North Hollywood to Pasadena Bus Rapid Transit (BRT) Corridor Planning and Environmental Study

HAZARDOUS WASTE AND MATERIALS SITE ASSESSMENT REPORT

Prepared For:

Metro

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
ADL	Aerially Deposited Lead
AHERA	Asbestos Hazardous Emergency Response Act
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
COC	Chemicals of Concern
DTSC	Department of Toxic Substances Control
EDR	Environmental Data Resources Inc.
HazMat	Hazardous Materials
ISA	Initial Site Assessment
LBP	Lead Based Paint
LUST	Leaking Underground Storage Tank
MTBE	Methyl Tert-Butyl Ether
NB	Northbound
O&M	Operations and Maintenance
PAH	Polyaromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation Recovery Act
RCRIS	Resource Conservation and Recovery Information System
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SB	Southbound
SVOCs	Semi-volatile Organic Compounds
TPH	Total Petroleum Hydrocarbon
TSCA	Toxic Substances Control Act
TSP	Transit Signal Priority
USGS	United States Geological Services
UST	Underground Storage Tank
VOC	Volatile Organic Compound

1. Introduction

The Los Angeles County Metropolitan Transportation Authority (Metro) is proposing the North Hollywood to Pasadena Bus Rapid Transit (BRT) Corridor Project (Proposed Project or Project) which would provide a BRT service connecting several cities and communities between the San Fernando and San Gabriel Valleys. Specifically, the Proposed Project would consist of a BRT service that runs from the North Hollywood Metro B/G Line (Red/Orange) station in the City of Los Angeles through the Cities of Burbank, Glendale, the community of Eagle Rock in the City of Los Angeles, and Pasadena, ending at Pasadena City College. The Proposed Project with route options would operate along a combination of local roadways and freeway sections with various configurations of mixed-flow and dedicated bus lanes depending on location. A Draft Environmental Impact Report (EIR) is being prepared for the following purposes:

- To satisfy the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code (PRC) Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.).

- To inform public agency decision-makers and the public of the significant environmental effects of the Proposed Project, as well as possible ways to minimize those significant effects, and reasonable alternatives to the Proposed Project that would avoid or minimize those significant effects.

- To enable Metro to consider environmental consequences when deciding whether to approve the Proposed Project.

This Hazardous Waste and Materials Site Assessment Report is comprised of the sections listed below. This information will be used to inform the impact analysis presented in the Draft EIR.

1. Introduction
2. Project Description
3. Summary of Conclusions
4. Scope of Work
5. Regulatory Review
6. Historic Information
7. Physical Site Inspection
8. Recommendations
9. Limitations
10. List of Preparers

2. Project Description

This section is an abbreviated version of the Project Description contained in the Draft EIR. This abbreviated version provides information pertinent to the Technical Reports. Please reference the Project Description in the Draft EIR for additional details about the Proposed Project location and surrounding uses, project history, project components, and construction methods. The Draft EIR also includes a more comprehensive narrative description providing additional detail on the project routing, station locations, and proposed roadway configurations. Unless otherwise noted, the project description is valid for the Proposed Project and all route variations, treatments, and configurations.

2.1 PROJECT ROUTE DESCRIPTION

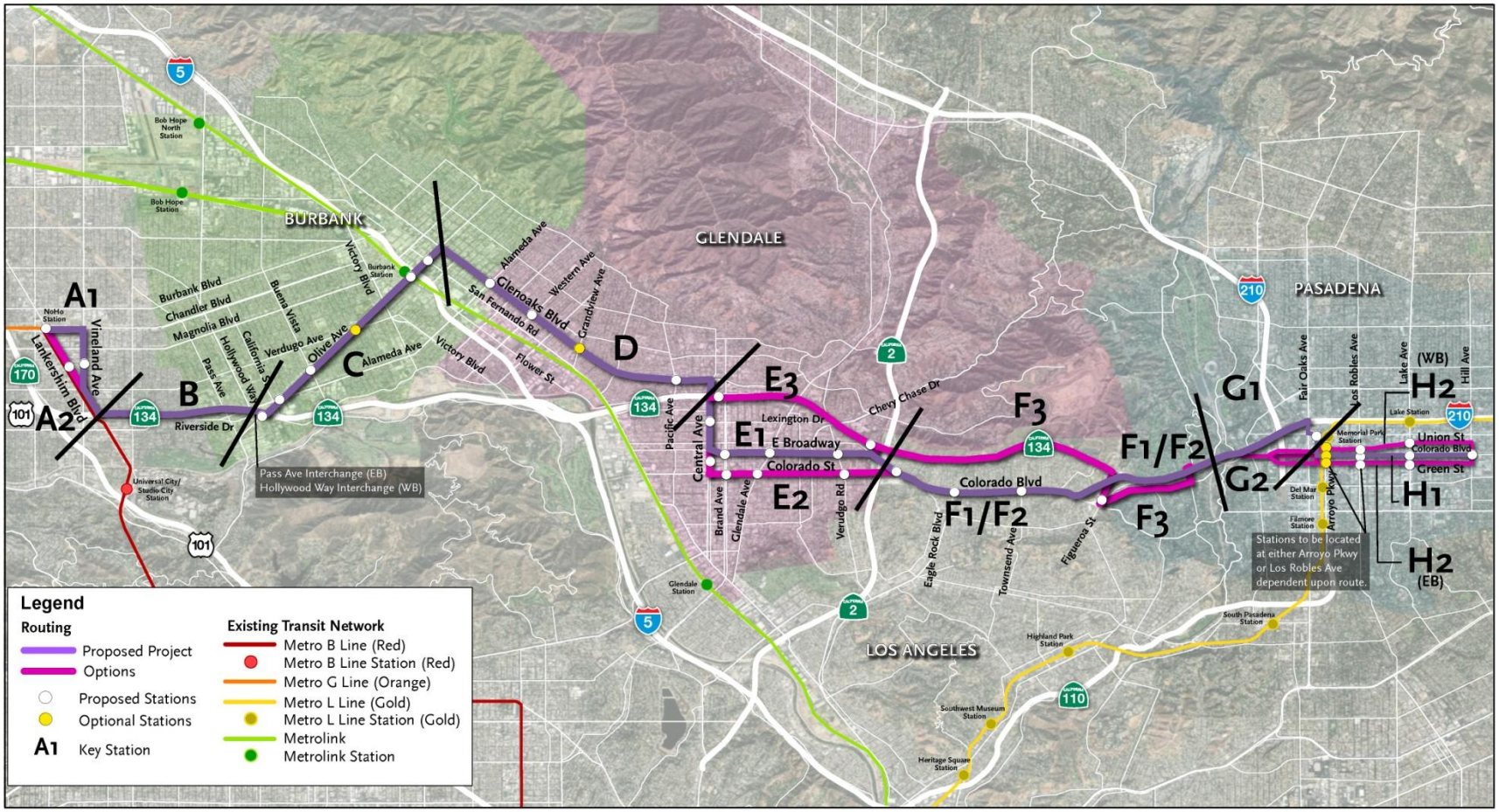
Metro is proposing the BRT service to connect several cities and communities between the San Fernando and San Gabriel Valleys. The Proposed Project extends approximately 18 miles from the North Hollywood Metro B/G Line (Red/Orange) Station on the west to Pasadena City College on the east. The BRT corridor generally parallels the Ventura Freeway (State Route 134) between the San Fernando and San Gabriel Valleys and traverses the communities of North Hollywood and Eagle Rock in the City of Los Angeles as well as the Cities of Burbank, Glendale, and Pasadena. Potential connections with existing high-capacity transit services include the Metro B Line (Red) and G Line (Orange) in North Hollywood, the Metrolink Antelope Valley and Ventura Lines in Burbank, and the Metro L Line (Gold) in Pasadena. The Study Area includes several dense residential areas as well as many cultural, entertainment, shopping and employment centers, including the North Hollywood Arts District, Burbank Media District, Downtown Burbank, Downtown Glendale, Eagle Rock, Old Pasadena and Pasadena City College (see **Figure 1**).

2.2 BRT ELEMENTS

BRT is intended to move large numbers of people quickly and efficiently to their destinations. BRT may be used to implement rapid transit service in heavily traveled corridors while also offering many of the same amenities as light rail but on rubber tires and at a lower cost. The Project would provide enhanced transit service and improve regional connectivity and mobility by implementing several key BRT elements. Primary components of the BRT are further addressed below and include:

- Dedicated bus lanes on city streets
- Transit signal priority (TSP)
- Enhanced stations with all-door boarding

Figure 1 – Proposed Project with Route Options



2.3 DEDICATED BUS LANES

The Proposed Project would generally include dedicated bus lanes where there is adequate existing street width, while operating in mixed traffic within the City of Pasadena. BRT service would operate in various configurations depending upon the characteristics of the roadways as shown below:

- **Center-Running Bus Lanes:** Typically includes two lanes (one for each direction of travel) located in the center of the roadway. Stations are usually provided on islands at intersections and are accessible from the crosswalk.
- **Median-Running Bus Lanes:** Typically includes two lanes (one for each direction of travel) located in the inside lane adjacent to a raised median in the center of the roadway. Stations are usually provided on islands at intersections and are accessible from the crosswalk.
- **Side-Running Bus Lanes:** Buses operate in the right-most travel lane separated from the curb by bicycle lanes, parking lanes, or both. Stations are typically provided along curb extensions where the sidewalk is widened to meet the bus lane. At intersections, right-turn bays may be provided to allow buses to operate without interference from turning vehicles and pedestrians.
- **Curb-Running Operations:** Buses operate in the right-most travel lane immediately adjacent to the curb. Stations are located along the sidewalk which may be widened to accommodate pedestrian movement along the block. Right-turning traffic merges with the bus lane approaching intersections and buses may be delayed due to interaction with right-turning vehicles and pedestrians.
- **Mixed-Flow Operations:** Where provision of dedicated bus lanes is impractical, the BRT service operates in lanes shared with other roadway vehicles, although potentially with transit signal priority. For example, where the service transitions from a center-running to side-running configuration, buses would operate in mixed-flow. Buses would also operate in mixed-flow along freeway facilities.

Table 1 provides the bus lane configurations for each route segment of the Proposed Project.

Table 1 – Route Segments

Key	Segment	From	To	Bus Lane Configuration
A1 (Proposed Project)	**Lankershim Blvd.**	**No. Chandler Blvd.**	**Chandler Blvd.**	**Mixed-Flow**
	Chandler Blvd.	**Lankershim Blvd.**	**Vineland Ave.**	**Side-Running**
	Vineland Ave.	**Chandler Blvd.**	**Lankershim Blvd.**	**Center-Running**
	Lankershim Blvd.	**Vineland Ave.**	**SR-134 Interchange**	**Center-Running** **Mixed-Flow**[1]
A2 (Route Option)	Lankershim Blvd.	No. Chandler Blvd.	SR-134 Interchange	Side-Running Curb-Running[2]
B (Proposed Project)	**SR-134 Freeway**	**Lankershim Blvd.**	**Pass Ave. (EB)** **Hollywood Wy. (WB)**	**Mixed-Flow**
C (Proposed Project)	**Pass Ave. – Riverside Dr. (EB)** **Hollywood Wy. – Alameda Ave. (WB)**	**SR-134 Freeway**	**Olive Ave.**	**Mixed-Flow**[3]
	Olive Ave.	**Hollywood Wy. (EB)** **Riverside Dr. (WB)**	**Glenoaks Blvd.**	**Curb-Running**
D (Proposed Project)	**Glenoaks Blvd.**	**Olive Ave.**	**Central Ave.**	**Curb-Running** **Median-Running**[4]
E1 (Proposed Project)	**Central Ave.**	**Glenoaks Blvd.**	**Broadway**	**Mixed Flow** **Side-Running**[5]
	Broadway	**Central Ave.**	**Colorado Blvd.**	**Side-Running**
E2 (Route Option)	Central Ave.	Glenoaks Blvd.	Colorado St.	Side-Running
	Colorado St. – Colorado Blvd.	Central Ave.	Broadway	Side-Running
E3 (Route Option)	Central Ave.	Glenoaks Blvd.	Goode Ave. (WB) Sanchez Dr. (EB)	Mixed-Flow
	Goode Ave. (WB) Sanchez Dr. (EB)	Central Ave.	Brand Blvd.	Mixed-Flow
	SR-134[6]	Brand Blvd.	Harvey Dr.	Mixed-Flow
F1 (Route Option)	Colorado Blvd.	Broadway	Linda Rosa Ave. (SR-134 Interchange)	**Side-Running**
				Side-Running Center Running[7]

Key	Segment	From	To	Bus Lane Configuration
F2 (Proposed Project)	**Colorado Blvd.**	**Broadway**	**Linda Rosa Ave. (SR-134 Interchange)**	**Side-Running**
F3 (Route Option)	SR-134	Harvey Dr.	Figueroa St.	Mixed-Flow
	Figueroa St.	SR-134	Colorado Blvd.	**Mixed-Flow**
	Colorado Blvd.	Figueroa St.	SR-134 via N. San Rafael Ave. Interchange	**Mixed-Flow**
G1 (Proposed Project)	**SR-134**	**Colorado Blvd.**	**Fair Oaks Ave. Interchange**	**Mixed-Flow**
	Fair Oaks Ave.	**SR-134**	**Walnut St.**	**Mixed-Flow**
	Walnut St.	**Fair Oaks Ave.**	**Raymond Ave.**	**Mixed-Flow**
	Raymond Ave.	**Walnut St.**	**Colorado Blvd. or Union St./Green St.**	**Mixed-Flow**
G2 (Route Option)	SR-134	Colorado Blvd.	Colorado Blvd. Interchange	Mixed-Flow
	Colorado Blvd. or Union St./Green St.	Colorado Blvd. Interchange	Raymond Ave.	Mixed-Flow
H1 (Proposed Project)	**Colorado Blvd.**	**Raymond Ave.**	**Hill Ave.**	**Mixed-Flow**
H2 (Route Option)	Union St. (WB) Green St. (EB)	Raymond Ave.	Hill Ave.	Mixed-Flow

Notes:
[1]South of Kling St.
[2]South of Huston St.
[3]Eastbound curb-running bus lane on Riverside Dr. east of Kenwood Ave.
[4]East of Providencia Ave.
[5]South of Sanchez Dr.
[6]Route continues via Broadway to Colorado/Broadway intersection (Proposed Project F2 or Route Option F1) or via SR-134 (Route Option F3)
[7]Transition between Ellenwood Dr. and El Rio Ave.

2.4 TRANSIT SIGNAL PRIORITY

TSP expedites buses through signalized intersections and improves transit travel times. Transit priority is available areawide within the City of Los Angeles and is expected to be available in all jurisdictions served by the time the Proposed Project is in service. Basic functions are described below:

- **Early Green:** When a bus is approaching a red signal, conflicting phases may be terminated early to obtain the green indication for the bus.
- **Extended Green:** When a bus is approaching the end of a green signal cycle, the green may be extended to allow bus passage before the green phase terminates.
- **Transit Phase:** A dedicated bus-only phase is activated before or after the green for parallel traffic to allow the bus to proceed through the intersection. For example, a queue jump may be implemented in which the bus departs from a dedicated bus lane or a station ahead of other traffic, so the bus can weave across lanes or make a turn.

2.5 ENHANCED STATIONS

It is anticipated that the stations servicing the Proposed Project may include the following It is anticipated that the stations servicing the Proposed Project may include the following elements:

- Canopy and wind screen
- Seating (benches)
- Illumination, security video and/or emergency call button
- Real-time bus arrival information
- Bike racks
- Monument sign and map displays

Metro is considering near-level boarding which may be achieved by a combination of a raised curb along the boarding zone and/or ramps to facilitate loading and unloading. It is anticipated that BRT buses would support all door boarding with on-board fare collection transponders in lieu of deployment of ticket vending machines at stations.

The Proposed Project includes 21 proposed stations and two “optional” stations, and additional optional stations have been identified along the Route Options, as indicated in **Table 2**. Of the 21 proposed stations, four would be in the center of the street or adjacent to the median, and the remaining 17 stations would be situated on curbs on the outside of the street.

Table 2 – Proposed/Optional Stations

Jurisdiction	Proposed Project	Route Option
North Hollywood (City of Los Angeles)	North Hollywood Transit Center (Metro B/G Lines (Red/Orange) Station)	
	Vineland Ave./Hesby St.	Lankershim Blvd./Hesby St.
City of Burbank	Olive Ave./Riverside Dr.	
	Olive Ave./Alameda Ave.	
	Olive Ave./Buena Vista St.	
	Olive Ave./Verdugo Ave. (optional station)	
	Olive Ave./Front St. (on bridge at Burbank-Downtown Metrolink Station)	
	Olive Ave./San Fernando Blvd.	
City of Glendale	Glenoaks Blvd./Alameda Ave.	
	Glenoaks Blvd./Western Ave.	
	Glenoaks Blvd./Grandview Ave. (optional station)	
	Central Ave./Lexington Dr.	Goode Ave. (WB) & Sanchez Dr. (EB) west of Brand Blvd.
		Central Ave./Americana Way
	Broadway/Brand Blvd.	Colorado St./Brand Blvd.
	Broadway/Glendale Ave.	Colorado St./Glendale Ave.
	Broadway/Verdugo Rd.	Colorado St./Verdugo Rd.
		SR 134 EB off-ramp/WB on-ramp west of Harvey Dr.
	Colorado Blvd./Eagle Rock Plaza	
Eagle Rock (City of Los Angeles)	Colorado Blvd./Eagle Rock Blvd.	
	Colorado Blvd./Townsend Ave.	Colorado Blvd./Figueroa St.
	Raymond Ave./Holly St. [1] (near Metro L Line (Gold) Station)	
City of Pasadena	Colorado Blvd./Arroyo Pkwy. [2]	Union St./Arroyo Pkwy. (WB)[2] Green St./Arroyo Pkwy. (EB)[2]
	Colorado Blvd./Los Robles Ave. [1]	Union St./Los Robles Ave. (WB)[1] Green St./Los Robles Ave. (EB)[1]
	Colorado Blvd./Lake Ave.	Union St./Lake Ave. (WB) Green St./Lake Ave. (EB)
	Pasadena City College (Colorado Blvd./Hill Ave.)	Pasadena City College (Hill Ave./Colorado Blvd.)

[1]With Fair Oaks Ave. interchange routing
[2]With Colorado Blvd. interchange routing

2.6 DESCRIPTION OF CONSTRUCTION

Construction of the Proposed Project would likely include a combination of the following elements dependent upon the chosen BRT configuration for the segment: restriping, curb-and-gutter/sidewalk reconstruction, right-of-way (ROW) clearing, pavement improvements, station/loading platform construction, landscaping, and lighting and traffic signal modifications. Generally, construction of dedicated bus lanes consists of pavement improvements including restriping, whereas ground-disturbing activities occur with station construction and other support structures. Existing utilities would be protected or relocated. Due to the shallow profile of construction, substantial utility conflicts are not anticipated, and relocation efforts should be brief. Construction equipment anticipated to be used for the Proposed Project consists of asphalt milling machines, asphalt paving machines, large and small excavators/backhoes, loaders, bulldozers, dump trucks, compactors/rollers, and concrete trucks. Additional smaller equipment may also be used such as walk-behind compactors, compact excavators and tractors, and small hydraulic equipment.

The construction of the Proposed Project is expected to last approximately 24 to 30 months. Construction activities would shift along the corridor so that overall construction activities should be of relatively short duration within each segment. Most construction activities would occur during daytime hours. For specialized construction tasks, it may be necessary to work during nighttime hours to minimize traffic disruptions. Traffic control and pedestrian control during construction would follow local jurisdiction guidelines and the Work Area Traffic Control Handbook. Typical roadway construction traffic control methods would be followed including the use of signage and barricades.

It is anticipated that publicly owned ROW or land in proximity to the Proposed Project's alignment would be available for staging areas. Because the Proposed Project is anticipated to be constructed in a linear segment-by-segment method, there would not be a need for large construction staging areas in proximity to the alignment.

2.7 DESCRIPTION OF OPERATIONS

The Proposed Project will provide BRT service from 4:00 a.m. to 1:00 a.m. or 21 hours per day Sunday through Thursday, and longer service hours (4:00 a.m. to 3:00 a.m.) will be provided on Fridays and Saturdays. The proposed service span is consistent with the Metro B Line (Red). The BRT will operate with 10-minute frequency throughout the day on weekdays tapering to 15 to 20 minutes frequency during the evenings, and with 15-minute frequency during the day on weekends tapering to 30 minutes in the evenings. The BRT service will be provided on 40-foot zero-emission electric buses with the capacity to serve up to 75 passengers, including 35-50 seated passengers and 30-40 standees, and a maximum of 16 buses are anticipated to be in service along the route during peak operations. The buses will be stored at an existing Metro facility.

3. Summary of Conclusions

This Hazardous Waste and Materials Site Assessment Report was performed by PARIKH Consultants, Inc. to evaluate whether potential sources or indications of hazardous substance contamination are present in the areas of ROW and construction for the Proposed Project. This study included a review of previous land uses in the area through review of United States Geologic Services (USGS) maps and historical aerial photographs; a field inspection of the Project Area; a review of listings of federal and state regulatory agencies that are responsible for recording incidents of spills, soil and ground water contamination and transfer, and storage or disposal facilities that handle hazardous materials; and as applicable review of files available at the regulatory agencies.

Review of previous land use and the site reconnaissance indicates that the Project Area has supported vehicular activity since the 1930s. It is highly likely that the surface soils along the Project Area are affected by deposition of aerial deposited lead (ADL) from transportation fuels. Therefore, it is recommended that surface samples of soil be collected and analyzed for total lead. Health and safety measures and disposal plans should be developed based on the results of the analytical data.

The Proposed Project also involves re-striping some of the roadways to allow for more efficient bus transport and installation of bicycle transport lanes. The historical road striping may contain Asbestos Containing Materials (ACM) and lead based paint. Health and safety measures and disposal plans should be developed based on the results of the analytical data.

An ACM investigation should be performed by an inspector certified by the Asbestos Hazardous Emergency Response Act (AHERA) under Toxic Substance Control Act (TSCA) Title II and certified by California Division of Occupational Safety and Health (Cal OSHA) under State of California rules and regulations (California Code of Regulations, Section 1529). This work should be performed before the start of soil-disturbing activities.

The Proposed Project also involves installation of station platforms in sidewalks or medians that are currently vegetated. Because the medians were installed prior to the 1980s, it is likely that the surface soils are impacted with presence of herbicides and pesticides. If the work involves removal of the area where landscaping is present, soils that would be disturbed should be tested for presence of pesticides and herbicides. Health and safety measures and disposal plans should be developed based on the results of the analytical data.

Study of the Project Area, including the 38 potential station platform locations, identified the following routes and station platforms that may require additional assessment beyond the ADL investigation. This list is provided in **Table 3**.

Environmental areas of concern, other than those noted above based on the Project Area site reconnaissance, were not readily identified or apparent based on the scope of work performed for this Project.

This conclusion, and any and all conclusions, recommendations and information included in this report are based upon the information that was readily available to PARIKH Consultants, Inc. at the time of the site visit, and on PARIKH Consultants, Inc.'s professional judgment and reviews using accepted environmental site assessment practices pursuant to the scope of work.

Table 3 – Stations Requiring Additional Assessment beyond ADL Investigation

Location/Station Identification		Current Construction/Planned	Potential Impacts Identified
1	Vineland Ave/Hesby St. Station (2)	Station planned on current landscaped median	Aerially deposited lead, pesticides and herbicides in surface soils
2	Olive Ave. (Proposed Project Route Section C)	Road widening from 68 to 72 feet	Soil impact associated with widening. Petroleum hydrocarbons associated with gas stations in the widening areas
3	W. Olive Ave./W. Alameda Ave. Station (5)	Possible platform adjacent to gas station	Residual soil impacts associated with historical gas station contamination
4	Glenoaks Blvd. (Proposed Project Route Section D)	Roadway extension into landscaped median	Aerially deposited lead, pesticides and herbicides in surface soils
5	W. Glenoaks Blvd./E. Alameda Ave. Station (10)	Station Planned on currently landscaped median	Aerially deposited lead, pesticides and herbicides in surface soils
6	W. Glenoaks Blvd./Western Ave. Station (11)	Station Planned on currently landscaped median	Aerially deposited lead, pesticides and herbicides in surface soils
7	W. Glenoaks Blvd./Grandview Ave. Station (12)	Station Planned on currently landscaped median	Aerially deposited lead, pesticides and herbicides in surface soils
8	W. Glenoaks Blvd./Pacific Ave. Station (13)	Station Planned on currently landscaped median	Aerially deposited lead, pesticides and herbicides in surface soils
9	E. Colorado St./Verdugo Rd. Station (21)	Possible platform adjacent to gas station	Residual soil impacts associated with historical gas station contamination
10	SR-134/Harvey Dr. Station (23)	Westbound Platform on the shoulder of SR-134 On Ramp	Aerially deposited lead and pesticides and herbicides in surface soils
11	Colorado Blvd./Eagle Rock Blvd. Station (25)	Possible Platform adjacent to gas station	Residual soil impacts associated with historical gas station contamination
12	Figueroa St./Colorado Blvd. Station (27)	Possible Platform adjacent to gas station	Residual soil impacts associated with historical gas station contamination
13	Eastern Terminus – Colorado Blvd./Hill Ave. Station (32)	Possible Platform adjacent to gas station	Residual soil impacts associated with historical gas station contamination

SOURCE: Parikh Consultants, Inc., 2020.

4. Scope of Work

This Hazardous Waste and Materials Site Assessment Report was performed by PARIKH Consultants, Inc. to evaluate whether potential sources or indications of hazardous substance contamination are present in the areas of ROW and construction for the Proposed Project. The purpose of this investigation was to identify and evaluate potentially hazardous waste sites and update the evaluation of environmental factors that may have affected the soil and groundwater quality in the project vicinity due to past and present environmental and commercial activities.

The ISA was performed during December 2019 through April of 2020 and included the following scope of work:

- Site visit and visual inspection of exterior of the Project Area
- Review of Previous Environmental Reports in the Project Area
- Review of Project Area background including recent aerial photographs
- Review of computer database government record search of hazardous waste sites within 1-mile band along a corridor defining the Project Area
- Review of available agency records for the Project Area
- Preparation of a written report summarizing the results.

5. Regulatory Review

A search of environmental regulatory databases was conducted for the Project Area and surrounding properties. The database search was conducted by Environmental Data Resources Inc. (EDR) to determine whether documentation exists related to environmental incidents at the site or surrounding properties (Appendix C). The databases searched and respective search distances from the Project Corridor specified by American Society for Testing and Materials (ASTM) guidelines are as follows:

- Federal Databases
  - National Priority List (NPL) – 1 mile
  - Proposed National Priority List (Proposed NPL) – 1 mile
  - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) – ½ mile
  - CERCLIS No Further Remedial Action Planned (CERCLIS – NFRAP) – ¼ mile
  - Corrective Action Report (CORRACTS) – 1 mile
  - Resource Conservation and Recovery Information System Treatment Storage Disposal Facility (RCRIS-TSD) – ½ mile
  - RCRIS Large Quantity Generator – ¼ mile
  - RCRIS Small Quantity Generator – ¼ mile
  - Emergency Response Notification System (ERNS) – Project limits
  - Superfund/Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Consent Decrees (CONSENT) – 1 mile
  - Records of Decision (ROD) – 1 mile
  - Delisted NPL – 1 mile
  - Facility Index System/Facility Identification Initiative Program Summary Report (FINDS) – Project limits
  - Hazardous Material Reporting System (HMIRS) – Project limits
  - Material Licensing Tracking System (MLTS) – Project limits
  - Mines Master Index File (MINES) – ¼ mile
  - Federal Superfund Liens (NPL Liens) – Project limits
  - PCB Activity Database System (PADS) – Project limits
  - Resource Conservation Recovery Act (RCRA) Administration Action Tracking System
  - Toxic Chemical Release Inventory System (TRIS) – Project limits
  - Toxic Substance Control Act (TSCA) – Project limits
  - Section 7 Tracking System (SSTS) – Project limits
  - FIFRA/TSCA Tracking System (FTTS) – Project limits
- State, Regional and County Databases
  - Annual Workplan Sites (AWP) – 1 mile
  - Cal sites Databases (CAL-SITES) – 1 mile
  - California Hazardous Material Incident Report System (CHMIRS) – 1 mile
  - “Cortese” Hazardous Waste and Substance Sites List (CORTESE) – 1 mile
  - Proposition 65 Records (NOTIFY 65) – 1 mile
  - Toxic Pits Cleanup Act Sites (TOXIC PITS) – 1 mile
  - State Landfill – ½ mile

- Waste Management Unit Database (WMUDS/SWAT) – ½ mile
- Leaking Underground Storage Tank Information System (LUST) – ½ mile
- Bond expenditure Plan (CA BOND EXP. PLAN) – 1 mile
- Active UST Facilities (UST) – ¼ mile
- Facility Inventory Database (CA FID UST) – ¼ mile
- Hazardous Substance Storage Container Database (HIST UST) – ¼ mile
- Aboveground Petroleum Storage Tank Facilities (AST) – Project limits
- Cleaner Facilities (CLEANERS) – ¼ mile
- Waste Discharge System (CA WDS) – Project limits
- List of Deed Restrictions (DEED) – Project limits
- Spills, Leaks, Investigation and Cleanup Cost Recovery Listing (CAL SLIC) – ½ mile
- Hazardous Waste Information System (HAZNET) – ¼ mile

The results of the EDR database search and descriptions of the environmental databases are provided in Appendix C. The sites identified in the EDR search were evaluated with respect to their potential to adversely impact the Project Area. The main criteria were used to evaluate whether the EDR listed sites warranted further consideration and were for sites that are immediately adjacent to the areas that are to be disturbed. This is because the Proposed Project involves minimal soil disturbance and groundwater disturbance is not anticipated. Therefore, groundwater gradient is not a consideration for this Project. Sites immediately adjacent to the areas that are to be disturbed are the most likely to experience adverse environmental impact.

Some of the sites, such as gas stations, were immediately identified during site visits and are discussed in Section 7.1 of this report. Review of the EDR database identified sites that are immediately adjacent to the proposed ROW; however, the majority of these sites are not adjacent to the proposed BRT stations where soil disturbance may take place. Several LUST sites are listed; however, the sites that are adjacent to the proposed BRT stations are all closed. Several active UST sites associated with gas stations were also identified that are adjacent to the proposed BRT stations. Those UST sites are identified in Section 7.1.

6. Historic Information

The following discussion provides historic context in the Project Area related to existing hazardous conditions.

6.1 USGS Map Review

USGS maps were obtained from the EDR. Due to the length of the segment, the reports are combined from several different USGS maps and are included in Appendix A. The maps include the following years:

- 1894, 1896, 1898, 1900, 1902, 1921, 1926, 1928, 1933, 1940, 1941, 1948, 1950, 1953, 1966, 1972, 1988, 1991, 1994, 1995, 1998, and 2012, and include parts of the following segments, as applicable per year: Los Angeles, Santa Monica, Pasadena, Burbank, Sunland, Altadena, Sierra Madre, Glendale, La Crescenta, Beverly Hills, Mt. Wilson, El Monte, Van Nuys and Hollywood.

Based on review of the USGS maps, the elevation of the Project Area ranges from approximately 550 to 950 feet above mean sea level. The elevation is higher in the Pasadena area than in the Glendale-Burbank area. The general area topography for the Project Area slopes toward the south.

The 1894 topographic map shows presence of Downtown Burbank, Downtown Glendale and Pasadena. The area south of Burbank is titled as Providencia. Eagle Rock Valley Road connects Glendale to Burbank through the San Rafael Mountains that separate them. Little change is visible in the 1896 through 1902 topographic maps. The 1926 topographic map shows further development along the Project Area. It appears that Burbank, Glendale and Pasadena are expanding and the area between them is developing with streets and through ways. The 1926 topographic map also shows development of the Rose Bowl in Pasadena. The 1953 and later maps show development of freeways and full development of streets that encompass the project area.

6.2 Historical Aerial Photograph Review

To examine historical uses, available aerial photographs from 1923 (Pasadena only), 1928, 1938, 1948, 1953, 1964, 1972, 1977, 1983, 1989, 1994, and 2005 were reviewed. These aerial photographs are included as Appendix B. Google aerial photographs from 2019 were also reviewed.

The 1923 aerial photograph shows Pasadena as fully developed with residences. The 1928 aerial photograph shows development of the Rose Bowl in Pasadena; however, the areas surrounding Glendale and Burbank are sparsely populated. The 1938 aerial photograph is similar to the 1928 photograph. The 1948 and later photographs, similar to the USGS maps, show the areas surrounding Burbank and Glendale are fully developed. North Hollywood and Eagle Rock areas show development in the 1954 to 1983 aerial photos. Expressways and freeways are developed later from 1954 to 1983 aerial photos.

7. Physical Site Inspection

Observations made during the Project Area inspection walk/drive-through are described in the following paragraphs. The inspection was performed on Saturday, March 1, 2020.

7.1 SITE VISIT

The site visit consisted of a walk/drive-through of the Project Area and observation of problem sites or visual contamination. A description of the area at each station is followed by the site observations.

7.1.1 North Hollywood District of Los Angeles

Western Terminus - North Hollywood B/G (Red/Orange) Station (1) – The existing B/G Line (Red/Orange) North Hollywood terminus west of Lankershim Boulevard and north of Chandler Boulevard would accommodate NoHo to Pasadena BRT Corridor buses.

Observations: *This area is a mixture of commercial/residential.*

Vineland Avenue - Lankershim Boulevard. (Route Option A1) – This route option extends east via Chandler Boulevard turning south onto Vineland Avenue then continuing southeast via Lankershim Boulevard to the SR-134 interchange. A two-way cycle track would be provided along the west curb of Vineland Avenue.

Observations: *On Chandler Boulevard, the properties are occupied by either high density residential or retail properties. Chandler Boulevard is a 3-lane road with an additional center lane for left turns. Vineland Avenue is also surrounded by high density residential or commercial properties. The street has a landscaped center median that separates the northbound and southbound traffic. It has 2 lanes in each direction. In addition to the two lanes, the shoulder is wide allowing for bicycle and other amenities.*

Vineland Avenue/Hesby Street Station (2) – A station with a pair of platforms (in the median area) would be provided south of Hesby Street (near-side for northbound buses and far-side for southbound buses) along with a new traffic signal and crosswalk.

Observations: *The center median is landscaped. The area surrounding this segment is occupied by residential properties to the west and commercial properties to the east.*

Lankershim Boulevard (Route Option A2) – This route option extends southeast in side-running bus lanes created by conversion of the outside travel lane to dedicated bus use along Lankershim Boulevard from Chandler Boulevard to Hesby Street. South of Hesby Street, curb-running bus lanes would be added by removal of on-street parking and minor widening of the roadway (via sidewalk reduction) to a minimum of 72 feet curb-to-curb), providing dedicated bus lanes through the Lankershim Boulevard/Vineland Avenue/Camarillo Street intersection. The curb-running lanes would continue to the SR-134 (eastbound buses would access SR-134 via

the Riverside Drive on-ramp west of Lankershim Boulevard; westbound buses would exit directly to Lankershim Boulevard).

Observations: *Lankershim Boulevard is a 4-lane street plus a center median for left turns. The median is raised and landscaped. From Vineland Avenue to SR-134 there are several autobody shops on both the east and west side of Lankershim Boulevard. There is also a Toyota dealership. Because the work only involves lane modifications, none of these properties would likely pose an environmental concern. This area is surrounded by commercial developments, including a restaurant with an outdoor sitting area in the northwest corner of Magnolia Boulevard and Lankershim Boulevard.*

Lankershim Boulevard/Hesby Street Station (3) – A pair of station platforms would be integrated into the existing sidewalks south of Hesby Street (near-side for northbound buses and far-side for southbound buses).

Observations: *Sidewalks in this area are concrete.*

7.1.2 North Hollywood District of Los Angeles to City of Burbank Media District

Ventura Freeway (Proposed Project Route Section B) – The route continues east along the Ventura Freeway (SR-134) from the Lankershim Boulevard interchange to the Burbank Media District exiting at the Pass Avenue interchange. Riverside Drive would be modified to include an eastbound curb-running bus lane between North Kenwood Street and West Olive Avenue.

Observations: *SR-134 is a 4-lane freeway in each direction. No issues of environmental concern related to the route is noted as there are no construction activities planned.*

7.1.3 City of Burbank Media District – Downtown Burbank

Olive Avenue (Proposed Project Route Section C) – The BRT route continues from SR-134 to West Olive Avenue. Eastbound buses would operate in mixed-flow down Pass Avenue and would turn east onto Riverside Drive and continue to West Olive Avenue; westbound buses would turn from West Olive Avenue to Hollywood Way and would operate in mixed-flow along Hollywood Way to access SR-134 from West Alameda Avenue. West of Alameda Avenue the roadway is 72-feet wide and could support bus lanes by restriping alone; east of Alameda Avenue portions of the roadway narrow to 68-feet and would be widened to 72 feet by narrowing the sidewalk or curbside landscape strip. Note that the dedicated curb-running bus lanes would remove one general-purpose lane in each direction on the bridge over Interstate 5 (roughly between Lake Street and North 1st Street). The bus lanes along Olive Avenue would be "curb-running"; right-turns would merge with the bus lane approaching each intersection and the curb lane would be designated for buses and right-turns only. On the bridge over the railroad corridor and Interstate 5 freeway, the curb lanes would be converted to bus-only. Curb-running bus lanes continue to South Glenoaks Boulevard where a queue jump would be provided for westbound buses to make a left-turn from a right-turn bay at East Olive Avenue.

Observations: *West Olive Avenue is a 4-lane road with an added center median used for left turns. Some areas of the center median are curbed and landscaped while other areas are only paved with stripes. Surrounding areas are occupied mostly by commercial and residential buildings. There is a Shell service station on the northeast corner of Alameda Avenue and Olive Avenue where the street widening would initiate. There is a Chevron service station at the southwest corner of West Olive Avenue and Buena Vista Street and a Valvoline oil changing station on the northeast corner. Remaining properties along Olive Avenue are mostly commercial/retail properties. A natural gas fired electrical power generating facility is located on the northwest corner of Olive Avenue and Lake Street before the bridge over the railroad corridor. On the northeast corner of Olive Avenue and South Glenoaks Boulevard there is a Chevron service station. The gas stations identified above were checked on the EDR report and Geo Tracker and were identified as environmentally 'closed' sites. However, a site being closed does not mean there cannot be impacts to surficial soils due to site usage and incidental grading during construction.*

Riverside Drive/Olive Avenue/Hollywood Way Station (4) – The westbound platform would be located along West Olive Avenue between Riverside Drive and N. Hollywood Way where it would integrate into the sidewalk area in front of the existing office building entry plaza. The eastbound platform would be located along Riverside Drive between N. Hollywood Way and West Olive Avenue; a curb extension would be built to widen the sidewalk area to accommodate pedestrian circulation behind the loading zone.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The pavement is concrete.*

West Olive Avenue/West Alameda Avenue Station (5) – The westbound platform would be located far-side at the triangular area across from California Street where there is an existing bus stop. The eastbound platform would also be located far-side; the WB free-right lane from Alameda Avenue would be closed to accommodate a short station platform extending along a reconstructed sidewalk between the triangular island and the gas station driveway.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The pavement is concrete. Since the eastbound station would be adjacent to the entrance to the gas station driveway, there is potential for environmental impacts in the surface soils from the historical use of the gas station.*

West Olive Avenue/North Buena Vista Street Station (6) – The westbound platform would be located near-side adjacent to landscaping and an office building entry plaza. The eastbound platform would be located far-side just beyond an existing drive through at an oil-changing business.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The pavement is concrete. Since the eastbound station would be adjacent to the entrance to the Valvoline oil change facility driveway, there is potential for environmental impacts in the surface soils from the historical use.*

West Olive Avenue /West Verdugo Avenue Station (7) – A potential/optional or future "infill" station may be provided at the Olive Avenue/Verdugo Avenue intersection. Far side platforms would be provided east of Verdugo Avenue in the eastbound direction (near Beachwood Drive) and immediately west of Verdugo Avenue in the westbound direction. Existing crosswalks provide access to both platforms.

Observations: *The Social Security building is located on the east side north of Beachwood Drive The developed properties surrounding this area are mostly commercial buildings. The sidewalk is concrete in front of the Social Security building with a grass strip.*

West Olive Avenue/Burbank Metrolink Station (8) – A pair of sidewalk platforms would be located on the bridge adjacent to a new signalized mid-block crosswalk connecting the existing elevator and pedestrian ramp structure. Curb extensions would be provided to accommodate vertical station elements and maintain pedestrian circulation through the station area.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The sidewalk pavement is concrete.*

East Olive Avenue/San Fernando Boulevard Station (9) – Both platforms would be located far-side from South San Fernando Boulevard. To accommodate local buses along with the BRT service, the entire curb between San Fernando Boulevard and the downstream alleys would be designated as a loading zone.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The sidewalk pavement is concrete.*

7.1.4 City of Glendale

Glenoaks Boulevard (Proposed Project Route Section D) – The route continues southeast via South Glenoaks Boulevard in Burbank to Glendale where the street continues as West Glenoaks Boulevard. Between East Olive Avenue and East Providencia Avenue, the roadway has four through lanes and a striped two-way left-turn lane. In this section, the bus lane configuration would be the same as that used along Olive Avenue; curb-running bus lanes shared with right-turns at the intersections. At Providencia Avenue, the roadway widens to six lanes with a wide raised-landscaped center median. In this section, a median-running configuration would be provided by converting the inside travel lanes to bus-only.

Observations: *Glenoaks Boulevard is a 4-lane road west of Providencia Avenue with an added center median used for left turns. Some areas of the center median are curbed and landscaped while other areas are only paved with stripes. Surrounding areas are occupied by mostly commercial buildings. Sidewalk pavement is concrete with some trees planted in the vegetated areas. East of Providencia Avenue, Glenoaks widens to a 6-lane road with a wide landscaped median and sidewalks. Further east is a high school and several other residential and commercial properties. There is a 7-Eleven gas station on the corner of Alameda Avenue and Glenoaks Boulevard. The site is not listed on the Geotracker and during site visit no issues of environmental concern were readily identified. The buildings surrounding this area are mostly*

commercial buildings or high density residential. The sidewalk pavement is concrete. From Cleveland Avenue to Kenilworth Avenue, the buildings transition to mostly single-family residential buildings with commercial blocks interspersed. The sidewalks have street trees.

West Glenoaks Boulevard/East Alameda Avenue Station (10) – A pair of far-side platforms would be located at East Alameda Avenue. The platforms would be constructed in the "shadow" of near-side left-turn bays. Access to the loading zones would be provided by crosswalks. The existing landscaped median-noses would be reconfigured to accommodate the stations and left-turn bays.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The center median landscaped island would be modified for the station platforms.*

West Glenoaks Boulevard/Western Avenue Station (11) – A pair of far-side platforms would be located at Western Avenue. The configuration would be like the Glenoaks Boulevard/Alameda Avenue station.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The center median landscaped island would be modified for the station platforms.*

West Glenoaks Boulevard/Grandview Avenue Station (12) – A potential/optional or future "infill" station may be provided along West Glenoaks Boulevard at Grandview Avenue. The station configuration would be like the Glenoaks Boulevard/Alameda Avenue station.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The center median landscaped island would be modified for the station platforms.*

West Glenoaks Boulevard/Pacific Avenue Station (13) – A pair of far-side stations would be located along West Glenoaks Boulevard at N. Pacific Avenue. The station configuration would be like the Glenoaks Boulevard/Alameda Avenue station.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The center median landscaped island would be modified for the station platforms.*

Central Avenue (Proposed Project Route Section D) – The route continues south via N. Central Avenue in mixed-flow approaching the Ventura Freeway. At the Ventura Freeway, there are three route options.

Observations: *Central Avenue is a 4-lane road with the center area used for turns. The sidewalks are concrete. The segment is occupied mostly by commercial or high-density residential units.*

Broadway (Proposed Project Route) – South of Sanchez Drive, dedicated bus lanes would be provided along Central Avenue by converting the outside lane to bus-and-right-turn only. The bus lanes would be side-running adjacent to the existing Class II bike lanes, which extend from West Doran Street to West Wilson Avenue, and curb-running south of West Wilson Avenue. The bus lanes would extend to West Broadway where the route would turn to the east. Dedicated side-running bus lanes would also be provided along Broadway by converting the

outside lane to bus-and-right-turn only. The side-running bus lanes would operate alongside the parking lane which would remain. The existing Class III bicycle "sharrows" would be removed. The route continues along East Broadway to Harvey Drive near the Los Angeles city limit. At that location, buses would either access the Ventura Freeway via Harvey Drive or would turn onto West Broadway heading into the Eagle Rock community of Los Angeles.

Observations: *Broadway begins as a 6-lane road at Central Avenue and transitions to a 4-lane road east of Brand Boulevard with the center median used for turns. The sidewalks are concrete and buffered in some areas with street trees. The segment is occupied by mostly commercial or high-density residential units. Intermixed with the high-density residential units are blocks of single-family homes.*

Central Avenue/Lexington Drive Station (14) – A pair of far-side platforms with curb extensions would be provided along N. Central Avenue at Lexington Drive The bicycle lanes would be routed behind the station platform area to avoid conflicts with loading and unloading.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The sidewalks are concrete.*

Broadway/Brand Boulevard Station (15) – A pair of far-side platforms would be provided along Broadway at Brand Boulevard. The westbound station would be placed within the wide sidewalk area; the eastbound station would include a curb extension to accommodate the loading area and pedestrian circulation.

Observations: *The developed properties surrounding this area are mostly commercial buildings and retail shops. The sidewalks are brick or concrete.*

Broadway/Glendale Avenue Station (16) - A pair of far-side platforms would be provided along East Broadway at Glendale Avenue The stations would include curb extensions to accommodate the loading area and pedestrian circulation.

Observations: *The developed properties surrounding this area are mostly commercial buildings. The sidewalks are made of concrete.*

Broadway/Verdugo Rd. Station (17) - A pair of far-side platforms would be provided along Broadway at Verdugo Rd. The stations would be placed within the wide sidewalk area.

Observations: *The developed properties surrounding this area are a mixture of commercial and residential buildings. Glendale High School is located to the southeast of the intersection. The sidewalks are concrete except the area on the north side of Broadway to the east of Verdugo Road which also has a landscaped strip.*

Colorado Street (Route Option E2) – South of Sanchez Drive dedicated bus lanes would be provided along Central Avenue by converting the outside lane to bus-and-right-turn only. The bus lanes would be side-running adjacent to the existing Class II bike lanes, which extend from West Doran Street to West Wilson Avenue, and curb-running south of West Wilson Avenue. The bus lanes would extend to West Colorado Street where the route would turn to the east..

The route continues east in dedicated side-running lanes along East Colorado Street to the city limit where buses would enter mixed flow approaching the SR-2 interchange area along Colorado Boulevard when heading into the Eagle Rock community of Los Angeles.

Observations: *Similar to Broadway, Colorado Street is a 6-lane road with the center median used for turns between Central Avenue and Brand Boulevard. The road converts to 4 lanes with center islands east of Brand Boulevard. The sidewalks are concrete and buffered in some areas with street trees. The street is occupied mostly by commercial or high-density residential units. Intermixed with the high-density residential units are blocks of single-family homes.*

Central Avenue/Americana Way Station (18) - A pair of far-side platforms would be provided along South Central Avenue at Americana Way within the wide sidewalks.

Observations: *The sidewalks are made of concrete. The area is occupied by retail buildings.*

East Colorado Street/Brand Boulevard Station (19) – A pair of far-side platforms would be provided along East Colorado Street at South Brand Boulevard. Curb extensions would be provided to accommodate the loading zones and preserve pedestrian circulation.

Observations: *The sidewalks are made of concrete. The area is occupied by retail buildings.*

East Colorado Street/Glendale Avenue Station (20) - A pair of far-side platforms would be provided along East Colorado Street at South Glendale Avenue. Curb extensions would be provided to accommodate the loading zones and preserve pedestrian circulation.

Observations: *The sidewalks are made of concrete. The area is occupied by retail buildings.*

East Colorado Street/Verdugo Rd. Station (21) - A pair of far-side platforms would be provided along East Colorado Street at South Verdugo Road. Curb extensions would be provided to accommodate the loading zones and preserve pedestrian circulation.

Observations: *Two gas stations, Shell and Mobil, are located on opposite corners of the intersection. Review of EDR and Geotracker data indicated that both gas stations are "environmentally closed" and there are no further action requirements associated with site cleanup; however, surficial soils may have been impacted as a result of site operations. If the curb extensions are installed adjacent to the gas stations, there is potential for residual soil impacts from gas station operations.*

The remaining area is occupied by retail buildings and the sidewalks are made of concrete.

Ventura Freeway (Route Option E3) – The service would extend east along SR-134 using the frontage road couplet Sanchez Drive (eastbound) and Goode Avenue (westbound) and to access the SR-134 on and off-ramps at N. Brand Boulevard.

The service would continue along the freeway to the vicinity of the Harvey Drive interchange where buses would either continue east along the freeway or would exit to serve the Eagle Rock community of Los Angeles. Buses would use the existing high-occupancy vehicle (HOV) lanes on the freeway if practicable.

Observations: *SR-134 is a 10 lane (4 mixed-flow lanes and 1 carpool lane in each direction) freeway with paved shoulders, including carpool lanes. No modification of this stretch of road is anticipated.*

Goode Avenue/Sanchez Drive Station (22) – A pair of station platforms would be provided along the freeway frontage roads between N. Central Avenue and N. Brand Boulevard. The westbound platform would be located along Goode Avenue west of Brand Boulevard; the eastbound platform would be located mid-block along Sanchez Drive approaching N. Brand Boulevard. Curb extensions would be provided at each station to accommodate the station features and provide for pedestrian circulation.

Observations: *The sidewalks in the areas of both proposed platforms are concrete.*

SR-134/Harvey Drive Station (23) – Station platforms would be provided along the SR-134 ramps west of Harvey Drive for buses exiting to serve Eagle Rock via Colorado Boulevard or continuing east along SR-134. There is an existing bus stop on the eastbound off-ramp approaching Harvey Drive which could potentially be modified for the BRT service. A complementary westbound platform could potentially be developed along the shoulder of the existing westbound on-ramp from Harvey Drive.

Observations: *The current bus stop on the eastbound off-ramp is paved with concrete. It is adjacent to a parking area. There is a short concrete paved shoulder on the westbound on-ramp from Harvey Drive; however, the paved shoulder appears too narrow for use as a bus stop. The concrete area would likely need to be widened for the station platform.*

7.1.5 Eagle Rock Community of Los Angeles

Colorado Boulevard (Route Option F1) – The service would extend east via East Colorado Street or East Broadway from Glendale connecting to Colorado Boulevard within the Eagle Rock community of Los Angeles. Dedicated side-running bus lanes would be provided east of the Colorado Boulevard/Broadway intersection; the bus lanes would transition to a center-running configuration east of Ellenwood Drive. The center-running configuration would extend about 2 miles to near the Ventura Freeway ramps at Linda Rosa Avenue. The westbound bus lane would begin at Dahlia Drive. Buses would continue via the Ventura Freeway to Pasadena. There would be three stations in Eagle Rock.

Observations: *Colorado Boulevard is a 4-lane road with buffered bike lanes and on-street parking. There is a landscaped median which is interrupted for left turns. Properties along this segment are mostly residential with some retail.*

Colorado Boulevard/Eagle Rock Plaza Station (24) – Buses operating via Broadway would serve a near-side westbound platform and a far-side eastbound platform at the Colorado Boulevard/Broadway intersection. A new crosswalk on the east leg of the intersection would provide access to both platforms. Westbound buses operating towards Colorado Boulevard (Route Option F3) would serve an alternative platform located near-side approaching Sierra

Villa Drive. The bike lanes would be routed behind the stations which would be constructed on curb extensions.

Observations: *GlenRock carwash and Valero gas station are located on the northwest corner of East Colorado Boulevard and Lockhaven Avenue. The fuel dispensers for the gas station are likely located too far from East Colorado Boulevard for surface spillage to have migrated to the sidewalk. The sidewalks are made of concrete. A portion of the sidewalk area in front of the carwash has a grass strip. The area is generally occupied by retail buildings.*

Colorado Boulevard/Eagle Rock Boulevard Station (25) – The westbound platform would be located far-side west of Eagle Rock Boulevard, the eastbound platform would be located far-side east of Caspar Avenue, about 300 feet east of Eagle Rock Boulevard. The existing crosswalks and traffic signals at Eagle Rock Boulevard and Caspar Avenue would provide access to in-street (median area) platforms.

Observations: *A Mobil and a Shell gas station are located on the west side of Eagle Rock Boulevard across from each other on Colorado Boulevard. The westbound platform would be adjacent to the Shell gas station. Review of EDR and Geotracker data indicated that both gas stations are 'environmentally closed' and there are no further action requirements associated with site cleanup; however, surficial soils may have been impacted as a result of site operations. If the platforms are to be installed adjacent to the gas stations, there is potential for residual soil impacts from gas station operations.*

Colorado Boulevard/Townsend Avenue Station (26) – The westbound platform would be located far-side west of the south leg of Townsend Avenue; a complementary eastbound near-side platform would be located adjacent on the same leg of the intersection. The existing crosswalks and traffic signals at Townsend Avenue would provide access to in-street (median area) platforms.

Observations: *The current sidewalk in this area is concrete.*

Colorado Boulevard (Proposed Project Route) – The service would extend east via East Colorado Street or East Broadway from Glendale connecting to Colorado Boulevard within the Eagle Rock community of Los Angeles. Dedicated side-running bus lanes would be provided east of the Colorado Boulevard/Broadway intersection extending approximately 1.5 miles to Dahlia Drive. In this stretch, the existing buffered bike lanes would be converted to 11- or 12-foot bus lanes. Bicycles would be allowed to operate within the bus lane but "sharrow" pavement markings would not be provided.

Buses would operate in mixed-flow between Dahlia Drive and the SR-134 ramps near Linda Rosa Avenue. Buses would continue via the SR-134 to Pasadena. There would be three stations in Eagle Rock, which would include curb-extensions to accommodate station elements while maintaining adequate sidewalk width for pedestrian circulation and access to adjacent buildings:

Observations: *There are no changes to the observations outlined from the previous configuration. This configuration involves removing much of the existing street markings to re-align the traffic lanes.*

Colorado Boulevard/Eagle Rock Plaza Station (24) – Buses operating via Broadway would serve a near-side westbound platform and a near-side eastbound platform at the Colorado Boulevard/Sierra Villa Drive intersection.

Observations: *There are no changes to the observations outlined from the previous configuration.*

Colorado Boulevard/Eagle Rock Boulevard Station (25) – The westbound platform would be located far-side at Eagle Rock Boulevard east of Rockland Avenue. The eastbound platform would be located far-side east of Caspar Avenue. The existing crosswalks and traffic signals at Eagle Rock Boulevard and Caspar Avenue would provide access to all platforms. Bypass lanes would be provided for bicycles behind the BRT station loading platforms to reduce bus-bicycle conflicts in the loading zone and allow cyclists to pass buses stopped at the BRT stations. Provision of the bypass lanes for bicycles would require relocating the curb and narrowing the sidewalk width adjacent to the station platform.

Observations: *There are no changes to the observations outlined from the previous configuration.*

Colorado Boulevard/Townsend Avenue Station (26) – The westbound platform would be located near-side east of the north leg of Townsend Avenue; the complementary eastbound platform would be located near-side west of the south leg of Townsend Avenue. The existing crosswalks and traffic signals at Townsend Avenue would provide access to both platforms.

Observations: *There are no changes to the observations outlined from the previous configuration.*

Ventura Freeway (Route Option F3) – The service would extend east along the Ventura Freeway either continuing along SR-134 from Glendale (Route Option E3) or would access the freeway via the Harvey Drive interchange from Broadway (Route Option E1). The service would operate on the freeway exiting at the Figueroa Street interchange to serve Eagle Rock. Eastbound buses would operate in mixed-flow on Figueroa Street to a station at Colorado Boulevard and would then turn east and continue along Colorado Boulevard in mixed-flow and return to SR-134 at the N. San Rafael Avenue interchange between Eagle Rock and Pasadena. Westbound buses would operate in the inverse direction.

Observations: *Figueroa Street is a 4-lane (2 in each direction) road. As Figueroa Street approaches Colorado Boulevard, it gradually transitions to a 6-lane road.*

Figueroa Street/Colorado Boulevard Station (27) – Eastbound buses would exit from the Ventura Freeway to N. Figueroa Street and would continue on Figueroa Street to serve a platform located on Colorado Boulevard far-side from the Figueroa Street/Colorado Boulevard intersection. The westbound platform would be provided along Figueroa Street just north of the

Figueroa Street/Colorado Boulevard intersection; a curb extension would be provided into the wide northbound departure lane to accommodate the station and pedestrian circulation.

Observations: *The eastbound platform is located adjacent to a Chevron gas station. If this station is reconstructed and the soils are disturbed, there is potential for underlying soils to have been impacted as result of gas station operations.*

7.1.6 City of Pasadena

The service would exit the Ventura Freeway at either the Fair Oaks Avenue interchange or the Colorado Boulevard interchange and would then extend to Pasadena City College at Hill Avenue via either Colorado Boulevard or the Green Street – Union Street couplet (eastbound via Green Street, westbound via Union Street). Buses would operate in "mixed-flow" along existing travel lanes in Pasadena (there would be no dedicated bus lanes).

Fair Oaks Avenue Interchange (Route Option G1) – Buses using the Fair Oaks Avenue interchange would operate via Fair Oaks Avenue and East Walnut Street to N. Raymond Avenue. The route would extend south along N. Raymond Avenue to as far as Colorado Boulevard or East Green Street, providing a close connection to the Metro L (Gold) Line Memorial Park Station at Holly Street.

Observations: *Fair Oaks Avenue is a 6-lane road with a center median for turns. The surrounding area is mostly office use and hotels.*

N. Raymond Avenue/Holly Street Station (28)3 – The station would be located along N. Raymond Avenue north of Holly Street. The eastbound platform would be located nearside and the westbound platform would be located far-side; there are existing bus stops at both locations. Curb extensions in conjunction with widened sidewalks would accommodate the station footprint along with pedestrian circulation.

Observations: *The developed area is office buildings or commercial properties. The sidewalk is concrete. Pasadena Memorial Park is located on the east side of Raymond Avenue between Holly Street and East Walnut.*

Colorado Boulevard Interchange (Route Option G2) – Buses using the Colorado Boulevard interchange would follow Colorado Boulevard east along Colorado Boulevard or would transition to and from East Green Street and East Union Street via South Saint John Avenue. Stations located at Arroyo Parkway would provide the closest connections to the Metro L Line (Gold) Memorial Park and Del Mar stations.

Observations: *The route is occupied by commercial and retail businesses and a mixture of high density residential and single-family homes. Since the current roadways would be used and no changes to the roadway are anticipated, there should not be any environmental impacts.*

Colorado Boulevard (Route Option H1) – Buses would operate along Colorado Boulevard east to the terminal station at Hill Avenue. Stations would be located at Arroyo Parkway or Los Robles Avenue, and Lake Avenue and Hill Avenue.

Observations: *The majority of the route is occupied by commercial and retail properties. The sidewalks are made of concrete with a few openings for trees.*

Colorado Boulevard/Arroyo Parkway Station (29) – With the Colorado Boulevard interchange route option, a pair of far-side platforms would be provided at Arroyo Parkway. Curb extensions would be provided behind the Rose Parade "blue line" to retain a wide sidewalk walking zone for pedestrians behind the loading area.

Observations: *The current sidewalk area is made of concrete.*

Colorado Boulevard /Los Robles Avenue Station (30) – With the Fair Oaks Avenue interchange route option, a station would be provided at Los Robles Avenue to provide better spacing between the Raymond Avenue/Holly Street station and stations along Colorado Boulevard. The platforms would be located far-side in both directions. Curb extensions, as described above for the Colorado Boulevard/Arroyo Parkway Station, would be used.

Observations: *The current sidewalk area is made of concrete.*

Colorado Boulevard/Lake Avenue Station (31) – A pair of far-side platforms would be provided at Lake Avenue. The station design would utilize curb extensions like the Colorado Boulevard/Arroyo Parkway station. The eastbound boarding zone would straddle an existing driveway, so local service would board to the east and the BRT service would board nearest the corner.

Observations: *The current sidewalk area is made of concrete.*

Eastern Terminus – **Colorado Boulevard/Hill Avenue Station (32)** – A pair of far-side platforms would be provided at Hill Avenue near Pasadena City College. Curb extensions would be provided behind the Rose Parade "blue line" to retain a wide sidewalk walking zone for pedestrians behind the loading area.

Observations: *There is a Chevron gas station on the southwest corner of Hill Avenue and Colorado Boulevard. If the station platform is located near the gas station, there may be residual soil impacts from the gas station's historical operations.*

Green Street – Union Street (Route Option H2) – Buses would operate eastbound along Green Street, turning north at Hill Avenue to a terminal station near Colorado Boulevard and would then continue north to Union Street, where buses would turn and return westbound via Union Street.

Observations: *Both Green and Union Streets are one-way streets with concrete sidewalks. The majority of these streets are occupied by commercial and retail businesses.*

Green Street/Arroyo Parkway Station (33) – An eastbound station with a near-side platform would be provided approaching Arroyo Parkway in conjunction with the Colorado Boulevard interchange route option. A curb extension would provide a wide enough area to accommodate pedestrian circulation and retain some of the existing street trees.

Observations: *The current sidewalk area is made of concrete.*

Green Street/Los Robles Avenue Station (34) – An eastbound station with a far-side platform would be provided at Los Robles Avenue in conjunction with the Fair Oaks Avenue interchange route option. A curb extension would provide a wide enough area to accommodate pedestrian circulation.

Observations: *The current sidewalk area is made of concrete.*

Green Street/Lake Avenue Station (35) – An eastbound station with a far-side platform would be provided at Lake Avenue. A curb extension would be provided to retain a wide sidewalk walking zone for pedestrians adjacent to the bank building's side-plaza. The existing green zone and yellow loading zone along the curb would be relocated to the east along Green Street

Observations: *The current sidewalk area is made of concrete.*

Eastern Terminus – Hill Avenue/Colorado Boulevard Station (32) – A layover and terminal would be provided on Hill Avenue mid-block between Green Street and Colorado Boulevard. The existing roadway would be restriped to provide an approximate 200-foot long layover and station zone along the east curb. The platform area would be about 150 feet south of Colorado Boulevard. The landscaping between the curb and adjacent Pasadena City College parking lot would be paved to accommodate the station and pedestrian circulation. A charging sub-station may displace several parking stalls, if provided.

Observations: *The current sidewalk area is made of concrete.*

Union Street/Lake Avenue Station (36) – A station with a near-side platform would be provided approaching N. Lake Avenue. The existing westbound free right-turn bay would be removed and replaced with a pedestrian plaza to shorten the walk distance across Union Street. The station would be integrated into the plaza area.

Observations: *The current sidewalk area is made of concrete.*

Union Street/Los Robles Avenue Station (37) – A station with near- or far-side platforms would be provided at Los Robles Avenue in conjunction with the Fair Oaks Avenue interchange route option. The near-side station option would be short due to the presence of a parking structure driveway and the station would displace the existing right-turn bay. The far-side station option would be created by straightening the existing curb line; buses would stop within the right-turn lane serving the parking structure west of Los Robles Avenue

Observations: *The current sidewalk area is made of concrete.*

Union Street/Arroyo Parkway Station (38) – A station with a near-side platform would be provided at Arroyo Parkway in conjunction with the Colorado Boulevard interchange route option. Due to an existing parking structure driveway, this station would be short; a curb extension would increase the sidewalk width to accommodate pedestrian circulation behind the loading area.

Observations: *The current sidewalk area is made of concrete.*

7.2 AERIAL LEAD DEPOSITION

The BRT would operate on an existing traffic-bearing road. USGS maps and historical aerial photographs show that these roads have supported vehicular traffic from the 1930s. Due to this vehicular activity, the soils along the project area are likely contaminated with lead from exhaust of cars burning leaded gasoline. Even in areas where currently there is concrete sidewalk there is potential for presence of lead impacts, as the area may have been previously exposed to ADL.

The lead levels in surface soils along highways and traffic bearing streets can reach concentrations in excess of the hazardous waste threshold, requiring disposal at either a Class I landfill or on-site stabilization. Special health and safety procedures should be in effect for the workers working near lead contaminated areas. A work plan for investigation of the ADL should be submitted and work should be performed according to an approved work plan. This work should be performed before soil disturbing activities.

7.3 ASBESTOS CONTAINING MATERIALS AND LEAD BASED PAINT

The Proposed Project includes re-striping the roadways to provide designated lanes for bus transportation. There has been documented evidence of presence of ACM and lead based paint in paint stripes for pavement.

In the areas where existing paint is to be removed, an ACM investigation should be performed by an inspector certified by Asbestos Hazardous Emergency Response Act (AHERA) under Toxic Substance Control Act (TSCA) Title II and certified by California Division of Occupational Safety and Health (Cal OSHA) under State of California rules and regulations (California Code of Regulations, Section 1529. This work should be performed during the Project's design phase.

Surveys for lead based paint should be conducted prior to demolition of the structures within the ROWest Lead based paint and ACM should be abated by using contractors certified to perform such work and in accordance with state and federal regulations.

7.4 PESTICIDE AND HERBICIDE IN LANDSCAPE SOILS

The Proposed Project involves installation of station platforms adjacent to several landscaped areas. Such installation involves removal and disposal of soils. Based on review of aerial photographs, these landscaped areas appear to have been present since the 1960s and early 1970s. The presence of herbicides and pesticides in these soils should be investigated to address health and safety concerns for construction workers.

8. Recommendations

Review of previous land use and the site reconnaissance indicates that the Project Area has supported vehicular activity since the 1930s. It is highly likely that the surface soils along the project area are affected by ADL. Therefore, it is recommended that surface samples of soil should be collected and analyzed for total lead.

The Proposed Project also involves re-striping some of the roadways to allow for more efficient bus transport and installation of bicycle transport lanes. The historical road striping may contain ACM and lead based paint. An ACM investigation should be performed by an inspector certified by AHERA under TSCA Title II and certified by Cal OSHA. This work should be performed during the Project's design phase.

Study of the Project Area, including the 38 station platform locations, identified routes and stations that may require additional assessment beyond the ADL investigation. This list is provided in **Table 3**.

Other than noted above, environmental areas of concern were not readily identified during the site reconnaissance of the Project Area or apparent based on the scope of work performed. Based on PARIKH Consultants, Inc.'s Hazardous Waste and Materials Site Assessment Report findings, environmental conditions or issues of concerns, other than noted above, were not identified or indicated.

9. Limitations

The operations, facility conditions and information obtained and utilized in the preparation of this report have been obtained in part from the client, and their employees or agents, and various government officials and are assumed by PARIKH Consultants, Inc. to be complete and correct. It should be noted that this information is subject to professional interpretation, which leads to conclusions which may differ based upon opinions specific to individuals.

This report has been presented in accordance with generally accepted environmental assessment practices, based upon the information set forth within the report narrative, for specific application to the proposed BRT Corridor P&E Study from North Hollywood to Pasadena, California. No warranty, expressed or implied, is made.

The conclusions in this report are qualitative opinions based on limited quantitative information. Soil and groundwater sampling and analysis were not a part of this scope of work. The scope of work was limited to observation of the surface at a specific time, a limited aerial survey review, and environmental database research. This assessment is not designed to predict future site or off-site conditions. Also, site conditions can differ at locations other than those observed along the Project corridor. Subsurface conditions can differ from those observed on the surface.

This investigation is not a risk assessment and is not intended to provide information needed for public health risk assessment purposes. The consultant has endeavored to determine as much as practical about the site conditions given what we consider to be a reasonable amount of analysis and research time. Additional investigation or sampling and analysis could result in information that would lead to revised conclusions. Additional search can usually turn up more information but frequently with a diminishing rate of information return for the effort spent. The degree of certainty of an environmental assessment is proportional to the time and effort spent. However, the degree of certainty cannot be 100 percent even with highly detailed exploratory drilling and testing work well beyond the scope of this study.

10. List of Preparers

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Appendix

Appendix A – USGS Topographic Maps

Appendix B – Historic Aerial Photographs (Large Files Available Upon Request)

Appendix C – EDR Radius Map Report