COUNCIL REPORT

CITY OF MOUNTAIN VIEW

DATE: June 4, 2019

CATEGORY: Unfinished Business

DEPT.: Public Works

TITLE: **Automated Guideway Transit Phase 2 Feasibility Study**

RECOMMENDATION

1. Approve the scope of work for the Automated Guideway Transit (AGT) Phase 2 Feasibility Study.

2. Authorize the City Manager to execute agreements with the Mountain View Transportation Management Association and Google to provide funding for the AGT Phase 2 Feasibility Study.

BACKGROUND

At its June 16, 2015 meeting, the City Council directed staff to initiate a multi-year process in conjunction with other cities and agencies to improve last-mile connections. During an October 27, 2015 Study Session, the City Council provided the following additional direction: (1) focus on the development of an off-street AGT system (e.g., automated people mover, group rapid transit, personal rapid transit, etc.); and (2) give priority to the corridor linking the Downtown Transit Center to the City's North Bayshore Area. On February 2, 2016, the City Council directed staff to carry out a feasibility study for an AGT system, and on December 6, 2016, the City Council approved execution of a professional services agreement with Lea+Elliott, Inc. (Lea+Elliott) to prepare the study.

The AGT Feasibility Study included the identification of candidate technologies, development of passenger market and demand estimates, identification of system requirements, and evaluation of technologies to meet system needs. The consultant team's scope of work also included community meetings, business outreach, a project website, and partner agency discussions. Staff also monitored the North Bayshore Transportation Access Study that Google had contracted with the Valley Transportation Authority (VTA) to conduct. The City Council held Study Sessions on May 23, 2017 and October 17, 2017 to review progress on the AGT study.

On February 27, 2018, the City Council approved the AGT Feasibility Study Report and directed staff to develop a work plan and budget and to seek funding partners for a Phase 2 Feasibility Study that focuses primarily on the evaluation of alternative route alignments for an Autonomous Transit AGT system.

ANALYSIS

Staff has developed a work plan based on the direction received from the Council on February 27, 2018. In the feasibility study, Autonomous Transit was identified as best suited to the corridor in terms of demand, community acceptance, flexibility, and adaptability. Autonomous Transit consists of automated vehicles operating on a mapped network, preferably with dedicated lanes, but capable of operating in mixed-flow traffic. The guidance systems are provided in the vehicles, simplifying the guideway segments to be just structural elements. Further development of Autonomous Transit is anticipated over the next few years in terms of technology and regulatory requirements.

The recommended scope of work focuses on the evaluation of potential routes to identify a preferred alignment. The Study would also consider potential stations and key system components along with a preliminary look at implementation issues. The identification of a preferred alignment will allow the City to plan for and preserve the right-of-way as new development and road improvements are approved. In addition, the Phase 2 study results could help position the City to secure funding and/or enter into partnerships for the construction and operation of an AGT system.

Scope of Work

The key tasks for the proposed AGT Phase 2 Feasibility Study scope of work are listed below.

Task 1—Project Management

Task 2—Baseline Conditions

This task will involve collecting key information on the existing conditions along potential alignments and set the stage for public outreach. Key activities include:

- Define study corridor.
- Data collection—updated traffic, development plans, etc.

- Establish baseline development assumptions.
- Establish baseline traffic assumptions and conditions.
- Map existing roadway conditions and right-of-way lines.
- Develop stakeholder list—property owners, businesses, agencies.
- Conduct initial community outreach, including a public meeting to help identify key community issues and concerns.

Task 3—Identify Potential Service Characteristics

This task will identify the key transit service characteristics needed for an effective transit service. Understanding the potential operating parameters will help identify and evaluate alignment alternatives and the physical infrastructure needs (e.g., guideways, stations, and operating and storage facilities). Key activities include:

- Define initial operating assumptions.
- Update ridership estimates.
- Evaluate and summarize potential service options.
- Identify system requirements (e.g., size of operating facility).
- Identify supporting actions to ensure transit usage.
- Coordinate with key stakeholders who may be involved in future service delivery (e.g., Mountain View Transportation Management Association, VTA).

Task 4—Evaluate Alignment Options

This task will combine technical evaluation with community engagement to identify which alignments and dedicated guideway configurations will provide the best combination of transit effectiveness, cost, and community acceptance. These may include specific alignment segments, which may be elevated, depressed, or at-grade. To facilitate community engagement, visual aids, such as renderings and simulations, will be developed. This task will also address how the infrastructure improvements can be appropriately phased. Key activities include:

- Identify segments and alternatives—potential alignments are shown in Figure 1 and include a possible connection to the Bayshore/NASA VTA light rail station.

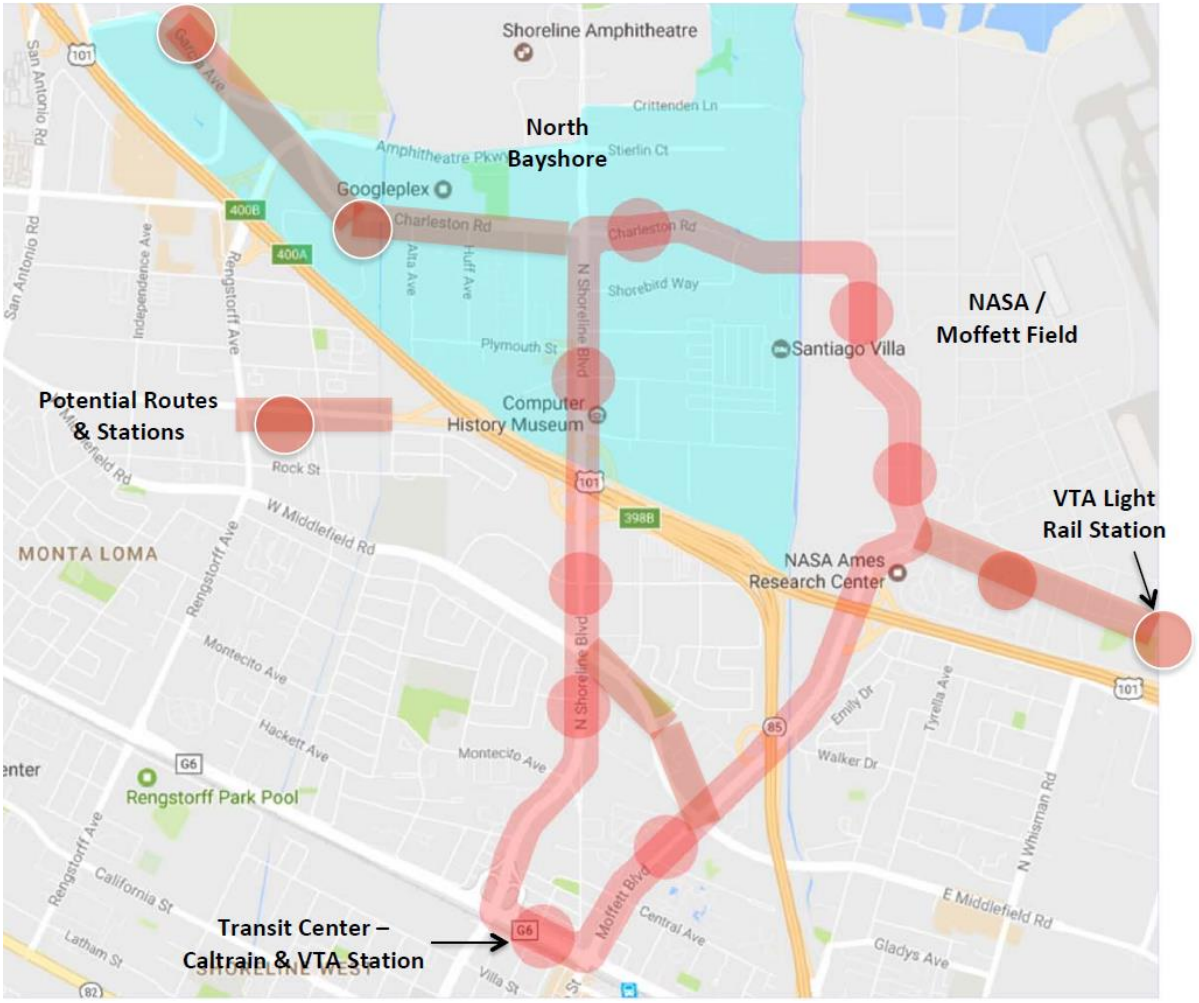

Figure 1—Potential Alignments

- Conduct an initial high-level screening for feasibility and potential fatal flaws for potential alignments (e.g., right-of-way constraints, clearances with overhead structures, high traffic volumes, etc.).

- Create four to five final alternatives, composed of feasible segments, vertical alignment configurations, and operating models (e.g., one-way loop, bidirectional, etc.).

- Create potential phasing options for each alternative.

- Conduct traffic analysis (coordinated with North Bayshore Circulation Feasibility Study).

- Evaluate alternatives using various criteria, including community impacts, right-of-way requirements, visual, pedestrian/bike, transit operations efficiency, etc.

- Develop capital cost estimates.

- Prepare summary evaluation.

- Develop design concept for preferred alternative.

- Develop phasing strategy.

- Conduct community meetings and individual or group stakeholder meetings, including with adjacent property owners.

Task 5—Define Preferred Plan and Next Steps

This task will summarize the results of the previous tasks and propose a preferred alignment and infrastructure plan. It will also identify potential implementation strategies and next steps. Key activities include:

- Define the recommended AGT alignment and infrastructure plan.

- Identify the estimated timeline for full AGT implementation, including regulatory approval and technology development.

- Identify implementation strategies, including phasing opportunities.

- Identify funding alternatives, including options for service operation.

- Prepare Final Report, including potential next steps.

- Conduct community meeting to consider the proposed plan.

Task 6—Council and Committee Meetings

Consultant will attend up to three City Council meetings. Other committee meetings (e.g., Bicycle/Pedestrian Advisory Committee) will be attended as needed (two to three meetings). These meetings are in addition to the community and stakeholder meetings identified in Tasks 1 to 5.

Project Budget and Schedule

As requested by Council, staff reached out to potential funding partners for the Feasibility Study. As indicated in Attachments 1 and 2, the Mountain View Transportation Management Association (TMA) is prepared to provide $100,000 and Google is committing $250,000 toward the Study costs. The estimated cost to complete the AGT Phase 2 Feasibility Study is $850,000.

Staff also explored the following potential funding sources:

- Grants—There are some new Federal funding grants available that were investigated. It was determined that the timing of funding availability did not fit with timing of this study. In addition, these grant funds are limited, will be highly competitive nationwide, and are likely to go to pilot projects rather than planning studies. These grant programs could be considered for future project phases. Staff has submitted the AGT project for consideration as part of the Metropolitan Transportation Commission's Horizon initiative for Plan Bay Area 2050, a long-term planning document that helps determine eligibility for Federal and State funding.

- VTA—VTA is willing to support and/or partner with the City for future Federal or State grant opportunities. VTA is also willing to participate in any stakeholder or technical working groups set up for the City's study. Staff will explore the possibility of competing for VTA's Measure B Innovative Transit Models grant program when the call for projects is released in late 2019.

- Cupertino—The City of Cupertino was interested in exploring an AGT connection from the Mountain View Transit Center to a potential transit station at Highway 85

to facilitate connecting Cupertino residents and employees to Caltrain. However, the amount of funds available (approximately $25,000) was not deemed sufficient to adequately explore that connection as part of Mountain View's AGT Phase 2 Feasibility Study. In addition, rail transit options have been dropped from VTA's Measure B Highway 85 Transit Guideway Study, and Highway 85 transit options will now likely include dedicated lanes for bus and shuttle services. These buses and shuttles could continue to the Mountain View Transit Center and/or North Bayshore area without an AGT connection to Highway 85.

If the recommended actions are approved and Council approves the project budget as part of the Fiscal Year 2019-20 Capital Improvement Program (CIP), staff will proceed with consultant selection and return to Council to award the contract in Fall 2019. The Study should be completed in late 2020.

FISCAL IMPACT

The estimated project cost is $850,000, which includes consultant costs, project management, and administrative fees. The cost of the project will be partially shared by the Mountain View Transportation Management Association ($100,000) and Google ($250,000). The proposed Fiscal Year 2019-20 CIP, scheduled for Council approval on June 18, 2019, includes $500,000 to fully fund the project.

ALTERNATIVES

1. Modify the proposed work plan for the AGT Phase 2 Feasibility Study.

2. Do not proceed with the AGT Phase 2 Feasibility Study at this time.

3. Provide other direction.

PUBLIC NOTICING

The City Council's agenda is advertised on Channel 26, and the agenda and this report appear on the City's website at www.mountainview.gov. The Council report has been provided to the Mountain View TMA and Google.

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Attachments:
1. Mountain View TMA Letter dated April 22, 2019
2. Google Letter dated April 21, 2019