



Board Report

File #: 2018-0072, **File Type:** Contract

Agenda Number:

PLANNING AND PROGRAMMING COMMITTEE MAY 16, 2018

SUBJECT: WEST SANTA ANA BRANCH TRANSIT CORRIDOR

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

RECOMMENDATIONS A AND B APPROVED AS AMENDED DURING MAY'S REGULAR BOARD MEETING, RECOMMENDATION C TO BE VOTED ON DURING JUNE'S REGULAR BOARD MEETING.

CONSIDER:

A. RECEIVING AND FILING:

1. West Santa Ana Branch Transit Corridor Updated Northern Alignment Options Screening Report, including project goals; and
2. Update on Public-Private Partnership (P3) project delivery procurement process

B. AUTHORIZING:

1. Northern alignment options to carry forward into Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR)
 - a. Concept E: Union Station via Alameda Underground
 - b. Concept F: Union Station via Alameda Underground/Center Aerial
 - c. Concept G: Downtown Transit Core Underground

FASANA AMENDMENT: As part of the environmental process, consider studying up to 6-car platforms.

C. AUTHORIZING the Chief Executive Officer to execute:

1. Modification No. 2 to Contract No. AE5999300 with WSP USA Inc. for technical services for the evaluation of the three northern alignments in the Draft EIS/EIR in the amount of \$2,760,752, increasing the total contract value to \$12,405,244; and

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2. Modification No. 1 to Contract No. PS2492300 with Arellano Associates for outreach support for the augmented Community Participation Program as part of the evaluation of the three northern alignments in the Draft EIS/EIR in the amount of \$429,310, increasing the total contract value to \$922,203.

ISSUE

At the March 1, 2018 meeting, the Board authorized expanding the northern alignment study area to address scoping period comments and updated technical information. Based on community input and technical analysis, a Northern Alignment Alternatives and Concepts Updated Screening Report (Updated Screening Report) has been completed. Attachment A contains the Executive Summary, inclusive of performance, travel and cost information. The full report is on file and available upon request.

The Updated Screening Report recommends three (3) northern alignment options to be carried forward into the environmental document for further analysis. The Board is deciding on actions necessary to advance the NEPA and CEQA review of the West Santa Ana Branch (WSAB) Transit Corridor (Project), but is not making a decision about the final project. Board action is needed in order to proceed forward with the environmental analysis and remain on schedule per the Measure M groundbreaking date of Fiscal Year (FY) 2022. In addition, Board action in May would facilitate efforts for project acceleration.

BACKGROUND

The WSAB Project is a proposed light rail transit (LRT) line that would extend approximately 20 miles from downtown Los Angeles through southeast Los Angeles County (LA County). South of downtown Los Angeles, a single alignment has been identified following existing right-of-way parallel to the Blue Line owned by Union Pacific, then along Randolph Avenue in the City of Huntington Park using Metro owned Right-of-Way (ROW), then following the San Pedro Subdivision Branch (owned by Port of Los Angeles and Port of Long Beach), to the eight-mile, Metro-owned, abandoned Pacific Electric ROW to the southern terminus in the City of Artesia. WSAB would traverse a highly populated area, with high numbers of low-income and heavily transit-dependent residents. A primary goal of the Project is to improve mobility by connecting the communities of southeast LA County with the Metro rail network.

The Project is identified in Measure M as a light rail transit (LRT) project. The exact project description of all projects set forth in the Measure M ordinance are to be defined by the environmental process, which includes features such as termini, alignment and stations. Per Measure M and Metro's 2009 Long-Range Transportation Plan (as amended), the Project has a \$4 billion (B) (2015\$) allocation based on the cost estimate in the Measure M Expenditure Plan (Proposition A and C funds may not be used for underground segments). Per Measure M, funding becomes available in two cycles as follows:

Measure M Expected Opening Date	L RTP Funding Allocation (2015\$)
FY 2028	\$1 billion

FY 2041	\$3 billion
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Measure M indicates that an early delivery of the second funding cycle may be made possible with a Public Private Partnership (P3) delivery method. A P3 is being pursued as a delivery strategy for accelerating the second funding cycle, which may enable Metro to deliver the project in one phase, coupled with a comprehensive delivery approach.

The entire Project is also included in Metro's "Twenty-Eight by '28 Initiative" project list as an aspirational project schedule to be completed in time for the 2028 Olympic and Paralympic Games in Los Angeles. Therefore, efforts are being made to achieve an early project delivery; this May 2018 Board action would facilitate efforts for project acceleration.

Northern Alignments

In September 2016, the Board authorized award of a professional services contract (Legistar file 2016-0571) to environmentally clear the Project under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). As part of this planning process, a Northern Alignment Options Screening Report (April 2017) was prepared to further assess six northern alignment options previously analyzed in the Technical Refinement Study (TRS), received by the Board in September 2015 (Legistar file 2015-0994). As a result of the Northern Alignment Options Screening Report, per Board action at the April 2017 meeting (Legistar file 2017-0152), four northern alignment options were carried into the scoping period for the environmental analysis as shown in Attachment B:

- A. Pacific/Alameda
- B. Pacific/Vignes
- C. Alameda
- D. Alameda/Vignes

In June 2017, as part of the environmental process, public scoping meetings were held in the cities of Bellflower, Huntington Park, Los Angeles, and South Gate. The meetings provided project updates to stakeholders and solicited comments through an extended formal comment period that ended in August 2017. At the conclusion of the public scoping period, over 1,100 comments were received. Approximately 400 of the comments were submitted by Little Tokyo stakeholders. A majority of the comments expressed strong opposition to some or all of the northern alignment options and were particularly opposed to an elevated alignment along Alameda Street. In general, comments from the Little Tokyo community included concerns regarding the potential visual impact of an aerial alignment and concerns regarding the potential construction impacts brought on by a WSAB alignment through their community. Similarly, the Arts District and Industrial District communities also generally expressed concerns with an at-grade or elevated alignment along Alameda Street.

Metro also received scoping letters from several agencies. In their scoping letters, Metrolink, the Federal Railroad Administration (FRA) and the California High Speed Rail Authority (HSR) expressed concerns regarding the northern alignment options. Specifically, their comments focused on encouraging Metro to seek alternatives that do not limit or preclude the potential for existing or future regional railroad capacity at Union Station (LAUS), reasoning that LAUS is the regional rail hub and, therefore, should prioritize regional rail services due to limited platform availability.

In response to comments received during the scoping period and ongoing technical analysis, the project team analyzed additional northern alignment options, coordinating with several departments. Considerations brought to bear in developing additional alignments responsive to public comment included potential terminus station areas and identifying opportunities and challenges as they relate to operations, transit oriented communities (TOC) and constructability of the alignments. Additional new northern alignment options were developed and further refined. The new northern alignment concepts that emerged can be found in Attachment C. They are:

- E. Alameda (underground) to Union Station
- F. Alameda (underground)/Center (aerial) to Union Station
- G. Downtown Transit Core underground to 7th/Metro or Pershing Square station areas
- H. Arts District/6th Street underground to Union Station via extended Purple or Red Lines

DISCUSSION

Given the factors identified in the scoping comments and workshops, an Updated Screening Report was completed to provide a detailed screening evaluation of the original and new northern alignment concepts to identify the highest performing alignment options. As part of the Updated Screening Report, eight northern alignment options were analyzed, including the original four alignments and four supplemental northern alignment concepts. The eight options were evaluated based on how well they addressed the qualitative Project goals as well as key, quantitative performance factors.

The Project goals are intended to qualitatively guide the overall planning process and serve as one of several performance measurement tools. Attachment D summarizes how each alignment qualitatively performed when compared to the goals. The Project goals are:

- Provide Mobility Improvements
- Support Local and Regional Local Use Plans and Policies
- Minimize Environmental Impacts
- Ensure Cost Effectiveness and Financial Feasibility
- Ensure Equity

In addition to the Project goals, staff also quantitatively evaluated each northern alignment options against key performance factors. These factors which aim to capture the customer impact and experience are compared for each alignment in Attachment E.

Community Engagement

The Updated Screening Report provides a summary of the outreach efforts held March through April 2018, including location of meetings held and feedback received. Comments received at the community meetings, via the online comment form and via e-mail cite both LAUS and the Downtown Transit Core as the top preferences for potential riders beginning/ending their trips. Of those who indicated an alignment preference, Concepts E and G are preferred. Other comments submitted pertained to pedestrian connections, safety, homelessness, first/last mile connections, parking supply, impacts at and around stations, property values, noise levels, aesthetics, construction

impacts, alignment configuration, budget, ridership, P3 potential, and property acquisitions. Stakeholder briefings, meetings, presentations and comment letters received from the southern portion of the project corridor revealed a substantial amount of support for a one seat ride to LAUS and opposition to a terminus in the Arts District.

Briefings, meetings, presentations and comment letters received from stakeholders in the northern portion of the project corridor yielded interest in additional alignments and an interest in having Metro consider heavy rail transit as the mode for WSAB. A rough order of magnitude (ROM) cost for a 20-mile WSAB heavy rail alignment based on recent Metro projects was prepared and found the cost to range between \$12.3B and \$18.4B. It has also been determined, in consultation with the Federal Transit Administration (FTA), that the environmental process would need to be restarted, thereby impacting the project schedule.

Recommended Alignments

Based on the technical evaluation and public/stakeholder input, the Updated Screening Report recommends three options to be carried forward into the Draft environmental document for further analysis and refinement. Attachment F includes a map of the three recommended alignments. These alignments also represent a reasonable range of alternatives to be evaluated as required by the state and federal environmental process.

- Two alignments would terminate at LAUS; one would terminate in the Downtown Transit Core.
- All three alignments are completely underground or have substantial underground configurations in the downtown LA area.
- All three options would run parallel to the Blue Line between the Slauson and Washington stations, thereby allowing transfer opportunities, which would also provide relief to the Blue Line. As the Blue Line tends to operate at capacity in one direction at the peak hour, providing passengers with an alternative to riding the Blue Line all the way into downtown LA was identified as an important operational consideration.
- All three alignments would provide at least one station to serve the Arts District area.
- Attachments G1 and G2 illustrate trips that are common to the LAUS and Downtown Transit Core termini. Approximately 90% of trips are common to both termini.

The three recommended options are:

- **Concept E - Union Station via Alameda Underground:**
 - Description: Extends approximately 7.9 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line and Alameda Street.
 - Ridership: It has estimated daily boardings of 81,000 of which includes an estimated 27,000 new riders.
 - Connectivity: This alignment allows for a direct connection to LAUS.
 - Cost Estimate: As a mostly underground alignment, Concept E has a preliminary capital cost of \$5.8B (2017\$).
 - Overall Evaluation: Concept E received an overall score of High and is recommended to move forward.
 - Other Factors: This option would provide a one seat ride to the west side of LAUS,

providing transfer opportunities to Metro rail and bus and regional rail services. The alignment addresses community concerns expressed as part of the Scoping process. The alignment also includes an optional station at 1st/Central providing a connection to the Regional Connector future north/south and east/west connections. The alignment could serve an Arts District Station in the vicinity of Alameda and 7th Streets.

- **Concept F - Union Station via Alameda/Center:**

- Description: Extends approximately 8.1 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line, Alameda Street and then Center Street.
- Ridership: It has estimated daily boardings of 74,500 of which includes an estimated 26,000 new riders.
- Connectivity: This alignment allows for a direct connection to LAUS and therefore one transfer to the future north-south line and regional rail services.
- Cost Estimate: As a partially underground alignment, Concept F has a preliminary capital cost of \$5.4B (2017\$).
- Overall Evaluation: Concept F received an overall score of Medium/High and is recommended to move forward.
- Other Factors: This option would provide a one seat ride to LAUS, providing transfer opportunities to Metro rail and bus and regional rail services. The alignment addresses community concerns expressed as part of the Scoping process; however, an aerial configuration would be required on Center Street to terminate at Platform 2. The alignment could serve an Arts District Station in the vicinity of Alameda and 7th Streets.

- **Concept G - Downtown Transit Core:**

- Description: Extends approximately 8.0 miles between the Downtown Transit Core and the Florence/Salt Lake Station parallel to the Metro Blue Line then primarily under Alameda, 7th and 8th Streets.
- Ridership: It has estimated daily boardings of 78,500 of which includes an estimated 25,000 new riders.
- Connectivity: If the terminus allows for a connection to 7th/Metro Center, one transfer can be made to Red, Purple, North-South and East-West lines. If the terminus allows for a connection to Pershing Square, then two transfers are required to access the future North-South and East-West lines. Two transfers are needed to access regional rail services.
- Cost Estimate: As a mostly underground alignment, Concept G has a preliminary capital cost of \$5.8B (2017\$).
- Overall Evaluation: Concept G received an overall score of Medium/High and is recommended to move forward.
- Other Factors: This option would support connectivity for emerging Transit Oriented Communities at South Park/Fashion District and the Arts District South Station, and provide access to very high population and employment densities. It best serves transit dependent/Environmental Justice communities. Extending WSAB to a potential 5th/Flower station at the Regional Connector creates significant problems in allowing for a station connection at Pershing Square. Therefore, this alignment does not allow for a future direct extension to a future 5th/Flower station.

The three concepts recommended to move forward will be further studied as part of the Draft EIS/EIR. The remaining five concepts will be eliminated from further consideration, as these concepts do not perform as well in advancing the goals of the Project. The environmental document will describe the five eliminated concepts and explain why they were dropped from further consideration. This will be done as part of the Scoping and Updated Screening Process description of the environmental document where staff will capture alternatives that have been considered but were dropped from further evaluation.

Cost Estimates

All project cost estimates are rough order of magnitude. None of the eight options are close to the estimated budget in Measure M. Significant project design development remains. Cost estimates are expected to increase, resulting from further defining the project during the environmental review and public, stakeholder and partner engagement processes. Therefore, cost was not deemed determinative in screening alignments into the subsequent environmental review process. However, a reasonable and achievable funding package will be prepared to address costs and deliver a project within the envelope suggested by the estimated costs.

Technical Services Contract Modification No. 2

The execution of Contract Modification No. 2 will allow the contractor to conduct additional analysis, design work and updates to the technical reports to reflect the approved northern alignments and complete the environmental document.

Outreach Services Contract Modification No. 1

The execution of Contract Modification No. 1 will allow the outreach contractor to continue implementing focused outreach services to the corridor communities in support of the environmental document.

P3 Procurement Activities

Public Private Partnership (P3) is an innovative project delivery and financing model where Metro partners with a private sector firm to improve project performance, reduce short- and long-term costs, transfer project risks, and accelerate completion of a project. P3 delivery can include private sector participation in funding the project, as well as the operations and maintenance over extended periods of time. The procurement process for the WSAB Project will be a two-stage procurement, consisting of a Request for Qualification (RFQ) phase followed by a Request for Proposals (RFP) phase. Interim milestones for achieving the RFQ and RFP phases include Market Sounding, Shortlisting of Procurement Options, Qualitative Assessment, Risk Identification/Analysis, and Value for Money Assessment. These deliverables will form the P3 Business Case that will drive an effective competitive procurement that can best deliver on Metro's project objectives. During this process, Metro will provide regular updates to the Board, as well as conducting Small Business Outreach.

Market Sounding

The Metro P3 Team completed a phased Market Sounding to support delivery of the WSAB P3 Project. Market Soundings is a series of separate, one-on-one discussions between a public project sponsor (and its P3 advisors) and current P3 market participants to assess a project's financial feasibility, risk allocation, and other related topics, to help inform the optimal approach for delivering the project. The Project Team anticipates undertaking up to three Market Soundings over the next 12 months (leading up to the issuance of the RFQ). Once the Market Sounding is complete, findings will be compiled to inform subsequent key decisions that will determine the path forward for the WSAB P3.

A few key findings from the first Market Sounding included the following:

- Confirmed a strong interest in a P3 and were broadly supportive of Design-Build-Finance-Operate-Maintain arrangement.
- Identifying one operator for the entire alignment was recommended, even if the Project is phased.
- Considerations for including rolling stock could lead to potential efficiencies.
- In general, the industry indicated that TOC should not be included as part of the P3.
- Participants indicated that affordability of the project scope and timing of delivery would need to be confirmed before procurement, and that an affordability cap could bring additional certainty and ensure successful transaction close if projected costs exceed budget.

Request for Qualifications and Request for Proposals

The RFQ/RFP process will provide an opportunity for Metro to evaluate the most qualified firms on the basis of technical and financial capability, as well as a strong track record of safety and completing successful P3 projects of similar size and complexity. Current schedule for the WSAB project includes releasing the RFQ in 2019. The Metro P3 Team will determine the subsequent schedule for release of the Draft and Final RFP and Project Agreement, as the project scope continues to be developed by Countywide Planning and Development. The Team will advise the Board once the dates are determined.

DETERMINATION OF SAFETY IMPACT

These actions will not have any impact on the safety of our customers and/or employees because this Project is at the study phase and no capital or operational impacts results from this Board action.

FINANCIAL IMPACT

The FY 2017-18 budget includes \$4,507,640 in Cost Center 4370 (Systemwide Team 3), Project 460201 (WSAB Corridor Admin) for professional services. Since this is a multi-year contract, the Cost Center Manager and Chief Planning Officer will be responsible for budgeting in future years.

Impact to Budget

The funding for this Project is from Measure R 35%. As these funds are earmarked for the WSAB Transit Corridor project, they are not eligible for Metro bus and rail capital and operating expenditures.

ALTERNATIVES CONSIDERED

The Board could decide not to approve the recommended northern alignment options to be carried forward into the Draft EIS/EIR. This alternative is not recommended, as this would impact the Project's environmental clearance schedule and would not be responsive to comments received during the scoping period on the current alignments or consider updated technical information. This would also not be consistent with prior Board direction to advance the Project and Measure M. The narrowing of the options will ensure the Project remains on schedule and will also support the procurement of a contractor to deliver the Project.

The Board may also advance other alignment options into the environmental clearance process. The following options are identified below, along with staff's reasoning for why these options are not as well-suited to achieve the Project goals as the recommended options. Including more options than necessary in the environmental document has cost, schedule and risk implications.

- Alternatives A: Pacific/Alameda and B: Pacific/Vignes - Both alignments would turn north via Pacific Avenue to Santa Fe, terminating at LAUS. These alignments are not recommended to move forward because land uses along this alignment are not supportive to transit and there is insufficient interest from local jurisdictions to leverage transit with TOC.
- Alternatives C: Alameda and D: Alameda/Vignes - Both alignments would turn north via Alameda Street in an aerial configuration terminating at LAUS. These alignments are not recommended to move forward due to significantly negative urban design impacts, strong community opposition and potential cumulative construction impacts to the Little Tokyo Community.
- Concept H: Arts District/6th Street - This alignment would turn north parallel to the Los Angeles River in an underground configuration with a station at the Arts District/6th Street. This alignment would include extending either the Red or Purple Line to this station for passenger service as part of the WSAB project, providing a transfer opportunity to passengers wishing to travel to LAUS. This alignment is not recommended to move forward due to low compatibility with the Project goals, including low ridership and limited benefits to transit-dependent and minority populations. Furthermore, all of the three recommended options serve areas of the Arts District. The recommendation to not carry forward Concept H into the WSAB environmental process does not preclude a separate effort to study and/or environmentally clear an Arts District station.
- Alignments and Modes Suggested by Others - Various stakeholders in the northern portion of the Project corridor expressed interest in potential new alignments, including shifting Concept G (Downtown Transit Core) or Concept H (Arts District/6th Street) to head west from the proposed 7th/Alameda Station or Arts District/6th Street station, respectively, and travel southwest to the existing Pico Station of the Metro Blue and Expo Lines. Although a potential alignment to the Pico Station may provide additional and direct connectivity to South Park/Fashion District and LA Live/Staples Center, this alignment would increase travel time and further reduce the number of new riders traveling between the southern portion of this alignment and northern destinations. Moreover, it results in a forced transfer to travel from the

Pico station to 7th/Metro Center for those whose destination is elsewhere.

As previously noted, heavy rail transit was also suggested as a mode. A rough order of magnitude (ROM) cost for a 20-mile WSAB heavy rail alignment based on recent Metro projects was prepared and found the cost to range between \$12.3B and \$18.4B. It has also been determined, in consultation with the FTA, that the environmental process would need to be restarted, thereby impacting the project schedule. Therefore, heavy rail transit is not recommended.

NEXT STEPS

Upon Board approval, staff will continue to perform the necessary environmental analyses and outreach to complete the Draft EIS/EIR, along with concurrently proceeding with the P3 procurement process. In addition, staff will execute the contract modifications with WSP for technical services and with Arellano Associates for outreach support services.

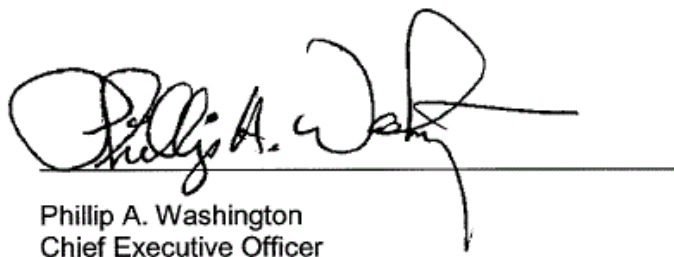
As a result of Board approval, a series of updated scoping meetings will be held in summer 2018 to update communities and public agencies on the northern alignment options being carried forward into the environmental document and gather their feedback, as required by NEPA and CEQA. The FTA is serving as lead agency for purposes of NEPA and staff will be coordinating with the FTA on the updated scoping meetings. Staff will also continue to provide briefings to key stakeholders, in addition to continued public outreach efforts along the corridor.

ATTACHMENTS

Attachment A - Northern Alignment Alternatives and Concepts Updated Screening Report- Executive Summary
Attachment B - Original Northern Alignment Map
Attachment C - New Northern Alignments Map
Attachment D - Northern Alignments Summary of Project Goals Results
Attachment E - Northern Alignments Summary of Key Performance Measurements
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West Santa Ana Branch Transit Corridor

Final Northern Alignment Alternatives and Concepts Screening Report
Executive Summary



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ACRONYMS AND ABBREVIATIONS

BRT	Bus Rapid Transit
CEQA	California Environmental Quality Act
EJ	Environmental Justice
Environmental Study	West Santa Ana Branch Transit Corridor Environmental Study
LA County	Los Angeles County
LAUS	Los Angeles Union Station
L RTP	Long-Range Transportation Plan
Metro	Los Angeles County Metropolitan Transportation Authority
NEPA	National Environmental Protection Act
P3	Public-Private Partnership
Project	West Santa Ana Branch Transit Corridor
ROM	Rough-Order-of-Magnitude
SIP	Strategic Implementation Plan
Study Area	West Santa Ana Branch Transit Corridor Study Area
TOC	Transit Oriented Community
TOD	Transit Oriented Development
TRS	Technical Refinement Study
VMT	Vehicle Miles Traveled
WSAB	West Santa Ana Branch

EXECUTIVE SUMMARY

The West Santa Ana Branch (WSAB) Transit Corridor (Project) is a proposed light rail transit line that would extend approximately 20 miles from downtown Los Angeles through southeast Los Angeles County (LA County), traversing densely populated, low-income and heavily transit-dependent communities not currently served by Metro Rail. The Project is one of the many transit projects funded by LA County Measure R (approved in November 2008) and Measure M (approved in November 2016). The Project is identified in the Los Angeles County Metropolitan Transportation -Range Transportation Plan with anticipated ground breaking in 2022.

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study (Environmental Study). Public Scoping Meetings, as part of the environmental process, took place in the cities of Bellflower, Los Angeles, South Gate, and Huntington Park in June 2017. The comments received from the public at those meetings resulted in the development of new alignment and station concepts. The evaluation of these new Concepts as well as the original Alternatives is the subject of this report.

ES.1 Summary of Results

Based on the findings of the Northern Alignment Alternatives and Concepts screening analysis, a northern terminus at Los Angeles Union Station (LAUS) or in the Downtown Transit Core would provide the highest benefits. This was further confirmed based on input gathered from public outreach meetings held in March 2018. The evaluation resulted in three Concepts that best align with Project goals:









































Concept E: Alameda (underground) aligns with the overall project goals for the Project. This Concept rates high for mobility improvements, minimizes environmental impacts, and ensures equity by providing more transit access to minority and low-income communities. Concept E is also supportive of land use plans and policies by serving high population and employment densities. The significant underground section of this alignment would result in high capital costs and risks; however, the opportunity to provide a direct connection to LAUS, the East-West (Gold Line/Regional Connector), and the North-South (Blue Line) Lines offers benefits that best meet the project goals, objectives, and evaluation criteria.

Concept F: Alameda/Center, with a similar alignment as Concept E, also aligns with the overall project goals by rating high in mobility improvements and ensures equity to minority and low-income communities. Concept F would provide additional benefits of a connection to emerging Transit Oriented Communities (TOC) near the Arts District North Station and an aerial connection into LAUS above the Gold Line Platform or on Platform 2. The significant underground section of this alignment would also result in high capital costs and risks; however, the opportunity to provide a direct connection to LAUS and the Blue Line offers benefits that meet the project goals, objectives, and evaluation criteria.

Concept G: Downtown Transit Core also aligns with the overall project goals by supporting connectivity for emerging TOCs, and providing access to very high population densities, employment densities and transit-dependent/environmental justice communities. Like Concepts E and F, the significant underground portions of this alignment, particularly in the Downtown Core, would result in high capital costs and risks. Based on modeling results, transfers to the Regional Connector at the 7th

Street/Metro Center terminus would likely attract more riders than a terminus at Pershing Square. This Concept would offer valuable benefits of mobility and supportive land use while meeting the project goals, objectives, and evaluation criteria.

Table ES-1. Summary of Results

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1. Provide Mobility Improvements								
2. Support Local and Regional Land Use Plans and Policies								
3. Minimize Environmental Impacts								
4. Ensure Cost Effectiveness and Financial Feasibility								
5. Ensure Equity								
Overall Ratings	Medium/ Low	Medium/ Low	Medium	Medium	High	Medium/ High	Medium/ High	Low

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.

ES.2 Study Area

Stretching over 20 miles from Elysian Park in the north to the Los Angeles/Orange County line in the south, the WSAB Transit Corridor Study Area (Study Area) is approximately 98 square miles and incorporates 20 individual cities – the cities of Los Angeles, Vernon, Maywood, Huntington Park, Commerce, Bell, Cudahy, Bell Gardens, South Gate, Lynwood, Compton, Downey, Paramount, Bellflower, Long Beach, Lakewood, Norwalk, Artesia, Cerritos and Hawaiian Gardens – as well as portions of unincorporated LA County (see Figure ES-1). The developed and low-income residential neighborhoods and encompasses major regional employment centers, including the industrial and manufacturing backbone of the County.

As population and employment continue to increase within the Study Area, daily travel is also projected to increase. Under current (2017) conditions, the Study Area has approximately 6.39 million daily person trips. Over the next 25 years (by 2042), the daily person trips are projected to increase by 14 percent to approximately 7.26 million daily person trips. For both 2017 and 2042, approximately 31 percent of the trips stay within the Study Area, 33 percent are trips from the Study Area to destinations outside the Study Area, and 36 percent are trips into the Study Area from points outside the Study Area.

This increase of nearly 900,000 daily person trips between 2017 and 2042 may further burden the existing transportation network. Although auto travel is the predominant travel mode (with 86 percent of home-based work trips made by auto), there is significant transit demand given the high proportion of transit-dependent populations.

Figure ES-2 presents the daily trip flows from the Study Area destinations (trips beginning in the Study Area) and the primary locations where these trips are traveling. The majority of trips beginning within the Study Area have destinations within the Study Area. Those with districts adjacent to the Study Area (Central Los Angeles, Gateway Cities East and West) have the next highest number of trips. Districts that are farther away from the Study Area (South Bay, Westside, and San Gabriel Valley) have the next level of trip destinations.

Figure ES-3 shows daily trip flows by attractions to the WSAB Study Area generally shows the reverse of which are trips coming into the Study Area. Similar to the productions, the majority of trips stay within the Study Area, and the districts adjacent to the Study Area have a high number of trips coming into the corridor. In terms of attractions, the Study Area has a high number of trips (approximately 289,000) from the San Gabriel Valley traveling to the Study Area.

As shown in these figures, about half of the daily travel begins and ends in the WSAB Transit Corridor, followed by a significant travel demand between the Study Area and the Central LA District. There is also a significant travel demand between the Study Area and the Gateway Cities and the South Bay.

Figure ES-1. WSAB Transit Corridor Study Area

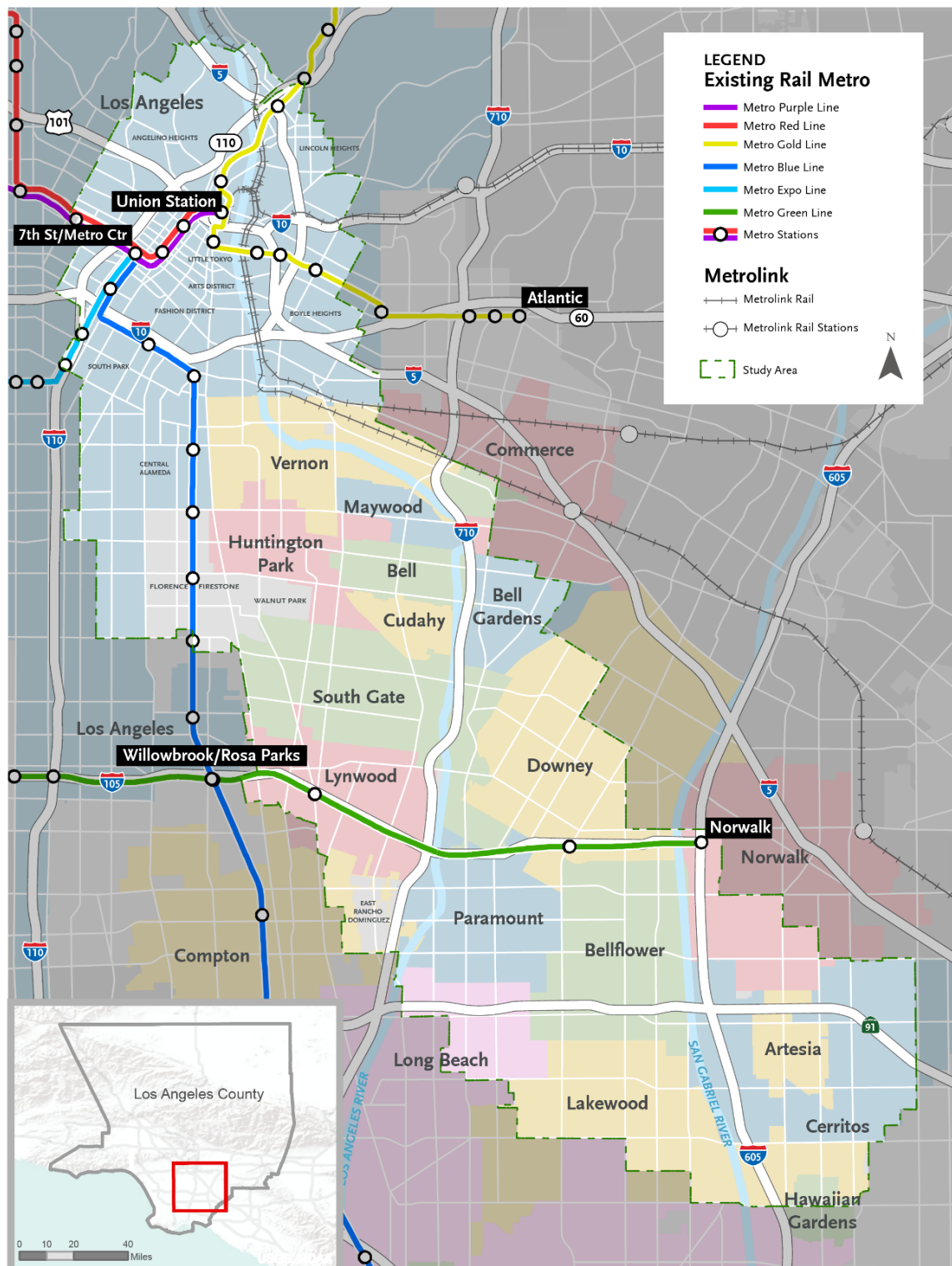


Figure ES-2. WSAB Transit Corridor Study Area Trip Destinations Map

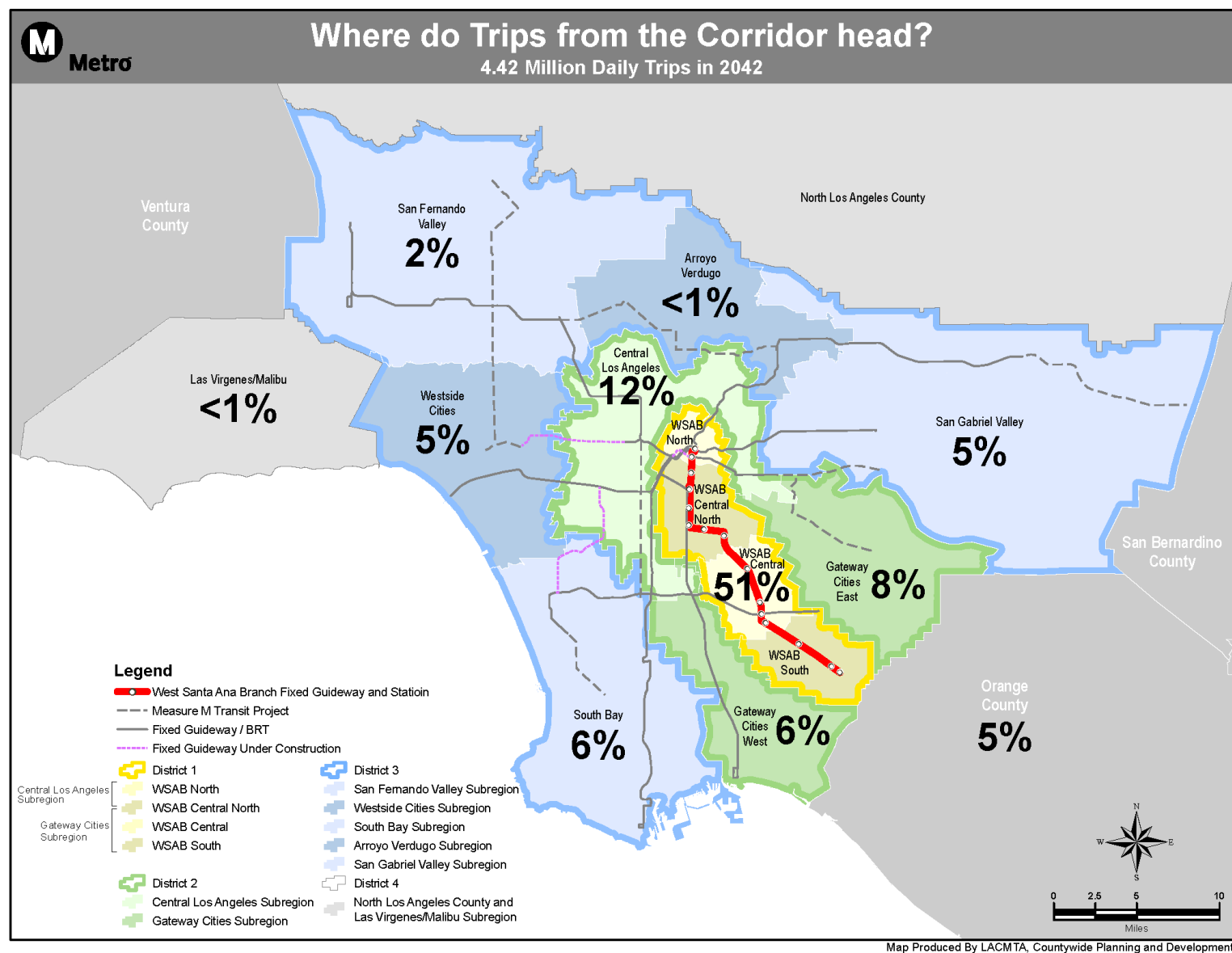
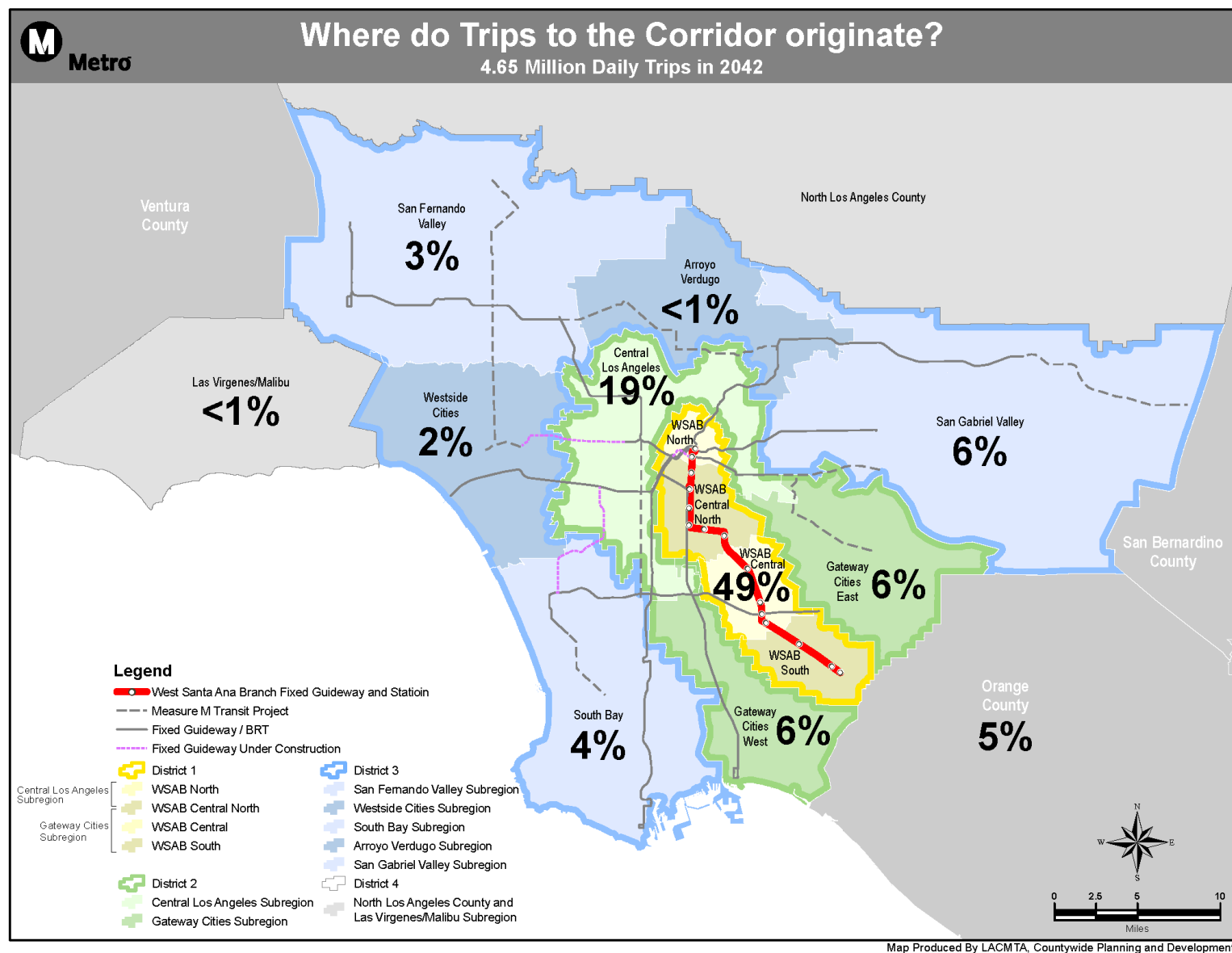


Figure ES-3. WSAB Transit Corridor Study Area Trip Origin Map



ES.3 Study Background

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study with the goal of environmentally clearing the Project under the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). As part of this planning process, a Northern Alignment Options Screening Report (April 2017) was prepared to further assess the six Northern Alignment Options previously analyzed in the Technical Refinement Study (TRS), completed in September 2015. As a result of the Northern Alignment Options Screening Report, the following four of those six Northern Alignment Options were carried into the scoping period for the environmental analysis: Pacific/Alameda, Pacific/Vignes, Alameda, and Alameda/Vignes.

Public Scoping Meetings, as part of the environmental process, took place in the cities of Bellflower, Los Angeles, South Gate, and Huntington Park in June 2017. The meetings provided project updates and information to stakeholders with the intent to receive comments and questions during a comment period ending in August 2017.

Although the Project was defined for the Environmental Study, several factors have emerged since August 2017 that required revisiting the Project alternatives. These include:

Scoping Comments Received 1,122 comments were received during the Public Scoping Period between June and August 2017. Comments related to the Northern Alignment Options identified some level of opposition, with the highest levels of concerns related to potential impacts to the Little Tokyo community.¹ Evaluating new Concepts is in response to the issues raised during the Public Scoping Period. Comments were also received from the California High-Speed Rail Authority, Metrolink, and the Federal Railroad Administration stating a preference for alignments that do not limit existing or planned capacity at LAUS for regional rail services.

Updates to the Long-Range Transportation Plan (LRTP) The passing of Measure M initiated the acceleration of major highway and transit projects within LA County. The updated LRTP Expenditure Plan would affect No Build project assumptions (with respect to the timeline of background projects), as well as an anticipated accelerated timeline for the WSAB Transit Corridor. As such, the WSAB Transit Corridor Options needed to be updated to be consistent with projects, programs and initiatives within the updated LRTP.

TOD/TOC Planning Initiatives – Metro, in partnership with the City of South Gate and the Eco-Rapid Transit Joint Power Authority, has received a grant from the Federal

Development (TOD) Strategic Implementation Plan (SIP). While the WSAB Transit Corridor TOD SIP does not directly influence the alternatives development process for the WSAB Transit Corridor, it is important to consider future development potentials when evaluating the Northern Alignment Alternatives and Concepts.

Advancing Engineering and Planning Phases Following approval of Measure M, several regional and long-term projects have advanced into further engineering and planning phases that would affect the Northern Alignment Alternatives and Concepts.

¹ Approximately 400 comments were received by Little Tokyo community stakeholders.

These include Blue Line upgrades, Bus Rapid Transit (BRT) initiatives and studies, and environmental studies progressing on the Division 20 Portal Widening and Turnback Facility, Regional Rail (Amtrak, Metrolink, and High-Speed Rail), and Link US at LAUS. Given the advancement of these projects, it is important that the Northern Alignment Alternatives and Concepts considers these projects within its own development timeline.

In addition, Metro is exploring a public-private partnership (P3) as an alternative strategy for delivering the WSAB Transit Corridor. The design of the WSAB Transit Corridor needs to consider P3 best practices as a part of the evaluation process.

ES.4 Purpose of the Study

Given the factors described above, additional concepts and planning analyses were initiated based on direction from the Metro Board (March 1, 2018). As a result, updated evaluations were conducted on the four Northern Alignment Options presented at the Public Scoping Meeting in June 2017: A) Pacific/Alameda; B) Pacific/Vignes; C) Alameda (aerial); and D) Alameda/Vignes. To address concerns raised during the Public Scoping Period as well as other factors described above, four new Northern Alignment Concepts were developed: E) Alameda (underground); F) Alameda/Center; G) Downtown Transit Core; and H) Arts District/6th Street.

The purpose of this study is to present the screening evaluation of all eight Northern Alignment Alternatives and Concepts (between downtown Los Angeles and the City of Huntington Park). Following completion of this report, Metro staff will make recommendations to the Metro Board of Directors (anticipated in May 2018) on alternatives and/or concepts to be studied further as part of the NEPA/CEQA environmental analysis phase of the Project development.

ES.5 Goals, Objectives, and Evaluation Criteria

Building on extensive stakeholder and agency outreach, the goals and objectives of the WSAB Transit Corridor were established through the development of the Alternatives Analysis Study in 2010, where goals and objectives were identified through a 24-month period of public meetings and work sessions with elected officials, stakeholders, advisory committee members, and communities. These goals were further confirmed in 2015 during the TRS through technical meetings with key stakeholders, including Eco-Rapid Transit, Study Area cities, and the California Department of Transportation (Caltrans); and were further discussed in 2017 as part of the WSAB Transit Corridor Scoping Meetings and in community update meetings in March 2018. Based on the planning and community involvement activities, the following five goals were developed for the Project:

- Goal 1: Provide Mobility Improvements
- Goal 2: Support Local and Regional Land Use Plans and Policies
- Goal 3: Minimize Environmental Impacts
- Goal 4: Ensure Cost Effectiveness and Financial Feasibility
- Goal 5: Ensure Equity

For this evaluation, the criteria were developed based on earlier studies and reports, updated model forecasting (as described in section ES.3), cost estimates and engineering analysis for

the four new Concepts, as well as discussions, reviews, and input received by various Metro departments. The Northern Alignment Alternatives and Concepts were evaluated based on how well each aligns with the project goals and advances the overall objectives of the Project.

Figure ES-4 presents a flow chart that represents the evaluation process used to identify the **Alternatives and Concepts that best meet the project goals, objectives, and evaluation criteria** established for the Project.

received in June 2017, new alignment Concepts were developed, evaluated with the expectation that they will be forwarded to the Metro Board and that the Board will determine which alignments should be carried forward into the environmental document.

Figure ES-4. Evaluation Process

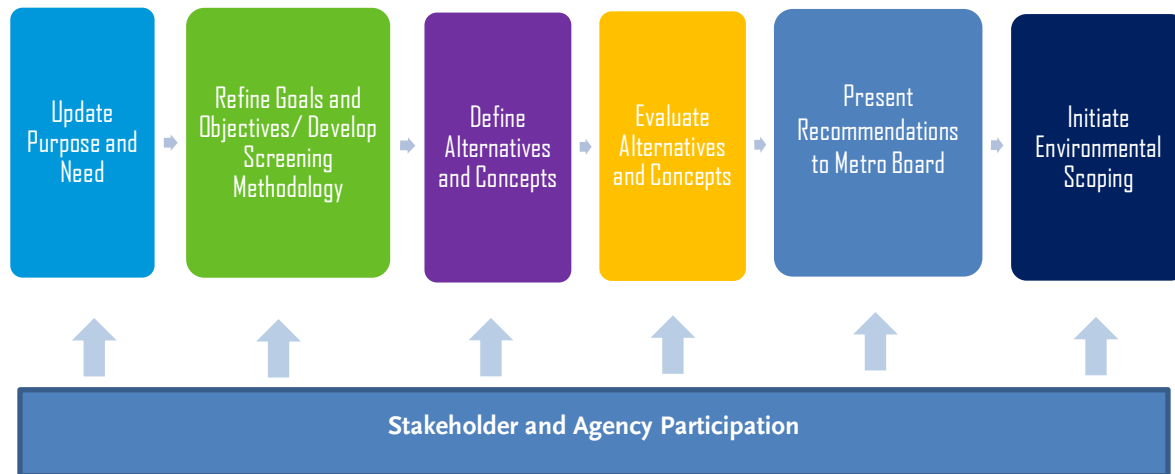


Table ES-2 provides a list of the evaluation criteria established for each goal and set of objectives.

Table ES-2. Goals, Objectives, and Evaluation Criteria

Goals	Objectives	Evaluation Criteria
1. Provide Mobility Improvements	1.1 Improves travel speeds and reduces travel times	<ul style="list-style-type: none"> ▪ Daily hours of user benefits ▪ Minutes of travel time from southern to northern termini
	1.2 Supports other transit systems along the corridor	<ul style="list-style-type: none"> ▪ Effects to other Metro Rail Lines ▪ Streamlines/improves customer experiences (number of daily one-seat rides)
	1.3 Connects with the greater transit network	<ul style="list-style-type: none"> ▪ Connections to other Metro Rail Lines ▪ Direct access to regional rail (commuter rail) ▪ Potential for future extensions
	1.4 Provides an alternative to a congested freeway and arterial network. Serves local and regional trips	<ul style="list-style-type: none"> ▪ Number of daily boardings ▪ Number of new transit trips ▪ Peak load points versus operational limits
	1.5 Supports active transportation and first/last mile connections	<ul style="list-style-type: none"> ▪ Quality of the pedestrian environment and public realm near station areas ▪ Potential connections to bicycle facilities
2. Support Local and Regional Land Use Plans and Policies	2.1 Serves major employment centers and high-density residential neighborhoods	<ul style="list-style-type: none"> ▪ 2042 population density within ½ mile of stations ▪ 2042 employment density within ½ mile of stations
	2.2 Encourages local economic development, projects, plans, and jobs	<ul style="list-style-type: none"> ▪ Communities -Oriented ▪ Supports land values and real estate market trends ▪ Potential Joint Use/Joint Development Opportunities within ¼ mile of stations
	2.3 Serves affordable housing developments	<ul style="list-style-type: none"> ▪ Number of existing affordable housing units within ½ mile of stations
	2.4 Supports and is consistent with local plans	<ul style="list-style-type: none"> ▪ Consistent with development patterns and land uses (scale/intensity of development) ▪ Consistent with ongoing planning efforts that update zoning/development standards

Goals	Objectives	Evaluation Criteria
3. Minimize Environmental Impacts	3.1 Minimizes environmental and community impacts	<ul style="list-style-type: none"> Reduction in regional vehicle miles traveled Level of effects to sensitive uses (e.g., historic properties)
	3.2 Minimizes impacts to the transportation network	<ul style="list-style-type: none"> Impacts to roadway travel lanes, parking, and truck movements Disruption to existing rail Right-of-Way (ROW)
	3.3 Minimizes other environmental impacts	<ul style="list-style-type: none"> Impacts to visual, noise, hazards and other environmental considerations
4. Ensure Cost Effectiveness and Financial Feasibility	4.1 Costs are financially feasible	<ul style="list-style-type: none"> Rough-Order-of-Magnitude capital costs
	4.2 Provide a cost-effective project	<ul style="list-style-type: none"> Capital cost compared to number of new riders per year
	4.3 Minimizes risk of cost increase	<ul style="list-style-type: none"> Intensity of engineering challenges Amount of property acquisition
5. Ensure Equity	5.1 Provides benefits to transit-dependent and minority populations	<ul style="list-style-type: none"> Percentage of transit-dependent persons within ½ mile of stations
	5.2 Minimizes adverse effects to an EJ community	<ul style="list-style-type: none"> Potential adverse effects to EJ communities
	5.3 Provision of new reliable fixed service to underserved communities	<ul style="list-style-type: none"> New fixed service to transit-dependent persons around station areas
	5.4 Serves low-income riders	<ul style="list-style-type: none"> Estimated number of low-income riders

ES.6 Northern Alignment Alternatives and Concepts

For purposes of assessing all eight of the Northern Alignment Alternatives and Concepts, the northern section of the alignment is generally assumed to be the portion of the WSAB alignment north of the Florence/Salt Lake Station in the City of Huntington Park. The original four Northern Alignment Alternatives (A through D) were presented during the 2017 Public Scoping Meetings (Figure ES-5). The new Northern Alignment Concepts (E through H) were developed to address concerns raised during the 2017 Public Scoping Period (Figure ES-6). Table ES-3 summarizes major characteristics of the Concepts followed by a description of the alignments and stations.

Original Northern Alignment Alternatives

- A. Pacific/Alameda** Extends approximately 7.4 miles between LAUS and Florence/Salt Lake Station along Pacific Boulevard/Santa Fe Avenue then Alameda Street. This concept would provide five stations north of Florence/Salt Lake: LAUS (with Station Options above the Metro Gold Line or at Platform 2 in the LAUS Rail Yard²), Little Tokyo, Arts District, Pacific/Vernon, and Pacific/Randolph (Figure ES-7).
- B. Pacific/Vignes** Extends approximately 7.2 miles between LAUS and the Florence/Salt Lake Station along Pacific Boulevard/Santa Fe Avenue then Vignes Street. This concept would provide four stations north of Florence/Salt Lake: LAUS (LAUS Rail Yard), Arts District, Pacific/Vernon, and Pacific/Randolph (Figure ES-8).
- C. Alameda (aerial)** – Extends approximately 8.0 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line then Alameda Street. This concept would provide seven stations north of Florence/Salt Lake: LAUS (LAUS Rail Yard), Little Tokyo, 7th/Alameda, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-9).
- D. Alameda/Vignes** – Extends approximately 8.1 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line then Alameda Street to Vignes Street. This concept would provide seven stations north of the Florence/Salt Lake Station: LAUS (LAUS Rail Yard), Arts District, 7th/Alameda, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-10).

New Northern Alignment Concepts

- E. Alameda (underground)** – Extends approximately 7.9 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line and Alameda Street. This concept would provide seven stations north of Florence/Salt Lake: LAUS (with station options in the LAUS Forecourt or East of the Metropolitan Water District Building), Little Tokyo, Arts District South, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-11).
- F. Alameda/Center** – Extends approximately 8.1 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line, Alameda Street then Center Street. This concept would provide seven stations north of the Florence/Salt Lake

² Concepts connecting to LAUS via aerial alignment into the LAUS Rail Yard have two potential terminus options. Option A: above the existing Gold Line platforms and Option B: Platform 2.

Station: LAUS (LAUS Rail Yard), Arts District North, Arts District South, Washington, Vernon, Slauson, and Pacific/Randolph (Figure ES-12).

- G. Downtown Transit Core** – Extends approximately 8.0 miles between the Downtown Transit Core and the Florence/Salt Lake Station; parallel to the Metro Blue Line then primarily under Alameda, 7th and 8th Streets. This concept would provide seven stations north of Florence/Salt Lake: 7th Street/Metro Center or Pershing Square³), South Park/Fashion District, Arts District South, Washington, Vernon, Slauson, and Randolph (Figure ES-13). Please note that references to the Downtown Transit Core terminus refers to a new underground station at 8th and Flower Streets with an underground pedestrian connection to the existing 7th/Metro Center Station. A potential terminus at Pershing Square refers to a new underground station at 5th Street and Broadway with an underground pedestrian connection to the existing Pershing Square Station.
- H. Arts District/6th Street** – Extends approximately 7.6 miles between LAUS and the Florence/Salt Lake Station along the Metro Blue Line then underground from the Blue Line to the Arts District/6th Street Station. This concept then assumes a revenue service extension of the Red/Purple Line to LAUS. This concept would provide four stations north of the Florence/Salt Lake Station: Arts District/6th Street, Vernon, Slauson, and Pacific/Randolph (Figure ES-14).

All Alternatives and Concepts would converge in the City of Huntington Park and follow the San Pedro Subdivision for 11 miles from the Florence/Salt Lake Station to the Pioneer Station in City of Artesia. Eight proposed stations would be located within the rail ROW along the southern portion of the Project. The San Pedro Subdivision is owned by the Ports of Long Beach and Los Angeles.

Table ES-3. Characteristics of the Northern Alignment Alternatives and Concepts

Alternative/ Concept	Length ¹	Preliminary Proposed Configuration ¹	# of Proposed Stations ¹
A. Pacific/Alameda	7.7 miles	3.6 miles aerial; 2.9 miles at-grade; 1.2 miles underground	5 stations: 3 aerial; 1 at-grade; 1 underground
B. Pacific/Vignes	7.5 miles	3.0 miles aerial; 2.9 miles at-grade; 1.6 miles underground	4 stations: 2 aerial; 1 at-grade; 1 underground
C. Alameda (aerial)	8.3 miles	5.8 miles aerial; 2.5 miles at-grade	7 stations: 6 aerial; 1 at-grade
D. Alameda/Vignes	8.3 miles	5.0 miles aerial; 2.5 miles at-grade; 0.8 miles underground	7 stations: 5 aerial; 1 at-grade; 1 underground
E. Alameda (underground)	8.1 miles	3.2 miles aerial; 2.5 miles at-grade; 2.4 miles underground	7 stations: 3 aerial; 1 at-grade; 3 underground
F. Alameda/Center	8.2 miles	3.6 miles aerial; 2.4 miles at-grade; 2.2 miles underground	7 stations: 4 aerial; 1 at-grade; 2 underground
G. Downtown Transit Core	8.1 miles	2.8 miles aerial; 3.2 miles at-grade; 2.1 miles underground	7 stations: 3 aerial; 1 at-grade; 3 underground

³ Note that initial evaluations indicated higher mobility benefits for a terminus station near 7th Street/Metro Center compared to Pershing Square. However, given potential capacity and operational constraints resulting from the additional passengers connecting from a terminus at 8th Street and Flower, both the 7th Street/Metro Center and Pershing Square Stations should continue to be evaluated as part of Concept G.

Alternative/ Concept	Length ¹	Preliminary Proposed Configuration ¹	# of Proposed Stations ¹
H. Arts District/6 th Street	7.6 miles	2.6 miles aerial; 2.4 miles at-grade; 2.6 miles underground	4 stations: 2 aerial; 1 at-grade; 1 underground

Note: ¹ Description is provided between the Northern Terminus Station and the Florence/Salt Lake Station.

Figure ES-5. WSAB Transit Corridor Original Northern Alignment Alternatives



Figure ES-6. WSAB Transit Corridor New Northern Alignment Concepts



Figure ES-7. A) Pacific/Alameda Northern Alignment Alternative



Figure ES-8. B) Pacific/Vignes Northern Alignment Alternative



Figure ES-9. C) Alameda (aerial) Northern Alignment Alternative



Figure ES-10. D) Alameda/Vignes Northern Alignment Alternative



Figure ES-11. E) Alameda (underground) Northern Alignment Concept



Figure ES-12. F) Alameda/Center Northern Alignment Concept



Figure ES-13. G) Downtown Transit Core Northern Alignment Concept



Figure ES-14. H) Arts District/6th Street Northern Alignment Concept

ES.7 Screening Evaluation




The screening evaluation was conducted to determine how well each of the eight Northern Alignment Alternatives and Concepts met the goals and objectives of the Project, as summarized in Table ES-2. As previously identified, the five Project goals are:

- Goal 1: Provide Mobility Improvements
- Goal 2: Support Local and Regional Land Use Plans and Policies
- Goal 3: Minimize Environmental Impacts
- Goal 4: Ensure Cost Effectiveness and Financial Feasibility
- Goal 5: Ensure Equity

The goals and objectives in this Screening Report were assessed on their potential

was assigned based on the goals and objectives. Table ES-4 presents the typical rating methodology for each criterion.

Table ES-4. Rating Methodology









Rating		Description
	High	A high rating indicates the alternative or concept highly supports and satisfies the criterion, or has a low potential for negative impacts.
	Medium	A medium rating indicates the alternative or concept moderately supports the criterion, or has a moderate potential for negative impacts.
	Low	A low rating indicates that an alternative or concept does not support or conflicts with the criterion, or has a high potential for negative impacts.

Findings of the screening evaluation are based on individual criteria analyzed for each of the alternatives and concepts, and is then summarized through ratings of the major objectives (high, medium, or low). Note that no weighting was applied to the results of the screening evaluation as each goal was given equal consideration. The resulting evaluation demonstrates how each alternative and concept compares to the major goals of the Project with an overall high, medium, or low rating.

Goal 1: Provide Mobility Improvements

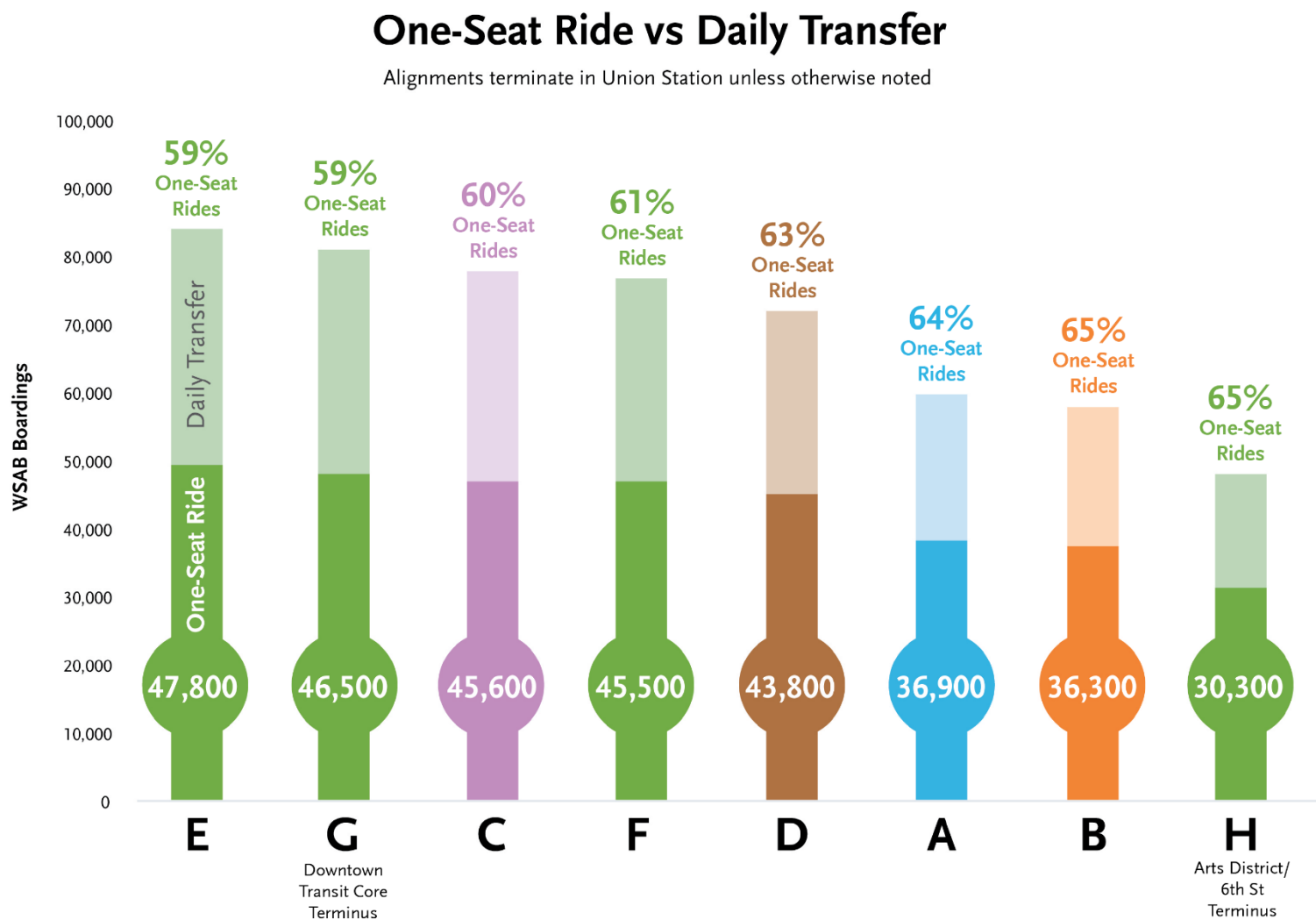
Based on the criterion analyzed, alignments along Alameda Street (Alternatives C and D, and Concepts E and F) and Concept G: Downtown Transit Core would provide the greatest overall mobility improvement benefits (Table ES-5). These Alternatives and Concepts connect directly to LAUS or the Downtown Transit Core and serve high-density residential and employment corridors, resulting in greater user benefits (overall time savings to the passenger) and higher daily boardings (each time a passenger boards a transit vehicle). These Alternatives and Concepts also directly serve numerous existing and planned Metro and regional rail lines and would be supported by first-/last-mile connections (bicycle and pedestrian accessibility), enhancing the overall mobility of the transit network. Figure ES-15 presents a comparison of one-seat rides versus daily transfers by Alternatives and Concepts.

Table ES-5. Goal 1: Provide Mobility Improvements

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1.1 Improves travel speeds and reduces travel times (daily hours of user benefits)	22,000 hours	22,500 hours	24,000 hours	23,500 hours	25,000 hours	24,000 hours	24,000 hours	18,500 hours
1.2 Improves travel speeds and reduces travel times inclusive of any necessary transfers (minutes of travel time)	36.6 minutes	34.5 minutes	35.5 minutes	35.5 minutes	33.5 minutes	34.0 minutes	33.6 minutes	37.5 minutes
1.3 Supports other transit systems (effects to other Metro Lines)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
1.4 Supports other transit systems (daily one-seat ride)	36,900 daily one-seat rides	36,300 daily one-seat rides	45,600 daily one-seat rides	43,800 daily one-seat rides	47,800 daily one-seat rides	45,500 daily one-seat rides	46,500 daily one-seat rides	30,300 daily one-seat rides
1.5 Connects with the greater transit network (connections to Metro Lines, regional rail and future extensions)	Medium	Low	High	Medium	High	Medium	Medium	Low
1.6 Provides an alternative to freeway and arterial network. Serves local and regional trips. (Daily boardings; new transit trips, peak operational limits)	58,000 Boardings (24,500 new riders)	56,000 Boardings (25,000 new riders)	75,500 Boardings (26,000 new riders)	69,500 Boardings (25,500 new riders)	81,500 Boardings (27,000 new riders)	74,500 Boardings (26,000 new riders)	78,500 Boardings (25,000 new riders)	46,500 Boardings (19,500 new riders)
1.7 Supports active transportation and first/last mile connections (bicycle and pedestrian connections)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
Goal 1 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.

Figure ES-15. WSAB Transit Corridor Study Area One-Seat Ride vs. Transfers



Goal 2: Support Local and Regional Land Use Plans and Policies

TOCs are places (such as corridors or neighborhoods) that, by their design, allow people to drive less and access transit more. A TOC maximizes equitable access to a multi-modal transit network as a key organizing principle of land use planning and community development. TOCs differ from TODs in that a TOD is a specific building or development project that is fundamentally shaped by close proximity to transit. TOCs promote equity and sustainable living in a diversity of community contexts by (a) offering a mix of uses that support transit ridership of all income levels (e.g. housing, jobs, retail, services and recreation); (b) ensuring appropriate building densities, parking policies, and urban design that support accessible neighborhoods connected by multi-modal transit; and (c) ensure that transit related investments provide equitable benefits that serve local, disadvantaged and underrepresented communities.⁴









With regard to land values and real estate market trends, the greatest densities permitted in the Downtown Core (regional center general plan land use designation) are directly associated with the higher assessed parcel valuations from the LA County Assessor. Concept G includes the Pershing Square, 7th Street/Metro Center and the Fashion District communities and stands out with the highest assessed value ratio, which is generally indicative of maximum economic development opportunity, although the buy-in is high. The other Alternatives and Concepts essentially show ratios where the largest component of the total assessed valuation for these station areas is land. While traditionally the development buy-in is low and risks are high, emerging residential housing markets in areas south and east of the downtown core represent substantial development opportunities. In the short term, the underlying land use entitlements and surrounding remaining industrial uses are the likely factors that slow the pace of new growth and development in these station areas.

Overall, Concept G provides the greatest compatibility with existing and planned land uses as the proposed stations along the corridor serve the second-highest population density, the highest employment density, and affordable housing units. Concept G would also be supportive of TOC investments and development patterns within downtown Los Angeles. Although other Alternatives and Concepts connecting to LAUS (Alternatives A, B, C, D and Concepts E and F) would generally serve high population and employment densities, these alignments would offer only moderate support of local land use and regional plans and policies in terms of land use, affordable housing, and development patterns.

It has been noted that the northern terminus station proposed in Concept H provides an opportunity to connect to an emerging TOC. However, compared to potential TOC investment and development near the Downtown Core and LAUS, Concept H would not connect to the highest population and employment densities within downtown Los Angeles.

⁴ Where Metro identifies disadvantaged and underrepresented communities, included are lower-income households as well as the following protected categories as defined by the California Fair Employment and Housing Act (FEHA): race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age for individuals over forty years of age, military and veteran status, and sexual orientation.

Table ES-6. Goal 2: Support Local and Regional Land Use Plans and Policies

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
2.1 Serves major employment centers and high-density residential (2042 Population Density)	27,880 persons/ square mile	17,670 persons/ square mile	16,180 persons/ square mile	10,350 persons/ square mile	16,040 persons/ square mile	16,740 persons/ square mile	24,160 persons/ square mile	1,980 persons/ square mile
2.2 Serves major employment centers and high-density residential (2042 Employment Density)	15,130 jobs/ square mile	10,100 jobs/ square mile	15,520 jobs/ square mile	11,200 jobs/ square mile	14,520 jobs/ square mile	13,510 jobs/ square mile	44,260 jobs/ square mile	11,210 jobs/ square mile
2.3 Encourages local economic development (TOC policies; supports land values; potential joint development opportunities)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
2.4 Serves affordable housing developments (number affordable housing units near stations)	3,750 affordable housing units	1,270 affordable housing units	4,590 affordable housing units	3,960 affordable housing units	5,600 affordable housing units	5,040 affordable housing units	20,980 affordable housing units	550 affordable housing units
2.5 Supports and is consistent with local plans (development patterns; character of public realm; development standards)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
Goal 2 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.

Goal 3: Minimize Environmental Impacts









Concept E provides the greatest overall potential to minimize environmental impacts. Concept E would be primarily underground, and would likely avoid impacts that would affect the at-grade environment (e.g., sensitive uses, transportation network, visual impacts, hazards, etc.). This concept would also have the highest reduction in vehicle miles traveled (VMT) from travelers reducing their auto trips and result in a reduction in greenhouse gas and other pollutants (Table ES-7).

Alternative B and Concepts F and H would have moderate environmental impacts and partially avoid sensitive uses. Alternative B and Concept F would have moderate impacts to the transportation network and other environmental considerations and have high VMT reductions. Although Concept H would likely avoid any sensitive uses, the concept would offer the lowest VMT reduction compared to all of the alternatives and concepts considered.

It is anticipated that Alternatives A, C, and D and Concept G would need to address significant environmental impacts given the potential effects to sensitive uses and other potential environmental impacts. Alternative A and C would include an aerial alignment through the Little Tokyo Station and would likely affect sensitive uses and travel lanes where columns and/or straddle bents may restrict turns, reduce lane widths, and interrupt sight distances. Alternatives A and C would also likely result in visual and noise impacts near the Little Tokyo community and Alameda Street and have a higher potential for hazardous materials encounters in the heavily industrial area of Los Angeles. Although Alternative D would avoid direct surface impacts to the Little Tokyo community, it would likely result in transportation and visual impacts related to the aerial alignment along Alameda Street south of 5th Street. The columns and/or straddle bents associated with the Alternative D aerial structure would result in transportation impacts similar to impacts that would occur for Alternatives A and C. Concept G may likely affect the historic core of Los Angeles and its associated designated Historic Cultural Monuments. Concept G may also have a high potential for vibration impacts when passing underground due to the historic and dense nature of the downtown core area. Additionally, this Concept has one of the lowest VMT reductions.

It should be noted that while Goal 3 is to minimize adverse environmental impacts, the ability to maximize environmental benefits should also be considered. VMT reduction is greater for Alternatives and Concepts that connect directly to LAUS. As a major Metro transfer point and direct regional rail connections to the WSAB corridor that do not currently exist. This will enable certain automobile drivers that currently travel long distances to and from the WSAB corridor to have a potential rail option for that trip instead. For example, someone who currently drives from Claremont to Bellflower for work could now make that trip on rail. As such, it is notable that both Concepts G and H, whose alignments require an extra transfer to connect to LAUS, do not reduce VMT as significantly as the other alignments and would therefore have less environmental benefits.

Table ES-7. Goal 3: Minimize Environmental Impacts

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
3.1 Minimizes environmental and community impacts (Reduction in VMT)	624,400 VMT reduction	645,500 VMT reduction	621,100 VMT reduction	611,500 VMT reduction	648,800 VMT reduction	629,100 VMT reduction	458,300 VMT reduction	327,300 VMT reduction
3.2 Minimizes environmental and community impacts (Effects to sensitive uses)	Low	Medium	Low	Medium	High	Medium	Low	Medium
3.3 Minimizes impacts to the transportation network (Impacts to travel lanes, parking and truck movements; disruption to existing rail ROW)	Medium	Medium	Low	Low	High	Medium	High	Medium
3.4 Minimizes other potential environmental impacts (Impacts to visual, noise, hazards, and other environmental topics.)	Low	Medium	Low	Low	High	Medium	Low	Medium
Goal 3 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments.









Goal 4: Ensure Cost Effectiveness and Financial Feasibility

Overall, the original four Northern Alignment Alternatives would demonstrate medium findings of cost effectiveness and financial feasibility as they were developed as a combination of lower cost assumptions, such as at-grade, aerial, and minimal underground segments. Given public scoping comments and stakeholder input, the four new Northern Alignment Concepts offers reduced social costs (i.e., environmental and equity) of at-grade and aerial alignments by proposing variations with new and longer underground segments. The trade-off, however, is higher capital cost.

Based on the updated Rough-Order-of-Magnitude (ROM) capital costs, engineering challenges, and potential amount of property acquisition needed, the Northern Alignment Concepts E, F, and G would rate low as their overall capital costs would be higher than the four original Northern Alignment Alternatives. Concept H has a lower capital cost than the other Northern Alignment Alternatives and Concepts but has the highest capital cost / new riders per year. This makes Concept H the least cost-effective alignment since it attracts far fewer new riders than the other Northern Alignment Alternatives and Concepts.

Concepts E, F, G, and H present the greatest potential engineering challenges due to the length of tunneling required adjacent to vertical structures ranging from low to high rise in a highly developed urban area with existing infrastructure. These engineering challenges and acquisition needs result in risks, which could decrease the overall cost effectiveness of these concepts (Table ES-8).

Table ES-8. Goal 4: Ensure Cost Effectiveness and Financial Feasibility

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
4.1 Costs are financial feasible (*ROM capital costs in \$Billions)	\$4.7 Billion (2017\$)	\$4.7 Billion (2017\$)	\$4.6 Billion (2017\$)	\$5.0 Billion (2017\$)	\$5.8 Billion (2017\$)	\$5.4 Billion (2017\$)	\$5.8 Billion (2017\$)	\$4.5 Billion (2017\$)
4.2 Provide a cost-effective project (capital cost / new riders per year)	\$607	\$596	\$557	\$620	\$679	\$655	\$729	\$740
4.3 Minimizes risk of cost increase (engineering challenges)	Higher risks with tunneling in Arts District	Higher risks with tunneling in Arts District	Less risk with aerial or at-grade	Risks with short tunneling in Arts District	Higher risks with tunneling	Higher risks with tunneling	Higher risks with tunneling	Higher risks with tunneling
4.4 Minimizes risk of cost increase (property acquisition)	Medium risks due to property impacts	Medium risks due to property impacts	Higher risks due to more property impacts	Higher risks due to more property impacts	Lower risk due to reduced property impacts	Medium risks due to property impacts	Lower risk due to reduced property impacts	Lower risk due to reduced property impacts
Goal 4 Ratings								

Notes: *ROM capital cost is based on early engineering assumptions and are provided to demonstrate general differentiators in costs.

Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments









Goal 5: Ensure Equity

The goal to ensure equity focuses on benefits to transit-dependent and minority populations, and low-income groups and the potential for adverse effects to Environmental Justice (EJ) communities. EJ communities are areas that are made up by a majority of minority or low-income individuals who may be disproportionately affected by the construction of a new transit project relative to other communities within the city. Concept G would serve the highest amount of transit-dependent persons (51.6 percent are transit dependent within ½ mile of the stations) and the highest number of low-income riders (32,400 low-income riders), and would provide new fixed service to underserved communities near the Arts District South and South Park/Fashion District Stations. This concept would also likely have minimal adverse effects to EJ communities such as Little Tokyo and Chinatown based on its proximity away from the communities. As a result, Concept G would receive the highest rating.

Both Concept E and Concept F would serve a high number of transit-dependent populations (38.4 percent and 38.8 percent, respectively) and low-income riders (31,700 and 28,400 low-income riders, respectively). Therefore, both of these concepts received high ratings.

Alternative B and Concept H would serve the lowest percentage of transit-dependent persons (21.6 percent and 24.1 percent, respectively) and low-income riders (21,300 and 19,000 low-income riders, respectively) compared to all other Alternatives and Concepts. As Alternative B would only provide two stations and Concept H would only provide one station for the entire northern alignment segment, this would limit the provision of new fixed service to transit-dependent communities compared to the other Alternatives and Concepts.

Table ES-9. Goal 5: Ensures Equity

Evaluation Criteria	Northern Alignment Alternatives and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
5.1 Provides benefits to transit-dependent and minority populations (% transit-dependent persons within ½ mile of stations)	34.7% transit dependent	21.6% transit dependent	39.7% transit dependent	35.8% transit dependent	38.4% transit dependent	38.8% transit dependent	51.6% transit dependent	24.1% transit dependent
5.2 Minimizes adverse effects to an EJ community (potential adverse effects to EJ communities)	Low	Medium	Low	Medium	High	High	High	High
5.3 Provision of new reliable fixed service to underserved communities (new fixed service to transit-dependent persons around station areas)	Medium	Medium	Medium	Medium	Medium	Medium	High	Low
5.4 Serves low-income riders (estimated number of low-income riders)	22,100 low-income riders	21,300 low-income riders	29,600 low-income riders	26,800 low-income riders	31,700 low-income riders	28,400 low-income riders	32,400 low-income riders	19,000 low-income riders
Goal 5 Ratings								

Note: Since the proposed alignment for all Alternatives and Concepts is the same south of Florence/Salt Lake Station, evaluation results shown are attributed to differences in the Northern Alignments

ES.8 Community and Stakeholder Outreach

To support development of the new Northern Alignment Concepts and discuss the original four Alternatives, community update meetings were held to communicate Alternatives and new Concepts being considered with stakeholders along the WSAB Transit Corridor. Five meetings were held between March 12 and March 19, 2018, with over 250 people participating in-person and approximately 85 written comment cards received. Over 270 people have viewed the recording of the Artesia webcast as of April 2, 2018. Table ES-10 presents the meeting details. Comments also continue to be received via the project e-mail address and the online comment submission form available on the project website. Two additional public meetings are planned for late April/early May 2018, prior to the Metro Board decision.

Table ES-10. WSAB Public Outreach Meetings March 2018

Meeting #	Community	Date	Time	Location	Number of Participants
1	Little Tokyo	Monday, March 12, 2018	3 to 5 PM	Nishi Hongwanji Buddhist Temple 815 E 1st St, Los Angeles, CA 90012	75
2	Little Tokyo	Monday, March 12, 2018	6 to 8 PM	Nishi Hongwanji Buddhist Temple 815 E 1st St, Los Angeles, CA 90012	36
3	Artesia*	Tuesday, March 13, 2018	6 to 8 PM	Albert O. Little Community Center 18750 Clarkdale Av, Artesia, CA 90701	52
4	Bell	Saturday, March 17, 2018	10 AM to 12 PM	Bell Community Center 6250 Pine Ave, Bell, CA 90201	26
5	Downey	Monday, March 19, 2018	6 to 8 PM	Barbara J. Riley Community and Senior Center 7810 Quill Dr., Downey, CA 90242	64

Note: *The Artesia meeting was also conducted as a live webcast, which was recorded and is available for viewing on the project website.

Meeting participants were encouraged to provide comments, and were specifically asked to consider the following about the new Northern Alignment Concepts:

1. Where would you prefer to end/begin in downtown (i.e., Downtown Transit Core, Union Station, Arts District)?
2. Are there destinations beyond the WSAB Transit Corridor you ultimately want to reach?
3. What are your comments on the new Northern Alignments?

In addition, presentations have been made to the Gateway Cities Council of Governments Transportation Committee and over twenty stakeholder and community organizations.

Comments received cited both LAUS and the Downtown Transit Core as the top preferences for beginning/ending their trips, followed by the Arts District. Other destinations meeting participants desire to reach include Pasadena, Glendale, Burbank, Orange County, and Metrolink/Amtrak connections to other cities from LAUS. Not everyone responded to Question 3, although of those who did, Concept G was most selected, followed by Concept E. Other comments submitted pertained to pedestrian connections, safety, first/last mile in relation to a stations, property values, noise levels, budget, ridership, P3 potential, and property acquisitions.

ES.9 Findings Summary

Each of the Northern Alignment Alternatives and Concepts provides a unique set of benefits that must be considered against the potential costs and challenges. The following discussion summarizes the key findings:

Alternative A: Pacific/Alameda: By serving LAUS, and providing a Little Tokyo Station and an Arts District North Station, moderate mobility benefits are achieved with long travel times (36.6 minutes), limited user benefits (22,000 hours), a moderate number of boardings (58,000) and a low number of new riders (24,500) compared to the other Alternatives and Concepts. However, station areas would collectively serve the highest residential and employment densities. There are also TOC opportunities near the Arts District North Station that would meet the needs of emerging communities and stakeholders. In terms of environmental impacts and ensuring equity, this Alternative would need to address significant environmental challenges with effects to sensitive uses and EJ communities like Little Tokyo. Given the tradeoffs of moderate mobility, land use and cost and likely significant environmental and social justice concerns, Alternative A receives an overall rating of **Medium/Low**.

Alternative B: Pacific/Vignes: This Alternative would provide many of the same moderate benefits as the Alternative A, but would not propose a Little Tokyo Station, therefore minimizing adverse effects to that EJ community. However, without a Little Tokyo Station, this Alternative misses a key connection to the East-West Line (Gold Line/Regional Connector) thereby further limiting mobility benefits and access to high residential and employment densities. For equity, this Alternative would rate low since it would not serve a high percentage of transit dependent (21.6 percent), minority, or low-income riders (21,300) compared to the other Alternatives and Concepts. Based on the moderate mobility, land use, environmental and cost considerations; and the limited ability to ensure equity for the project; Alternative B receives an overall rating of **Medium/Low**.

Alternative C: Alameda (aerial): The Alameda (aerial) Alternative provides connections to LAUS, Little Tokyo, Arts District South, and Metro Blue Line (North-South Line), resulting in significant mobility benefits with higher user benefits (24,000 hours), number of boardings (75,500) and new riders (26,000). By following the Metro Blue Line, this Alternative serves low-income and densely populated areas that would benefit from additional transit service and helps to address overcrowding on the Metro Blue Line. However, this Alternative would need to address significant environmental challenges including visual impacts from a primarily aerial alignment along Alameda

Street, through Little Tokyo, then into LAUS. Given the tradeoffs of high mobility benefits, moderate land use, equity and cost, and significant environmental concerns, Alternative C receives an overall rating of **Medium**.

Alternative D: Alameda/Vignes: As with Alternative C, this Alternative provides new transit service to a transit-dependent community along the Metro Blue Line (North-South Line) and results in substantial mobility benefits including user benefits (23,500 hours), number of boardings (70,000) and new riders (25,500). With at-grade and aerial alignments, this Alternative would likely have environmental impacts near the Little Tokyo community and transportation and visual impacts along Alameda Street. This Alternative would support a moderate amount of residential and employment densities and have a medium amount of cost and risk as it limits the amount of underground segments proposed. Given the high mobility benefits, but medium findings for land use, cost and equity, and low findings for environmental impacts, Alternative D receives an overall rating of **Medium**.

Concept E: Alameda (underground): The new Concept E would provide similar or better benefits as the Alameda (aerial) Alternative with an underground alignment to address environmental concerns for the Little Tokyo community. This Concept would connect to both the North-South and East-West Lines thereby providing significant mobility benefits with higher user benefits (25,000 hours), and highest number of boardings (81,500) and new riders (27,000). By following the Metro Blue Line, then transitioning into an underground alignment, this Concept would serve low-income and densely populated areas to the south with the fastest, most direct connection into LAUS (33.5 minutes). Although this Concept would likely have less environmental impacts to consider (since it is mostly underground), it would have the highest cost and risk compared to the other alternatives and concepts. Given that Concept E would rate high in all of the goals except for cost and risk, this Concept receives an overall rating of **High**.

Concept F: Alameda/Center: The new Concept F provides similar mobility benefits as Alternative D but provides a faster connection (34.0 minutes) with an underground alignment north of I-10 to the Gold Line resulting in higher number of boardings (74,500) and new riders (26,000). Since a majority of the alignment is underground, the Alternative would likely have less environmental impacts to consider. However, this would result in higher costs and risks. Given the tradeoffs of high mobility and equity benefits, moderate land use and environmental concerns; and high financial cost and risk with tunneling, Concept F receives an overall rating of **Medium/High**.

Concept G: Downtown Transit Core: The new Concept G would provide a fast and direct connection (33.6 minutes) to the highest residential and employment densities in downtown Los Angeles. With emerging TOCs at South Park/Fashion District and the Arts District South Station, this Concept would provide significant mobility benefits to low-income and minority populations with 51.6 percent of persons near station areas being transit dependent. High mobility benefits include user benefits (24,000 hours), daily boardings (78,500), and new riders (25,000). Although Concept G is primarily underground, there are significant environmental impacts to consider, including potential impacts to historic uses near proposed station areas and the lower reduction in VMT compared to the other alternatives and concepts. Given the high mobility, land use, and equity benefits, but potential risk of underground tunnel costs

and environmental impact concerns, this Concept receives an overall rating of **Medium/High**.

Concept H: Arts District/6th Street: The new Concept H would provide opportunities to connect to an emerging TOC near Arts District/6th Street. However, compared to the other alternatives and concepts, Concept H would provide significantly lower mobility and land use benefits. With only one station connecting to the Red/Purple Line, this Concept would generally provide limited user benefits (18,500 hours), fewest daily boardings (46,500), and fewest new riders (19,500). This Concept would also support very low population densities and a small number of low-income and minority communities since the station and alignment would primarily be located in the core industrial area of Los Angeles. Concept H would not provide comparable benefits to the other alternatives or concepts; therefore, this Concept receives an overall rating of **Low**.

West Santa Ana Branch Transit Corridor

Original Northern Alignments Map



West Santa Ana Branch Transit Corridor

New Northern Alignments Map



West Santa Ana Branch Transit Corridor

Northern Alignment Summary of Project Goals Results

Evaluation Criteria	Northern Alignment Alternative and Concepts							
	Alt A Pacific/ Alameda	Alt B Pacific/ Vignes	Alt C Alameda (aerial)	Alt D Alameda/ Vignes	Concept E Alameda (underground)	Concept F Alameda/ Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1. Provide Mobility Improvements								
2. Support Local and Regional Land Use Plans and Policies								
3. Minimize Environmental Impacts								
4. Ensure Cost Effectiveness and Financial Feasibility								
5. Ensure Equity								
Overall Ratings	Medium/ Low	Medium/ Low	Medium	Medium	High	Medium/ High	Medium/ High	Low

West Santa Ana Branch Transit Corridor

Northern Alignment Summary of Select Performance Measurements

Transit Trips Projected to 2042

Northern Alignment Original Alternatives & New Concepts	Daily WSAB Boardings	Daily New Transit Trips	Daily Low-Income Riders	One-Seat Rides	Travel Time (minutes)	ROM Cost Estimate (2017 \$B's)	Cost per New Riders per Year (2017 \$)
A Pacific/Alameda	58,000	24,500	22,100	36,900	36.6	\$4.7	\$607
B Pacific/Vignes	56,000	25,000	21,300	36,300	34.5	\$4.7	\$596
C Alameda (aerial)	75,500	26,000	29,600	45,600	35.5	\$4.6	\$557
D Alameda/Vignes	69,500	25,500	26,800	43,800	35.5	\$5.0	\$620
E Alameda (underground)	81,500	27,000	31,700	47,800	33.5	\$5.8	\$679
F Alameda/Center	74,500	26,000	28,400	45,500	34.0	\$5.4	\$655
G Downtown Transit Core	78,500	25,000	32,400	46,500	33.6	\$5.8	\$729
H Arts District/6 th St	46,500	19,500	19,000	30,300	37.5	\$4.5	\$740

ROM = Rough order of magnitude

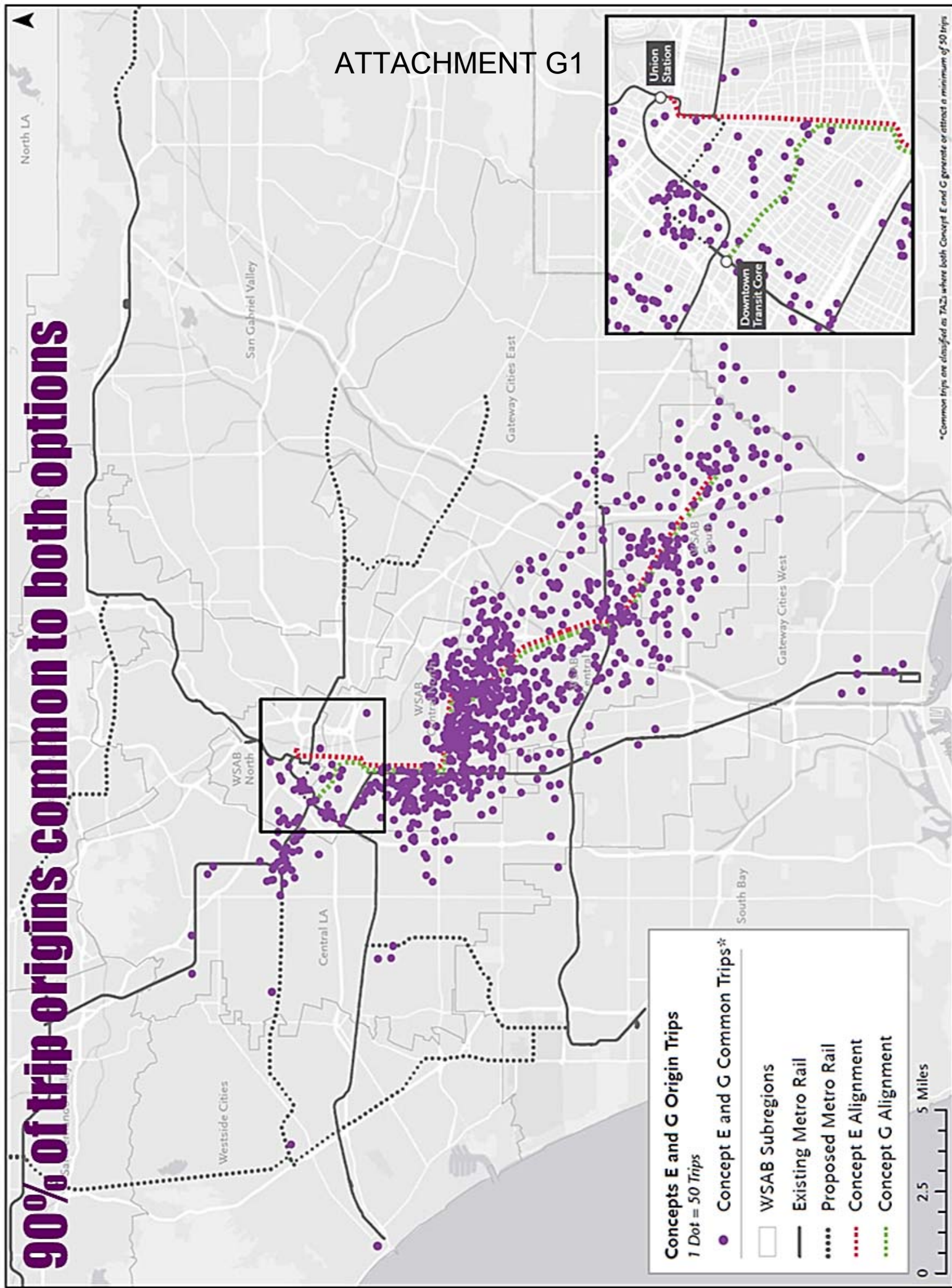
West Santa Ana Branch Transit Corridor

Recommended Northern Alignments Map



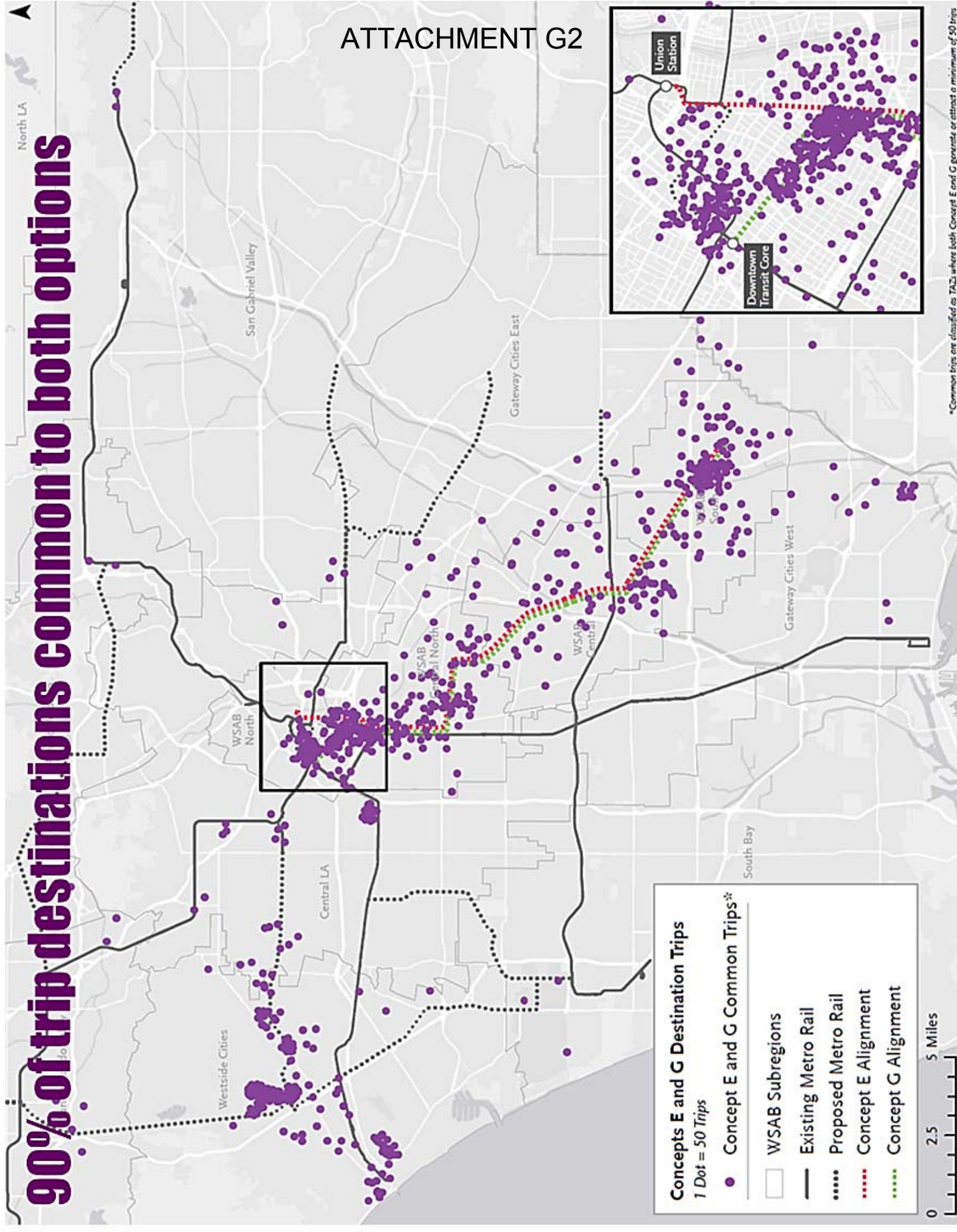
90% of trip origins common to both options

ATTACHMENT G1



90% of trip destinations common to both options

ATTACHMENT G2



PROCUREMENT SUMMARY

WEST SANTA ANA BRANCH TRANSIT CORRIDOR/AE5999300

1.	Contract Number: AE5999300			
2.	Contractor: WSP USA Inc.			
3.	Mod. Work Description: Environmental review and technical analysis on the three northern alignments in the Draft EIR/EIS			
4.	Contract Work Description: West Santa Ana Branch Transit Corridor Technical Services			
5.	The following data is current as of: May 3, 2018			
6.	Contract Completion Status		Financial Status	
	Contract Awarded:		Contract Award Amount:	\$9,392,326
	Notice to Proceed (NTP):		Total of Modifications Approved:	\$252,166
	Original Complete Date:		Pending Modifications (including this action):	\$2,760,752
	Current Est. Complete Date:		Current Contract Value (with this action):	\$12,405,244
7.	Contract Administrator: Gina Romo		Telephone Number: (213) 922-7558	
8.	Project Manager: Teresa Wong		Telephone Number: (213) 922-2854	

A. Procurement Background

This Board Action is to approve Contract Modification No. 2 issued in support of the environmental review and technical analysis on the three northern alignments in the Draft EIR/EIS for the West Santa Ana Branch Transit Corridor.

This Contract Modification was processed in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price.

On September 26, 2016, the Board awarded a firm fixed price Contract No. AE5999300 to Parsons Brinckerhoff, Inc., now WSP USA Inc., in the amount up to \$9,392,326 for the West Santa Ana Branch Transit Corridor.

Refer to Attachment I-1 – Contract Modification Log.

B. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an independent cost estimate, cost analysis, technical analysis, and fact finding. All direct rates and fee remain unchanged from the original contract.

Proposal Amount	Metro ICE	Negotiated Amount
\$2,760,752	\$2,722,357	\$2,760,752

PROCUREMENT SUMMARY

WEST SANTA ANA BRANCH TRANSIT CORRIDOR COMMUNITY PARTICIPATION
PROGRAM/ PS2492300

1.	Contract Number: PS2492300			
2.	Contractor: Arellano Associates, LLC			
3.	Mod. Work Description: Continue implementing outreach services as part of the Community Participation Program for the environmental review and clearance of the West Santa Ana Branch Transit Corridor Project (WSAB).			
4.	Contract Work Description: Outreach services as part of the Community Participation Program for WSAB.			
5.	The following data is current as of: May 4, 2018			
6.	Contract Completion Status		Financial Status	
	Contract Awarded:	9/26/16	Contract Award Amount:	\$492,893
	Notice to Proceed (NTP):	9/26/16	Total of Modifications Approved:	\$0
	Original Complete Date:	9/25/20	Pending Modifications (including this action):	\$429,310
	Current Est. Complete Date:	9/25/20	Current Contract Value (with this action):	\$922,203
7.	Contract Administrator: Lily Lopez		Telephone Number: (213) 922-4639	
8.	Project Manager: Teresa Wong		Telephone Number: (213) 922-2854	

A. Procurement Background

This Board Action is to approve Contract Modification No. 1 issued to augment the Community Participation Program to continue implementing focused outreach services to the corridor communities in support of the environmental documents for the WSAB Transit Corridor Project.

This Contract Modification was processed in accordance with Metro's Acquisition Policy and the contract type is firm fixed price. All other terms and conditions remain in effect.

On September 26, 2016, the Board awarded a firm fixed price Contract No. PS2492300 to Arellano Associates, LLC in the amount of \$492,893 to perform the environmental clearance study community outreach for the WSAB Transit Corridor based on the passage of Measure M.

Refer to Attachment I-2 – Contract Modification/Change Order Log for modifications issued to date.

B. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an independent cost estimate, cost analysis, technical analysis, fact finding, and negotiations. Direct labor rates for this modification were negotiated based on the current Consumer Price index and fee remained unchanged from the original contract.

Proposal Amount	Metro ICE	Negotiated Amount
\$429,310	\$413,986	\$429,310

CONTRACT MODIFICATION/CHANGE ORDER LOG

WEST SANTA ANA BRANCH TRANSIT CORRIDOR/AE5999300

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	Addition of a travel demand model review and calibration of six main tasks.	Approved	11/21/2017	\$252,166
2	Environmental review and technical analysis on the three northern alignments in the Draft EIR/EIS for the West Santa Ana Branch Transit Corridor.	Pending	5/24/2018	\$2,760,752
	Modification Total:			\$3,012,918
	Original Contract:	9/26/2016		\$9,392,326
	Total:			\$12,405,244

CONTRACT MODIFICATION/CHANGE ORDER LOG

WEST SANTA ANA BRANCH TRANSIT CORRIDOR COMMUNITY PARTICIPATION
PROGRAM / PS2492300

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	Continue implementing outreach services as part of the Community Participation Program for the environmental review and clearance for WSAB Transit Corridor Project.	Pending	Pending	\$429,310
	Modification Total:			\$429,310
	Original Contract:	9/26/16		\$492,893
	Total:			\$922,203

DEOD SUMMARY

WEST SANTA ANA BRANCH TRANSIT CORRIDOR/AE5999300

A. Small Business Participation

WSP USA Inc. (WSP) made a 26.12% Disadvantaged Business Enterprise (DBE) commitment. The project is 44% complete and the current DBE participation is 23.12%, a shortfall of 3.00%. WSP explained that their shortfall is related to the timing of certain scope items that will be performed by DBE's, including Lenax Construction, who has not performed to date. WSP confirmed that they will achieve their contractual DBE commitment.

Small Business Commitment	26.12% DBE	Small Business Participation	23.12% DBE
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	DBE Subcontractors	Ethnicity	% Committed	Current Participation¹
1.	BA Inc.	African American	1.44%	4.04%
2.	CityWorks Design	Hispanic American	3.55%	3.77%
3.	Connetics Transportation Group	Asian Pacific American	0.68%	1.16%
4.	Epic Land Solutions	Caucasian Female	1.03%	1.73%
5.	Geospatial Professional Services	Asian Pacific American	0.23%	0.44%
6.	Lenax Construction	Caucasian Female	2.01%	0.00%
7.	Terry A. Hayes Associates	African American	13.26%	8.30%
8.	Translink Consulting	Hispanic American	3.92%	3.68%
Total			26.12%	23.12%

¹Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Modification.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA). Trades that may be covered include: surveying, potholing, field, soils and materials testing, building construction inspection, construction management and other support trades.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

DEOD SUMMARY**WEST SANTA ANA BRANCH TRANSIT CORRIDOR COMMUNITY
PARTICIPATION/PS2492300****A. Small Business Participation**

Arellano Associates, LLC made a 100% Small Business Enterprise (SBE) commitment. The project is 53% complete and the current SBE participation is 100%. Arellano Associates, LLC is meeting their SBE commitment

Small Business Commitment	100% SBE	Small Business Participation	100% SBE
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	DBE Prime	% Committed	Current Participation¹
1.	Arellano Associates, LLC	100%	100%
	Total	100%	100%

¹Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Modification.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA). Trades that may be covered include: surveying, potholing, field, soils and materials testing, building construction inspection, construction management and other support trades.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

West Santa Ana Branch Transit Corridor

Planning and Programming - May 16, 2018

File 2018-0072

Construction - May 17, 2018



Recommendation

AUTHORIZING:

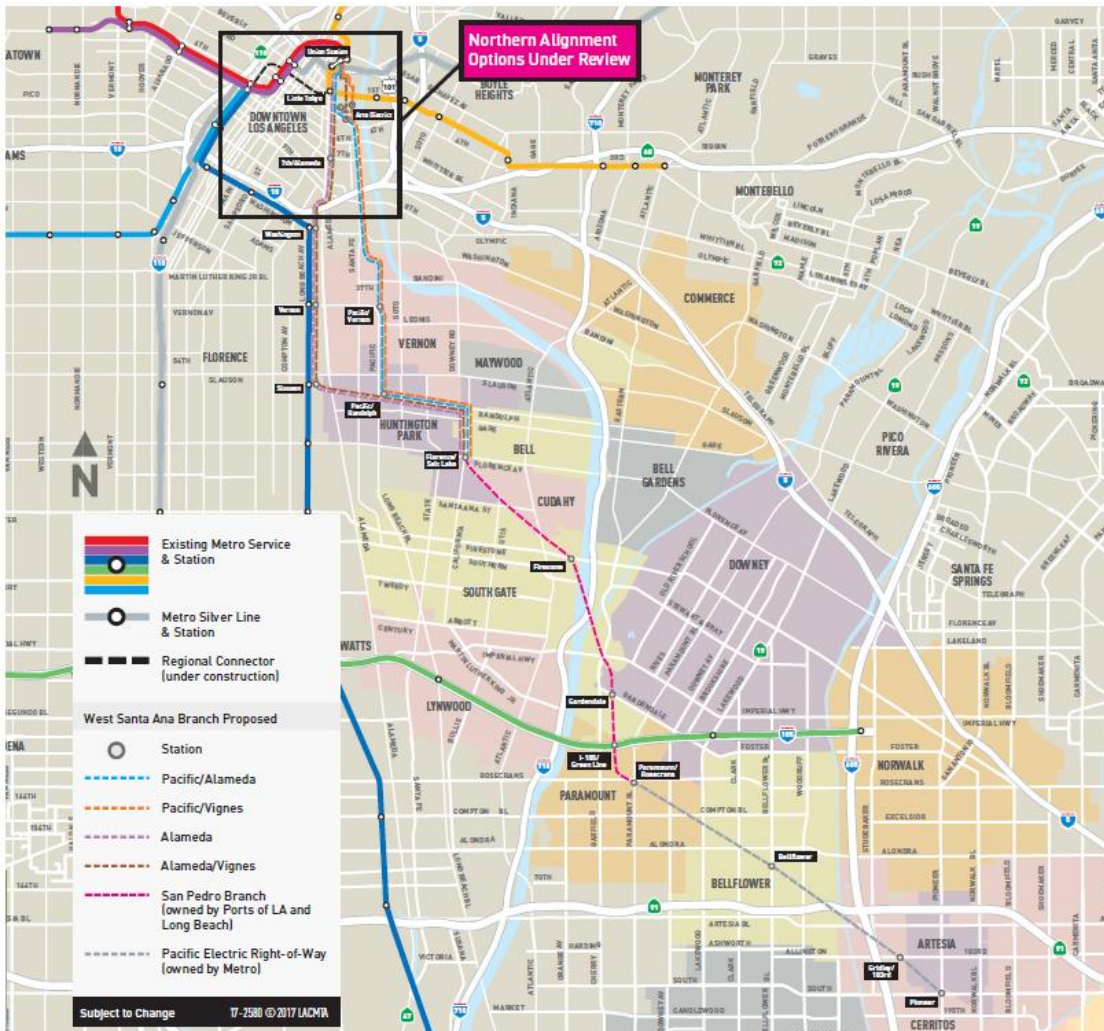
1. Northern alignment options to carry forward into Draft EIS/EIR

- a. Concept E: Union Station via Alameda Underground**
- b. Concept F: Union Station via Alameda Underground/Center Aerial**
- c. Concept G: Downtown Transit Core Underground**

2. Technical services Contract Modification No. 2 in the amount of \$2,760,752 for the evaluation northern alignments in Draft EIS/EIR.

3. Outreach services Contract Modification No. 1 in the amount of \$429,310 for augmented Community Participation Program as part of the evaluation of northern alignments.

West Santa Ana Branch



- Provide **mobility** improvements
- Support local/regional **land use** plans and policies
- Minimize **environmental** impacts
- Ensure **cost** effectiveness & financial feasibility
- Promote **equity**

Original Northern Alignment Alternatives

- A. Pacific/Alameda
- B. Pacific/Vignes
- C. Alameda (aerial)
- D. Alameda/Vignes



New Northern Alignment Concepts

E. Alameda (underground)
F. Alameda/Center
G. Downtown Transit Core
H. Arts District/6th St











































Recommended Alignments

- E. Alameda (underground)
- F. Alameda/Center
- G. Downtown Transit Core



Performance Compared to Project Goals

Evaluation Criteria	Northern Alignment Alternative and Concepts							
	Alt A Pacific/Alameda	Alt B Pacific/Vignes	Alt C Alameda (aerial)	Alt D Alameda/Vignes	Concept E Alameda (underground)	Concept F Alameda/Center	Concept G Downtown Transit Core	Concept H Arts District/ 6 th Street
1. Provide Mobility Improvements								
2. Support Local and Regional Land Use Plans and Policies								
3. Minimize Environmental Impacts								
4. Ensure Cost Effectiveness and Financial Feasibility								
5. Ensure Equity								
Overall Ratings	Medium/Low	Medium/Low	Medium	Medium	High	Medium/High	Medium/High	Low

Summary of All Northern Alignments

Ridership projected to 2042

Northern Alignment Original Alternatives & New Concepts	Daily WSAB Boardings	Daily New Transit Trips	Daily Low-Income Riders	Travel Time (minutes)	ROM Cost Estimate (2017 \$B's)	Cost per New Riders per Year (2017 \$)
A Pacific/Alameda	58,000	24,500	22,100	36.6	\$4.7	\$607
B Pacific/Vignes	56,000	25,000	21,300	34.5	\$4.7	\$596
C Alameda (aerial)	75,500	26,000	29,600	35.5	\$4.6	\$557
D Alameda/Vignes	69,500	25,500	26,800	35.5	\$5.0	\$620
E Alameda (underground)	81,500	27,000	31,700	33.5	\$5.8	\$679
F Alameda/Center	74,500	26,000	28,400	34.0	\$5.4	\$655
G Downtown Transit Core	78,500	25,000	32,400	33.6	\$5.8	\$729
H Arts District/6 th St	46,500	19,500	19,000	37.5	\$4.5	\$740

ROM = Rough order of magnitude

Community Meetings

- Nine Community Meetings held
 - March 12: Little Tokyo (3pm & 6pm)
 - March 13: City of Artesia @ 6pm (also conducted as a live webcast)
 - March 17: City of Bell @6pm
 - March 19: City of Downey @6pm
 - April 30: LAUS @ 3pm & 6pm
 - May 3: City of Paramount @ 6pm (also webcast)
 - May 15: City of Downey @ 7pm
- Over 490 attendees
- Over 300 webcast views
- Over 150 written comments received



Metro

Key Takeaways

- 90% of trips are common to LAUS and Downtown Transit Core
- 66% of population in the study area are considered Environmental Justice (EJ) communities
 - EJ communities are spread *throughout* the 20 mile corridor
- An average of 62% WSAB riders would enjoy a one seat ride
- Measure M identifies \$4B in 2017\$
 - \$1B- opening 2028
 - \$3B- opening 2041
- All alignments exceed Measure M \$4B allocation
- Board decision on Northern Alignment alternatives to further study in environmental is critical to moving project forward