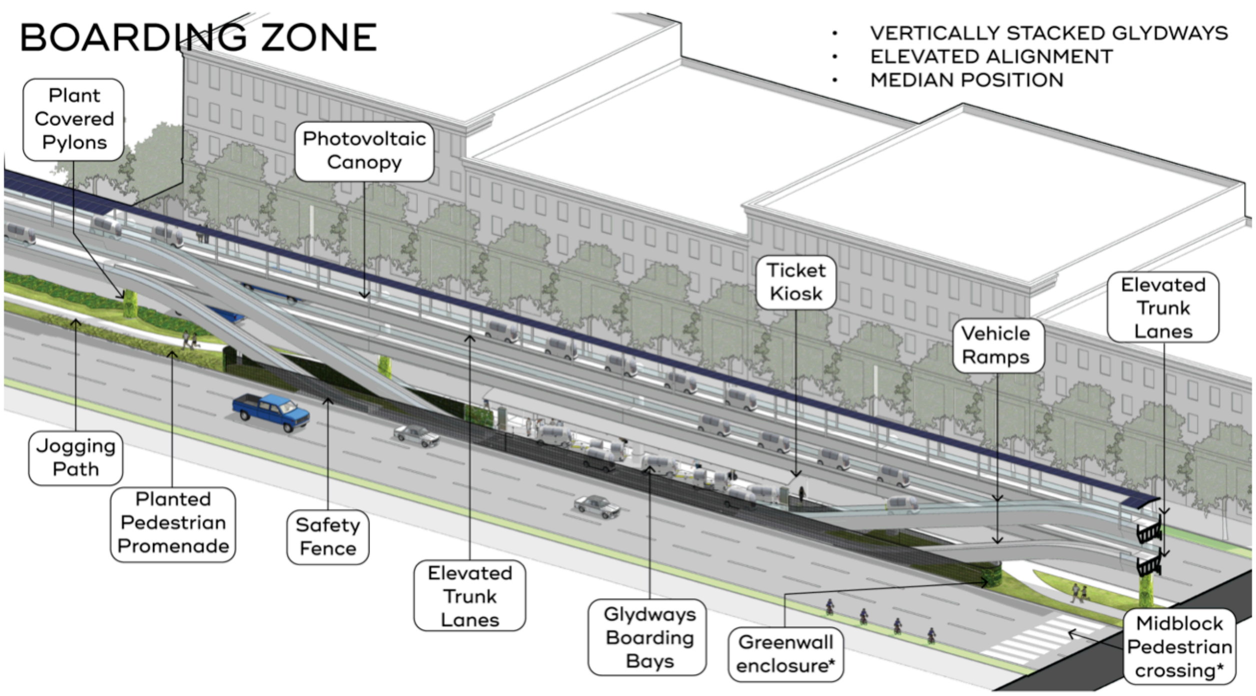


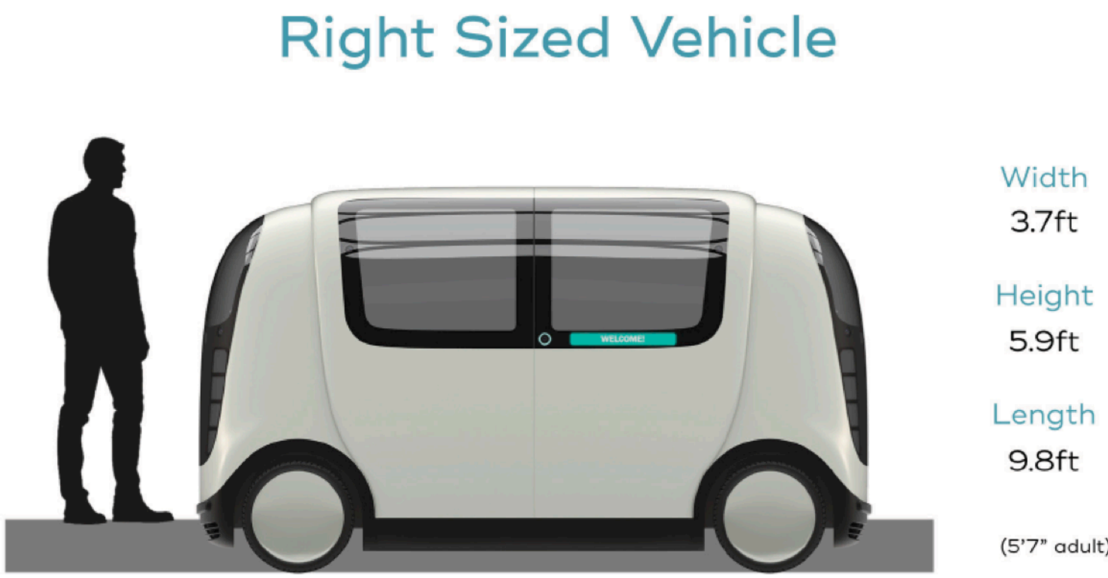
Figure C.22: At-grade Median Boarding Zone in a Stacked Elevated Glydway



(c) The Vehicles

(i) Person Walking By and System Users

Figure C.23: Glydways vehicle dimensions



[redacted]

To a passerby, the Glydways vehicle presents a welcoming modern aesthetic and attractive continuity of design with the surrounding environment and the boarding zone. Glydways vehicles move slowly while in the boarding zone, presenting a calm and safe atmosphere.

The Glydways vehicle provides a roomy interior to its riders. Once inside the vehicle, simple user interface allows rider to signal the ride to begin. Handles are present to ensure safe entry for those with mobility concerns. Large windows provide the riders with plenty of natural light and good viewing of the outdoors environment during the journey.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Figure C.28: Wheelchair fitting inside a Glyd SOLO vehicle

[redacted]

[redacted]

(ii) Amount of Passengers and Baggage in a Vehicle

[redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

(iii) Board and Alight from the Vehicle

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

(iv) Top Speed and Achievability

The Glydways vehicle is currently being designed to have a top operating speed of 62mph.

No new technology is required for a Glydways vehicle to travel at this top speed. Our top operating speed depends not on technological constraints, but rather on efficiency and cost considerations. If the vehicles go faster, then travel times will be shorter, however there will be a penalty in terms of efficiency and cost. Glydways travel times would be typically shorter than any other alternative transit modality due to the fact that Glydways vehicles travel from start to finish without ever stopping or slowing down.

Design trade-offs required to travel at 62mph as opposed to 31mph:

- **System efficiency:** It takes significantly more energy per distance to travel faster. Twice the speed, 4x the energy required. This results in higher operating costs. Higher speeds also affect how frequently vehicles need to recharge, and thus the size of the fleet. Similarly, higher speeds affect how frequently battery packs will need to be replaced.
- **Noise & vibration:** Higher speeds mean higher levels of noise & vibration both within the cabin and to the surrounding environment, and also on vehicle suspension with predictable impact to its dynamics.
- **Tire wear:** Vehicle tires will undergo more rapid wear at higher speeds.
- **Throughput:** There are diminishing throughput advantages to traveling at a higher speed. Throughput can increase, but not by very much. Thus higher speeds give only a marginal increase in utilization of amortized infrastructure and vehicle capitalization expense over a given time.
- **User Experience:** Higher speeds reduce travel times.
- **Acceleration rates:**
  - 0mph to 31mph = 6.04 seconds
  - 0mph to 62mph = 12.08 seconds
- **Turn Radii:** With lower top speed, more flexibility is allowed for the route, which has profound implications for corridor acquisition costs and staying within existing publicly owned corridors. In addition, super elevating the guideway (banking) also allows for tighter turning radii while keeping horizontal g-forces for passengers to a comfortable minimum. This also facilitates the addition of new spurs into parcels along the corridor and even into buildings. The table below illustrates radii and associated banking dimensions to provide safe, comfortable turning at a variety of speeds. The designated speeds for Trunk line operations (30mph) and boarding zone maneuvers (15mph and below) are highlighted.

Table C.3: Radii and associated banking dimensions to provide safe, comfortable turning of Glydways vehicles at a variety of speeds

15% g MAXIMUM LATERAL FORCE ON RIDER LENGTH OF CURVE (FT)						
Velocity		Bank				
(mph)	(kph)	0%	5%	10%	15%	20%
6	10	29.6	22.2	17.8	14.8	12.7
9	15	66.7	50.0	40.0	33.3	28.6
12	20	118.5	88.9	71.1	59.3	50.8
15	25	185.2	138.9	111.1	92.6	79.4
18	30	266.7	200.0	160.0	133.4	114.3
24	40	474.2	355.6	284.5	237.1	203.2
30	50	740.9	555.7	444.6	370.5	317.5

(v) Vehicles Autonomously Operated

[redacted]

[redacted]

[redacted]

[redacted]

(vi) Vehicles When They Are Not Operating

Vehicles return to offline maintenance/charging garages multiple times in a day for cleaning, recharging, storage, inspection, recalibration, and maintenance (if needed).

A vehicle returns to a garage when it is running low on energy, or when it is no longer needed by the system. The vehicle parks itself within the garage and is then serviced by maintenance personnel. Servicing includes a power cable being plugged into the vehicle, as well as routine or incidental/as-needed cleaning of the vehicles.

In addition to maintenance garages, adequately-charged and recently calibrated or serviced vehicles can also be parked at boarding bays, ready to provide immediate service.

(vii) Vehicles Storage

Garages provide storage for vehicles and are placed strategically near existing substations along the route, lowering the cost of infrastructure. Garages can be new or existing structures. A mass transit solution will naturally replace the need for massive personal vehicle parking structures. These can be easily repurposed by a Glydways system for garage purposes.

Depending on specific feasibility, maintenance garages can be a single central facility or multiple smaller, distributed facilities as space availability and high-intensity use requires. Existing parking garages and lots can be repurposed to be such facilities, or retrofitted to accommodate Glydways in addition to cars to increase utilization of these facilities.

Figure C.34: (Below) Charging and maintenance garage, (overhead electric charging system, not shown.)

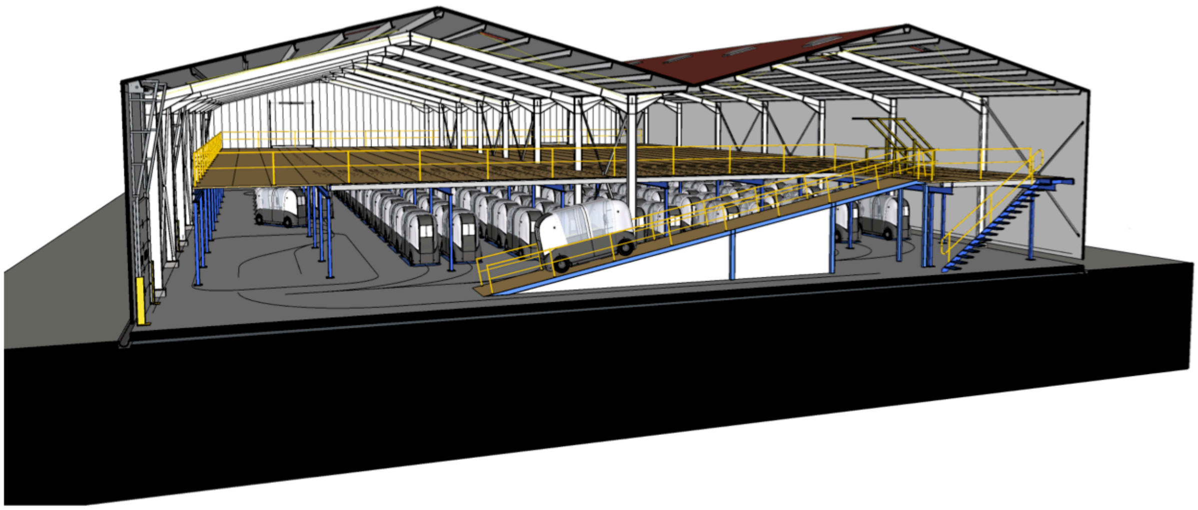
(viii) How Vehicles are Powered

Vehicles are powered by on-board battery and charged in separate garage facilities using manual plug-in hardware, handled by maintenance crews. The battery capacity is between 28 kWh and 40 kWh (depending on the configuration), this allows for 112 to 160 miles between charges.

(ix) Maintenance Facility for the Vehicles

The Glydways system combines vehicle storage and maintenance into the same facility. Vehicles return to the service garages multiple times in a day for cleaning, recharging, inspection and if need be, maintenance. Because of the component concept behind the vehicle design, any failing component is quickly swapped for a working one and mechanical repairs are conducted offsite. Another benefit of the lightweight nature of the vehicles, simple steel mezzanine structures can be built inside the main garage structure to provide valuable storage and other operations space.

Figure C.35: Cross section of a service garage



[redacted]

[redacted]

(x) Redistributing Vehicles to Meet Demands

[redacted]

[redacted]

(d) Pictures and Renderings of All Physical Elements of the System

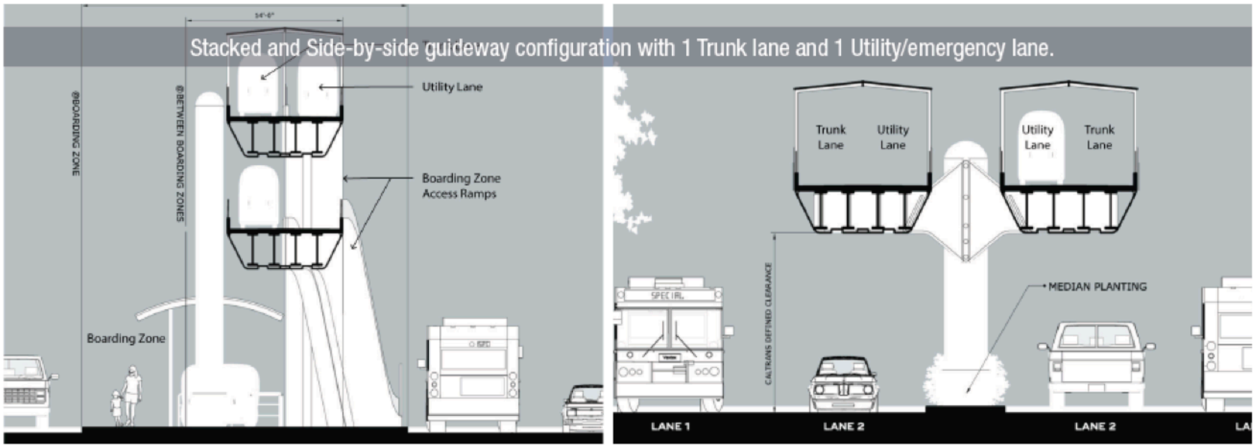
Glydways guideways above a ground-level boarding station. Each guideway provides for vehicles traveling in one direction.

Glydways stacked system above a ground-level boarding station.

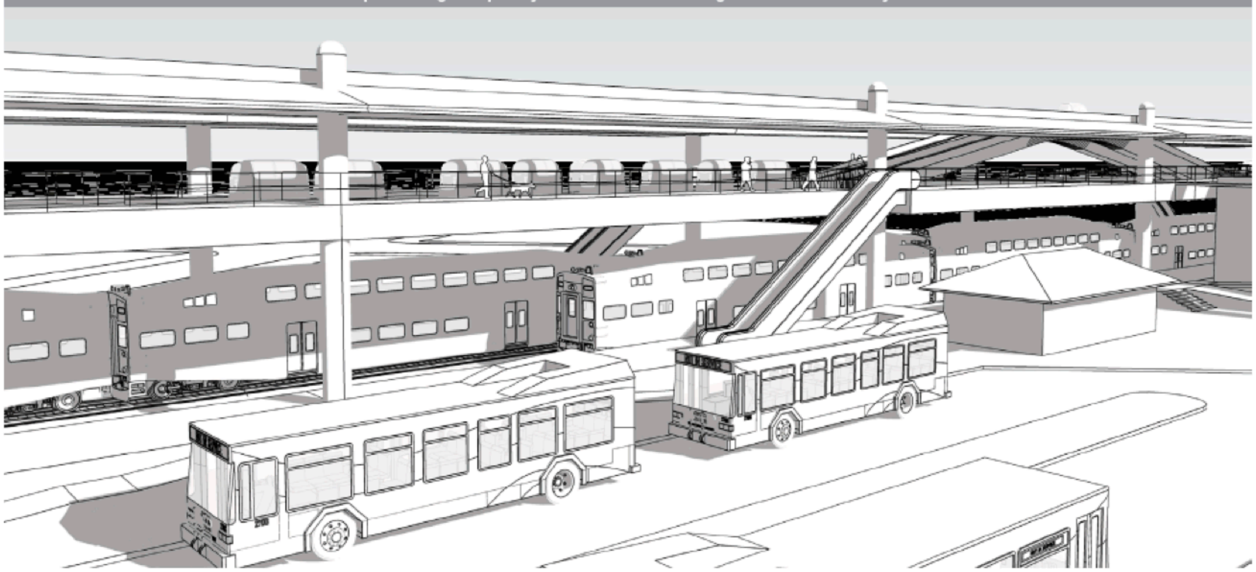
Boarding Zone showing ticket kiosk and numbered individual boarding bays

Grade-level Boarding Zone - Streetside Alignment

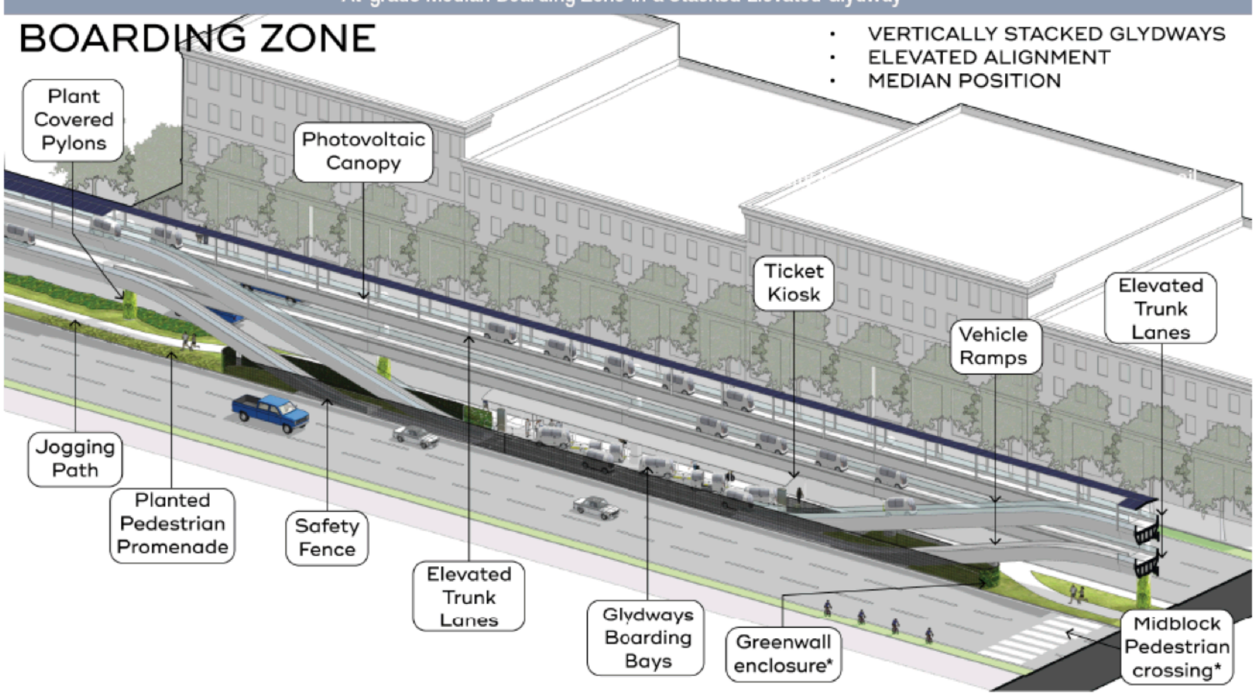
Stacked and Side-by-side guideway configuration with 1 Trunk lane and 1 Utility/emergency lane.



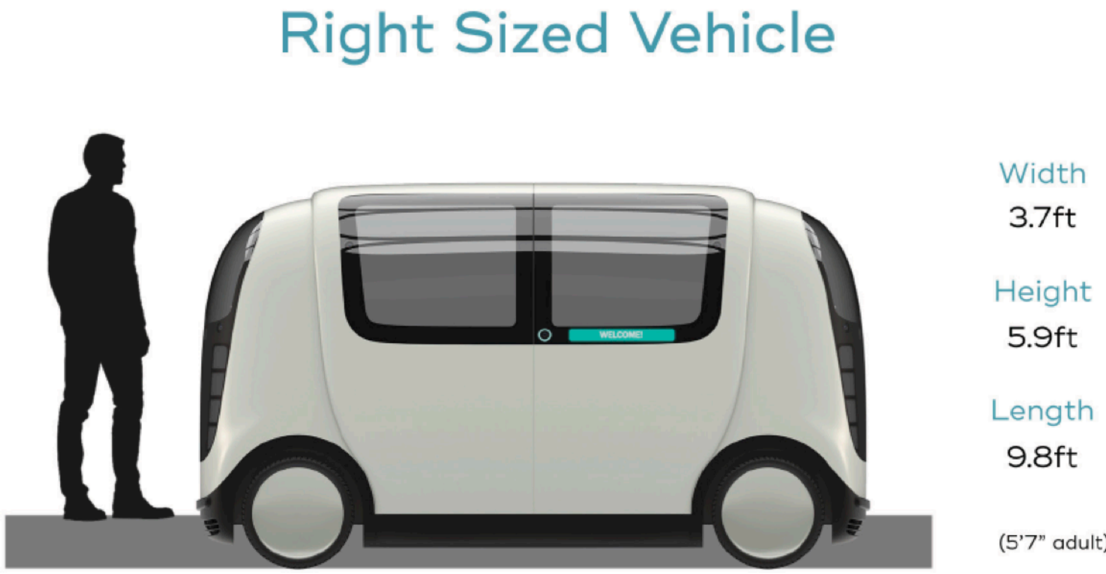
Example of High Capacity Intermodal Boarding Zone above heavy rail.



At-grade Median Boarding Zone in a Stacked Elevated Glydway



Glydways vehicle dimensions.



Charging and Maintenance Garage (Overhead electric charging system, Not shown).

D

OPERATIONAL ELEMENTS

D. OPERATIONAL ELEMENTS

(a) Operational Model

(i) Vehicle Travelling Outside the Grade-Separated Guideway

[redacted]

(ii) Potential Travel Time from SJC to Diridon

The Airport Connector route in Phase 1 from Diridon Station to SJC will have a total of 13 stop points. Of these 13, 3 reside within the Diridon Station area (Figure 4.5), and 5 reside within the Mineta International Airport central boulevard (Figure 4.4).

Traveling along the Trunk line (assumed 3.0 miles distance) our possible travel times are listed below for different fleet speeds, also assuming 40 seconds boarding and 15 seconds alighting time.

This travel time is significantly better when compared to a TNC option (with a 5 minute wait time), at 11 minutes, and existing public transit options at 25-40 minutes.

Table D.1: Phase 1 - Airport Connector: Glydways possible travel times for different fleet speeds

Diridon - SJC (3 stops)	31 mph	45 mph	62 mph	TNC (with 5 minute wait)	Existing Public Transit
Travel Time	6min 48sec	5min 0sec	3min 54sec	11min	25-40min

(iii) Potential Frequency of the Service

While system feasibility validation needs to be performed, due to the scalable economics of the solution, we are proposing that the service be available on-demand, 24/7.

Vehicles are expected to be available in less than one minute from when a user calls it.

(iv) Potential Passenger Carrying Capacity

Glydways offers two service classes:

- [redacted]

- [redacted]

A Glydways system works **best** when both services are available within the same system.

[redacted]

[redacted]

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]	[redacted]				[redacted]				
	[redacted]				[redacted]				
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

(v) Scaling up Capacity to Meet Demands

[redacted]

Infrastructure and Fleet Expansions: The pylons used for our elevated configuration can carry 2 pairs of Glydways sections (2 sections for each direction). The initial installation will contain only 1 pair: 1 guideway section for each direction capable of providing a capacity of up to 10,000pphd. The initial phase of system will provide boarding capacity comprised of the number of boarding zones times the number of boarding spots in each to assure a balanced access to throughput capability.

Additional capacity in the Trunk lanes will require a combination of an increase in fleet size and in the number of boarding zones and/or an increase in the number of boarding spots.

(vi) Dwell Time of a Vehicle at a Station

The minimum time from when a vehicle arrives at a spot to when it leaves is roughly 30 seconds. The maximum time is as long as a passenger needs - we don't rush our passengers. We expect the average time to be around 40 seconds, comfortably enabling a boarding zone throughput of 90 events per hour per spot.

(vii) Service Reliability

Our vehicles are not yet in service, and so we do not have a 5-year MMBF for our specific vehicle. However, it is well known that electric vehicles are much more reliable and require less maintenance than internal combustion vehicles. An example of a maintenance schedule for the Chevy Bolt EV is here:

https://my.chevrolet.com/content/dam/gmownercenter/gmna/dynamic/manuals/2017/Chevrolet/BOLT%20EV/Maintenance%20Schedule.pdf.

You can see that the first mechanical maintenance is a fluid change at 150,000 miles, unlike other Chevy combustion vehicles which have 7,500 miles service schedules and catastrophic failures for lack of maintenance. In addition, unlike consumer vehicles, and unlike commuter buses, our vehicles are very simple with fewer failure modes.

It is part of our system design to detect and mitigate vehicle failures before they happen within the system. Each vehicle has its own internal array of sensors as well as multiple times per day calibrations to determine the likelihood of a failure so we can address it off-system. The entire system is robust to single-point vehicle failures.

(viii) Ticketless Service and Fare Collection

Passengers will use a phone app or a boarding zone kiosk to request a ride. This app (or kiosk receipt/ticket) directs the passenger to their assigned vehicle at its assigned boarding bay. Transit fare cards (e.g., Clipper Card) are also a compatible method of fare collection, redeemable at the boarding zone kiosk or through the Glydways phone app when linked to the transit fare card account. Leveraging these two (2) technologies we can provide a flexibility of payment types while maintaining a rapid boarding process.

E

CURRENT STATUS OF CONCEPT TECHNOLOGY

E. CURRENT STATUS OF CONCEPT TECHNOLOGY

(a) Description of Current Development Status of PGTS Concept

[redacted]

(b) Schedule for Development of a Fully Deployable System

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

(c) Examples of Successful Similar Implementations

A high capacity/low-cost ATN solution similar to the Glydways system has never been implemented.

Around the world, there are various PRT systems in various stages of development and operation. However, all are designed with fundamental shortcomings that have prevented market adoption: inflexible implementation, proprietary hardware, heavy corridor requirements, lack of ability to build incrementally, unproven technologies, and most importantly, inability to deliver on high capacity that can meet current (or future) mass transit demands.

Two examples of such systems are the Morgantown PRT system in Morgantown, West Virginia, USA, and the Ultra PRT system at Heathrow Airport, London, United Kingdom.

By comparison, Glydways system has been holistically designed to provide high capacity (10,000 pphd) service with implementation flexibility to strive for the best of both worlds: lowest cost, high quality of service as a scalable solution.

(d) Areas of Notable Risks

[redacted]

[redacted]

[redacted]	[redacted]	[redacted]
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F

CONCEPT REQUIREMENTS

F. CONCEPT REQUIREMENTS

(a) Key Requirements for Implementation

[redacted]

[redacted]

[redacted]

[redacted]

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- [redacted]
- [redacted]

[redacted]

Phase 1 - Airport Connector: Expected date of activation: Q4 2024

Phase 2 - Stevens Creek Line: Expected date of activation: Q2 2025

(b) Aerial or Underground Configuration

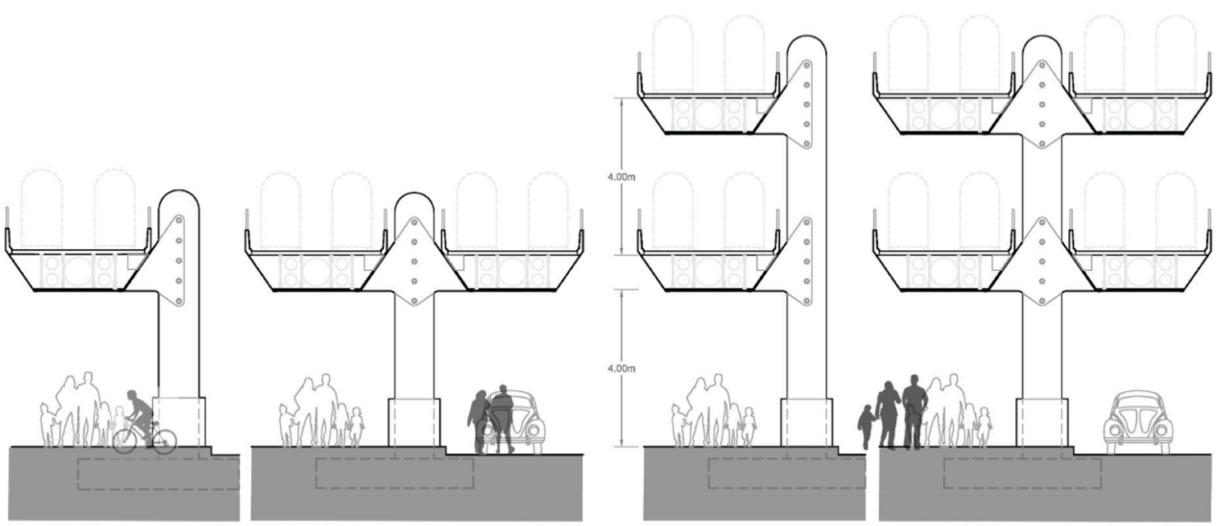
1. Yes. The system can operate above grade, at-grade and below grade and is designed from the outset to transition between each with minimal ramp run length required.
2. The maximum design grade for slow speed transitions (from boarding zones to Utility/ Trunk lane levels) is **15%**.
3. The maximum design grade for vertical transitions of the Trunk/ Utility lanes at transit speed (31mph) (i.e. topography, overpasses, etc.) is **9%**.

(c) Future Extension

As long as viable corridors are identified, the system can be extended at $51million/mile (cost variable based on corridor) to expand the reach of the system. In addition, if the initial installation commits to over-scaled foundations and pylons, the lightweight nature of the Glydways infrastructure allows for new guideway segments to be added to existing guideway support in the future in order to meet increased capacity demands within the corridor.

The vehicle's low weight/mass and moderate speeds have major beneficial impacts on the entire system, its reliability, maintenance needs, and flexibility. It also simplifies the scale and complexity of its supporting infrastructure. Conventional auto-oriented infrastructure is actually scaled to accommodate very heavy weight trucks, fully loaded. The reality is that freeways, roads, bridges and related structures are much more massive, expensive and difficult to maintain than is necessary to merely move people, especially one or two at a time. The Glydways system infrastructure by comparison is dramatically lighter, cheaper, more quickly-built and more flexible to change than anything serving this purpose in the world today.

Figure F.2: Expandible stacking configurations of the Glydways elevated system



(d) Added Stations

Glydways as a system is designed for incremental expansion, and by design, boarding zones can be added or expanded in the future. The Trunk line can be branched from the main line to connect to the new stations at new or growing developments.

Providing incremental expansion is a good way for private developers to play a larger role in the growth of a Glydways system. The incremental cost of expansion is an approachable cost with immediate ROI for those who connect to the main system.

(e) Maintenance Requirements for Guideways, Vehicles, Stations, etc.

Maintenance requirements:

- **Guideway:** Periodic structural inspections, re-painting schedule (if painted), periodic track monitoring system replacement and repair, resurfacing the running surface every 15 years. All maintenance operations are conventional as applied to elevated pedestrian structures and IT equipment. Maintenance crews will access the system through custom Glydways vehicles.
- **Vehicles:** Electric vehicle drivetrains nominally need very little maintenance and can easily last to 500k miles. For ease of cost comparison we extrapolate our expected costs from fleet EV vehicle data. However, there are some key maintenance aspects. Each time a vehicle enters the garage (nominally 2 times a day) the vehicle is calibrated, inspected, cleaned and charged. In addition, any rider can voice a complaint about any vehicle through our kiosks or the phone app. Aspects of the vehicle that may need more rigorous maintenance are the battery (replaced after 250k miles), doors (designed to be robust hinge points, not sliding) and interior features (due to risk of vandalism).
- [redacted]
- **Garages:** Garages are where most Glydways employees will be stationed. Central control, maintenance crews, emergency crews and management all reside in the main Garage structure(s). Garages are outfitted with employee areas with all required restroom, climate control and require no more maintenance than a comparable office. Vehicle charging infrastructure is facilitated through commercially available direct DC charging from a central power supply and contacts warrantied for 100,000 cycles.
- **Central Control:** The nerve center of a Glydways system, will need periodic replacement of equipment, similar to an IT server center. This is costed out at 5% replacement per year.

G

COSTS

G. COSTS

(a) Cost Per Mile

There are a number of unique, more complex locations along the route that will likely incur higher costs than the typical cost of greenfield or boulevard corridor configurations highlighted on B.1. Accounting for a rough estimate of the impact of these high costs locations, the costs are as follows:

- The **Phase 1 Airport Connector** (SCJ-to-Diridon) is expected to cost **$51 million USD per mile,** fully grade separated.
- The **Phase 2 Stevens Creek Line** is expected to cost approximately **$56 million USD per mile**, fully grade separated.

While we have made every effort to provide as realistic an estimate as possible, the costs presented throughout this submission section of this RFI are preliminary. More accurate estimates would require a detailed assessment of each corridor, with their respective specific site conditions, and a detailed scope for each alignment.

(b) Incremental Cost of a Station and/Or Access Point

The additional cost of boarding zones along a raised Glydways guideway segment on a flat site is approximately $850,000. This cost will include ramps, typically 8 boarding bays, integrated canopy roof, perimeter fencing, concrete pad connecting to adjacent walkways (access sidewalks are out of scope), 2 kiosks, lighting and boarding zone signage. Additional boarding zones for new spurs or for at-grade alignments will differ.

(c) Cost of the Vehicle Fleet Needed to Begin Operations

Shown in Table G.1 - Cost of vehicle fleet for Phase 1- Airport Connector and Phase 2 - Stevens Creek Line.

Table G.1: Cost of vehicle fleet for Phase 1- Airport Connector and Phase 2 - Stevens Creek Line

	LENGTH (MILES)	PEAK CAPACITY (PPL/HR)	VEHICLE (#)	FLEET COST ($,000)
Airport Connector	3.5	1250	168	$8,321
Stevens Creek Line	8.5	5000	1632	$66,351

For this study both routes are modeled as discrete systems, the fleet is not shared and all rides are personal, which is the highest cost case).

With more comprehensive simulation and ridership information, we expect reduction of the fleet numbers and costs due to optimization of fleet balancing along the entire line (De Anza to Airport).

(d) Summary of Capital Costs for Delivering Full System for Each Potential Project

Below are the CapEx assumptions for both Phase 1 and Phase 2 of this proposal, followed by detailed CapEx breakdown cost for each phase.

Overall System Parameters:

- 1.25ppl per ride (every 4th ride has 2 riders);
- 31mph top speed;
- Peak throughput requirement is generically based on 1/7 of daily travel;
- 24 hour / 7 days a week service; and,
- 20% counter commuting flow ratio.

For a more informed quotation, a significant amount of study needs to be completed of the entire corridor.

System Specifics by Phase

Table G.2: Phase 1 - Airport Connector System Specifics

PHASE 1: AIRPORT CONNECTOR SYSTEM SPECIFICS		
System Distance	3.5	miles elevated
Boarding Zones	7	number
Peak Throughput	1,250	pphd
Fleet Size	168	vehicles
Rides (weekday)	8,400	rides
Passenger miles (weekday)	14,620	miles
Passengers miles (year)	4.91	miles (millions)

Table G.3: Phase 2 - Stevens Creek Line System Specifics

PHASE 1: AIRPORT CONNECTOR SYSTEM SPECIFICS		
System Distance	8.5	miles elevated
Boarding Zones	10	number
Peak Throughput	5,000	pphd
Fleet Size	1,632	vehicles
Rides (weekday)	33,600	rides
Passenger miles (weekday)	142,000	miles
Passengers miles (year)	47.55	miles (millions)

CapEx Costs by Phase

Included in the cost figures are physical elements, service relocation, and construction management overhead costs:

Physical Elements

Table G.4: Physical Elements of CapEx Cost

TRACK INFRASTRUCTURE ($2354/FT)	NEW GARAGE COSTS ($160/SQFT)	VEHICLES
• Elevated steel joist construction, off site assembly (2 lanes in each direction) ($2240/ft)** • At grade boarding zone construction ($849k/per 8 bay) • Solar roof Infrastructure ($1.8/watt)** • [redacted]	• Steel warehouse on slab ($59/sqft)** • Control center ($510k first 2000 fleet) • HR facility outfit • Electrical charging infrastructure • Water infrastructure • Charging space available for 1/3 of fleet, storage for 2/3fleet.	• Vehicle costs ($30k)** • Vehicle battery packs ($5.2k)** • Tires ($100)** • System Service Vehicles: ($120k each)
Contingency of 20% applied ** Vendor Quote		

[redacted]

CapEx Physical Elements costs breakout by phase

Phase 1 - Airport Connector System CapEx

Table G.5: CapEx of Physical Elements for Phase 1

TRACK (4 LANES ELEVATED)	SOLAR ROOF INSTALL (CAPACITY MATCHED)	GARAGE (NEW BUILD)	CONTROL CENTER (STD. MODULE)	VEHICLES $7,128,000 BATTERIES $1,193,000
$58,741,000	$2,747,000*	$3,564,000	$675,000	$8,321,000
Total: $74,094,000 I Length: 3.5miles				
~$21,000,000/mile				

** Solar roof is calculated to match the capacity of the fleet, not total surface available.*

Phase 2 - Stevens Creek Line CapEx

Table G.6: CapEx of Physical Elements for Phase 2

TRACK (4 LANES ELEVATED)	SOLAR ROOF INSTALL (CAPACITY MATCHED)	GARAGE (NEW BUILD)	CONTROL CENTER (STD. MODULE)	VEHICLES $56,580,000 BATTERIES $9,771,320
$121,522,000	$22,019,000*	$29,495,000	$675,000	$66,351,000
Total: $239,964,000 | Length: 8.5miles				
~$28,000,000/mile				

** Solar roof is calculated to match the capacity of the fleet, not total surface available.*

Service Relocation, Corridor development and overhead / indirect costs

Table G.7: Service relocation and corridor development included within CapEx Cost

OVERHEAD	AT-GRADE	BELOW-GROUND	CONSTRUCTION/PM OVERHEAD
• Powerlines • Telecom • Existing traffic signage structures • Elevated structures	• Equipment and support structures (transformers, Utility boxes, poles, towers, fences, etc.) • Vehicle and pedestrian circulation spaces (roads, paths, etc.)	• Water (city water, storm sewer, recycled water lines, culverted streams) • Power and Telecom lines	• In City construction overhead • Project Management Overhead • Indirect Costs • Soft Costs • Exceptional structure • Landscaping
Costs are variable based on corridor and conditions which are not yet known: preliminary estimate of $20mm to $60mm / mile			

In addition we have included a contingency cost of 20% of overall costs.

Comprehensive Overview of CapEx by Phase*

Table G.8: Phase 1 - Airport Connector CapEx

	MILES	PEAK CAPACITY (PPL/HR)	PHYS. ELEM. PER MILE ($,000)	INDIRECT/ CORRIDOR DEV. PER MILE ($,000)	CAPEX ($,000)		PER MILE ($,000)
Phase 1: Airport Connector	3.5	1250	21,000	20,000	Low	143,000	41,000
				30,000	**Expected**	**178,000**	**51,000**
				60,000	High	283,000	81,000

Table G.9: Phase 2 - Stevens Creek Line CapEx

	MILES	PEAK CAPACITY (PPL/HR)	PHYS. ELEM. PER MILE ($,000)	INDIRECT/ CORRIDOR DEV. PER MILE ($,000)	CAPEX ($,000)		PER MILE ($,000)
Phase 2: Stevens Creek Line	8.5	5,000	21,000**	15,000	Low	306,000**	36,000
				30,000	**Expected**	**493,000**	**58,000**
			28,000	60,000	High	578,000	68,000

**As a point of comparison, note that UltraPRTs low capacity system installed at Heathrow Airport avoided much of the complexity that commonly adds cost to a system installation due to being installed on private grounds. Their 2011 total cost for installation was quoted as costing: $22.4m/mile, $53m total for 2.4miles. (https://www.huffingtonpost.co.uk/2011/09/12/heathrow-driverless- pods-_n_958262.html)*

***Lower capitalization cost from building at ground level for 50% of the route. (Bridge over intersections*

(e) High-Level Estimate of the Ongoing Operations and Maintenance Costs

Below are the OpEx cost assumptions for both systems, followed by OpEx breakout for both phases. Finally, we have included a comprehensive overview of CapEx, OpEx, and total cost of ownership ("TCO") (30 Years)

Table G.10: Elements included within OpEx

VEHICLES	INFRASTRUCTURE	CONTROL CENTER
• Vehicle lifecycle replacement: 500kmiles - $0.097/pass*mile • Battery lifecycle replacement: 200kmiles - $0.048/pass*mile • Maintenance Labor/parts: $0.024/ pass*mile • Cleaning/Inspection Labor: $0.13/ pass*mile • Standard: • 1.5min / vehicle x 3 times a day • Deep Clean: • 7min / vehicle every 30 rides • Tire replacement: $0.003/pass*mile 60,000miles/$100 set • Energy: $0.19kwh wholesale	• Structural Maintenance Labor ($8 per linear foot of system/ year) • [redacted] • Emergency Services Labor (24 hour redundant service, 3 shifts 8 hours each): ($25.6/ ft) • Energy ($4 per linear foot, $0.19kwh wholesale) • Landscape Maintenance	• Maintenance: IT replacement - 5% per year • Personnel Labor • HR Overhead • Energy: $1.56/sqft - $0.19kwh wholesale • Administrative Costs

VEHICLES	INFRASTRUCTURE	CONTROL CENTER
• Vehicle maintenance and replacement cycles are based on current on-road electric vehicle maintenance processes and timelines. Dedicated guideway vehicle maintenance should be similar or less frequent. Tesla fleet vehicle maintenance costs: $6900/300kmiles https://cleantechnica.com/2017/09/05/10492-tesla-model-s-maintenance-charging-costs-300000-miles/ Battery costs are assumed $200/kWh pack. (2017 pricing) https://about.bnef.com/blog/behind-scenes-take-lithium-ion-battery-prices/	• Life Cycle costs of steel and concrete bridges for assumed maintenance costs. https://www.countyengineers.org/assets/Presentations/2017/sun%20sssb%20econ%20barker.pdf	• Assumed salaries: • Chief: $200k/year • Front Line Mgt: $150k/year • Front Line IC: $125k/year • Maintenance Mgt: $120k/year • Maintenance Staff: $55k/year • Equipment per head: $100k • Building costs per head: $50k • Daily utilities per head: $7

Examples of Source Material for Vehicle Maintenance Include:

- Tesla fleet vehicle maintenance costs: $6900/300kmiles (https://cleantechnica.com/2017/09/05/10492-tesla-model-s-maintenance-charging-costs-300000-miles/)
- Battery costs are assumed $200/kWh pack. (2017 pricing) (https://about.bnef.com/blog/behind-scenes-take-lithium-ion-battery-prices)
- Life Cycle costs of steel and concrete bridges for assumed maintenance costs. (https://www.countyengineers.org/assets/Presentations/2017/sun%20sssb%20econ%20barker.pdf)

OpEx Breakout by Phase:

Table G.11: Phase 1 - Airport Connector Opex

PHASE 1 - AIRPORT CONNECTOR OPEX			
• Vehicle - OpEx - • Maintenance • Cleaning / Inspection • Tires • Energy	• Infrastructure - Labor and Std Maint. • TMS System • Emergency Services • Energy	• Control Center • Maintenance • Personnel • Energy	• Vehicle - Fleet Refresh - $679,000 • Batteries - Refresh - $282,000
$1,088,000	$1,489,000	$762,000	$961,000
Total: ~$4,300,000			

Table G.12: Phase 2 - Stevens Creek Line System OpEx

PHASE 2 - STEVENS CREEK LINE SYSTEM OPEX			
• Vehicle - OpEx - • Maintenance • Cleaning / Inspection • Tires • Energy	• Infrastructure - Labor and Std Maint. • TMS System • Emergency Services • Energy	• Control Center • Maintenance • Personnel • Energy	• Vehicle - Fleet Refresh - $6,631,000 • Batteries - Refresh - $2,751,000
$7,110,000	$4,967,000	$1,151,000	$9,382,000
Total: ~$22,610,000			

Comprehensive overview of CapEx, OpEx, TCO (30 Years) by phase:

Table G.13: Phase 1: Airport Connector CapEx, OpEx, 30 Yr TCO

	MILES	PEAK CAPACITY (PPL/HR)		CAPEX ($,000)	PER MILE ($,000)	OPEX ($,000/YR)	TCO 30Y ($,000)
Phase 1: Airport Connector	3.5	1,250 ppl/hr	Low	143,000	41,000	3,400	245,000
			Expected	**178,000**	**51,000**	**4,300**	**307,000**
			High	283,000	81,000	5,100	436,000

Table G.14: Phase 2: Stevens Creek Line CapEx, OpEx, 30 Yr TCO

	MILES	PEAK CAPACITY (PPL/HR)		CAPEX ($,000)	PER MILE ($,000)	OPEX ($,000/YR)	TCO 30Y ($,000)
Phase 2: Stevens Creek Line	8.5	5,000 ppl/hr	Low	306,000*	36,000	18,000	846,000
			Expected	**493,000**	**58,000**	**22,610**	**1,171,000**
			High	578,000	68,000	27,000	1,388,000

** Lower capitalization cost from building at ground level for 50% of the route. (Bridge over intersections)*

H

BUSINESS PLAN

H. BUSINESS PLAN

(a) Proposed Project Business Plan

Plenary Glydways Transit Solutions ("PGTS") propose a Design Build Finance Operate Maintain ("DBFOM") structure as demonstrated by Figure 11.1, where PGTS would take on full responsibility for the design and construction, operations and maintenance, as well as financing of the project for a 30 to 40 year term.

Table H.1: PGTS' DBFOM Responsibilities

TEAM MEMBER	RESPONSIBILITY
Plenary	• Development • Financing • Operations & Maintenance
Glydways	Supply of the vehicles and systems O&M of supplied equipment
Webcor	Construction
Obayashi	Construction
[Future Partners]	• Construction Subcontractors (MEP, etc.) • Soft FM Services (Landscaping, Janitorial, Security, etc. • Additional operating partners (if required)

Ownership of the system will remain with the City at all times. Financing will consist of a mix of debt and equity, providing certainty of delivery, as well as a focus on delivering a system that will operate for the long-term. If desired, the team would be open to having the City contribute public funds during the course of construction either as milestone or progress payments. The PGTS team would be reimbursed by the City for the remainder of its upfront design and construction financing, as well as for operations and maintenance via a combination of ridership revenue, other project revenue streams and recurring availability payments for the term of the agreement. Availability payments are a form of payment that are contingent on performance ("availability of the asset"), and which do not start until the project is open for public use. They are based on availability and capacity of the system but are not tied directly to ridership levels.

Based on the characteristics of the proposed system including point-to-point service, short travel times, on-demand availability (limited wait time) and comfort/ privacy of the trip, ridership potential is significantly greater than for existing public transit service modes. While we have not undertaken corridor-specific ridership modeling, based on the general characteristics and the corridor and demand drivers, combined with the service proposed we believe there is significant potential for farebox revenues to cover or exceed O&M costs. Our recommended structure would include a sharing of ridership revenue between the City and PGTS supplemented by an availability payment from the City. The availability payment is a familiar structure to lenders and other financiers of transportation assets developed as P3s and will provide a baseline revenue level that allows for efficient long-term financing and transfers asset performance risk to the private sector. The revenue sharing approach with respect to farebox revenues will provide for additional alignment of incentives and ensure that the City shares in revenue upside as ridership grows over time in what are expected to be high growth corridors.

We consider the proposed structure to be appropriate for this project and to present a balanced risk profile between public and private sectors, however we are also open to consider alternative business models and P3 transaction structures. We would be happy to discuss our proposal and alternatives in more detail with the City.

(b) Operator of the System Once Constructed

The PGTS team will manage all aspects of the operations of the system for the 30 to 40 year term. Members of our team would manage the Control Center, the garage/ maintenance facilities, and the fleet maintenance/ replacement. We would also be responsible for managing all soft and hard Facilities Maintenance and Replacement needs. The PGTS team has initiated discussions with local emergency response agencies regarding access, and we are open to various allocations of security responsibilities. Once the DBFOM contract has expired, operational responsibility will revert back to the City.

Should there be elements of the long-term operation of the system that the City feels would be best retained by the public, our team would be open to discussing these elements.

(c) Passenger Fares Strategy

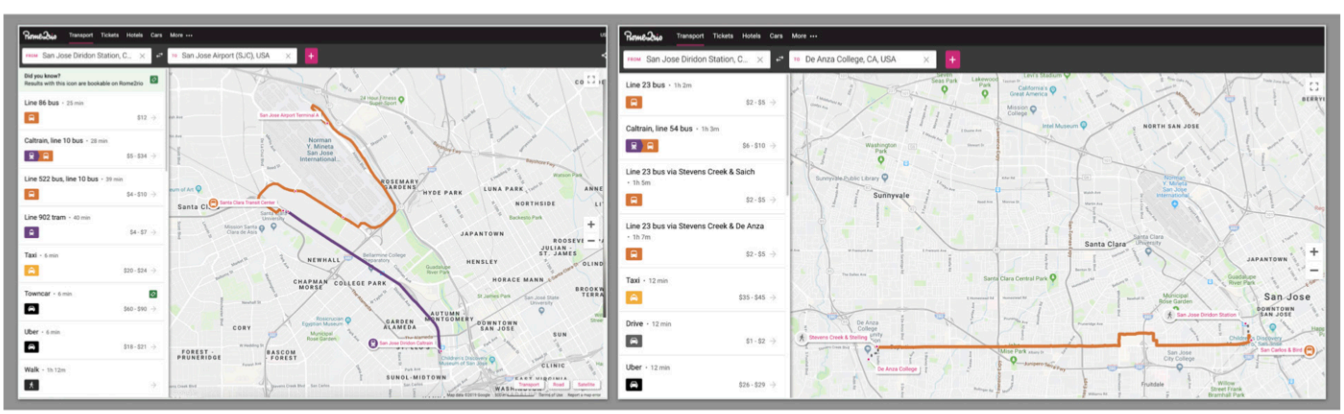
Determining a passenger fare strategy would be done in close consultation with the City and after more detailed study of passenger demand and travel patterns. Our objective would be to price the service in a way that is competitive with both other public transit options (potentially modestly higher to reflect the travel time and quality benefits of this service) and with personal auto travel (accounting for total cost of ownership). We would also explore peak period pricing, frequent user discounts and other dynamic pricing concepts. In addition we would ensure that this service's fare collection system is compatible and integrated with regional fare collection systems and passes (Clipper card).

Given the lower cost to build and operate our proposed system, prices to use this system that are comparable to other modes of transportation are expected to provide a greater coverage of the overall cost to put the system in place, but it is not required that farebox revenues cover all of these costs, so long as the City has other sources of funds to pay any availability payment that forms a part of the long-term contract. Ultimately fare setting policies will be overseen by the City and the approach to fares can be adapted based on the City's public policy objectives.

(d) Expected Fares for Passengers to Use the System

1. Based on research, the current range of options for the SJC airport to Diridon station spans from $5 to $24 in cost, at a minimum of 25 minutes for the public transit times. (see chart below for breakdown).
2. Mobility options that extends from Diridon Station to De Anza College, leveraging the Stevens Creek Blvd corridor, spans from $2.50 to $29 in cost. The $2.50 price is a current single bus ride that takes over an hour for the rider, where as the $29 is the cost of a TNC service like Uber or Lyft. It is important to bear in mind that during rush hour, it would take a rider about 35 minutes to complete the 8.5+ mile journey, adding in about 5 minutes of wait time, the entire journey would take 40 minutes total. By comparison, at 30mph and near-zero waiting time, a ride on the Glydways system would take about 20 minutes, a saving of 50% on journey time at a lower cost (and with higher speed operation, which is feasible with the proposed system, the time savings would be even greater).

Figure H.1: Current transportation options for Phase 1 and Phase 2



3. Similar airport connectivity options includes the Oakland Airport Connector which charges $**6 per ride** for a trip of 3.2miles for an 8 minute trip and a 6 minute wait.

Based on the cost of existing options, as well as the cost and characteristics of the proposed PGTS system, fares in the range of $5-$8 for a personal ride and $3-$6 for a shared ride currently appear to be reasonable. More detailed cost and ridership analysis, as well as consultation with the City around its policy objectives, would be required before we would be able to provide more specific information on an expected fare.

(e) Strategy to Maximize Ridership

When compared to other modes of public transportation a Glydways service offers natural advantages and additional ridership opportunities.

With that in mind, some strategies can be developed to maximize ridership:

Logistics Integration with regional transit systems, fare discount programs or stakeholders benefiting from such programs:

- 24/7 access to both Glyd SHARED and Glyd SOLO services;
- Seamless connections with other regional public transit services;
- Integration with regional fare collection systems (e.g., Clipper cards);
- Integration with Public Transit Incentive Programs;
- Partnerships and integration with ridesharing and personal mobility apps; and,
- Phone app access for seamless efficient travel.

Marketing and PR:

- Advertising and PR within SJC airport to ensure that passengers are aware of the system as a connectivity option;
- Advertising and PR regarding PGTS service offering within the San Jose region to highlight its advantages over driving or rideshare through TNCs; and,
- Periodic opportunities to ride the service for a free or discounted prices, including at its initial opening – as a new service and travel mode it is important to build awareness and encourage people to try or sample the service, this will allow them to experience the benefits and encourage long term ridership.

Enlist Partnership and Support from Private Organizations in the Region:

- Partnerships with employers (especially along the Stevens Creek line) in which employers would provide a discount or purchase passes for this service on behalf of their employees, or incorporate Glydways into the employees' transit benefit package in other ways.
- Facilitate transit oriented development on or near this transit line, to build both origins and destinations that are convenient from this service.
- Special event promotions - include fare into the ticket prices to events.

(f) Capital and Operations Costs

From our initial calculations and based on information currently available, it could be possible to fund operating costs from farebox revenues. However, we would need to further study the routes, actual costs to deploy the system, and what prices customers may be willing to bear.

With respect to capital costs, we expect that multiple funding sources will be required. To the extent there is a surplus of farebox revenue over operating costs, PGTS could raise and invest private capital to cover a portion of initial construction costs. Whether this is feasible and the extent of the contribution that could be made would depend on further study the routes, actual costs to deploy the system, and what prices customers may be willing to bear. We recommend that the City consider state and federal grant sources, as well as any available local sources of transportation funding, as a part of the overall project funding plan. In addition, value capture strategies such as Enhanced Infrastructure Financing Districts ("EIFD") should be evaluated and could form part of an overall funding plan.

(g) Opportunities or Strategies to Maximize FareBox Recovery and/or Offset Operations and Maintenance Costs

As described above, the lower cost to build and operate this system (relative to other transit modes) increases the opportunity for substantial farebox recovery. Similarly, the transportation benefits of the service (shorter wait and travel times, point-to-point operation), as well as the active ridership generation strategies described in a prior answer will maximize ridership at any given level of fares and generate more total revenue. O&M costs for this system are largely variable (energy usage, vehicle maintenance and lifecycle replacement for example scale almost directly with miles traveled), which will help to more closely match costs with ridership and therefore revenue. Since vehicles are dispatched on demand, a high percentage of miles traveled are revenue miles and our service does not suffer from the challenge of having large vehicles that may travel empty or with limited ridership for significant periods of time.

Some specific recommendations to further maximize farebox recovery and/or offset O&M costs may include the following:

Project Development Related Strategies:

- Maximize the use of standardized and modular components.
- [redacted]
- Glydways as a system allows for property owners to fund part of the system for a direct connection to their commercial space. A direct mass transit connection would be instrumental in increasing retail revenue and raising properly values.
- Evaluate and implement value capture tools such as EIFDs and CFD.
- Seek grant funding streams targeted at the deployment of innovative transportation options.

Fare & Revenue Related Strategies:

- Focus the system on serving a higher percentage of shared services, reducing the number of individual Glydways vehicles required to run the system.
- [redacted]
- Expansion of the system beyond the original scope: e.g., a direct connection to Apple Headquarters.
- Selling corporate rate ridership packages.
- Identify opportunities for ancillary signage and advertising revenues.
- Transportation of goods and baggage off-hours.
- [redacted]
- [redacted]

I

IMPACTS

I. IMPACTS

(a) Potential Negative Impacts During Construction

The lightweight, modular construction of the elevated Glydways track segments have been designed to significantly accelerate the speed of construction to both cut the costs that long term site disruption can impose and also minimize the impacts during construction.

Beyond safety, one of our key objectives is to identify the range of construction impacts our project will have on local communities and to demonstrate best practices in addressing the concerns of local constituents and businesses. We have carried out a series of interviews and focus groups with a variety of stakeholders, including representatives of local communities, neighbors, design, and client representatives on multiple, varied projects. The results highlighted several common impacts and many instances of good practices needed to address. Potential negative impacts to the community during construction include the following:

- Noise and vibration;
- Dust and dirt;
- Parking logistics challenges;
- Road closures and increased traffic;
- Pedestrian obstructions; and
- Security.

Once potential impacts have been established, appropriate control measures will be selected based on the amount of reduction needed, local ordinances, anticipated length of construction period, effectiveness of control strategy and cost and schedule impacts. Regardless of the abatement strategy, success is determined by monitoring impacts by properly trained staff, written specifications, and well-defined goals. Specific mitigation strategies associated with the potential community impacts previously mentioned are as follows:

Noise and Vibration

- Training by equipment manufacturers and/or suppliers on the proper use of the noise abatement features of specific pieces of construction equipment.
- Collaboration with the design team early to implement cost-effective measures in the design to reduce anticipated noise and vibration impacts.
- Implementing noise walls, movable shielding and/or noise curtains.
- Operating loud equipment only when necessary.
- Switching off equipment not in use.
- Use of the quietest practical type of equipment.
- Positioning stationary noise sources away from noise-sensitive areas.

Dust, Dirt, and Debris

- Air monitoring (by specialized consultant).
- Continuous watering of excavation including dedicated laborer watering at the source of dust-generating activity.
- Regular employment of a street sweeper and wheel washers.
- Implementation of sheeting/barriers.

Parking Logistics Challenges

- Designated worker parking.
- Option for off-site parking with a shuttle service.

Road Cosures and Increased Traffic

- Flaggers re-directing traffic.
- Wayfinding signage.
- Strategic alternate routes.
- Just-in-time deliveries.
- Multiple site entrances/exits.
- No construction traffic during peak commuting hours.
- Designating haul routes on less impactful roads.

Pedestrian Obstructions

- Re-routed sidewalks and crosswalks.
- Well-lit pedestrian overhead protection.

Security

- 24-hour on-site security.
- Surveillance cameras.

(b) Potential Negative Impacts During Operations

Glydways operations is designed to have a lower impact than traditional mass transit options. The system's quiet electric vehicle fleet, when in operation, translates to predictable and consistent wear-and-tear on its exclusive guideways

During operation, Glydways will have potential negative impacts in categories similar to rail-based transit technologies, such as noise and sightlines, albeit in much lighter magnitudes.

Similar negative side effects to a Glydways system: based on current design, we propose to add acoustic walls to the system to further dampen the noise on the Trunk line.

The system delivers on capacity by maintaining exclusive right-of-way for its fleet. When elevated guideways are deployed to achieve grade-separation, the guideways are at least 16' above ground, which presents an interruption to the sightlines of residences nearby. A BRT/LRT/HRT may avoid this impact by staying on the ground, but this mitigation comes at a cost to overall system safety and security.

In other corresponding categories, specifically crowding, security, and pollution, Glydways is designed to eliminate sources that contributes to those operational blights, and and we would intend to work with the City to ensure that the implementation of a system described within this RFI meets product design criteria. Finally, an autonomous fleet that can deliver on mass-transit capacity while offering a predictable and comfortable experience for riders will displace existing TNC drivers who are tasked with delivering these trips. However, this system will also create better, more permanent jobs, resulting in a more robust transportation sector overall.

(c) Mitigating Negative Impacts

The lightway nature of Glydways' infrastructure, combined with the predictable wear-and-tear of both the fleet and infrastructure, means that options in mitigating negative operation impacts tend to be easier to implement:

- **Sightline interruption as a result of elevated guideways:** the capability of the infrastructure to create lighting, wayfinding signage, and even pedestrian-oriented public space can serve to counter the negative connotation that constituents may have about elevated guideways.
- **Displacement of TNC gig-drivers:** permanent, better positions will need to be created within a Glydways connectivity system.
- **System noise:** at 60dba, a Glydways system is much quieter than that of a traditional BRT/LRT/HRT system. This noise can be mitigated by the addition of an acoustic walls to the system to further dampen the noise on the Trunk line.
- **Crowding:** Glydways systems are designed to minimize passenger wait time. As passengers do not need to linger at boarding zones, opportunity to form a crowd at these areas are lessened.
- **Security:** All Glydways [redacted] vehicles themselves are equipped with cameras. Riders themselves always have the option to reserve a private journey, [redacted]. All of these features work together to provide a mass transit experience that exceeds the safety and security standard of current mass transit options.
- **Pollution:** Glydways vehicles are electrical, and therefore do not emit any CO_2 during operation. Photovoltaics along the infrastructure can feed solar energy into existing power grids to make the system more sustainable overall.

(d) Community Outreach and Engagement Strategy

The outreach and engagement ("O&E") strategy focuses on three major elements: education, expertise, and empowerment.

Education: The O&E strategy begins with educating stakeholders on the significant economic, environmental, and social impacts of our proposed system, both during and after construction. Our team is also committed to leading with an internal culture of respect and transparency, which includes educating all members of the Plenary Glydways Transit Solutions ("PGTS") team - from site-level personnel to senior management - in how to reflect these critical traits.

Expertise: The PGTS team has significant expertise in the design, construction and operation of public transportation systems. We will bring our deep understanding of the impacted communities and square blocks, the authorities having jurisdiction, the relevant codes and local requirements, the local workforce availability, and relevant trade partners to ensure the successful development of the proposed systems in San Jose. Burdens on the community will be assessed both prior to construction, but also as issues arise, and with solutions incorporated to create positive impressions on local communities and neighborhoods.

Empowerment: To empower those potentially affected by the project, we will begin the O&E process early and continue to engage the community well into operations, so as to ensure that all stakeholders know how they can participate in the process and that we are invested in their quality of life as we deploy the proposed system.

The Community Outreach and Communication Plan will span a wide range of tactics to ensure that constituents' concerns are addressed. Examples include:

- Meet-and-greets to address individual concerns, explain our logistics plans, working hours, delivery schedule, and potential impacts.
- Utilize public facing portals and message exchange vehicles to provide updates on the project status, major upcoming milestones and potential effects to daily operations and mitigation measures as the project progress.
- Development and distribution of communication materials such as newsletters, flyers, website postings, social media engagement, signage, and public notices.
- The establishment of a hotline to address questions, concerns, and comments.
- To ensure prompt issue resolution, direct contact information (phone numbers, emails) of key project staff will be provided.

Anticipate and address specific concerns, such as special events at the surrounding facilities and impacts related to other ongoing projects in the site vicinity will also be taken into consideration and addressed.

SUBMITTED TO

CITY OF SAN JOSE
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ATTENTION: MARICELA AVILA

SUBMITTED BY

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