

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

Conceptual Capital Cost Report
Update

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1.0 Introduction

1.1 Project Description

The Los Angeles County Metropolitan Transportation Authority (Metro) is completing the North Hollywood to Pasadena Bus Rapid Transit (BRT) Draft Environmental Impact Report (DEIR) pursuant to California Environmental Quality Act (CEQA) guidelines. The Project will provide a premium bus transit service in an approximately 18-mile corridor from the North Hollywood Metro B (Red)/G (Orange) Line Station on the west to Pasadena City College on the east, within the following communities:

- North Hollywood in the City of Los Angeles
- Burbank Media District and Downtown
- Glendale Grandview Neighborhood and Downtown
- Eagle Rock in the City of Los Angeles
- City of Pasadena

1.2 Purpose and Scope

This report is an update to the previously developed Conceptual Capital Cost Report, dated April 30, 2019, and documents the assumptions, parameters, and presents the results of the conceptual cost estimates for the Proposed Project and Route Options being evaluated in the DEIR. The capital cost estimates will be updated in progressive levels of detail as the Project advances through the various stages of project development. The purpose of this document is to:

- Describe the methods used to define, quantify and present capital cost estimates required for project evaluation.
- Define the nature and sources of cost data to be used in the preparation of capital cost estimates.
- Define the assumptions used in the preparation of capital cost estimates.
- Identify the limitations of capital cost estimates at this stage of project development.

The capital cost estimates presented herein will be a performance measure tool that can be used by decision-makers in their evaluation and selection of the components which will comprise the Proposed Project. These capital cost estimates will also be used in the assessment of project cost effectiveness and efficiency.

1.3 Proposed Project and Route Options

The capital cost estimates presented in this report are based on the conceptual engineering plans dated April 10, 2020. The Proposed Project also includes Route Options for several

segments, as depicted in **Figure 1**. The Project will consist of several different BRT configurations that vary segment by segment:

- In a curb-running configuration, the dedicated bus lanes will be on the far outside travel lanes, immediately adjacent to the curb and sidewalk.
- In a side-running configuration, the dedicated bus lanes will have a parking lane, bicycle lane, or both, between the dedicated bus lane and the curb and sidewalk.
- In a center-running configuration, the dedicated bus lanes will be in the center of the roadway, either adjacent to one another, or running adjacent to a median.

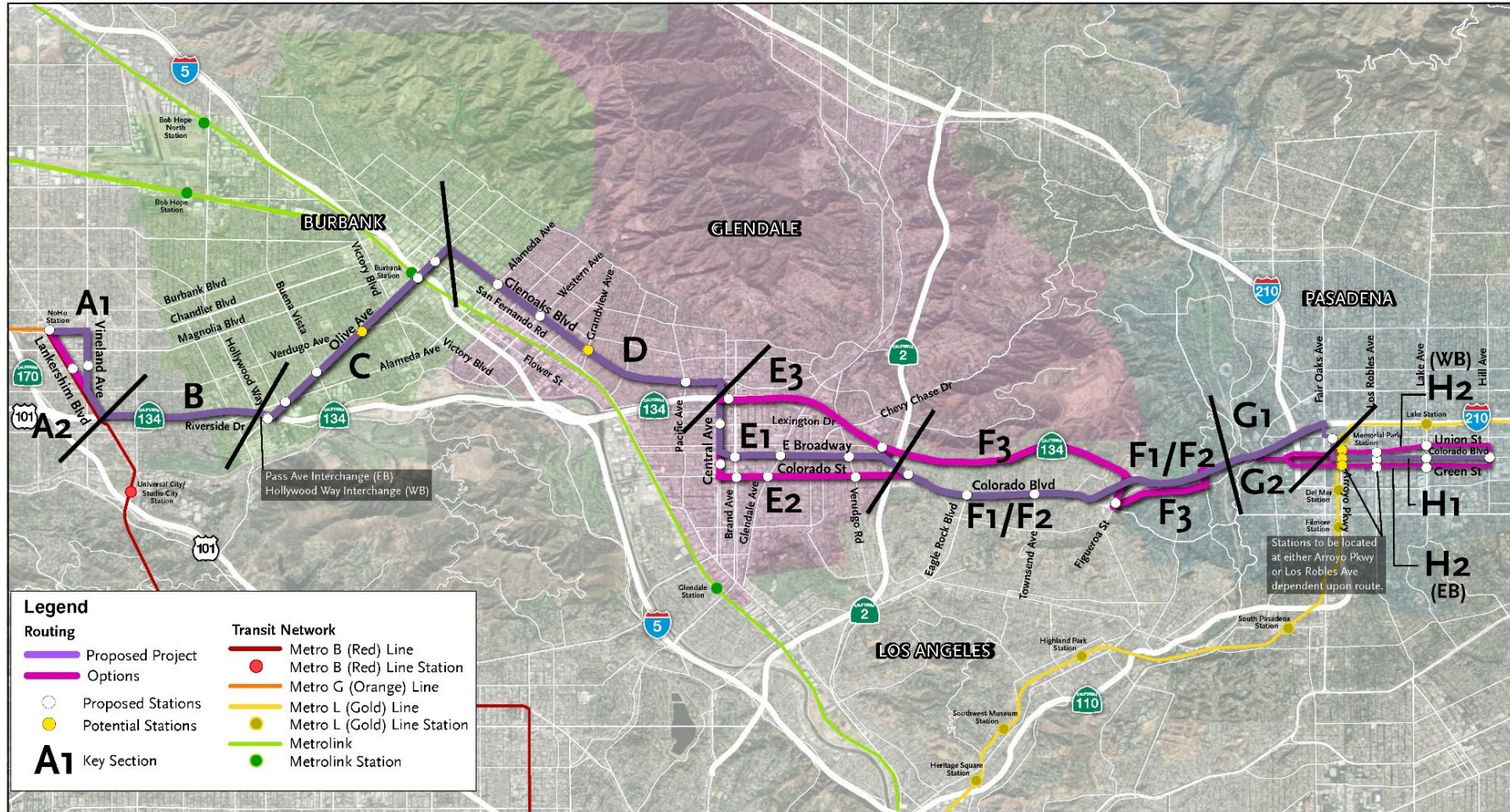
The different configurations each have their own benefits and challenges. Center running alignments tend to be more complex, requiring more roadway reconfiguration, more traffic control work to provide protected signal phasing and signal priority to improve operational efficiency and allow special turning movements.

Table 1 presents the curb, side, or center configurations for each of street segments that are presented in the conceptual engineering plans and used in this capital cost report. The approximate segment lengths and number of stations within each segment are also indicated.

Table 1 – Proposed Project Segments (in bold) and Route Options

Route Option	Segment Name	Community	Configuration	Length (mi)	Number of Stations
A1	Lankershim Blvd / Vineland Ave	Los Angeles	Side- & Center-Running	1.6	2
A2	Lankershim Blvd	Los Angeles	Side- & Curb-Running	1.3	2
B	CA 134	Los Angeles / Burbank	Mixed-Flow	1.4	0
C	Olive Ave	Burbank	Curb-Running	2.2	6
D	Glenoaks Blvd	Burbank / Glendale	Curb- & Center-Running	3.4	4
E1	Central Ave / E Broadway	Glendale	Curb- & Side-Running	2.2	4
E2	Central Ave / Colorado St	Glendale	Curb- & Side-Running	2.8	5
E3	CA 134	Glendale	Mixed-Flow	2.3	2
F1	Colorado Blvd	Los Angeles / Pasadena	Side & Center-Running, Mixed-Flow	2.6	3
F2	Colorado Blvd	Los Angeles / Pasadena	Side-Running, Mixed-Flow	2.6	3
F3	CA 134	Los Angeles / Pasadena	Mixed-Flow	3.9	1
G1	CA 134 / Fair Oaks Ave	Pasadena	Mixed-Flow	1.7	1
G2	CA 134 / Colorado Blvd	Pasadena	Mixed-Flow	1.0	0
H1	Colorado Blvd	Pasadena	Mixed-Flow	1.9	3
H2	Green St / Union St	Pasadena	Mixed-Flow	2.2	3

Figure 1 – Proposed Project and Route Options



2.0 Estimate Methodology and Development

2.1 Overall Approach and Format

The approach will use the Standard Cost Category (SCC) format developed by the Federal Transit Administration (FTA), which captures both the “hard” infrastructure construction costs of a project and the “soft” costs like professional services, right-of-way, contingency, and inflation. This is the format used by FTA during the project development process and facilitates comparison to other transit project costs on an established basis. Subsequent sections of this document will define in further detail the following major categories that are included in the SCC format.

Table 2 – FTA SCC Capital Cost Estimate Category Descriptions

SCC	Brief Description
10	Guideway Guideway grading and earthwork (not used for this project)
20	Stations/Stops Construction of station/stop platforms, shelters and amenities
30	Support Facilities Operations, maintenance, cleaning, and storage facilities (not used for this project)
40	Sitework and Special Conditions Demolition, and earthwork; utility construction, rehabilitation, and relocations; hazardous materials; environmental mitigation; roadway reconstruction; pedestrian and bicycles facilities; landscaping and lighting; temporary facilities, contractor mobilization, traffic control, and indirect cost items.
50	Systems Traffic signal construction and modification; implementation of transit signal priority; communications systems; central control hardware and software; fare collection systems
60	Right-of-Way Right-of-way or easement acquisition
70	Vehicles Buses; non-revenue vehicles; spare parts
80	Professional Services Project development; engineering; final design; project management; construction administration and management; professional liability and other non-construction insurance; legal, permits, review fees by other agencies; surveys, testing, investigation, and inspection; start up
90	Contingency Overall project contingency and reserves
100	Finance Charges Debt financing paid in year-of-expenditure dollars (not used on this project)

The level of detail of the capital cost estimates corresponds with the current level of definition, engineering, and environmental analysis that has been completed for the Project. The level of estimating detail will increase as the project design and engineering advances.

An individual SCC formatted estimate was prepared for each route segment (and segment options) to capture and identify the costs associated with each segment, and to assist in the evaluation of the segment options. There are a number of project costs that are not attributable to an individual segment, therefore an SCC formatted estimate was prepared for “overall” project items, including public art, the bus vehicles and spare parts, charging infrastructure at the Metro Division where the buses will be stored and maintained, ticket vending machines at a limited number of stations, and a \$5,000,000 allowance for contribution to a new Bus Operations Center.

2.2 Project Elements, Quantities, and Cost Data

A list of project elements was developed to define the different aspects of project development and implementation. These elements were developed from quantity take-offs of construction items shown in the conceptual engineering drawings, documented design assumptions, and other project information (e.g. Operating Statistics and O&M Costs Report for number of vehicles). Item quantities are estimated for each SCC section. Unit cost and allocated contingency are assigned for each item and cost category. Unit costs are based in whole or in part on:

- Construction cost data from Caltrans database
- Construction cost data from Los Angeles County Department of Public Works
- Construction cost data from Metro
- Construction cost and estimating data from Kimley-Horn and Leland Saylor databases and resources

Unit cost data presented is for a complete, furnished and installed item, inclusive of contractor labor, equipment, and materials. Local and recent cost data is preferred and used as much as possible. Non-local cost resources are adjusted to reflect current local conditions. Adjustments for the differences between the published date of historical cost data and the current base year of the estimates will use an escalation factor calculated using the Construction Cost Index and Building Cost Index values published by Engineering News Record (ENR), where applicable.

2.3 General Cost Assumptions and Parameters

The following are general design assumptions, parameters and criteria that will be used in developing the capital cost estimates. Other, more detailed design assumptions associated with individual work components, areas and unit prices are documented within the cost estimate detail.

- Base year for the estimate is 2020
- Construction will occur 2022-2024
- Annual inflation factor of 3% to midpoint of construction (2.5 years)
- Contingency as described in Section 2.4

2.4 Contingency

Contingencies are included in this capital cost estimate to compensate for unforeseen items of work, quantity fluctuations, variances in unit costs, and variances in project scope that develop as any project progresses through the various stages of design development. Consistent with FTA guidelines and procedures, contingency will be used in this estimate in two forms: allocated and unallocated contingency.

Allocated contingency will be used based on the level of design completed for the Project, as well as the relative difficulty in establishing unit prices for these items. The allocated contingency allowance, ranging from 5 to 30 percent, is applied to each of the FTA cost categories. The percentage selected for each cost category is based on professional judgment and experience related to the cost variability typically seen for the items of work within each cost category. The percentages shown in **Table 3** below are used in this estimate, until project specific conditions warrant otherwise.

Unallocated contingency is reserved for costs above and beyond what can be estimated for the Project. This includes changes that may occur in the project scope and schedule, due to the unknowns at the current phase of the Project. In accordance with Metro's established practices, unallocated contingency is applied as 10% of the total of cost categories 10 through 80.

Table 3 – Allocated Contingency per FTA Standard Cost Category

FTA SCC	Description	Allocated Contingency %
10	Guideway and Track Elements	N/A
20	Stations, Stops, Terminals, Intermodal Facilities	30
30	Support Facilities: Yards, Shops, Administration Buildings	N/A
40	Sitework and Special Conditions	30
50	Systems	30
60	Right-of-Way, Land, Existing Improvements	30
70	Vehicles / Spare Parts	15
80	Professional Services	N/A*
90	Unallocated Contingency	10

** Category 80 items are calculated as a percentage of the construction costs, which include allocated contingency; therefore, allocated contingency is not applied to these items.*

3.0 Capital Cost Categories

The following sections provide a brief description of each cost category and the sub-categories that are specific to the cost estimates that will be conducted.

3.1 SCC 10: Guideway and Track Elements

This category is not used for this Project.

3.2 SCC 20: Stations, Stops, Terminals, Intermodal

At-grade station, stop, shelter, mall, terminal, platform – (SCC 20.01)

The at-grade station, stop, shelter, mall, terminal, platform category includes the capital costs for fixed facilities and amenities for transit stops including bus stop platforms, shelters, lighting, signage, landscaping, furnishings, and sidewalks for pedestrian access.

SCC 20 Assumptions

This category includes the demolition and construction costs of the platforms, which are assumed to be 12-feet wide, 100-feet long, and 6 to 8-inches tall (typical sidewalk elevation). Note that smaller platforms are being considered at several locations with physical constraints, and the current estimate reflects the smaller footprint quantities at those locations. Amenities provided at the shelter include: a shelter with seating, trash receptacle, bicycle racks, advertising kiosk and system map, miscellaneous signage, pedestrian railing, station marker/totem and lighting. Although the platforms will contain system/communications elements such as surveillance cameras, public address speakers, ticket vending machines at select stations, variable message boards and other communications equipment, these costs are included under SCC 50 and not SCC 20.

The Project currently identifies two optional stations, one located at Olive Ave and Verdugo Ave (Proposed Project Segment C) and one located at Glenoaks Blvd and Grandview Ave (Proposed Project Segment D). The costs associated with these stations are included in the current estimate.

The quantity and placement of station platforms varies by segment and BRT configuration. The Project has “side” stations with the platforms constructed in areas of existing and/or expanded sidewalk. The “center” stations are in the median for center-running BRT configuration, with platforms constructed in existing medians and/or roadway pavement. Due to the bus doors being located only on the right-side of the vehicles, the center stations will consist of two platforms, one serving each direction of BRT service.

The current estimate includes an allowance for utility adjustments of \$125,000 at side platforms and \$25,000 for center platforms. The difference in allowances is because there are typically

more concentrated utilities susceptible to adjustments located in the sidewalk area than in the median areas. As the project progresses through more advanced design and collects surveyed utility data, this allowance will be refined and adjusted to be specific to the impacts at each station platform. This cost is captured in SCC 40 and not SCC 20.

It should be noted that both side and center platforms will require full depth reconstruction of adjacent roadway pavement. The estimate also includes cost for the reconstruction of existing sidewalks for the block in which a side platform is located to provide ADA compliant access to the platform and BRT service. Both of these costs are associated with stations but are captured in SCC 40 and not in SCC 20.

3.3 SCC 30: Support Facilities: Yards, Shops, Admin. Buildings

This category is not used for this Project.

3.4 SCC 40: Sitework and Special Conditions

Demolition, Clearing, Earthwork – (SCC 40.01)

The demolition, clearing, and earthwork category includes the capital costs for the demolition and clearing costs for the roadway and site work elements.

Site Utilities, Utility Relocation – (SCC 40.02)

This category includes the construction costs associated with relocating and adjusting existing utilities that may be in conflict with the proposed BRT infrastructure. All utilities, both public and private, are included, with the exception of systems and communications infrastructure needed to support the BRT, which is captured in SCC 50.

Detailed utility impact and relocation information is not available nor analyzed at the conceptual engineering phase, so for the purposes of the Project, utility relocation allowances will be used. As noted previously, the current estimate includes an allowance for utility adjustments of \$125,000 at side platforms and \$25,000 for center platforms. The difference in allowances is because there are typically more concentrated utilities susceptible to adjustments located in the sidewalk area than in the median areas. As the project progresses through more advanced design and collects surveyed utility data, this allowance will be refined and adjusted to be specific to the impacts at each station platform.

In addition to a utility adjustment allowance at stations, an allowance for other general utility adjustments is included for each road segment based on the amount of anticipated construction activity and length of each segment. In segments where mixed-flow operations are performed, this allowance is low. In segments where large areas of curb are being moved to accommodate proposed widening, the allowance is higher to account for storm inlets and piping adjustments.

An additional consideration for utility locating crews and utility potholing crews has been included in the estimate. This was estimated based on the duration of construction and length of the Project and distributed proportionately throughout the segments based on their length.

[Hazardous Materials, Contaminated Soil – \(SCC 40.03\)](#)

The hazardous materials and contaminated soil category includes special hazardous materials, such as contaminated soil or groundwater, underground storage or fuel tanks, and other hazardous materials and treatments.

For the purposes of the Project, hazardous material allowances are estimated as 10% of the demolition subtotal. This percentage is based on estimates from similar BRT projects at this phase of the project.

[Environmental Mitigation – \(SCC 40.04\)](#)

This category is not used for this Project.

[Site Structures – \(SCC 40.05\)](#)

The site structure category includes any retaining walls, sound walls, or other structures that are required outside of the guideway construction envelope. There is a small retaining wall anticipated at the proposed station at the Harvey Drive offramp (Route Option E3).

[Pedestrian/Bike Access and Accommodation, Landscaping – \(SCC 40.06\)](#)

The pedestrian/bike access and accommodation, and landscaping category includes the capital costs for pedestrian and bike related streetscape improvements that are specifically related to the BRT construction. This includes costs for the construction of sidewalks, curbs, functional landscaping, replacement of impacted street trees, and bicycle facilities. The current estimate includes costs for full-width green pavement markings in proposed bicycle lanes.

[Automobile, Bus, Van Accessways Including Roads, Parking Lots – \(SCC 40.07\)](#)

The automobile, bus, van accessways category includes the capital costs associated with street reconstruction to accommodate BRT service. This includes costs for curb-to-curb mill and overlay where BRT is operating in dedicated bus lanes (2" depth), an allowance of 5% of milling for roadway reconstruction of "soft spots," pavement markings, and reconstruction of medians. The current estimate includes full width red pavement markings for the bus lanes, and concrete pavement for the length of each platform.

An additional consideration for construction survey/layout crews is included in the estimate. This is estimated based on the duration of construction and length of the Project and distributed proportionately throughout the segments based on their length.

This category also includes a \$750,000 allowance for the site-civil work that will be required to construct a layover facility at the east end of the Project near Pasadena City College. This layover facility will include two charging stations, and costs associated with the charging station

infrastructure are captured in SCC 50. The estimate currently does not include an operator relief building at this location.

Temporary Facilities and Other Indirect Costs during Construction – (SCC 40.08)

The category includes the capital costs for temporary facilities during construction. Such facilities and costs include mobilization, demobilization, traffic control, pedestrian control, temporary lighting, temporary electricity, temporary bus stops, stormwater pollution prevention measures, street sweeping, and contractor general conditions.

Mobilization is estimated to include six separate mobilizations/demobilizations of the contractor for moving staging areas and equipment and is included in the respective segments anticipated for staging at this time. Contractor general conditions (salaries, bonds, insurance, vehicles, etc.) is estimated at 12% of the construction subtotal of SCC 20 – 50. Other items such as street sweeping, and traffic and pedestrian control were estimated based on the duration and length of the overall Project and distributed among the segments based on their length.

SCC 40 Assumptions

Cost assumptions and methodology have been described within each subcategory. A cost allowance for art in public places is included in the current estimate at 0.5% of the construction subtotal of SCC 20 – 50.

3.5 SCC 50: Systems

Traffic Signals and Crossing Protection – (SCC 50.02)

The traffic signals and crossing protection category includes the capital costs associated with the modification of existing traffic signals, construction of new traffic signals, pedestrian crossing protection, and signal prioritization at intersections. Intersections throughout the project were categorized into four main types of modification that would be required:

- Minimal improvements (new cabinet and controller)
- Moderate improvements (new partial signal, new poles and heads, cabinet, controller, auxiliary heads, overhead rectangular rapid flashing beacons (RRFBs), etc.)
- Significant improvements (queue jumps, new poles and mast arms)
- Major improvements (center-running BRT with special phases, queue jumps, etc.)

An additional allowance per segment is included for system integration, which varies by segment.

Traction Power Supply: Substations – (SCC 50.03)

This category includes costs for in-route charging infrastructure at the layover facility at the east end of the Project near Pasadena City College. The estimate includes two chargers at \$1,375,000 each, based on based on recent Metro cost data, which includes allocated

contingency. This cost does not include the site-civil work associated with constructing the layover area, which is captured in SCC 40.

The estimate also includes an allowance for 16 vehicle chargers to be installed at the Metro Division where the buses will be stored and maintained, which is based needing 16 vehicles for peak service. Metro provided recent cost data of \$350,000 per installed charger at the Metro Division, inclusive of allocated contingency.

Communications – (SCC 50.05)

The communication category includes capital costs for the systems required for communication between the bus operators, maintenance facility/depots, and other personnel. These systems typically include two-way radios, public address systems on platforms, emergency telephone systems, variable message signs, interfaces to the fare collection and ticket vending equipment, and equipment for the hearing impaired.

The current estimate includes an allowance for one-quarter mile of fiber optic duct bank for each station to connect systems and communications elements on platforms to a nearby fiber network. An additional allowance of \$150,000 is included for each platform for the communications and systems elements on each platform, including communications cabinet, public address system, variable message board, surveillance cameras, etc.

Fare Collection System and Equipment – (SCC 50.06)

The fare collection system and equipment category includes capital costs for a self-service, proof-of-payment fare collection system. It is assumed that the unit costs for fare collection include all equipment costs and installation costs. The current estimate includes ticket vending machines at three stations, with one ticket vending machine per platform.

Central Control – (SCC 50.07)

This category includes an allowance of \$5,000,000 (base year) for a contribution toward a central bus operations center, per Metro direction. Because this item is included in the capital cost category, several other factors are applied including allocated contingency, inflation, professional services, and unallocated contingency. After these factors, a year-of-expenditure total amount of \$9.7M is included in the current estimate.

3.6 SCC 60: Right-of-Way, Land, Existing Improvements

Purchase or Lease of Real Estate – (SCC 60.01)

The purchase or lease of real estate category includes all land acquisition and acquisition related costs required to obtain various real property needed for the construction, operation, and maintenance of the proposed alignments.

The current estimate includes an allowance of \$50,000 for minor right-of-way acquisition that may be needed at side-oriented platforms and proposed traffic signals.

3.7 SCC 70: Vehicles

Bus – (SCC 70.04)

The bus category includes capital costs for the manufacturing and procuring of the revenue buses, including the engineering, commissioning, shipping, delivery, and storage of the vehicles.

A 20% vehicle spare ratio is included in this estimate, and the required number of buses are based on the latest Operating Statistics and O&M Costs Report. Based on the current ridership forecasts, 24 40-foot vehicles will be required. Unit costs for bus vehicles are based on prices provided by Metro.

Non-Revenue Vehicles – (SCC 70.06)

This category is not used in this Project.

Spare Parts – (SCC 70.07)

The spare parts category includes costs for vehicle spare parts such as spare tires, etc. and is estimated to be 5% of the vehicle costs, per Metro direction.

3.8 SCC 80: Professional Services

The professional services category includes all non-construction professional fees required for the project development, engineering final design, project and construction management, agency program management, project insurance, surveys and testing, and start-up costs.

Table 4 – Professional Services - Percentage Applied to Construction Cost

80 - Professional Services	Percentage of SCC 10-50
80.01 Project Development (incl. preliminary engineering)	6%
80.02 Final Design	8%
80.03 Project Management for Design and Construction	10%
80.04 Construction Administration and Management	5%
80.05 Professional Liability and other Non-Construction Insurance	1%
80.06 Legal, Permits, Review Fees by Other Agencies, Cities, etc.	4%
80.07 Surveys, Testing, Investigation, Inspection	2%
80.08 Start Up	1%

4.0 Cost Estimate Summary

The tables below summarize the results of the conceptual capital cost estimates for the Proposed Project and for Route Options. Costs are presented in year of expenditure (YOE) dollars, which include inflation and contingency as described in Sections 2.3 and 2.4. Based on the information described in this report and the American Association of Cost Engineers (AACE) guidelines, this is a Class 4 estimate, with a margin of error of Low -15% and High +25%. The low and high ranges provided in **Table 5** reflect this margin of error. **Table 6** presents a summary of cost estimates for each Route Option and segment of the Project, including the project-wide elements.

Table 5 – Cost Estimate Summary for the Proposed Project

SCC	Cost Category	Escalated Total (\$ Millions)
20	Stations, Stops, Terminals, Intermodal	\$22.3
40	Roadway / Utilities / Gen. Conditions	\$107.2
50	Systems	\$45.9
10-50	Construction Subtotal	\$175.4
60	Right-of-Way	\$2.1
70	Vehicles	\$28.9
80	Professional Services	\$63.7
90	Unallocated Contingency	\$27.0
10-100	Total Project Cost	\$297.1
	Low (-15%)	\$252.5
	High (+25%)	\$371.4

Table 6 – Contingency Summary

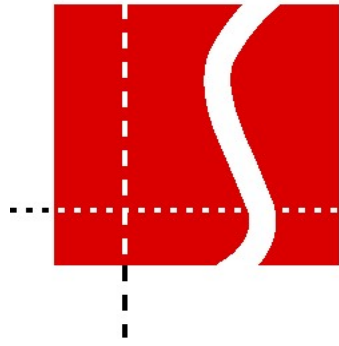
Allocated Contingency % of Base Year Dollars	18.32%
Unallocated Contingency % of Base Year Dollars	11.83%
Total Contingency as % of Base Year Dollars	30.15%
Unallocated Contingency % of Subtotal (10-80)	10.00%

Table 7 – Cost Estimate Summary for the Proposed Project by Route Option (\$ Millions)

(Proposed Project Route Options Highlighted in Purple)

SCC	Cost Category	Escalated Total Project	Project Wide	A1	A2	B	C	D	E1	E2	E3	F1	F2	F3	G1	G2	H1	H2
20	Station Stops	\$22.3	\$0	\$1.0	\$0.9	\$0	\$5.5	\$3.6	\$3.7	\$4.4	\$1.9	\$3.0	\$3.0	\$0.9	\$1.1	\$0	\$4.5	\$2.6
40	Roadway / Utilities / Gen. Conditions	\$107.2	\$0.9	\$14.6	\$8.9	\$0	\$27.6	\$27.4	\$16.0	\$20.6	\$2.6	\$23.1	\$13.2	\$1.3	\$1.2	\$0.1	\$6.4	\$6.5
50	Systems	\$45.9	\$12.9	\$3.9	\$1.2	\$0	\$6.4	\$8.4	\$4.5	\$5.8	\$2.3	\$8.8	\$3.6	\$0.7	\$0.9	\$0.3	\$5.4	\$6.0
10-50	Construction Subtotal	\$175.4	\$13.8	\$19.5	\$11.0	\$0	\$39.4	\$39.4	\$24.2	\$30.8	\$6.8	\$34.8	\$19.7	\$2.9	\$3.1	\$0.3	\$16.3	\$15.1
60	Right-of-Way	\$2.1	\$0	\$0.4	\$0.1	\$0	\$0.7	\$0	\$0.3	\$0.4	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0	\$0.6	\$0.6
70	Vehicles	\$28.9	\$28.9	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
80	Professional Services	\$63.7	\$5.0	\$7.1	\$4.0	\$0	\$14.3	\$14.3	\$8.8	\$11.2	\$2.5	\$12.7	\$7.2	\$1.0	\$1.1	\$0.1	\$5.9	\$5.5
90	Unallocated Contingency	\$27.0	\$4.8	\$2.7	\$1.5	\$0	\$5.5	\$5.4	\$3.3	\$4.2	\$0.9	\$4.8	\$2.7	\$0.4	\$0.4	\$0.1	\$2.2	\$2.1
10-100	Total Project Cost	\$297.1	\$52.4	\$29.6	\$16.6	\$0	\$59.9	\$59.0	\$36.6	\$46.7	\$10.4	\$52.4	\$29.6	\$4.4	\$4.8	\$0.5	\$25.1	\$23.3
	Low (-15%)	\$252.5																
	High (+25%)	\$371.4																

Appendix A – Cost Estimate Workbooks



Leland Saylor Associates

A Certified DVBE

CAPITAL COST ESTIMATE

NORTH HOLLYWOOD TO PASADENA BRT

LOS ANGELES, CA

LSA JOB NUMBER:

18-074r6

October 2, 2020

PREPARED FOR

KIMLEY HORN AND ASSOCIATES

BY LELAND SAYLOR ASSOCIATES



PROJECT: **NORTH HOLLYWOOD TO PASADENA BRT**
LOCATION: **LOS ANGELES, CA**
CLIENT: **KIMLEY HORN AND ASSOCIATES**
DESCRIPTION: **CAPITAL COST ESTIMATE**

JOB NUMBER: **18-074r6**
PREPARED BY: **SF, IS, JN**
BID DATE:
ESTIMATE DATE: **10/2/2020**

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PROJECT: **NORTH HOLLYWOOD TO PASADENA BRT**
LOCATION: **LOS ANGELES, CA**
CLIENT: **KIMLEY HORN AND ASSOCIATES**
DESCRIPTION: **CAPITAL COST ESTIMATE**

JOB NUMBER: **18-074r6**
PREPARED BY: **SF, IS, JN**
CHECKED BY: **IS**
ESTIMATE DATE: **10/2/2020**

SECTION I

OVERALL SUMMARY OF ESTIMATE

LELAND SAYLOR ASSOCIATES

PROJECT: **NORTH HOLLYWOOD TO PASADENA BRT**
 LOCATION: **LOS ANGELES, CA**
 CLIENT: **KIMLEY HORN AND ASSOCIATES**
 DESCRIPTION: **CAPITAL COST ESTIMATE**
OVERALL SUMMARY OF ESTIMATE

JOB NO: **18-074r6**
 PREPARED BY: **SF, IS, JN**
 CHECKED BY: **IS**
 DATE: **10/2/2020**

OVERALL SUMMARY OF ESTIMATE

DIV #	DESCRIPTION	QTY	UNIT	UNIT COST	TOTALS
1.00	Proposed Project - Project Wide Elements				\$ 52,427,868
2.00	Proposed Project - Route Option A1				\$ 29,624,878
3.00	Route Option A2				\$ 16,593,854
4.00	Proposed Project - Route Option B (All on CA 134. No Work for this Option)				
5.00	Proposed Project - Route Option C				\$ 59,931,391
6.00	Proposed Project - Route Option D				\$ 59,026,629
7.00	Proposed Project - Route Option E1				\$ 36,590,443
8.00	Route Option E2				\$ 46,682,312
9.00	Route Option E3				\$ 10,348,346
10.00	Route Option F1				\$ 52,392,560
11.00	Proposed Project - Route Option F2				\$ 29,597,302
12.00	Route Option F3				\$ 4,401,555
13.00	Proposed Project - Route Option G1				\$ 4,791,550
14.00	Route Option G2				\$ 484,524
15.00	Proposed Project - Route Option H1				\$ 25,106,499
16.00	Route Option H2				\$ 23,343,009
	Proposed Project (A1, B, C, D, E1, F2, G1, H1)				\$ 297,096,561



PROJECT: **NORTH HOLLYWOOD TO PASADENA BRT**
LOCATION: **LOS ANGELES, CA**
CLIENT: **KIMLEY HORN AND ASSOCIATES**
DESCRIPTION: **CAPITAL COST ESTIMATE**

JOB NUMBER: **18-074r6**
PREPARED BY: **SF, IS, JN**
CHECKED BY: **IS**
ESTIMATE DATE: **10/2/2020**

SECTION I

ESTIMATE DETAIL

UNIT COST MASTER SHEET

Item	Unit	Unit Cost	Column1
20.01 At-grade stations			
Concrete platform, 8" depth. Center.	SF	55.61	
Concrete platform, 8" depth. Side.	SF	66.74	
Red curve bus maneuvering	LF	5.00	
Tactile surfacing	SF	50.00	
Shelter/Seating/Screen	EA	18,000.00	
Railing (SS)	LF	350.00	
Station Marker	EA	35,000.00	
Trash Receptacle. Blast resistant	EA	5,500.00	
Advertising Kiosk	EA	10,000.00	
Station Signage & misc.	EA	10,000.00	
Electric power supply & platform lighting. Center	EA	75,000.00	
Electric power supply & platform lighting. Side	EA	100,000.00	
Bike rack, loop type, 7 bikes	EA	1,200.00	
Concrete parking pad at stations	SF	56.05	
30.01 Maintenance Facility			
Charging Bay. See 50.03			
40.01 Demo, Clearing			
Demo. (e) road pavement center stations	SF	5.00	
Demo. (e) road/sidewalk pavement side stations	SF	10.00	
Demo 20' w, unpaved (e) dirt median for (n) roadway on Vineyard..	SF	0.60	
Demo sidewalk at reduction & expansion areas	SF	7.96	
Demo/Remove Curb & Gutter	LF	4.00	
Cold Plane AC Pavement (3")	SF	2.75	
Remove Existing Sidewalk	SF	10.00	
Remove Existing Streetlights	EA	5,000.00	
40.02 Site Utilities, Utility Relo			
Survey of (e) utilities crew	LF	8.26	
Survey of (e) utilities crew. Per platform	EA	15,000.00	

UNIT COST MASTER SHEET

Item	Unit	Unit Cost	Column1
Utility modifications stations. Center. Per platform	EA	25,000.00	
Utility modifications stations. Side. Per platform	EA	125,000.00	
Potholing crew	LF	4.08	
Potholing crew. Per platform	EA	12,000.00	
Allowances utility modifications other than stations			
A1 - Vineland	LS	150,000.00	
A2 - Lankershim Blvd	LS	150,000.00	
C - Olive	LS	250,000.00	
D - Glenoaks Blvd:	LS	300,000.00	
E1 - Broadway	LS	250,000.00	
E2 - Colorado	LS	200,000.00	
E3 - Stations 22 & 23. No allowance			
F1 - Colorado	LS	750,000.00	
F2 - Colorado	LS	40,000.00	
F3 - Station 27	LS	40,000.00	
G1 - Station 28	LS	40,000.00	
H1 - Colorado	EA	-	mixed flow
H2 - Hill & Union	EA	-	mixed flow
Pole relocation / replacement	EA	20,000.00	
40.03 Hazardous Materials, Contamination			
(All based on 10% of demo cost as per narrative)			
Hazardous Material Allowance. A1	LS		
Hazardous Material Allowance. A2	LS		
Hazardous Material Allowance. C	LS		
Hazardous Material Allowance. D	LS		
Hazardous Material Allowance. E1	LS		
Hazardous Material Allowance. E2	LS		
Hazardous Material Allowance. E3.	LS	-	
Hazardous Material Allowance. F1	LS		
Hazardous Material Allowance. F2	LS		
Hazardous Material Allowance. F3	LS		
Hazardous Material Allowance. G1	LS		

UNIT COST MASTER SHEET

Item	Unit	Unit Cost	Column1
Hazardous Material Allowance. G2	LS		
Hazardous Material Allowance. H1	LS		
Hazardous Material Allowance. H2	LS		
40.04 Environmental Mitigation			
Mitigation Material Allowance. None allowed	LS		
40.06 Pedestrian / Bike Access, Landscape			
Thermoplastic Pavement Marking 6"	LF	1.32	
Green thermoplastic bike lane	SF	3.30	
Bike lane margin. 3lfx1.20	LF	3.60	
Concrete separator 3'w x 8"h	LF	90.00	
Continental Crosswalk	SF	5.50	
Reconstruct (e) & or (n) curb ramp	EA	3,500.00	
Misc sidewalk repairs	LOC	500.00	
Replace trees	EA	6,000.00	
Work at other misc adjacent elements	LS	100,000.00	
Relocate parking meters	SF	1,500.00	
Bike lane pavement symbol	EA	200.00	
Reconstruction sdwk at reduction & exp. areas	SF	14.00	
Curb & gutter @ station side walk	LF	50.00	
Station sidewalk reconstruction. Side stations.	SF	35.00	
6" PCC sidewalk	SF	9.80	
5" PCC sidewalk	SF	9.15	
4" PCC Sidewalk	SF	8.50	
Median curb&gutter	LF	40.00	
Landscape Median, hardscape	SF	30.00	
Landscape Median, plantings	SF	15.00	
40.07 Auto, Bus, Accessways, Roadway			
Survey crew for layouts	LF	8.60	
Survey crew for layouts. Per platform	EA	5,000.00	
Reconstruct 20' w median, concrete	SF	30.45	
Milling (e) asphalt	SF	2.75	
Haul off millings	TON	33.60	
Red curve for bus maneuvering @ stations	LF	75.00	
Red thermoplastic bus lane	SF	3.30	
Thermoplastic Pavement Marking 6"	LF	1.32	
Thermoplastic Pavement Marking 8"	LF	1.40	
Chevron pavement markings	SF	6.00	
Saw cut AC	LF	3.00	
Pavement Marking symbol	EA	200.00	
Directional arrows	EA	75.00	
Curb & Gutter at sidewalks generally	LF	40.00	
Construct curb ramp	EA	3,500.00	
AC Overlay (2")	TON	115.50	
Streetlighting	EA	5,500.00	
New Agg Base (12" base)	SF	3.50	
Landscape Median, hardscape	SF	30.00	
Landscape Median, plantings	SF	15.00	
Solid 4"w lane striping w/markers.	LF	4.00	
Intermitted 4" lane stripe w/markers	LF	3.75	
Double yellow lane stripe w/markers	LF	8.50	
Repair soft spots	SF	21.90	
7' wide street parking	LF	1.86	
8' wide street parking	LF	1.98	

UNIT COST MASTER SHEET

Item	Unit	Unit Cost	Column1
Remove / replace (n) striping on (e) rd surfaces. H1&H2	LS	75,000.00	
Remove / replace (n) striping on (e) rd surfaces. E3 & F3	LS	15,000.00	
Concrete K rail	LF	140.00	
40.08 Temp Facilities, Indirect Costs, MOT			
Mobilization + Demobilization ea sector	EA	220,000.00	
Mobilization + Demobilization H2 only	EA	75,000.00	
SWPPP	LF	5.24	
SWPP per platform	EA	7,500.00	
Street sweeping	LF	2.34	
Street sweeping per platform	EA	10,000.00	
Traffic Control, Staging, pedestrian control, safety	LF	44.78	
Traffic Control, Staging, pedestrian control, safety. Per platform. (only where no AC is)	EA	20,000.00	
Contractors General Conditions, insurance, bond. 10%x 20-50. + bonds 1% + insur 1% =12%	%	12.00	
50.02 Traffic Signals			
Minimal Improvements	EA	\$ 20,000.00	
Moderate Improvements	EA	\$ 150,000.00	
Significant Improvements	EA	\$ 250,000.00	
Major Improvements	EA	\$ 350,000.00	
System Integration	EA		Corridor Specific
50.03 Traction Power Supply / Charging Station			
Charging Station only at H1 & H2	EA	1,375,000	Metro historical / recent pricing
Vehicle Chargers at Division	EA	350,000	Metro historical / recent pricing
50.05 Communications			
Fiber Optic Ductbank	LF	175.00	
Station systems/comms (PA, CCTV, Next bus, cabinet etc.) Per platform	LS	150,000.00	
50.06 Fare Collection			
Ticket Vending Machine	EA	120,000.00	
Validator (not required)	EA		
50.07 Central Control			
Allowance	LS	5,000,000.00	

UNIT COST MASTER SHEET

Item	Unit	Unit Cost	Column1
60.01 - Purchase or lease of real estate. Allow esc 10% flat			
Allowance, side station	LS	50,000.00	
Allowance (n) signalized intersection- or Q jump	LS	50,000.00	
60.02 - Relocation of existing households and businesses			
None required			
70.04 Bus			
40' BYD ZEB Bus	EA	850,000.00	
70.07 - Spare parts			
Allowance (5% of bus cost)	LS	42,500.00	
80.00 Professional Services			
01 Project Development, PE. 6%	%	6%	Determined by METRO
02 Final Design. 8%	%	8%	Determined by METRO
03 Project Mgmt for Design & Construction. 13%	%	10%	Determined by METRO
04 Construction Administration & Mgmt. 5%	%	5%	Determined by METRO
05 Professional Liability & Non Constr. Insur. 1%	%	1%	Determined by METRO
06 Legal, Permits, Review Fees, etc 4%	%	4%	Determined by METRO. 80.06,07,08 is to total 7%
07 Surveys, Testing, Investigation, Inspection. 2%	%	2%	Determined by METRO
09 Start up, 1%	%	1%	Determined by METRO
Escalation @ 3% per annum	%	7.50%	Determined by LSA
Escalation @ 3% per annum	%	4.50%	For Prof Services prior to Construction
Escalation for ROW 60.01 @ 10% lump sum	%	10.00%	Determined by LSA
Escalation for VEH 70.04 @ 5% per annum	%	15.76%	Determined by LSA. 3yrs to get to 2022

Project Wide Elements - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Project Wide Elements								
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
See separate Estimates for each sector								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.01				\$ -		\$ -	\$ -	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
Not used								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								
Not used								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.03				\$ -		\$ -	\$ -	
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.								
Not used								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.04				\$ -		\$ -	\$ -	
20.05 - Joint development								
Not used								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.05				\$ -		\$ -	\$ -	
20.06 - Automobile parking multi-story structure								
Not used								
				\$ -	30%	\$ -	\$ -	

	\$	-	30%	\$	-	\$	-
Total Costs - 20.06	\$	-		\$	-	\$	-
20.07 - Elevators, escalators							
Not used	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 20.07	\$	-		\$	-	\$	-

Project Wide Elements - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
See separate Estimates for each sector								
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 40.01				\$	-		\$	-
40.02 - Site Utilities, Utility Relocation								
See separate Estimates for each sector								
				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 40.02				\$	-		\$	-
40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments								
See separate Estimates for each sector								
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 40.03				\$	-		\$	-
40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks								
Not used								
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 40.04				\$	-		\$	-

40.05 - Site structures including retaining walls, sound walls

Not used	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 40.05				\$	-	\$	-

40.06 - Pedestrian / bike access and accommodation, landscaping

See separate Estimates for each sector	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 40.06	\$	-		\$	-	\$	-

40.07 - Automobile, bus, van accessways including roads, parking lots

See separate Estimates for each sector	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 40.07	\$	-		\$	-	\$	-

40.08 - Temporary Facilities and other indirect costs during construction

See separate Estimates for each sector	\$	-	30%	\$	-	\$	-
Total Costs - 40.08	\$	-		\$	-	\$	-

40.09 - Art Allowance

Public Art Allowance 0.5% of SCC 20-50	%	\$	127,441,432	0.5%	\$	637,207	30%	\$	191,162	\$	828,369	Per Metro direction
Total Costs - 40.08		\$			\$	637,207		\$	191,162	\$	828,369	

Project Wide Elements - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
Not used								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	
50.02 - Traffic signals and crossing protection								
See separate Estimates for each sector								
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.02				\$ -		\$ -	\$ -	
50.03 - Traction power supply: substations								
See separate Estimates for each sector								
Vehicle Chargers at Division	EA	\$ 350,000	16	\$ 5,600,000	0%	\$ -	\$ 5,600,000	Pricing from Metro inclusive of alloc. contingency; 16 buses required for peak service,
Total Costs - 50.03				\$ 5,600,000		\$ -	\$ 5,600,000	
50.04 - Traction power distribution: catenary and third rail								
Not used								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.04				\$ -		\$ -	\$ -	
50.05 - Communications								
See separate Estimates for each sector								
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.05				\$ -		\$ -	\$ -	
50.06 - Fare collection system and equipment								
Two stations, 4 platforms to be identified later	EA	\$ 120,000	4	\$ 480,000	30%	\$ 144,000	\$ 624,000	
Total Costs - 50.06				\$ 480,000		\$ 144,000	\$ 624,000	
50.07 - Central Control								
Contribution to bus operations center	LS	\$ 5,000,000	1	\$ 5,000,000	15%	\$ 750,000	\$ 5,750,000	

Total Costs - 50.07				\$ 5,000,000		\$ 750,000	\$ 5,750,000
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Project Wide Elements - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
See each sector for allowance								
Total Costs - 60.01				\$ -		\$ -	\$ -	
60.02 - Relocation of existing households and businesses								
None required				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

Project Wide Elements - SCC 70 - VEHICLES

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	
		\$ -						
70.04 - Bus								
40' Bus	EA	\$ 850,000	24	\$ 20,400,000	15%	\$ 3,060,000	\$ 23,460,000	Metro \$850k as at January 2019
Total Costs - 70.04		\$ -		\$ 20,400,000		\$ 3,060,000	\$ 23,460,000	

-											
70.05 - Other											
Vehicle Procurement	LS	\$	12,000	24	\$	288,000	15%	\$	43,200	\$	331,200
				0							
Total Costs - 70.05					\$	288,000		\$	43,200	\$	331,200
				0							
70.06 - Non-revenue vehicles											
Not used					\$	-	30%	\$	-	\$	-
					\$	-	30%	\$	-	\$	-
Total Costs - 70.06					\$	-		\$	-	\$	-
70.07 - Spare parts											
Allowance is 5% of bus cost.	LS	\$	20,400,000	5%	\$	1,020,000	15%	\$	153,000	\$	1,173,000
Total Costs - 70.07					\$	1,020,000		\$	153,000	\$	1,173,000

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option A1

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	704	211		915	5.0%	3.3%	69	984
20.01 At-grade station, stop, shelter, mall, terminal, platform		704	211	30%	915	5.0%	3.3%	69	984
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%		0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	10,463	3,139		13,602	75.0%	49.1%	1,020	14,623
40.01 Demolition, Clearing, Earthwork		262	79	30%	341	1.9%	1.2%	26	367
40.02 Site Utilities, Utility Relocation		322	97	30%	419	2.3%	1.5%	31	450
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		26	8	30%	34	0.2%	0.1%	3	37
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		1,156	347	30%	1,503	8.3%	5.4%	113	1,616
40.07 Automobile, bus, van accessways including roads, parking lots		6,635	1,990	30%	8,625	47.6%	31.2%	647	9,272
40.08 Temporary Facilities and other indirect costs during construction		2,062	619	30%	2,681	14.8%	9.7%	201	2,882
50 SYSTEMS	0.00	2,781	834		3,615	19.9%	13.1%	271	3,886
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		2,250	675	30%	2,925	16.1%	10.6%	219	3,144
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		531	159	30%	690	3.8%	2.5%	52	742
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	13,948	4,184		18,133	100.0%	65.5%	1,360	19,493
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	250	75		325		1.2%	33	358
60.01 Purchase or lease of real estate		250	75	30%	325	1.8%	1.2%	33	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	6,709	0		6,709	37.0%	24.2%	373	7,082
80.01 Project Development		1,088			1,088	6.0%	3.9%	49	1,137
80.02 Final Design		1,451			1,451	8.0%	5.2%	65	1,516
80.03 Project Management for Design and Construction		1,813			1,813	10.0%	6.6%	82	1,895
80.04 Construction Administration & Management		907			907	5.0%	3.3%	68	975
80.05 Professional Liability and other Non-Construction Insurance		181			181	1.0%	0.7%	14	195
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		725			725	4.0%	2.6%	54	780
80.07 Surveys, Testing, Investigation, Inspection		363			363	2.0%	1.3%	27	390
80.08 Start up		181			181	1.0%	0.7%	14	195
Subtotal (10 - 80)	0.00	20,907	4,259		25,167		90.9%		26,932
90 UNALLOCATED CONTINGENCY					2,517		9%		2,693
Subtotal (10 - 90)	0.00				27,683		100%		29,625
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				27,683		100%		29,625
Allocated Contingency as % of Base Yr Dollars w/o Contingency					20.37%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					12.04%				
Total Contingency as % of Base Yr Dollars w/o Contingency					32.41%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$25,181
YOE Total Project Cost per Mile (X000)								High (+25%)	\$37,031

A1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Route Option A1. Paved.	LF	n/a	6,641					
Proposed Project - Route Option A1. Unimproved.	LF	n/a	1,664	vineland ext & to 134 ramps				
			8,305					
			1.58 mls					
No work at station 1. All work at NO HW transit center by others.								
Scope at A1 starts at junction Fair & Chandler								
20.01 At-grade station								
NUMBER OF STATIONS. Station 2. Center. Vineland/Hesby. Demo. (e) road pavement. See 40.01.								Inboard/outboard platforms are counted as 1# station (2 platforms 12'x100'=2400 sf) See 40.01
Concrete platform, 8" depth. 2 platforms side by side.	SF	\$ 55.61	2,400	\$ 133,464	30%	\$ 40,039	\$ 173,503	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	2,400	\$ 134,520	30%	\$ 40,356	\$ 174,876	Assume 12". Incl exc, rock base, conc footings/Pad.
Tactile surfacing	SF	\$ 50.00	400	\$ 20,000	30%	\$ 6,000	\$ 26,000	200x2'w
Bus shelter	EA	\$ 18,000.00	8	\$ 144,000	30%	\$ 43,200	\$ 187,200	4 per platform as per 7-15 meeting (glass dome roof, stl mesh cladding, seating)
Railing (SS)	LF	\$ 350.00	200	\$ 70,000	30%	\$ 21,000	\$ 91,000	length of platform
Station Marker	EA	\$ 35,000.00	2	\$ 70,000	30%	\$ 21,000	\$ 91,000	1 per platform. Large totem pole or sim
Trash Receptacle	EA	\$ 5,500.00	4	\$ 22,000	30%	\$ 6,600	\$ 28,600	2 per platform. Blast resistant.
Advertising Kiosk	EA	\$ 10,000.00	2	\$ 20,000	30%	\$ 6,000	\$ 26,000	1 per platform
Station Signage	LS	\$ 10,000.00	1	\$ 10,000	30%	\$ 3,000	\$ 13,000	Code, wayfaring, systems, safety. Allowance per station
Electric power supply & platform lighting w/ 2 platforms	EA	\$ 75,000.00	1	\$ 75,000	30%	\$ 22,500	\$ 97,500	Allowance per center station /w 2 platforms
Bike rack	EA	\$ 1,200.00	4	\$ 4,800	30%	\$ 1,440	\$ 6,240	2 per platform. 7 bike rake. Loop type
Total Costs - 20.01				\$ 703,784		\$ 211,135	\$ 914,919	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.03				\$ -		\$ -	\$ -	

20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.									
NOT USED			\$	-	30%	\$	-	\$	-
			\$	-	30%	\$	-	\$	-
Total Costs - 20.04			\$	-		\$	-	\$	-
20.05 - Joint development									
NOT USED			\$	-	30%	\$	-	\$	-
			\$	-	30%	\$	-	\$	-
Total Costs - 20.05			\$	-		\$	-	\$	-
20.06 - Automobile parking multi-story structure									
NOT USED			\$	-	30%	\$	-	\$	-
			\$	-	30%	\$	-	\$	-
Total Costs - 20.06			\$	-		\$	-	\$	-
20.07 - Elevators, escalators									
NOT USED			\$	-	30%	\$	-	\$	-
			\$	-	30%	\$	-	\$	-
Total Costs - 20.07			\$	-		\$	-	\$	-

A1 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.01				\$	-		\$	-
30.02 - Light Maintenance Facility								
NOT USED				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.02				\$	-		\$	-
30.03 - Heavy Maintenance Facility								
NOT USED				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.03				\$	-		\$	-

30.04 - Storage or Maintenance of Way Building

NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.04	\$	-		\$	-	\$	-

30.05 - Yard and Yard Track

NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.05	\$	-		\$	-	\$	-

A1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) road pavement & base at stations #2	SF	\$ 5.00	2,400	\$ 12,000	30%	\$ 3,600	\$ 15,600	12'wx100'lg x2 platforms. Center station
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	2,400	\$ 12,000	30%	\$ 3,600	\$ 15,600	
Demo 20' w, unpaved (e) dirt median on Vineyard.	SF	\$ 0.60	48,000	\$ 28,800	30%	\$ 8,640	\$ 37,440	Allow demo curbs, misc planting etc & haul off, 2400lfx20'w=48000sf.
Demo sidewalk at reduction & expansion areas	SF	\$ 7.96	25,470	\$ 202,741	30%	\$ 60,822	\$ 263,564	
Demo curb & gutter	LF	\$ 4.00	1,698	\$ 6,792	30%	\$ 2,038	\$ 8,830	346+1352
Demo deteriorated pavement sections (5%)								Not allowed. All (n) sidewalk effected by project measured
Total Costs - 40.01				\$ 262,333		\$ 78,700	\$ 341,033	
40.02 - Site Utilities, Utility Relocation								
Survey all (e) utilities & document. Video / Grnd penetrating radar/(e) as built.	LF	\$ 8.26	6,641	\$ 54,855	30%	\$ 16,456	\$ 71,311	Per LF of paved total alignment 6641 lf
Potholing crew	LF	\$ 4.08	6,641	\$ 27,095	30%	\$ 8,129	\$ 35,224	Per LF of paved total alignment 6641 lf
Utility modifications @ stations	LOC	\$ 25,000	2	\$ 50,000	30%	\$ 15,000	\$ 65,000	Allowance per platform @ Inlets, levels & SD adjustments. Center stations should have minor work
A1 - Other Vineland Blvd utility modifications	LS	\$ 150,000	1	\$ 150,000	30%	\$ 45,000	\$ 195,000	Allowance throughout the 6641lf paved alignment
Power pole relocation	EA	\$ 20,000	2	\$ 40,000	30%	\$ 12,000	\$ 52,000	Allowance based on 2 per platform
Total Costs - 40.02				\$ 321,950		\$ 96,585	\$ 418,535	

40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments

Allowance 10% of 40.01 LS \$ 262,333 10% \$ 26,233 30% \$ 7,870 \$ 34,103 10% is specified as per previous estimate

Total Costs - 40.03 \$ 26,233 \$ 7,870 \$ 34,103

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

NOT USED \$ - 30% \$ - \$ -
 \$ - 30% \$ - \$ -

Total Costs - 40.04 \$ - \$ - \$ -

40.05 - Site structures including retaining walls, sound walls

NOT USED \$ - 30% \$ - \$ -
 \$ - 30% \$ - \$ -

Total Costs - 40.05 \$ - \$ - \$ -

40.06 - Pedestrian / bike access and accommodation, landscaping

Bike Lanes

6' wide bike lane - single 6" stripe	LF	\$ 1.32	2,040	\$ 2,693	30%	\$ 808	\$ 3,501	Thermoplastic striping
6' wide bike lane - green painted surface	SF	\$ 3.30	12,240	\$ 40,392	30%	\$ 12,118	\$ 52,510	Thermoplastic green
10' wide bike lane - single 6" stripe	LF	\$ 1.32	3,055	\$ 4,033	30%	\$ 1,210	\$ 5,242	Thermoplastic striping
10' wide bike lane - green painted surface	SF	\$ 3.30	30,550	\$ 100,815	30%	\$ 30,245	\$ 131,060	Thermoplastic green
12' wide bike lane - single 6" stripe	LF	\$ 1.32	1,050	\$ 1,386	30%	\$ 416	\$ 1,802	Thermoplastic striping
12' wide bike lane - green painted surface	SF	\$ 3.30	12,600	\$ 41,580	30%	\$ 12,474	\$ 54,054	Vineland east of camarillo Thermoplastic

Bike lane margins

Margins between bike & car lanes	LF	\$ 3.60	1,295	\$ 4,662	30%	\$ 1,399	\$ 6,061	3lf striping per lf of margin
Margins between bike & mixed flow lanes	LF	\$ 3.60	2,024	\$ 7,286	30%	\$ 2,186	\$ 9,472	3lf striping per lf of margin
Concrete separator at contraflow bike lanes	LF	\$ 90.00	4,060	\$ 365,400	30%	\$ 109,620	\$ 475,020	Painted conc curb 3'wx8"h & infill conc. 4060 lf
Continental crosswalk 24" wide striping	LF	\$ 5.50	4,284	\$ 23,562	30%	\$ 7,069	\$ 30,631	Assume solid 24" wide striping

Sidewalks

Reconstruction sidewalk at reduction & expansion areas	SF	\$ 14.00	23,376	\$ 327,264	30%	\$ 98,179	\$ 425,443
Curb & gutter	LF	\$ 40.00	1,698	\$ 67,920	30%	\$ 20,376	\$ 88,296
Reconstruct (e) & or (n) curb ramp	EA	\$ 3,500.00	26	\$ 91,000	30%	\$ 27,300	\$ 118,300

Sidewalk amenities

Replace street trees	EA	\$ 6,000.00	10	\$ 60,000	30%	\$ 18,000	\$ 78,000	Allowance based on Google
Relocate parking meters	EA	\$ 1,500.00	12	\$ 18,000	30%	\$ 5,400	\$ 23,400	Allowance based on Google

Total Costs - 40.06 \$ 1,155,993 \$ 346,798 \$ 1,502,791

40.07 - Automobile, bus, van accessways including roads, parking lots

Survey crew, layout / as built records	LF	\$	8.60	6,641	\$	57,113	30%	\$	17,134	\$	74,246	Per LF of total alignment Basis is A1, C, D, E1, & F1
Reconstruct 20'w , unpaved median into roadway on vineyard, See 40.01 for demo.	SF	\$	30.45	48,000	\$	1,461,600	30%	\$	438,480	\$	1,900,080	2400 lf x 20'w. Incl exc (e) soil, (n) rock base, (n) concrete road. City std req a conc subbase under AC.
Saw cut AC @ vineland rd extension	LF	\$	3.00	2,328	\$	6,984	30%	\$	2,095	\$	9,079	1164x2
(N) AC on conc subbase (48,000 sf)	TON	\$	115.50	578	\$	66,759	30%	\$	20,028	\$	86,787	2" thick
Milling (E) asphalte road paving.	SF	\$	2.75	437,171	\$	1,202,220	30%	\$	360,666	\$	1,562,886	(e) median of 2400 lf x 20w. The (n) median sub base is concrete, not Asphalte. assume 2" thick milling
Milling (E) asphalte road paving @ cross sts	SF	\$	2.75	26,000	\$	71,500	30%	\$	21,450	\$	92,950	Allowance to extend AC up all side rds for 30lf
Haul off asphalte millings	TON	\$	33.60	5,574	\$	187,286	30%	\$	56,186	\$	243,472	145lbs fc
AC Overlay (2") incl cross sts	TON	\$	115.50	5,574	\$	643,797	30%	\$	193,139	\$	836,936	145lbs/CF. . Allow (n) 2" AC
Replace hatched crosswalks @ cross streets	SF	\$	3.00	6,750	\$	20,250	30%	\$	6,075	\$	26,325	Fair, magnolia2#, total 3
8' wide street parking - striped	LF	\$	1.32	788	\$	1,040	30%	\$	312	\$	1,352	Allow 788 lf of thermoplastic striping
8' WIDE PARKING - CURBSIDE - striping	LF	\$	1.98	5,517	\$	10,924	30%	\$	3,277	\$	14,201	Allow 5517 lf of thermoplastic striping
Directional arrows	EA	\$	75.00	94	\$	7,050	30%	\$	2,115	\$	9,165	Thermoplastic
Road letters "bus lane"	EA	\$	200.00	189	\$	37,800	30%	\$	11,340	\$	49,140	Thermoplastic
Bus lane red paint	SF	\$	3.30	119,640	\$	394,812	30%	\$	118,444	\$	513,256	Thermoplastic red, 12' w
Road symbols "bike lane" includes small directional arrow	EA	\$	200.00	38	\$	7,600	30%	\$	2,280	\$	9,880	Thermoplastic
Diagonal hatch striping at side of ramps sheet. Use chevron price	SF	\$	6.00	11,610	\$	69,660	30%	\$	20,898	\$	90,558	Sheet 4. vineland east of camarillo 645x18'w
Chevron median striping	SF	\$	6.00	866	\$	5,196	30%	\$	1,559	\$	6,755	3lf of 4" striping per lf of the 2'w.433x2=866sf
Solid 4" or 6" wide lane line w/ markers	LF	\$	4.00	9,062	\$	36,248	30%	\$	10,874	\$	47,122	Thermo plastic & \$4.44 ea yellow markers
Intermittent 4" lane line w/ markers	LF	\$	3.75	9,683	\$	36,311	30%	\$	10,893	\$	47,205	Thermoplastic
Double yellow lane line w/ markers	LF	\$	8.50	3,006	\$	25,551	30%	\$	7,665	\$	33,216	Thermoplastic
Bike lane 4" intermittent center striping	LF	\$	3.75	4,081	\$	15,304	30%	\$	4,591	\$	19,895	
Median curb & gutter	LF	\$	40.00	10,552	\$	422,080	30%	\$	126,624	\$	548,704	Allow conc curb & gutter
Landscaping in median, 75%	SF	\$	15.00	26,650	\$	399,750	30%	\$	119,925	\$	519,675	75% allow topsoil, planting, drainage, NO irrigation. In narrow areas allow hardscape. 35533sfx75%
Hardscape in median, 25%	SF	\$	30.00	8,883	\$	266,490	30%	\$	79,947	\$	346,437	25% allow hardscape. In narrow areas allow hardscape. 35533sfx25%
Misc signage above pavement level	LS	\$	10,000.00	1	\$	10,000	30%	\$	3,000	\$	13,000	Pole signs etc allowance
Rebuild deteriorated roadway (soft spots) 5% of overlay.	SF	\$	21.90	32,071	\$	702,355	30%	\$	210,706	\$	913,061	Demo is in 40.01. 5% x641,425
Concrete K rail	LF	\$	140.00	3,350	\$	469,000	30%	\$	140,700	\$	609,700	
Total Costs - 40.07					\$	6,634,680		\$	1,990,404	\$	8,625,084	

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction	LF	\$ 2.34	6,641	\$ 15,540	30%	\$ 4,662	\$ 20,202	Per LF of paved total alignment
SWPPP	LF	\$ 5.24	6,641	\$ 34,799	30%	\$ 10,440	\$ 45,238	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	6,641	\$ 297,384	30%	\$ 89,215	\$ 386,599	Per LF of paved total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% of 20-50.	%	\$ 12,453,696	12.00%	\$ 1,494,444	30%	\$ 448,333	\$ 1,942,777	12% of 10-50.

Note: All Contractors overhead/profits Incl in prices.

Total Costs - 40.08 \$ 2,062,166 \$ 618,650 \$ 2,680,816

A1 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	30%	\$ -	\$ -	NOT USED
Total Costs - 50.01				\$ -		\$ -	\$ -	
50.02 - Traffic signals and crossing protection								
								(n) signal intersections. Modify (e) signals @ intersections
Minimal Improvements	EA	\$ 20,000.00		\$ -	30%	\$ -	\$ -	
Moderate Improvements	EA	\$ 150,000.00	3	\$ 450,000	30%	\$ 135,000	\$ 585,000	Weddington, McCormick, Huston
Significant Improvements	EA	\$ 250,000.00	3	\$ 750,000	30%	\$ 225,000	\$ 975,000	Vineland/Chandler, Hortense, Kling
Major Improvements	EA	\$ 350,000.00	3	\$ 1,050,000	30%	\$ 315,000	\$ 1,365,000	Magnolia, Hesby, Camarillo
System Integration	EA	\$ -		\$ -	30%	\$ -	\$ -	
Total Costs - 50.02				\$ 2,250,000		\$ 675,000	\$ 2,925,000	
50.03 - Traction power supply: substations								
Charging station. See H1 & H2				\$ -	30%	\$ -	\$ -	None at A1 & A2
Total Costs - 50.03				\$ -		\$ -	\$ -	

50.04 - Traction power distribution: catenary and third rail												
Not used												
				\$	-	30%	\$	-	\$	-		
				\$	-	30%	\$	-	\$	-		
Total Costs - 50.04				\$	-		\$	-	\$	-		
50.05 - Communications												
Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$	150,000.00	2	\$	300,000	30%	\$	90,000	\$	390,000	Allowance 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$	175.00	1,320	\$	231,000	30%	\$	69,300	\$	300,300	1/4 mile of duct construction per station. Buried 1 only 4" conduit/conc encased , MH access etc
Total Costs - 50.05				\$	531,000		\$	159,300	\$	690,300		
50.06 - Fare collection system and equipment												
Ticket Vending Machine	EA	\$	120,000.00	-	\$	-	30%	\$	-	\$	-	1 per platform
Total Costs - 50.06				\$	-		\$	-	\$	-		
50.07 - Central Control												
NOT USED												
				\$	-	30%	\$	-	\$	-		
				\$	-	30%	\$	-	\$	-		
Total Costs - 50.07				\$	-		\$	-	\$	-		

A1 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description			
60.01 - Purchase or lease of real estate											
Allowance, Side stations. None	EA	\$	-	\$	-	30%	\$	-			
Allowance, (n) signalized intersection, incl Q jump.	EA	\$	50,000.00	5	\$	250,000	30%	\$	75,000	\$	325,000
Total Costs - 60.01				\$	250,000		\$	75,000	\$	325,000	
60.02 - Relocation of existing households and businesses											
				\$	-	30%	\$	-	\$	-	
				\$	-	30%	\$	-	\$	-	
Total Costs - 60.02				\$	-		\$	-	\$	-	

A1 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	
70.04 - Bus NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	
70.05 - Other NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.05				\$ -		\$ -	\$ -	
70.06 - Non-revenue vehicles NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.06				\$ -		\$ -	\$ -	
70.07 - Spare parts NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.07				\$ -		\$ -	\$ -	

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option A2

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	660	198		857	8.4%	5.5%	64	922
20.01 At-grade station, stop, shelter, mall, terminal, platform		660	198	30%	857	8.4%	5.5%	64	922
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	6,380	1,914		8,294	81.0%	53.5%	622	8,916
40.01 Demolition, Clearing, Earthwork		273	82	30%	355	3.5%	2.3%	27	381
40.02 Site Utilities, Utility Relocation		514	154	30%	668	6.5%	4.3%	50	718
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		27	8	30%	35	0.3%	0.2%	3	38
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		1,040	312	30%	1,351	13.2%	8.7%	101	1,453
40.07 Automobile, bus, van accessways including roads, parking lots		2,749	825	30%	3,574	34.9%	23.0%	268	3,842
40.08 Temporary Facilities and other indirect costs during construction		1,777	533	30%	2,310	22.6%	14.9%	173	2,484
50 SYSTEMS	0.00	841	252		1,093	10.7%	7.0%	82	1,175
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		310	93	30%	403	3.9%	2.6%	30	433
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		531	159	30%	690	6.7%	4.5%	52	742
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	7,880	2,364		10,244	100.0%	66.1%	768	11,013
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	50	15		65		0.4%	7	72
60.01 Purchase or lease of real estate		50	15	30%	65			7	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus									
70.05 Other									
70.06 Non-revenue vehicles									
70.07 Spare parts									
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	3,790	0		3,790	37.0%	24.4%	211	4,001
80.01 Project Development		615			615	6.0%	4.0%	28	642
80.02 Final Design		820			820	8.0%	5.3%	37	856
80.03 Project Management for Design and Construction		1,024			1,024	10.0%	6.6%	46	1,071
80.04 Construction Administration & Management		512			512	5.0%	3.3%	38	551
80.05 Professional Liability and other Non-Construction Insurance		102			102	1.0%	0.7%	8	110
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		410			410	4.0%	2.6%	31	441
80.07 Surveys, Testing, Investigation, Inspection		205			205	2.0%	1.3%	15	220
80.08 Start up		102			102	1.0%	0.7%	8	110
Subtotal (10 - 80)	0.00	11,721	2,379		14,100		90.9%		15,085
90 UNALLOCATED CONTINGENCY					1,410		9%		1,509
Subtotal (10 - 90)	0.00				15,510		100%		16,594
100 FINANCE CHARGES					0		0%		
Total Project Cost (10 - 100)	0.00				15,510		100%		16,594
Allocated Contingency as % of Base Yr Dollars w/o Contingency						20.30%			
Unallocated Contingency as % of Base Yr Dollars w/o Contingency						12.03%			
Total Contingency as % of Base Yr Dollars w/o Contingency						32.33%			
Unallocated Contingency as % of Subtotal (10 - 80)						10.00%			
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$14,105
YOE Total Project Cost per Mile (X000)								High (+25%)	\$20,742

A2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Route Option A2. Paved.	LF	n/a	5,977	to 134 ramps Chandler to Magnolia				
Route Option A2. Unimproved.	LF	n/a	1,400					
			7,377					
			1.40 mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
NUMBER OF STATIONS. Station 3. Side. Hesby/Lankershim.							Station 3 is 100x10x2 = 2000sf	
Demo. (e) sidewalk. Not reqd this station								
Red curve for bus maneuvering	LF	\$ 5.00	160	\$ 800	30%	\$ 240	\$ 1,040	40' ea end platform 160 lf ea station
Concrete platform, 8" depth	SF	\$ 66.74	2,000	\$ 133,480	30%	\$ 40,044	\$ 173,524	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	2,400	\$ 134,520	30%	\$ 40,356	\$ 174,876	Assume 12". Incl exc, rock base, conc footings/Pad.
Sidewalk modifications @ side stations. See 40.05								
Tactile surfacing	SF	\$ 50.00	400	\$ 20,000	30%	\$ 6,000	\$ 26,000	1 stations / 2 platforms w/ sidewalks
Shelter/Seating/Screen	EA	\$ 18,000.00	8	\$ 144,000	30%	\$ 43,200	\$ 187,200	4 per platform
Railing (SS) None								
Station Marker	EA	\$ 35,000.00	2	\$ 70,000	30%	\$ 21,000	\$ 91,000	1 per platform for this station
Trash Receptacle	EA	\$ 5,500.00	4	\$ 22,000	30%	\$ 6,600	\$ 28,600	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	2	\$ 20,000	30%	\$ 6,000	\$ 26,000	1 per platform
Station Signage	EA	\$ 10,000.00	1	\$ 10,000	30%	\$ 3,000	\$ 13,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	4	\$ 4,800	30%	\$ 1,440	\$ 6,240	2 per platform
Electric power supply & platform lighting	EA	\$ 100,000.00	1	\$ 100,000	30%	\$ 30,000	\$ 130,000	Allowance per station w/ 2 platforms
Total Costs - 20.01				\$ 659,600		\$ 197,880	\$ 857,480	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED								
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	

20.03 - Underground station, stop, shelter, mall, terminal, platform							
NOT USED				\$	-	30%	\$ - \$ -
Total Costs - 20.03				\$	-	\$	- \$ - \$ -
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.							
NOT USED				\$	-	30%	\$ - \$ -
Total Costs - 20.04				\$	-	\$	- \$ - \$ -
20.05 - Joint development							
NOT USED				\$	-	30%	\$ - \$ -
Total Costs - 20.05				\$	-	\$	- \$ - \$ -
20.06 - Automobile parking multi-story structure							
NOT USED				\$	-	30%	\$ - \$ -
Total Costs - 20.06				\$	-	\$	- \$ - \$ -
20.07 - Elevators, escalators							
NOT USED				\$	-	30%	\$ - \$ -
Total Costs - 20.07				\$	-	\$	- \$ - \$ -

A2 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$	-	30%	\$ - \$ -	
				\$	-			
Total Costs - 30.01				\$	-	\$	- \$ -	

30.02 - Light Maintenance Facility									
NOT USED		\$	-	30%	\$	-	\$	-	
		\$	-						
Total Costs - 30.02		\$	-		\$	-	\$	-	
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30.03 - Heavy Maintenance Facility									
NOT USED		\$	-	30%	\$	-	\$	-	
		\$	-						
Total Costs - 30.03		\$	-		\$	-	\$	-	
<hr/>									
30.04 - Storage or Maintenance of Way Building									
NOT USED		\$	-	30%	\$	-	\$	-	
Total Costs - 30.04		\$	-		\$	-	\$	-	
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30.05 - Yard and Yard Track									
NOT USED		\$	-	30%	\$	-	\$	-	
Total Costs - 30.05		\$	-		\$	-	\$	-	

A2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) road pavement/base at stations #3	SF	\$ 10.00	2,000	\$ 20,000	30%	\$ 6,000	\$ 26,000	This station is located on (e) rd adj (e) 15'w sidewalk.2 platforms 100x10
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	2,400	\$ 12,000	30%	\$ 3,600	\$ 15,600	
Demo 20' w, unpaved (e) dirt) median	SF	\$ 0.60	5,000	\$ 3,000	30%	\$ 900	\$ 3,900	Allow demo curbs, misc planting etc & haul off
Demo sidewalk at reduction & expansion areas	SF	\$ 7.96	28,769	\$ 229,001	30%	\$ 68,700	\$ 297,702	
Demo curb & gutter	LF	\$ 4.00	2,213	\$ 8,852	30%	\$ 2,656	\$ 11,508	
Demo deteriorated pavement sections (5%)								Not allowed
Total Costs - 40.01				\$ 272,853		\$ 81,856	\$ 354,709	

40.02 - Site Utilities, Utility Relocation

Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	LF	\$	8.26	5,977	\$	49,370	30%	\$	14,811	\$	64,181	Per LF of total paved alignment
Potholing crew	LF	\$	4.08	5,977	\$	24,386	30%	\$	7,316	\$	31,702	Per LF of total paved alignment
Utility modifications @ stations	LOC	\$	125,000.00	2	\$	250,000	30%	\$	75,000	\$	325,000	Allowance @ Inlets, levels &SD adjustments
A2 - Other Lankershim utility modifications	LS	\$	150,000.00	1	\$	150,000	30%	\$	45,000	\$	195,000	
Power pole relocation at (n) stations	EA	\$	20,000.00	2	\$	40,000	30%	\$	12,000	\$	52,000	Allowance based on 1 per platform
Total Costs - 40.02					\$	513,756		\$	154,127	\$	667,883	

40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments

Allowance 10% of 40.01	LS	\$	272,853.24	10%	\$	27,285	30%	\$	8,186	\$	35,471	
Total Costs - 40.03					\$	27,285		\$	8,186	\$	35,471	

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

NOT USED					\$	-	30%	\$	-	\$	-	
Total Costs - 40.04					\$	-		\$	-	\$	-	

40.05 - Site structures including retaining walls, sound walls

NOT USED					\$	-	30%	\$	-	\$	-	
Total Costs - 40.05					\$	-		\$	-	\$	-	

40.06 - Pedestrian / bike access and accommodation, landscaping

Crosswalk

Continental crosswalk 24" wide striping	LF	\$	5.50	15,855	\$	87,203	30%	\$	26,161	\$	113,363
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Sidewalks

Reconstruct (e) sidewalk at station 3 to accommodate (n) access configurations. (200lf)	SF	\$	35.00	3,000	\$	105,000	30%	\$	31,500	\$	136,500 (e) sidewalk is 15'wx100x2 = 3000 sf (200lf)
Reconstruction sidewalk at reduction & expansion areas	SF	\$	14.00	26,556	\$	371,784	30%	\$	111,535	\$	483,319
Curb & gutter	LF	\$	40.00	2,213	\$	88,520	30%	\$	26,556	\$	115,076
Reconstruct (e) & or (n) curb ramp	EA	\$	3,500.00	22	\$	77,000	30%	\$	23,100	\$	100,100

Sidewalk amenities at (n) stations

Replace street trees	EA	\$	6,000.00	10	\$	60,000	30%	\$	18,000	\$	78,000 Allowance based on Google. P9
Work at other misc adjacent elements	EA	\$	100,000.00	1	\$	100,000	30%	\$	30,000	\$	130,000 Per station
Relocate parking meters	EA	\$	1,500.00	100	\$	150,000	30%	\$	45,000	\$	195,000 Allowance based on Google. P9

Total Costs - 40.06					\$	1,039,507		\$	311,852	\$	1,351,358
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40.07 - Automobile, bus, van accessways including roads, parking lots

Survey crew	LF	\$	8.60	5,977	\$	51,402	30%	\$	15,421	\$	66,823 Per LF of total alignment
Reconstruct 20'w , unpaved median into roadway on vineyard, See 40.01 for demo.	SF	\$	30.45	5,000	\$	152,250	30%	\$	45,675	\$	197,925 Incl exc (e)base/ subgrade, compact, (n) base, (n) concrete road.
(N) AC on conc subbase	TON	\$	115.50	61	\$	7,007	30%	\$	2,102	\$	9,109 2"thick
Milling (E) asphalte road paving.	SF	\$	2.75	227,395	\$	625,337	30%	\$	187,601	\$	812,938 Assume 2" thick milling
Milling (E) asphalte road paving @ cross sts	SF	\$	2.75	23,767	\$	65,358	30%	\$	19,608	\$	84,966 Allowance to extend AC up all side rds for 30lf
Haul off asphalte millings	TON	\$	33.60	3,022	\$	101,539	30%	\$	30,462	\$	132,001 145lbs fc
AC Overlay (2") incl cross sts	TON	\$	115.50	3,022	\$	349,041	30%	\$	104,712	\$	453,753 145lbs/CF. Allow (n) 2" AC
Replace hatched crosswalks @ cross streets	SF	\$	3.00	6,200	\$	18,600	30%	\$	5,580	\$	24,180 Fair, magnolia2#, total 3
8' wide street parking - striped	LF	\$	1.98	3,715	\$	7,356	30%	\$	2,207	\$	9,562
Directional arrows	EA	\$	75.00	110	\$	8,250	30%	\$	2,475	\$	10,725 Thermoplastic
Road letters "bus lane"	EA	\$	200.00	238	\$	47,600	30%	\$	14,280	\$	61,880 Thermoplastic
Bus lane red paint	SF	\$	3.30	56,705	\$	187,127	30%	\$	56,138	\$	243,264 Thermoplastic red, 12' w
Chevron pavement markings	SF	\$	6.00	13,378	\$	80,268	30%	\$	24,080	\$	104,348 1575 lf

Solid 4" or 6" wide lane line w/ markers	LF	\$ 4.00	11,155	\$ 44,620	30%	\$ 13,386	\$ 58,006	Thermoplastic & \$4.44 ea yellow markers
Intermittent 4" lane line w/ markers	LF	\$ 3.75	2,733	\$ 10,249	30%	\$ 3,075	\$ 13,323	Thermoplastic
Double yellow lane line w/ markers	LF	\$ 8.50	1,706	\$ 14,501	30%	\$ 4,350	\$ 18,851	Thermoplastic
Misc signage above pavement level	LS	\$ 10,000.00	1	\$ 10,000	30%	\$ 3,000	\$ 13,000	pole signs etc
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	18,817	\$ 412,092	30%	\$ 123,628	\$ 535,720	5% x 376343 sf
Concrete K rail	LF	\$ 140.00	3,975	\$ 556,500	30%	\$ 166,950	\$ 723,450	
Total Costs - 40.07				\$ 2,749,097		\$ 824,729	\$ 3,573,826	

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	5,977	\$ 13,986	30%	\$ 4,196	\$ 18,182	Per LF of paved total alignment
SWPPP	LF	\$ 5.24	5,977	\$ 31,319	30%	\$ 9,396	\$ 40,715	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	5,977	\$ 267,650	30%	\$ 80,295	\$ 347,945	Per paved LF of total alignment
Utility modifications @ stations	LOC	\$ 125,000.00	2	\$ 250,000	30%	\$ 75,000	\$ 325,000	
A2 - Other Vineland Blvd utility modifications	LS	\$ 150,000.00	1	\$ 150,000	30%	\$ 45,000	\$ 195,000	
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% of 20-50.	%	\$ 7,036,054.11	12.00%	\$ 844,326	30%	\$ 253,298	\$ 1,097,624	12% of 10-50.
Note: All Contractors overhead/profits Incl in prices.								
Total Costs - 40.08				\$ 1,777,282		\$ 533,185	\$ 2,310,467	

A2 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	

50.02 - Traffic signals and crossing protection												
Minimal Improvements	EA	\$	20,000.00	3	\$	60,000	30%	\$	18,000	\$	78,000	Weddington, private st, Hesby, Camrillo,
Moderate Improvements	EA	\$	150,000.00		\$	-	30%	\$	-	\$	-	
Significant Improvements	EA	\$	250,000.00	1	\$	250,000	30%	\$	75,000	\$	325,000	Magnolia
Major Improvements	EA	\$	350,000.00		\$	-	30%	\$	-	\$	-	
System Integration	EA	\$	-		\$	-	30%	\$	-	\$	-	
Total Costs - 50.02					\$	310,000		\$	93,000	\$	403,000	
50.03 - Traction power supply: substations												
Charging station. See H1 & H2					\$	-	30%	\$	-	\$	-	Assume Facility to be at ea end of routes None at A1 & A2
Total Costs - 50.03					\$	-		\$	-	\$	-	
50.04 - Traction power distribution: catenary and third rail												
NOT USED					\$	-	30%	\$	-	\$	-	
Total Costs - 50.04					\$	-		\$	-	\$	-	
50.05 - Communications												
Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$	150,000.00	2	\$	300,000	30%	\$	90,000	\$	390,000	Allowance 1 set up/cabinet per platform
Fibre optic ductbank	EA	\$	175.00	1,320	\$	231,000	30%	\$	69,300	\$	300,300	1/4 mile of duct construction per station
Total Costs - 50.05					\$	531,000		\$	159,300	\$	690,300	
50.06 - Fare collection system and equipment												
Ticket Vending Machine	EA	\$	120,000.00	-	\$	-	30%	\$	-	\$	-	1 per platform
Total Costs - 50.06					\$	-		\$	-	\$	-	
50.07 - Central Control												
NOT USED					\$	-	30%	\$	-	\$	-	
Total Costs - 50.07					\$	-		\$	-	\$	-	

A2 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	
Allowance, (n) signalized intersection, incl Q jump. None	EA	\$ -		\$ -	30%	\$ -	\$ -	
Total Costs - 60.01				\$ 50,000		\$ 15,000	\$ 65,000	
60.02 - Relocation of existing households and businesses								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

A2 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -	\$ 0	\$ -	\$ -	
70.03 - Commuter Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -		\$ -	\$ -	
Total Costs - 70.03				\$ -	\$ 0	\$ -	\$ -	
70.04 - Bus								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -		\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	

70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-				
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-				
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-				
Total Costs - 70.07	\$	-		\$	-	\$ -

B - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
This route option t will operate in mixed flow of the existing CA 134 (Riverside) without any improvements								

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option C

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	3,902	1,171		5,073	13.8%	9.1%	380	5,454
20.01 At-grade station, stop, shelter, mall, terminal, platform		3,902	1,171	30%	5,073	13.8%	9.1%	380	5,454
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				0
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				0
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				0
20.05 Joint development		0	0		0				0
20.06 Automobile parking multi-story structure		0	0		0				0
20.07 Elevators, escalators		0	0		0				0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	19,743	5,923		25,666	70.0%	45.8%	1,925	27,591
40.01 Demolition, Clearing, Earthwork		1,055	317	30%	1,372	3.7%	2.4%	103	1,475
40.02 Site Utilities, Utility Relocation		2,204	661	30%	2,865	7.8%	5.1%	215	3,080
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		106	32	30%	137	0.4%	0.2%	10	147
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		4,765	1,429	30%	6,194	16.9%	11.1%	465	6,659
40.07 Automobile, bus, van accessways including roads, parking lots		7,461	2,238	30%	9,699	26.4%	17.3%	727	10,426
40.08 Temporary Facilities and other indirect costs during construction		4,152	1,246	30%	5,398	14.7%	9.6%	405	5,803
50 SYSTEMS	0.00	4,576	1,373		5,949	16.2%	10.6%	446	6,395
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		1,390	417	30%	1,807	4.9%	3.2%	136	1,943
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		3,186	956	30%	4,142	11.3%	7.4%	311	4,452
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	28,222	8,466		36,688	100.0%	65.5%	2,752	39,440
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	500	150		650		1.2%	65	715
60.01 Purchase or lease of real estate		500	150	30%	650	1.8%	1.2%	65	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus									
70.05 Other									
70.06 Non-revenue vehicles									
70.07 Spare parts									
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	13,575	0		13,575	37.0%	24.2%	754	14,328
80.01 Project Development		2,201			2,201	6.0%	3.9%	99	2,300
80.02 Final Design		2,935			2,935	8.0%	5.2%	132	3,067
80.03 Project Management for Design and Construction		3,669			3,669	10.0%	6.6%	165	3,834
80.04 Construction Administration & Management		1,834			1,834	5.0%	3.3%	138	1,972
80.05 Professional Liability and other Non-Construction Insurance		367			367	1.0%	0.7%	28	394
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		1,468			1,468	4.0%	2.6%	110	1,578
80.07 Surveys, Testing, Investigation, Inspection		734			734	2.0%	1.3%	55	789
80.08 Start up		367			367	1.0%	0.7%	28	394
Subtotal (10 - 80)	0.00	42,296	8,616		50,913		90.9%		54,483
90 UNALLOCATED CONTINGENCY					5,091		9%		5,448
Subtotal (10 - 90)	0.00				56,004		100%		59,931
100 FINANCE CHARGES					0		0%		
Total Project Cost (10 - 100)	0.00				56,004		100%		59,931
Allocated Contingency as % of Base Yr Dollars w/o Contingency						20.37%			
Unallocated Contingency as % of Base Yr Dollars w/o Contingency						12.04%			
Total Contingency as % of Base Yr Dollars w/o Contingency						32.41%			
Unallocated Contingency as % of Subtotal (10 - 80)						10.00%			
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$50,942
YOE Total Project Cost per Mile (X000)								High (+25%)	\$74,914

C - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Route Option C. Paved.	LF	n/a	11,472					
Proposed Project - Route Option C. Unimproved.	LF	n/a	-					
			11,472					
			2.17mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
NUMBER OF STATIONS. Station 4,5,6,7,8,9. Side								
6 stations 4-9 is 13340 sf								
Demo. (e) sidewalk. See 40.01				\$ -	30%	\$ -	\$ -	See 40.01
Red curve for bus maneuvering	LF	\$ 5.00	480	\$ 2,400	30%	\$ 720	\$ 3,120	40' ea platform 160 lf ea station
Concrete platform, 8" depth	SF	\$ 66.74	13,340	\$ 890,312	30%	\$ 267,093	\$ 1,157,405	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	12,630	\$ 707,912	30%	\$ 212,373	\$ 920,285	Assume 12". Incl exc, rock base, conc footings/Pad.
(E) Sidewalk modifications @ side stations. See 40.05								
6 stations / 12 platforms w/ sidewalks. 1200 lf.								
Tactile surfacing	SF	\$ 50.00	2,260	\$ 113,000	30%	\$ 33,900	\$ 146,900	
Shelter/Seating/Screen	EA	\$ 18,000.00	46	\$ 828,000	30%	\$ 248,400	\$ 1,076,400	4 per platform but 3 per 70' platform
Railing (SS) None								
Station Marker	EA	\$ 35,000.00	12	\$ 420,000	30%	\$ 126,000	\$ 546,000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.00	24	\$ 132,000	30%	\$ 39,600	\$ 171,600	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	12	\$ 120,000	30%	\$ 36,000	\$ 156,000	1 per platform
Station Signage & misc	EA	\$ 10,000.00	6	\$ 60,000	30%	\$ 18,000	\$ 78,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	24	\$ 28,800	30%	\$ 8,640	\$ 37,440	2 per platform
Electric power supply & platform lighting	EA	\$ 100,000.00	6	\$ 600,000	30%	\$ 180,000	\$ 780,000	Allowance per station w/ 2 platforms
Total Costs - 20.01				\$ 3,902,423		\$ 1,170,727	\$ 5,073,150	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.03				\$ -		\$ -	\$ -	

20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.										
NOT USED				\$	-	30%	\$	-	\$	-
				\$	-	30%	\$	-	\$	-
Total Costs - 20.04				\$	-		\$	-	\$	-
20.05 - Joint development										
NOT USED				\$	-	30%	\$	-	\$	-
				\$	-	30%	\$	-	\$	-
Total Costs - 20.05				\$	-		\$	-	\$	-
20.06 - Automobile parking multi-story structure										
NOT USED				\$	-	30%	\$	-	\$	-
				\$	-	30%	\$	-	\$	-
Total Costs - 20.06				\$	-		\$	-	\$	-
20.07 - Elevators, escalators										
NOT USED				\$	-	30%	\$	-	\$	-
				\$	-	30%	\$	-	\$	-
Total Costs - 20.07				\$	-		\$	-	\$	-

C - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.01				\$	-		\$	-
30.02 - Light Maintenance Facility								
NOT USED				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.02				\$	-		\$	-

30.03 - Heavy Maintenance Facility								
NOT USED	\$	-	30%	\$	-	\$	-	
	\$	-	30%	\$	-	\$	-	
	\$	-	30%	\$	-	\$	-	
Total Costs - 30.03	\$	-		\$	-	\$	-	
30.04 - Storage or Maintenance of Way Building								
NOT USED	\$	-	30%	\$	-	\$	-	
	\$	-	30%	\$	-	\$	-	
	\$	-	30%	\$	-	\$	-	
Total Costs - 30.04	\$	-		\$	-	\$	-	
30.05 - Yard and Yard Track								
NOT USED	\$	-	30%	\$	-	\$	-	
	\$	-	30%	\$	-	\$	-	
	\$	-	30%	\$	-	\$	-	
Total Costs - 30.05	\$	-		\$	-	\$	-	

C - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at stations	SF	\$ 10.00	13,340	\$ 133,400	30%	\$ 40,020	\$ 173,420	These stations are located on (e) sidewalk 4, 5, 6, 7, 8, & 9. 955+5734 Not reqd at C Stations. Sidewalk reduction/expansions are separate
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	12,630	\$ 63,150	30%	\$ 18,945	\$ 82,095	
Demo 20' w, unpaved (e) dirt median on Olive.	SF	\$ 0.60	5,000	\$ 3,000	30%	\$ 900	\$ 3,900	
Demo sidewalk at reduction & expansion areas	SF	\$ 7.96	104,159	\$ 829,106	30%	\$ 248,732	\$ 1,077,837	
Demo curb & gutter	LF	\$ 4.00	6,689	\$ 26,756	30%	\$ 8,027	\$ 34,783	
Demo deteriorated pavement sections (5%)								
Total Costs - 40.01				\$ 1,055,412		\$ 316,623	\$ 1,372,035	

40.02 - Site Utilities, Utility Relocation

Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	LF	\$	8.26	17,354	\$	143,344	30%	\$	43,003	\$	186,347	Per LF of paved total alignment
Potholing crew	LF	\$	4.08	17,354	\$	70,804	30%	\$	21,241	\$	92,046	Per LF of paved total alignment
Utility modifications @ stations	LOC	\$	125,000.00	12	\$	1,500,000	30%	\$	450,000	\$	1,950,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 12 platforms
C. Other Olive Ave - utility modifications	LS	\$	250,000.00	1	\$	250,000	30%	\$	75,000	\$	325,000	
Power pole relocation at (n) stations	LS	\$	20,000.00	12	\$	240,000	30%	\$	72,000	\$	312,000	Allowance station platforms @ 12 loc

Total Costs - 40.02 **\$ 2,204,148** **\$ 661,245** **\$ 2,865,393**

40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments

Allowance 10% of 40.01	LS	\$	1,055,411.64	10%	\$	105,541	30%	\$	31,662	\$	137,204	
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Total Costs - 40.03 **\$ 105,541** **\$ 31,662** **\$ 137,204**

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

NOT USED					\$	-	30%	\$	-	\$	-	
					\$	-	30%	\$	-	\$	-	

Total Costs - 40.04 **\$ -** **\$ -** **\$ -**

40.05 - Site structures including retaining walls, sound walls

NOT USED					\$	-	30%	\$	-	\$	-	
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Total Costs - 40.05 **\$ -** **\$ -** **\$ -**

40.06 - Pedestrian / bike access and accommodation, landscaping

BIKE LANES - None shown
SIDEWALKS

Reconstruction sidewalk at reduction & expansion areas	SF	\$	14.00	95,556	\$	1,337,784	30%	\$	401,335	\$	1,739,119	
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (1200lf)	SF	\$	35.00	13,340	\$	466,900	30%	\$	140,070	\$	606,970	(e) sidewalk at stations is 1200LF varies 6'-16'w
Curb & Gutter	LF	\$	40.00	6,608	\$	264,320	30%	\$	79,296	\$	343,616	

CROSSWALK

Continental crosswalk 24" wide striping	LF	\$ 5.50	9,421	\$ 51,816	30%	\$ 15,545	\$ 67,360	Assume solid 24" wide striping ?
New 6'w sidewalk	SF	\$ 9.80	1,848	\$ 18,110	30%	\$ 5,433	\$ 23,544	308 lf x6'w (+\$1.30)
Reconstruct (e) & or (n) curb ramp	EA	\$ 3,500.00	96	\$ 336,000	30%	\$ 100,800	\$ 436,800	
Sidewalk amenities at (n) stations								
Replace street trees	EA	\$ 6,000.00	40	\$ 240,000	30%	\$ 72,000	\$ 312,000	Allowance based on Google
Work at other misc adjacent elements	EA	\$ 100,000.00	6	\$ 600,000	30%	\$ 180,000	\$ 780,000	Per station
Relocate parking meters	EA	\$ 1,500.00	300	\$ 450,000	30%	\$ 135,000	\$ 585,000	Allowance based on Google
Alterations to other vertical elements on alignment	LS	\$ 1,000,000.00	1	\$ 1,000,000	30%	\$ 300,000	\$ 1,300,000	
Total Costs - 40.06				\$ 4,764,930		\$ 1,429,479	\$ 6,194,409	
40.07 - Automobile, bus, van accessways including roads,								
Survey crew	LF	\$ 8.60	17,353	\$ 149,236	30%	\$ 44,771	\$ 194,007	Per LF of paved total alignment
Reconstruct 20'w , unpaved median into roadway on Olive, See 40.01 for demo.	SF	\$ 30.45	5,000	\$ 152,250	30%	\$ 45,675	\$ 197,925	Incl exc (e) base / subgrade, compact, (n) base, (n) concrete road. (conc city std)
(N) AC on conc subbase (5000 sf)	TON	\$ 115.50	60	\$ 6,930	30%	\$ 2,079	\$ 9,009	2" thick
Milling (E) asphalte road paving	SF	\$ 2.75	810,449	\$ 2,228,736	30%	\$ 668,621	\$ 2,897,356	
Milling (E) asphalte road paving @ cross sts	SF	\$ 2.75	54,667	\$ 150,333	30%	\$ 45,100	\$ 195,433	Allowance to extend AC up all side rds for 30lf
Haul off asphalte millings	TON	\$ 33.60	10,412	\$ 349,843	30%	\$ 104,953	\$ 454,796	
AC Overlay (2") incl cross sts	TON	\$ 115.50	10,412	\$ 1,202,586	30%	\$ 360,776	\$ 1,563,362	145lbs/CF. (n) asphalt. Allow (n) 2" AC
Replace hatched crosswalks @ cross streets	SF	\$ 3.00	17,500	\$ 52,500	30%	\$ 15,750	\$ 68,250	
8' wide street parking - striped	LF	\$ 1.98	1,854	\$ 3,671	30%	\$ 1,101	\$ 4,772	Allow 1854 lf of thermoplastic striping
Chevron pavement markings	SF	\$ 6.00	50,169	\$ 301,014	30%	\$ 90,304	\$ 391,318	8116lf
Directional arrows	EA	\$ 75.00	365	\$ 27,375	30%	\$ 8,213	\$ 35,588	Thermoplastic
Road letters "bus lane"	EA	\$ 200.00	490	\$ 98,000	30%	\$ 29,400	\$ 127,400	Thermoplastic
Bus lane red paint	SF	\$ 3.30	296,176	\$ 977,381	30%	\$ 293,214	\$ 1,270,595	Thermoplastic red, 12' w
Solid 4"or 6" wide lane line w/ markers	LF	\$ 4.00	32,055	\$ 128,220	30%	\$ 38,466	\$ 166,686	Thermo plastic & yellow markers
Intermittent 4" lane line w/ markers	LF	\$ 3.75	24,927	\$ 93,476	30%	\$ 28,043	\$ 121,519	Thermoplastic
Double yellow lane line w/ markers	LF	\$ 8.50	8,023	\$ 68,196	30%	\$ 20,459	\$ 88,654	Thermoplastic
Misc signage above pavement level	LS	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	Pole signs etc
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	64,883	\$ 1,420,938	30%	\$ 426,281	\$ 1,847,219	5% x 1,297,674 sf
Total Costs - 40.07				\$ 7,460,684		\$ 2,238,205	\$ 9,698,889	

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	17,354	\$ 40,608	30%	\$ 12,183	\$ 52,791	Per LF of paved total alignment
SWPPP	LF	\$ 5.24	17,354	\$ 90,935	30%	\$ 27,280	\$ 118,215	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	17,354	\$ 777,112	30%	\$ 233,134	\$ 1,010,246	Per LF of paved total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% of 20-50	%	\$ 25,197,793.77	12%	\$ 3,023,735	30%	\$ 907,121	\$ 3,930,856	12% of 10-50.

Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08 **\$ 4,152,391** **\$ 1,245,717** **\$ 5,398,108**

C - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	
50.02 - Traffic signals and crossing protection								
Minimal Improvements	EA	\$ 20,000.00	12	\$ 240,000	30%	\$ 72,000	\$ 312,000	Hollywood/Olive, Lima, California, Alameda, Florence, Buena Vista, Keystone, Parish, Virginia, Victory, San Fernando, 3rd,
Moderate Improvements	EA	\$ 150,000.00	1	\$ 150,000	30%	\$ 45,000	\$ 195,000	Bridge RRFB
Significant Improvements	EA	\$ 250,000.00	4	\$ 1,000,000	30%	\$ 300,000	\$ 1,300,000	Hollywood/Riverside, Riverside/Olive, Lake, Glenoaks
Major Improvements	EA	\$ 350,000.00	-	\$ -	30%	\$ -	\$ -	
System Integration	EA	\$ -	-	\$ -	30%	\$ -	\$ -	
Total Costs - 50.02				\$ 1,390,000		\$ 417,000	\$ 1,807,000	
50.03 - Traction power supply: substations								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.03				\$ -		\$ -	\$ -	

50.04 - Traction power distribution: catenary and third rail

NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 50.04				\$ -		\$ -	\$ -	

50.05 - Communications

Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	12	\$ 1,800,000	30%	\$ 540,000	\$ 2,340,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 175.00	7,920	\$ 1,386,000	30%	\$ 415,800	\$ 1,801,800	1/4 mile of duct construction per station
Total Costs - 50.05				\$ 3,186,000		\$ 955,800	\$ 4,141,800	

50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	-	\$ -	30%	\$ -	\$ -	1 per platform
Total Costs - 50.06				\$ -		\$ -	\$ -	

50.07 - Central Control

NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.07				\$ -		\$ -	\$ -	

C - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	6	\$ 300,000	30%	\$ 90,000	\$ 390,000	
Allowance, (n) signalized intersection, incl Q jump.	EA	\$ 50,000.00	4	\$ 200,000	30%	\$ 60,000	\$ 260,000	
Total Costs - 60.01				\$ 500,000		\$ 150,000	\$ 650,000	
60.02 - Relocation of existing households and businesses								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

C - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -		\$ -	\$ -	
Total Costs - 70.02				\$ -	\$ 0	\$ -	\$ -	
70.03 - Commuter Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -		\$ -	\$ -	
Total Costs - 70.03				\$ -	\$ 0	\$ -	\$ -	
70.04 - Bus				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	
70.05 - Other				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.05				\$ -		\$ -	\$ -	
70.06 - Non-revenue vehicles				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.06				\$ -		\$ -	\$ -	
70.07 - Spare parts				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.07				\$ -		\$ -	\$ -	

D - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Route Option D. Paved.	LF		17,825					
Proposed Project - Route Option D. Unimproved.	LF	n/a	-					
			17,825.00					
			3.38 mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
NUMBER OF STATIONS. Station 10,11,12 13. Center								
Demo. (e) sidewalk. See 40.01. None								
Red curve for bus maneuvering	LF	\$ 5.00	320	\$ 1,600	30%	\$ 480	\$ 2,080	40' ea platform 160 lf ea station
Concrete platform, 8" depth	SF	\$ 55.61	8,000	\$ 444,880	30%	\$ 133,464	\$ 578,344	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	6,500	\$ 364,325	30%	\$ 109,298	\$ 473,623	Assume 12". Incl exc, rock base, conc footings/Pad.
Tactile surfacing	SF	\$ 50.00	1,600	\$ 80,000	30%	\$ 24,000	\$ 104,000	
Shelter/Seating/Screen	EA	\$ 18,000.00	32	\$ 576,000	30%	\$ 172,800	\$ 748,800	4 per platform
Railing (SS)	LF	\$ 350.00	800	\$ 280,000	30%	\$ 84,000	\$ 364,000	
Station Marker	EA	\$ 35,000.00	8	\$ 280,000	30%	\$ 84,000	\$ 364,000	1 per platform
Trash Receptacle	EA	\$ 5,500.00	16	\$ 88,000	30%	\$ 26,400	\$ 114,400	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	8	\$ 80,000	30%	\$ 24,000	\$ 104,000	1 per platform
Station Signage & misc.	EA	\$ 10,000.00	4	\$ 40,000	30%	\$ 12,000	\$ 52,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	16	\$ 19,200	30%	\$ 5,760	\$ 24,960	2 per platform
Electric power supply & platform lighting	EA	\$ 75,000.00	4	\$ 300,000	30%	\$ 90,000	\$ 390,000	Allowance per station w/ 2 platforms
Total Costs - 20.01				\$ 2,554,005		\$ 766,202	\$ 3,320,207	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.03				\$ -		\$ -	\$ -	
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.04				\$ -		\$ -	\$ -	

20.05 - Joint development						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.05	\$	-		\$	-	\$ -
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.06	\$	-		\$	-	\$ -
20.07 - Elevators, escalators						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.07	\$	-		\$	-	\$ -

D - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.01				\$ -		\$ -	\$ -	
30.02 - Light Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.02				\$ -		\$ -	\$ -	
30.03 - Heavy Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.03				\$ -		\$ -	\$ -	

30.04 - Storage or Maintenance of Way Building

NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.04	\$	-		\$	-	\$	-

30.05 - Yard and Yard Track

NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.05	\$	-		\$	-	\$	-

D - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) road pavement at stations #10, 11, 12, & 13	SF	\$ 5.00	8,000	\$ 40,000	30%	\$ 12,000	\$ 52,000	
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	6,500	\$ 32,500	30%	\$ 9,750	\$ 42,250	
Demo sidewalk at reduction & expansion areas	SF	\$ 7.96	39,090	\$ 311,156	30%	\$ 93,347	\$ 404,503	
Demo 20' w, unpaved (e) dirt median	SF	\$ 0.60	128,000	\$ 76,800	30%	\$ 23,040	\$ 99,840	
Demo curb & gutter	LF	\$ 4.00	2,606	\$ 10,424	30%	\$ 3,127	\$ 13,551	
Total Costs - 40.01				\$ 470,880		\$ 141,264	\$ 612,145	
40.02 - Site Utilities, Utility Relocation								
Survey all (e) utilities & document. Video/Grnd penetrating radar/ (e)	LF	\$ 8.26	17,825	\$ 147,235	30%	\$ 44,170	\$ 191,405	Per LF of paved total alignment
Potholing crew	LF	\$ 4.08	17,825	\$ 72,726	30%	\$ 21,818	\$ 94,544	Per LF of paved total alignment
Utility modifications @ stations	LOC	\$ 25,000.00	8	\$ 200,000	30%	\$ 60,000	\$ 260,000	Allowance @ Inlets, levels & SD adjustments throughout Glenoaks. Per platform
D. Other Glenoaks Blvd- utility modifications	LS	\$ 300,000.00	1	\$ 300,000	30%	\$ 90,000	\$ 390,000	Allowance @ Inlets, levels & SD adjustments throughout Glenoaks
Power pole relocation at (n) stations (not reqd @ center stations)								
Total Costs - 40.02				\$ 719,961		\$ 215,988	\$ 935,949	

40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments

Allowance 10% of 40.01	LS	\$ 470,880.40	10%	\$ 47,088	30%	\$ 14,126	\$ 61,214
Total Costs - 40.03				\$ 47,088		\$ 14,126	\$ 61,214

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

NOT USED				\$ -	30%	\$ -	\$ -
Total Costs - 40.04				\$ -		\$ -	\$ -

40.05 - Site structures including retaining walls, sound walls

NOT USED				\$ -	30%	\$ -	\$ -
Total Costs - 40.05				\$ -		\$ -	\$ -

40.06 - Pedestrian / bike access and accommodation, landscaping

BIKE LANES. None found

CROSSWALK

Continental crosswalk 24" wide striping	LF	\$ 5.50	9,892	\$ 54,406	30%	\$ 16,322	\$ 70,728	Assume solid 24" wide striping ?
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SIDEWALKS

Reconstruction sidewalk at reduction & expansion areas	SF	\$ 14.00	31,272	\$ 437,808	30%	\$ 131,342	\$ 569,150	
Curb & gutter	LF	\$ 40.00	2,606	\$ 104,240	30%	\$ 31,272	\$ 135,512	
Reconstruct (e) & or (n) curb ramp	EA	\$ 3,500.00	69	\$ 241,500	30%	\$ 72,450	\$ 313,950	
Sidewalk amenities at (n) stations								
Replace trees	EA	\$ 6,000.00	30	\$ 180,000	30%	\$ 54,000	\$ 234,000	At alignment generally. Allowance
Relocate parking meters	EA	\$ 1,500.00	50	\$ 75,000	30%	\$ 22,500	\$ 97,500	At alignment generally. Allowance
Work at other misc adjacent elements	LS	\$ 100,000.00	1	\$ 100,000	30%	\$ 30,000	\$ 130,000	At alignment generally. Allowance

Total Costs - 40.06				\$ 1,192,954		\$ 357,886	\$ 1,550,840
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40.07 - Automobile, bus, van accessways including roads, parking lots

Survey crew	LF	\$ 8.60	16,825	\$ 144,695	30%	\$ 43,409	\$ 188,104	Per LF of paved total alignment
Reconstruct 20'w , unpaved median into roadway on Glenoaks, See 40.01 for demo.	SF	\$ 30.45	128,000	\$ 3,897,600	30%	\$ 1,169,280	\$ 5,066,880	20'w. Incl exc (e)base/ subgrade, compact, (n) base, (n) concrete road.
(N) AC on conc subbase	TON	\$ 115.50	1,547	\$ 178,640	30%	\$ 53,592	\$ 232,232	2" thick
Milling (E) asphalte road paving.	SF	\$ 2.75	723,607	\$ 1,989,920	30%	\$ 596,976	\$ 2,586,896	Millings 145lbs/ft
Milling (E) asphalte road paving @ cross sts	SF	\$ 2.75	47,035	\$ 129,345	30%	\$ 38,804	\$ 168,149	Allowance to extend AC up all side rds for 30lf
Haul off asphalte millings	TON	\$ 33.60	9,275	\$ 311,640	30%	\$ 93,492	\$ 405,132	
AC Overlay (2") incl cross sts	TON	\$ 115.50	9,275	\$ 1,071,263	30%	\$ 321,379	\$ 1,392,641	2" thick
Replace hatched crosswalks @ cross streets	SF	\$ 3.00	16,200	\$ 48,600	30%	\$ 14,580	\$ 63,180	
8' wide street parking - striped	LF	\$ 1.40	635	\$ 889	30%	\$ 267	\$ 1,156	
Directional arrows	EA	\$ 75.00	319	\$ 23,925	30%	\$ 7,178	\$ 31,103	
Road letters "bus lane"	EA	\$ 200.00	462	\$ 92,400	30%	\$ 27,720	\$ 120,120	
Bus lane red paint	SF	\$ 3.30	345,865	\$ 1,141,355	30%	\$ 342,406	\$ 1,483,761	
Chevron pavement markings	SF	\$ 6.00	44,096	\$ 264,576	30%	\$ 79,373	\$ 343,949	8912 lf
Solid 4"or 6" wide lane line w/ markers	LF	\$ 4.00	21,835	\$ 87,340	30%	\$ 26,202	\$ 113,542	Thermo plastic yellow markers
Intermittent 4" lane line w/ markers	LF	\$ 3.75	31,091	\$ 116,591	30%	\$ 34,977	\$ 151,569	Thermo plastic yellow markers
Double yellow lane line w/ markers	LF	\$ 8.50	6,269	\$ 53,287	30%	\$ 15,986	\$ 69,272	Thermo plastic yellow markers
Median curb & gutter	LF	\$ 40.00	14,973	\$ 598,920	30%	\$ 179,676	\$ 778,596	
Landscaping in median, 75%	SF	\$ 15.00	60,336	\$ 905,040	30%	\$ 271,512	\$ 1,176,552	
Hardscape in median,25%	SF	\$ 30.00	20,112	\$ 603,360	30%	\$ 181,008	\$ 784,368	
Misc signage above pavement level	LS	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	pole signs etc
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	57,800	\$ 1,265,820	30%	\$ 379,746	\$ 1,645,566	5% x 1,155,963 sf
Total Costs - 40.07				\$ 12,975,205		\$ 3,892,562	\$ 16,867,767	

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	17,825	\$ 41,711	30%	\$ 12,513	\$ 54,224	Per LF of paved total alignment
SWPPP	LF	\$ 5.24	17,825	\$ 93,403	30%	\$ 28,021	\$ 121,424	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	17,825	\$ 798,204	30%	\$ 239,461	\$ 1,037,665	Per LF of paved total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50.	%	\$ 25,147,410	12%	\$ 3,017,689	30%	\$ 905,307	\$ 3,922,996	12% of 10-50.

Note: All Contractors overhead/profits Incl in prices.

Total Costs - 40.08				\$ 4,171,006		\$ 1,251,302	\$ 5,422,308	
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D - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	
50.02 - Traffic signals and crossing protection								
Minimal Improvements	EA	\$ 20,000.00	8	\$ 160,000	30%	\$ 48,000	\$ 208,000	Angeleno, Verdugo, Elm, Irving, Justin, Rosedale, Arden, Sanchez
Moderate Improvements	EA	\$ 150,000.00		\$ -	30%	\$ -	\$ -	
Significant Improvements	EA	\$ 250,000.00	1	\$ 250,000	30%	\$ 75,000	\$ 325,000	Providencia
Major Improvements	EA	\$ 350,000.00	10	\$ 3,500,000	30%	\$ 1,050,000	\$ 4,550,000	Alameda, Allen, Western, Sonora, Grandview, Graynold, Highland, Concord, Kenilworth, Pacific, Central
System Integration	EA	\$ -		\$ -	30%	\$ -	\$ -	
Total Costs - 50.02				\$ 3,910,000		\$ 1,173,000	\$ 5,083,000	
50.03 - Traction power supply: substations								
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 50.03				\$ -		\$ -	\$ -	

50.04 - Traction power distribution: catenary and third rail												
NOT USED												
					\$	-	30%	\$	-	\$	-	
Total Costs - 50.04					\$	-		\$	-	\$	-	
50.05 - Communications												
Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$	150,000.00	8	\$	1,200,000	30%	\$	360,000	\$	1,560,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$	175.00	5,280	\$	924,000	30%	\$	277,200	\$	1,201,200	1/4 mile of duct construction per station
Total Costs - 50.05					\$	2,124,000		\$	637,200	\$	2,761,200	
50.06 - Fare collection system and equipment												
Ticket Vending Machine	EA	\$	120,000.00	-	\$	-	30%	\$	-	\$	-	1 per platform
Total Costs - 50.06					\$	-		\$	-	\$	-	
50.07 - Central Control												
NOT USED												
					\$	-	30%	\$	-	\$	-	
					\$	-	30%	\$	-	\$	-	
Total Costs - 50.07					\$	-		\$	-	\$	-	

D - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 60.01				\$	-		\$	-
60.02 - Relocation of existing households and businesses								
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 60.02				\$	-		\$	-

D - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	
70.04 - Bus				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	
70.05 - Other				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.05				\$ -		\$ -	\$ -	
70.06 - Non-revenue vehicles				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.06				\$ -		\$ -	\$ -	
70.07 - Spare parts				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.07				\$ -		\$ -	\$ -	

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option E1

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	2,643	793		3,436	15.3%	10.0%	258	3,693
20.01 At-grade station, stop, shelter, mall, terminal, platform		2,643	793	30%	3,436	15.3%	1.1%	258	3,693
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	11,473	3,442		14,914	66.3%	43.6%	1,119	16,033
40.01 Demolition, Clearing, Earthwork		133	40	30%	172	0.8%	0.1%	13	185
40.02 Site Utilities, Utility Relocation		1,556	467	30%	2,023	9.0%	0.7%	152	2,175
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		13	4	30%	17	0.1%	0.0%	1	19
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		1,366	410	30%	1,776	7.9%	0.6%	133	1,910
40.07 Automobile, bus, van accessways including roads, parking lots		5,710	1,713	30%	7,423	33.0%	2.5%	557	7,980
40.08 Temporary Facilities and other indirect costs during construction		2,694	808	30%	3,503	15.6%	1.2%	263	3,765
50 SYSTEMS	0.00	3,194	958		4,152	18.5%	12.1%	311	4,464
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		1,070	321	30%	1,391	6.2%	0.5%	104	1,495
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		2,124	637	30%	2,761	12.3%	0.9%	207	2,968
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	17,309	5,193		22,502	100.0%	65.8%	1,688	24,190
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	200	60		260		0.8%	26	286
60.01 Purchase or lease of real estate		200	60	30%	260	1.2%	0.1%	26	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	8,326	0		8,326	37.0%	24.3%	462	8,788
80.01 Project Development		1,350			1,350	6.0%	0.3%	61	1,411
80.02 Final Design		1,800			1,800	8.0%	0.4%	81	1,881
80.03 Project Management for Design and Construction		2,250			2,250	10.0%	0.5%	101	2,351
80.04 Construction Administration & Management		1,125			1,125	5.0%	0.4%	84	1,209
80.05 Professional Liability and other Non-Construction Insurance		225			225	1.0%	0.1%	17	242
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		900			900	4.0%	0.3%	68	968
80.07 Surveys, Testing, Investigation, Inspection		450			450	2.0%	0.2%	34	484
80.08 Start up		225			225	1.0%	0.1%	17	242
Subtotal (10 - 80)	0.00	25,835	5,253		31,088		90.9%		33,264
90 UNALLOCATED CONTINGENCY					3,109		9%		3,326
Subtotal (10 - 90)	0.00				34,197		100%		36,590
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				34,197		100%		36,590
Allocated Contingency as % of Base Yr Dollars w/o Contingency						20.33%			
Unallocated Contingency as % of Base Yr Dollars w/o Contingency						12.03%			
Total Contingency as % of Base Yr Dollars w/o Contingency						32.37%			
Unallocated Contingency as % of Subtotal (10 - 80)						10.00%			
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$31,102
YOE Total Project Cost per Mile (X000)								High (+25%)	\$45,738

E1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Route Option E1. Paved.	LF		11,837					
Proposed Project - Route Option E1. Unimproved.	LF	n/a	-					
			11,837					
			2.24mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
NUMBER OF STATIONS. Station 14 , 15, 16, 17. Side Demo. (e) sidewalk. See 40.01			4 stations, 8 platforms					
Red curve for bus maneuvering	LF	\$ 5.00	640	\$ 3,200	30%	\$ 960	\$ 4,160	80' ea platform 160 lf ea station
Concrete platform, 8" depth	SF	\$ 66.74	8,760	\$ 584,642	30%	\$ 175,393	\$ 760,035	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	8,980	\$ 503,329	30%	\$ 150,999	\$ 654,328	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side stations. See 40.0								4 stations / 8 platforms w/ sidewalks. 980 lf
Tactile surfacing	SF	\$ 50.00	1,560	\$ 78,000	30%	\$ 23,400	\$ 101,400	
Shelter/Seating/Screen	EA	\$ 18,000.00	32	\$ 576,000	30%	\$ 172,800	\$ 748,800	4 per platform 3 for shorter platform
Railing (SS) None								
Station Marker	EA	\$ 35,000.00	8	\$ 280,000	30%	\$ 84,000	\$ 364,000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.00	16	\$ 88,000	30%	\$ 26,400	\$ 114,400	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	8	\$ 80,000	30%	\$ 24,000	\$ 104,000	1 per platform
Station Signage & misc.	EA	\$ 10,000.00	4	\$ 40,000	30%	\$ 12,000	\$ 52,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	8	\$ 9,600	30%	\$ 2,880	\$ 12,480	2 per platform
Electric power supply & platform lighting	EA	\$ 100,000.00	4	\$ 400,000	30%	\$ 120,000	\$ 520,000	Allowance per station w/ 2 platforms
Total Costs - 20.01				\$ 2,642,771		\$ 792,831	\$ 3,435,603	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	

20.03 - Underground station, stop, shelter, mall, terminal, platform						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.03	\$	-		\$	-	\$ -
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.04	\$	-		\$	-	\$ -
20.05 - Joint development						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.05	\$	-		\$	-	\$ -
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.06	\$	-		\$	-	\$ -
20.07 - Elevators, escalators						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.07	\$	-		\$	-	\$ -

E1 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.01				\$ -		\$ -	\$ -	
30.02 - Light Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.02				\$ -		\$ -	\$ -	
30.03 - Heavy Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.03				\$ -		\$ -	\$ -	
30.04 - Storage or Maintenance of Way Building								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.04				\$ -		\$ -	\$ -	
30.05 - Yard and Yard Track								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.05				\$ -		\$ -	\$ -	

E1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at stations	SF	\$ 10.00	8,760	\$ 87,600	30%	\$ 26,280	\$ 113,880	14, 15, 16, 17, Demo & haul off
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	8,980	\$ 44,900	30%	\$ 13,470	\$ 58,370	
Total Costs - 40.01				\$ 132,500		\$ 39,750	\$ 172,250	
40.02 - Site Utilities, Utility Relocation								
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	LF	\$ 8.26	11,837	\$ 97,774	30%	\$ 29,332	\$ 127,106	Per LF of total alignment
Potholing crew	LF	\$ 4.08	11,837	\$ 48,295	30%	\$ 14,488	\$ 62,783	Per LF of total alignment
Utility modifications @ stations	LOC	\$ 125,000.00	8	\$ 1,000,000	30%	\$ 300,000	\$ 1,300,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 8 platforms
E1 Other Broadway- utility modifications	LS	\$ 250,000.00	1	\$ 250,000	30%	\$ 75,000	\$ 325,000	
Power pole relocation @ stations	LS	\$ 20,000.00	8	\$ 160,000	30%	\$ 48,000	\$ 208,000	Allowance. 1 per platform
Total Costs - 40.02				\$ 1,556,069		\$ 466,821	\$ 2,022,889	
40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments								
Allowance 10% of 40.01	LS	\$ 132,500.00	10%	\$ 13,250	30%	\$ 3,975	\$ 17,225	
Total Costs - 40.03				\$ 13,250		\$ 3,975	\$ 17,225	

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

Not used		\$	-		30%	\$	-	\$	-
		\$	-		30%	\$	-	\$	-
Total Costs - 40.04		\$	-			\$	-	\$	-

40.05 - Site structures including retaining walls, sound walls

Not used		\$	-		30%	\$	-	\$	-
		\$	-		30%	\$	-	\$	-
Total Costs - 40.05		\$	-			\$	-	\$	-

40.06 - Pedestrian / bike access and accommodation, landscaping

BIKE LANES

4'wide bike lane - single 6" stripe	LF	\$	1.32	3,618	\$	4,776	30%	\$	1,433	\$	6,208
4'w bike lane - green paint	SF	\$	3.30	14,472	\$	47,758	30%	\$	14,327	\$	62,085
Road symbol "bike lane" incl small directional arrow	EA	\$	200.00	26	\$	5,200	30%	\$	1,560	\$	6,760

CROSSWALK

Continental crosswalk 24" wide striping	LF	\$	5.50	8,141	\$	44,776	30%	\$	13,433	\$	58,208	Assume solid 24" wide striping ?
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SIDEWALKS

Curb & gutter	LF	\$	40.00	2,606	\$	104,240	30%	\$	31,272	\$	135,512	
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (980lf)	SF	\$	35.00	8,760	\$	306,600	30%	\$	91,980	\$	398,580	(e) sidewalk at stations is 980LF varies 6'-16'w
New 5'w sidewalk	SF	\$	9.15	2,085	\$	19,078	30%	\$	5,723	\$	24,801	417 lf x5'w
Reconstruct (e) & or (n) curb ramp	EA	\$	3,500.00	64	\$	224,000	30%	\$	67,200	\$	291,200	

Sidewalk amenities at (n) stations

Replace street trees	EA	\$	6,000.00	20	\$	120,000	30%	\$	36,000	\$	156,000	Allowance based on Google
Work at other misc adjacent elements	LS	\$	100,000.00	4	\$	400,000	30%	\$	120,000	\$	520,000	Allowance based on Google
Relocate parking meters	EA	\$	1,500.00	60	\$	90,000	30%	\$	27,000	\$	117,000	

Total Costs - 40.06				\$	1,366,427			\$	409,928	\$	1,776,355
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40.07 - Automobile, bus, van accessways including roads, parking lots

Survey crew	LF	\$ 8.60	11,837	\$ 101,798	30%	\$ 30,539	\$ 132,338	Per LF of total alignment
Milling (E) asphalte road paving.	SF	\$ 2.75	735,867	\$ 2,023,634	30%	\$ 607,090	\$ 2,630,725	
Milling (E) asphalte road paving@ cross sts	SF	\$ 2.75	45,600	\$ 125,400	30%	\$ 37,620	\$ 163,020	Allowance to extend AC up all side rds for 30lf
Haul off asphalte millings	TON	\$ 33.60	9,405	\$ 316,008	30%	\$ 94,802	\$ 410,810	781467 x2"x145lbs / 2000=
AC Overlay (2") incl cross sts	TON	\$ 115.50	9,405	\$ 1,086,278	30%	\$ 325,883	\$ 1,412,161	145lbs/CF. Allow (n) 2" AC
Replace hatched crosswalks @cross streets	SF	\$ 3.00	16,200	\$ 48,600	30%	\$ 14,580	\$ 63,180	
7' wide street parking - striped	LF	\$ 1.86	9,768	\$ 18,168	30%	\$ 5,451	\$ 23,619	Allow 9768 lf of thermoplastic striping
8' wide street parking - striped	LF	\$ 1.98	1,888	\$ 3,738	30%	\$ 1,121	\$ 4,860	Allow 1888 lf of thermoplastic striping
Directional arrows	EA	\$ 75.00	276	\$ 20,700	30%	\$ 6,210	\$ 26,910	Thermoplastic
Road letters "bus lane"	EA	\$ 200.00	497	\$ 99,400	30%	\$ 29,820	\$ 129,220	Thermoplastic
Bus lane red paint	SF	\$ 3.30	196,395	\$ 648,104	30%	\$ 194,431	\$ 842,535	Thermoplastic red, 12' w
Chevron pavement markings	SF	\$ 6.00	8,667	\$ 52,002	30%	\$ 15,601	\$ 67,603	1575 lf
Solid 4" or 6" wide lane line w/ markers	LF	\$ 4.00	23,404	\$ 93,616	30%	\$ 28,085	\$ 121,701	Thermoplastic & yellow markers
Intermittent 4" lane line w/ markers	LF	\$ 3.75	2,460	\$ 9,225	30%	\$ 2,768	\$ 11,993	Thermoplastic
Double yellow lane line w/ markers	LF	\$ 8.50	8,533	\$ 72,531	30%	\$ 21,759	\$ 94,290	Thermoplastic
Misc signage above pavement level	LS	\$ 30,000.00	1	\$ 30,000	30%	\$ 9,000	\$ 39,000	pole signs etc
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	43,871	\$ 960,775	30%	\$ 288,232	\$ 1,249,007	5% x 87,432 sf

Total Costs - 40.07

\$ 5,709,977

\$ 1,712,993

\$ 7,422,970

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	11,837	\$ 27,699	30%	\$ 8,310	\$ 36,008	Per LF of paved total alignment
SWPPP	LF	\$ 5.24	11,837	\$ 62,026	30%	\$ 18,608	\$ 80,634	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	11,837	\$ 530,061	30%	\$ 159,018	\$ 689,079	Per LF of paved total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 15,454,778	12%	\$ 1,854,573	30%	\$ 556,372	\$ 2,410,945	12% of 10-50.

Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08				\$ 2,694,359		\$ 808,308	\$ 3,502,666	
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E1 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	

50.02 - Traffic signals and crossing protection

Minimal Improvements	EA	\$ 20,000.00	21	\$ 420,000	30%	\$ 126,000	\$ 546,000	Burchett, Sanchez, Foran, Milford, Lexington, California, Wilson, Broadway, Orange, Brand, Artsakh, Louise, Kenwood, Jackson, Isabel, Glendale, Everett, Adams, Chevy Chase, Verdugo, Lukens,
Moderate Improvements	EA	\$ 150,000.00	1	\$ 150,000	30%	\$ 45,000	\$ 195,000	Cedar
Significant Improvements	EA	\$ 250,000.00	2	\$ 500,000	30%	\$ 150,000	\$ 650,000	Arden, Pioneer
Major Improvements	EA	\$ 350,000.00		\$ -	30%	\$ -	\$ -	
System Integration	EA	\$ -		\$ -	30%	\$ -	\$ -	
Total Costs - 50.02				\$ 1,070,000		\$ 321,000	\$ 1,391,000	

50.03 - Traction power supply: substations

NOT USED			\$	-		30%	\$	-	\$	-
			\$	-		30%	\$	-	\$	-
Total Costs - 50.03			\$	-			\$	-	\$	-

50.04 - Traction power distribution: catenary and third rail

NOT USED			\$	-		30%	\$	-	\$	-
			\$	-		30%	\$	-	\$	-
Total Costs - 50.04			\$	-			\$	-	\$	-

50.05 - Communications

Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	8	\$ 1,200,000	30%	\$ 360,000	\$ 1,560,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 175.00	5,280	\$ 924,000	30%	\$ 277,200	\$ 1,201,200	1/4 mile of duct construction per station
Total Costs - 50.05				\$ 2,124,000		\$ 637,200	\$ 2,761,200	

50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	-	\$ -	30%	\$ -	\$ -	1 per platform
Total Costs - 50.06				\$ -		\$ -	\$ -	

50.07 - Central Control

NOT USED			\$	-		30%	\$	-	\$	-
			\$	-		30%	\$	-	\$	-
Total Costs - 50.07			\$	-			\$	-	\$	-

E1 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	4	\$ 200,000	30%	\$ 60,000	\$ 260,000	
Allowance, (n) signalized intersection, incl Q jump. None	EA	\$ -			30%	\$ -	\$ -	
Total Costs - 60.01				\$ 200,000		\$ 60,000	\$ 260,000	
60.02 - Relocation of existing households and businesses								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

E1 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	

70.04 - Bus						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.04	\$	-		\$	-	\$ -
70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option E2

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	3,157	947		4,103	14.3%	9.4%	308	4,411
20.01 At-grade station, stop, shelter, mall, terminal, platform		3,157	947	30%	4,103	14.3%	1.1%	308	4,411
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	14,738	4,421		19,160	66.8%	43.9%	1,437	20,597
40.01 Demolition, Clearing, Earthwork		207	62	30%	269	0.9%	0.1%	20	289
40.02 Site Utilities, Utility Relocation		1,210	363	30%	1,573	5.5%	0.4%	118	1,691
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		21	6	30%	27	0.1%	0.0%	2	29
40.04 Environmental mitigation, e. a. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		2,330	699	30%	3,029	10.6%	0.8%	227	3,256
40.07 Automobile, bus, van accessways including roads, parking lots		7,613	2,284	30%	9,897	34.5%	2.6%	742	10,639
40.08 Temporary Facilities and other indirect costs during construction		3,358	1,007	30%	4,365	15.2%	1.1%	327	4,693
50 SYSTEMS	0.00	4,155	1,247		5,402	18.8%	12.4%	405	5,807
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		1,500	450	30%	1,950	6.8%	0.5%	146	2,096
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		2,655	797	30%	3,452	12.0%	0.9%	259	3,710
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	22,050	6,615		28,665	100.0%	65.7%	2,150	30,814
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	300	90		390	0.9%	0.9%	39	429
60.01 Purchase or lease of real estate		300	90	30%	390	1.4%	0.1%	39	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	10,606	0		10,606	37.0%	24.3%	589	11,195
80.01 Project Development		1,720			1,720	6.0%	0.3%	77	1,797
80.02 Final Design		2,293			2,293	8.0%	0.4%	103	2,396
80.03 Project Management for Design and Construction		2,866			2,866	10.0%	0.5%	129	2,995
80.04 Construction Administration & Management		1,433			1,433	5.0%	0.4%	107	1,541
80.05 Professional Liability and other Non-Construction Insurance		287			287	1.0%	0.1%	21	308
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		1,147			1,147	4.0%	0.3%	86	1,233
80.07 Surveys, Testing, Investigation, Inspection		573			573	2.0%	0.2%	43	616
80.08 Start up		287			287	1.0%	0.1%	21	308
Subtotal (10 - 80)	0.00	32,956	6,705		39,661	90.9%	90.9%		42,438
90 UNALLOCATED CONTINGENCY					3,966		9%		4,244
Subtotal (10 - 90)	0.00				43,627		100%		46,682
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				43,627		100%		46,682
Allocated Contingency as % of Base Yr Dollars w/o Contingency					20.35%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					12.03%				
Total Contingency as % of Base Yr Dollars w/o Contingency					32.38%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$39,680
YOE Total Project Cost per Mile (X000)								High (+25%)	\$58,353

E2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Route Option E2. Paved.	LF	n/a	14,812					
Route Option E2. Unimproved.	LF	n/a	-					
			14,812					
			2.81 mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
NUMBER OF STATIONS. Station 14, 18, 19, 20, 21. Side								
								Stations 14,18,19,20,21. is 9660sf. 905 lf.
								See 40.01
Demo. (e) sidewalk. See 40.01								See 40.01
Red curve for bus maneuvering	LF	\$ 5.00	800	\$ 4,000	30%	\$ 1,200	\$ 5,200	80' ea platform 160 lf ea station
Concrete platform, 8" depth	SF	\$ 66.74	9,660	\$ 644,708	30%	\$ 193,413	\$ 838,121	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	10,050	\$ 563,303	30%	\$ 168,991	\$ 732,293	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side stations. See 40.05.								5 stations / 10 platforms w/ sidewalks.
								980 lf
Tactile surfacing	SF	\$ 50.00	1,810	\$ 90,500	30%	\$ 27,150	\$ 117,650	
Shelter/Seating/Screen	EA	\$ 18,000.00	40	\$ 720,000	30%	\$ 216,000	\$ 936,000	4 per platform
Railing (SS)	LF	\$ 350.00	-	\$ -	30%	\$ -	\$ -	
Station Marker	EA	\$ 35,000.00	10	\$ 350,000	30%	\$ 105,000	\$ 455,000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.00	20	\$ 110,000	30%	\$ 33,000	\$ 143,000	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	10	\$ 100,000	30%	\$ 30,000	\$ 130,000	1 per platform
Station Signage & misc.	EA	\$ 10,000.00	5	\$ 50,000	30%	\$ 15,000	\$ 65,000	Code, wayfaring, system, safety.
								allowance Per station
Bike rack	EA	\$ 1,200.00	20	\$ 24,000	30%	\$ 7,200	\$ 31,200	2 per platform
Electric power supply & platform lighting	EA	\$ 100,000.00	5	\$ 500,000	30%	\$ 150,000	\$ 650,000	Allowance per station w/ 2 platforms
Total Costs - 20.01				\$ 3,156,511		\$ 946,953	\$ 4,103,464	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	

20.03 - Underground station, stop, shelter, mall, terminal, platform						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.03	\$	-		\$	-	\$ -
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.04	\$	-		\$	-	\$ -
20.05 - Joint development						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.05	\$	-		\$	-	\$ -
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.06	\$	-		\$	-	\$ -
20.07 - Elevators, escalators						
NOT USED	\$	-	30%	\$	-	\$ -
Total Costs - 20.07	\$	-		\$	-	\$ -

E2 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.01				\$ -		\$ -	\$ -	

30.02 - Light Maintenance Facility						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 30.02	\$	-		\$	-	\$ -
30.03 - Heavy Maintenance Facility						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 30.03	\$	-		\$	-	\$ -
30.04 - Storage or Maintenance of Way Building						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 30.04	\$	-		\$	-	\$ -
30.05 - Yard and Yard Track						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 30.05	\$	-		\$	-	\$ -

E2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at stations	SF	\$ 10.00	12,000	\$ 120,000	30%	\$ 36,000	\$ 156,000	14, 15, 16, 17,18. Demo & haul off
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	10,050	\$ 50,250	30%	\$ 15,075	\$ 65,325	
Demo sidewalk at reduction & expansion areas	SF	\$ 7.96	4,312	\$ 34,324	30%	\$ 10,297	\$ 44,621	
Demo curb & gutter	LF	\$ 4.00	539	\$ 2,156	30%	\$ 647	\$ 2,803	
Total Costs - 40.01				\$ 206,730		\$ 62,019	\$ 268,748	

40.02 - Site Utilities, Utility Relocation

Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	LF	\$ 8.26	15,000	\$ 123,900	30%	\$ 37,170	\$ 161,070	Per LF of total alignment
Potholing crew	LF	\$ 4.08	15,000	\$ 61,200	30%	\$ 18,360	\$ 79,560	Per LF of total alignment
Utility modifications @ stations	LOC	\$ 125,000.00	5	\$ 625,000	30%	\$ 187,500	\$ 812,500	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 9 platforms
E2 Other Colorado- utility modifications.	LS	\$ 200,000.00	1	\$ 200,000	30%	\$ 60,000	\$ 260,000	
Power pole relocation	EA	\$ 20,000.00	10	\$ 200,000	30%	\$ 60,000	\$ 260,000	Allowance
Total Costs - 40.02				\$ 1,210,100		\$ 363,030	\$ 1,573,130	

40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments

Allowance 10% of 40.01	LS	\$ 206,729.52	10%	\$ 20,673	30%	\$ 6,202	\$ 26,875	
Total Costs - 40.03				\$ 20,673		\$ 6,202	\$ 26,875	

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

NOT USED				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 40.04				\$ -		\$ -	\$ -	

40.05 - Site structures including retaining walls, sound walls

NOT USED				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 40.05				\$ -		\$ -	\$ -	

40.06 - Pedestrian / bike access and accommodation, landscaping

BIKE LANES

6'wide bike lane - single 6" stripe	LF	\$ 1.32	5,012	\$ 6,616	30%	\$ 1,985	\$ 8,601
6'w bike lane - green paint	SF	\$ 3.30	22,836	\$ 75,359	30%	\$ 22,608	\$ 97,966
Road symbol "bike lane" incl small directional arrow	EA	\$ 200.00	33	\$ 6,600	30%	\$ 1,980	\$ 8,580

CROSSWALK

Continental crosswalk 24" wide striping	LF	\$ 5.50	43,809	\$ 240,950	30%	\$ 72,285	\$ 313,234	assume solid 24" wide striping
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Bike lane margins

Concrete separator at contraflow bike lanes	LF	\$ 90.00	6,186	\$ 556,740	30%	\$ 167,022	\$ 723,762	2769 lf painted conc curb 3'wx8"h,
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SIDEWALKS

Reconstruction sidewalk at reduction & expansion areas	SF	\$ 14.00	7,588	\$ 106,232	30%	\$ 31,870	\$ 138,102	
New 4'w sidewalk	LF	\$ 8.50	254	\$ 2,159	30%	\$ 648	\$ 2,807	254x4= 1016sf
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (905lf)	SF	\$ 35.00	9,660	\$ 338,100	30%	\$ 101,430	\$ 439,530	(e) sidewalk at stations is 905lf varies 6'-16'w
Reconstruct (e) & or (n) curb ramp	EA	\$ 3,500.00	82	\$ 287,000	30%	\$ 86,100	\$ 373,100	

Sidewalk amenities at (n) stations

Replace street trees	EA	\$ 6,000.00	20	\$ 120,000	30%	\$ 36,000	\$ 156,000	Allowance based on Google
Work at other misc adjacent elements	EA	\$ 100,000.00	5	\$ 500,000	30%	\$ 150,000	\$ 650,000	Allowance based on Google
Relocate parking meters	EA	\$ 1,500.00	60	\$ 90,000	30%	\$ 27,000	\$ 117,000	Allowance based on Google

Total Costs - 40.06

\$ 2,329,755 \$ 698,927 \$ 3,028,682

40.07 - Automobile, bus, van accessways including roads, parking lots

Survey crew	LF	\$ 8.60	14,812	\$ 127,383	30%	\$ 38,215	\$ 165,598	Per LF of total alignment
Milling (E) asphalte road paving.	SF	\$ 2.75	1,049,636	\$ 2,886,499	30%	\$ 865,950	\$ 3,752,449	
Milling (E) asphalte road paving @ cross sts	SF	\$ 2.75	40,967	\$ 112,658	30%	\$ 33,798	\$ 146,456	Allowance to extend AC up all side rds for 30lf
Haul off asphalte millings	TON	\$ 33.60	13,126	\$ 441,034	30%	\$ 132,310	\$ 573,344	
AC Overlay (2") incl cross sts	TON	\$ 115.50	13,126	\$ 1,516,053	30%	\$ 454,816	\$ 1,970,869	145lbs/CF. (n) asphalt. Allow (n) 2" AC
Replace hatched crosswalks @ cross streets	SF	\$ 3.00	14,800	\$ 44,400	30%	\$ 13,320	\$ 57,720	
7' & 8' wide street parking - striped	LF	\$ 1.86	5,614	\$ 10,442	30%	\$ 3,133	\$ 13,575	

Directional arrows	EA	\$ 75.00	325	\$ 24,375	30%	\$ 7,313	\$ 31,688	Thermoplastic
Road letters "bus lane"	EA	\$ 200.00	532	\$ 106,400	30%	\$ 31,920	\$ 138,320	Thermoplastic
Bus lane red paint	SF	\$ 3.30	232,914	\$ 768,616	30%	\$ 230,585	\$ 999,201	Thermoplastic red, 12' w
Chevron pavement markings	SF	\$ 6.00	55,569	\$ 333,414	30%	\$ 100,024	\$ 433,438	5708 lf
Solid 4" or 6" wide lane line w/ markers	LF	\$ 4.00	30,766	\$ 123,064	30%	\$ 36,919	\$ 159,983	Thermo plastic & \$4.44 ea yellow markers
Intermittent 4" lane line w/ markers	LF	\$ 3.75	7,448	\$ 27,930	30%	\$ 8,379	\$ 36,309	Thermoplastic
Double yellow lane line w/ markers	LF	\$ 8.50	5,980	\$ 50,830	30%	\$ 15,249	\$ 66,079	Thermoplastic
Solid striping	LF	\$ 1.98	28,027	\$ 55,493	30%	\$ 16,648	\$ 72,141	
Misc signage above pavement level	LS	\$ 30,000.00	1	\$ 30,000	30%	\$ 9,000	\$ 39,000	pole signs etc
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	43,577	\$ 954,336	30%	\$ 286,301	\$ 1,240,637	5% x 871555 sf

Total Costs - 40.07				\$ 7,612,928		\$ 2,283,878	\$ 9,896,807	
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40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	14,812	\$ 34,660	30%	\$ 10,398	\$ 45,058	Per LF of total alignment
SWPPP	LF	\$ 5.24	14,812	\$ 77,615	30%	\$ 23,284	\$ 100,899	Per LF of total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	14,812	\$ 663,281	30%	\$ 198,984	\$ 862,266	Per LF of total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 19,687,253	12%	\$ 2,362,470	30%	\$ 708,741	\$ 3,071,211	12% of 10-50.

Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08				\$ 3,358,027		\$ 1,007,408	\$ 4,365,435	
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E2 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	

50.02 - Traffic signals and crossing protection

Minimal Improvements	EA	\$ 20,000.00	15	\$ 300,000	30%	\$ 90,000	\$ 390,000	Burchett, Sanchez, Foran, Milford, Lexington, California, Wilson, Broadway, Private St, Americana, Louise, Everett, Cedar, Adams, Chevy Chase,
Moderate Improvements	EA	\$ 150,000.00	3	\$ 450,000	30%	\$ 135,000	\$ 585,000	Glendale, Verdugo, Campus,
Significant Improvements	EA	\$ 250,000.00	3	\$ 750,000	30%	\$ 225,000	\$ 975,000	Arden, Brand, Pioneer
Major Improvements	EA	\$ 350,000.00		\$ -	30%	\$ -	\$ -	
System Integration	EA	\$ -		\$ -	30%	\$ -	\$ -	
Total Costs - 50.02				\$ 1,500,000		\$ 450,000	\$ 1,950,000	

50.03 - Traction power supply: substations

NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.03				\$ -		\$ -	\$ -	

50.04 - Traction power distribution: catenary and third rail

NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.04				\$ -		\$ -	\$ -	

50.05 - Communications

Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	10	\$ 1,500,000	30%	\$ 450,000	\$ 1,950,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 175.00	6,600	\$ 1,155,000	30%	\$ 346,500	\$ 1,501,500	1/4 mile of duct construction per station
Total Costs - 50.05				\$ 2,655,000		\$ 796,500	\$ 3,451,500	

50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	-	\$ -	30%	\$ -	\$ -	1 per platform
Total Costs - 50.06				\$ -		\$ -	\$ -	

E2 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	5	\$ 250,000	30%	\$ 75,000	\$ 325,000	
Allowance, (n) signalized intersection, incl Q jump.	EA	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	
Total Costs - 60.01				\$ 300,000		\$ 90,000	\$ 390,000	
60.02 - Relocation of existing households and businesses								
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

E2 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	
70.04 - Bus								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	

70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option E3

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	1,338	401		1,739	27.5%	18.0%	130	1,870
20.01 At-grade station, stop, shelter, mall, terminal, platform		1,338	401	30%	1,739	27.5%	2.1%	130	1,870
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				0
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				0
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				0
20.05 Joint development		0	0		0				0
20.06 Automobile parking multi-story structure		0	0		0				0
20.07 Elevators, escalators		0	0		0				0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	1,867	560		2,426	38.4%	25.1%	175	2,602
40.01 Demolition, Clearing, Earthwork		59	18	30%	77	1.2%	0.1%	6	83
40.02 Site Utilities, Utility Relocation		688	206	30%	894	14.1%	1.1%	67	961
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		6	2	30%	8	0.1%	0.0%	1	8
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		70	21		91	1.4%	0.0%		
40.06 Pedestrian / bike access and accommodation, landscaping		482	145	30%	627	9.9%	0.7%	47	674
40.07 Automobile, bus, van accessways including roads, parking lots		40	12	30%	52	0.8%	0.1%	4	56
40.08 Temporary Facilities and other indirect costs during construction		521	156	30%	678	10.7%	0.8%	51	729
50 SYSTEMS	0.00	1,662	499		2,161	34.2%	22.3%	162	2,323
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		0	0		0				
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		1,662	499	30%	2,161	34.2%	2.6%	162	2,323
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	4,866	1,460		6,326	100.0%	65.4%	468	6,794
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	100	30		130		1.3%	13	143
60.01 Purchase or lease of real estate		100	30	30%	130			13	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	2,341	0		2,341	37.0%	24.2%	130	2,471
80.01 Project Development		380			380			17	397
80.02 Final Design		506			506			23	529
80.03 Project Management for Design and Construction		633			633			28	661
80.04 Construction Administration & Management		316			316			24	340
80.05 Professional Liability and other Non-Construction Insurance		63			63			5	68
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		253			253			19	272
80.07 Surveys, Testing, Investigation, Inspection		127			127			9	136
80.08 Start up		63			63			5	68
Subtotal (10 - 80)	0.00	7,307	1,490		8,797		90.9%		9,408
90 UNALLOCATED CONTINGENCY					880		9%		941
Subtotal (10 - 90)	0.00				9,677		100%		10,348
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				9,677		100%		10,348
Allocated Contingency as % of Base Yr Dollars w/o Contingency					20.39%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					12.04%				
Total Contingency as % of Base Yr Dollars w/o Contingency					32.43%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$8,796
YOE Total Project Cost per Mile (X000)								High (+25%)	\$12,935

E3 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description																																																																																																																																																																																													
Route Option E3. Paved	LF	n/a	-																																																																																																																																																																																																		
Route Option E3. Unimproved	LF	n/a	-																																																																																																																																																																																																		
			-																																																																																																																																																																																																		
<p>This route is on the (e) Ventura Freeway. There are only 2 stations on E3. No other improvements.</p> <p>E3 uses (e) on & off ramps @ Sanchez /Goode and at Harvey</p> <p>20.01 - At-grade station, stop, shelter, mall, terminal, platform</p> <p>NUMBER OF STATIONS. Station 22,23.. Side Stations 22&23 is 4200 sf. 350 lf.</p> <p>Demo. (e) sidewalk. See 40.01 See 40.01</p> <tr> <td>Red curve for bus maneuvering</td> <td>LF</td> <td>\$ 5.00</td> <td>320</td> <td>\$ 1,600</td> <td>30%</td> <td>\$ 480</td> <td>\$ 2,080</td> <td>80' ea platform 160 lf ea station</td> </tr> <tr> <td>Concrete platform, 8" depth</td> <td>SF</td> <td>\$ 66.74</td> <td>4,200</td> <td>\$ 280,308</td> <td>30%</td> <td>\$ 84,092</td> <td>\$ 364,400</td> <td>Incl exc, rock base, conc footings/SOG.</td> </tr> <tr> <td>Concrete pad for bus parking</td> <td>SF</td> <td>\$ 56.05</td> <td>3,440</td> <td>\$ 192,812</td> <td>30%</td> <td>\$ 57,844</td> <td>\$ 250,656</td> <td>Assume 12". Incl exc, rock base, conc</td> </tr> <tr> <td>Sidewalk modifications @ side stations. See 40.05.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2 stations / 4 platforms w/ sidewalks. 980</td> </tr> <tr> <td>Tactile surfacing</td> <td>SF</td> <td>\$ 50.00</td> <td>700</td> <td>\$ 35,000</td> <td>30%</td> <td>\$ 10,500</td> <td>\$ 45,500</td> <td></td> </tr> <tr> <td>Shelter/Seating/Screen</td> <td>EA</td> <td>\$ 18,000.00</td> <td>14</td> <td>\$ 252,000</td> <td>30%</td> <td>\$ 75,600</td> <td>\$ 327,600</td> <td></td> </tr> <tr> <td>Railing (SS)</td> <td>LF</td> <td>\$ 350.00</td> <td>350</td> <td>\$ 122,500</td> <td>30%</td> <td>\$ 36,750</td> <td>\$ 159,250</td> <td></td> </tr> <tr> <td>Station Marker</td> <td>EA</td> <td>\$ 35,000.00</td> <td>4</td> <td>\$ 140,000</td> <td>30%</td> <td>\$ 42,000</td> <td>\$ 182,000</td> <td>2 per station for this group</td> </tr> <tr> <td>Trash Receptacle</td> <td>EA</td> <td>\$ 5,500.00</td> <td>8</td> <td>\$ 44,000</td> <td>30%</td> <td>\$ 13,200</td> <td>\$ 57,200</td> <td>2 per platform</td> </tr> <tr> <td>Advertising Kiosk</td> <td>EA</td> <td>\$ 10,000.00</td> <td>4</td> <td>\$ 40,000</td> <td>30%</td> <td>\$ 12,000</td> <td>\$ 52,000</td> <td>1 per platform</td> </tr> <tr> <td>Station Signage & misc.</td> <td>EA</td> <td>\$ 10,000.00</td> <td>2</td> <td>\$ 20,000</td> <td>30%</td> <td>\$ 6,000</td> <td>\$ 26,000</td> <td>Code, wayfaring, system, safety.</td> </tr> <tr> <td>Bike rack</td> <td>EA</td> <td>\$ 1,200.00</td> <td>8</td> <td>\$ 9,600</td> <td>30%</td> <td>\$ 2,880</td> <td>\$ 12,480</td> <td>2 per platform</td> </tr> <tr> <td>Electric power supply & platform lighting</td> <td>EA</td> <td>\$ 100,000.00</td> <td>2</td> <td>\$ 200,000</td> <td>30%</td> <td>\$ 60,000</td> <td>\$ 260,000</td> <td>Allowance per station w/ 2 platforms</td> </tr> <tr> <td>Total Costs - 20.01</td> <td></td> <td></td> <td></td> <td>\$ 1,337,820</td> <td></td> <td>\$ 401,346</td> <td>\$ 1,739,166</td> <td></td> </tr> <tr> <td colspan="9">20.02 - Aerial station, stop, shelter, mall, terminal, platform</td> </tr> <tr> <td>NOT USED</td> <td></td> <td></td> <td></td> <td>\$ -</td> <td>30%</td> <td>\$ -</td> <td>\$ -</td> <td></td> </tr> <tr> <td>Total Costs - 20.02</td> <td></td> <td></td> <td></td> <td>\$ -</td> <td></td> <td>\$ -</td> <td>\$ -</td> <td></td> </tr> <tr> <td colspan="9">20.03 - Underground station, stop, shelter, mall, terminal, platform</td> </tr> <tr> <td>NOT USED</td> <td></td> <td></td> <td></td> <td>\$ -</td> <td>30%</td> <td>\$ -</td> <td>\$ -</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>\$ -</td> <td>0%</td> <td>\$ -</td> <td>\$ -</td> <td></td> </tr> <tr> <td>Total Costs - 20.03</td> <td></td> <td></td> <td></td> <td>\$ -</td> <td></td> <td>\$ -</td> <td>\$ -</td> <td></td> </tr>									Red curve for bus maneuvering	LF	\$ 5.00	320	\$ 1,600	30%	\$ 480	\$ 2,080	80' ea platform 160 lf ea station	Concrete platform, 8" depth	SF	\$ 66.74	4,200	\$ 280,308	30%	\$ 84,092	\$ 364,400	Incl exc, rock base, conc footings/SOG.	Concrete pad for bus parking	SF	\$ 56.05	3,440	\$ 192,812	30%	\$ 57,844	\$ 250,656	Assume 12". Incl exc, rock base, conc	Sidewalk modifications @ side stations. See 40.05.								2 stations / 4 platforms w/ sidewalks. 980	Tactile surfacing	SF	\$ 50.00	700	\$ 35,000	30%	\$ 10,500	\$ 45,500		Shelter/Seating/Screen	EA	\$ 18,000.00	14	\$ 252,000	30%	\$ 75,600	\$ 327,600		Railing (SS)	LF	\$ 350.00	350	\$ 122,500	30%	\$ 36,750	\$ 159,250		Station Marker	EA	\$ 35,000.00	4	\$ 140,000	30%	\$ 42,000	\$ 182,000	2 per station for this group	Trash Receptacle	EA	\$ 5,500.00	8	\$ 44,000	30%	\$ 13,200	\$ 57,200	2 per platform	Advertising Kiosk	EA	\$ 10,000.00	4	\$ 40,000	30%	\$ 12,000	\$ 52,000	1 per platform	Station Signage & misc.	EA	\$ 10,000.00	2	\$ 20,000	30%	\$ 6,000	\$ 26,000	Code, wayfaring, system, safety.	Bike rack	EA	\$ 1,200.00	8	\$ 9,600	30%	\$ 2,880	\$ 12,480	2 per platform	Electric power supply & platform lighting	EA	\$ 100,000.00	2	\$ 200,000	30%	\$ 60,000	\$ 260,000	Allowance per station w/ 2 platforms	Total Costs - 20.01				\$ 1,337,820		\$ 401,346	\$ 1,739,166		20.02 - Aerial station, stop, shelter, mall, terminal, platform									NOT USED				\$ -	30%	\$ -	\$ -		Total Costs - 20.02				\$ -		\$ -	\$ -		20.03 - Underground station, stop, shelter, mall, terminal, platform									NOT USED				\$ -	30%	\$ -	\$ -						\$ -	0%	\$ -	\$ -		Total Costs - 20.03				\$ -		\$ -	\$ -	
Red curve for bus maneuvering	LF	\$ 5.00	320	\$ 1,600	30%	\$ 480	\$ 2,080	80' ea platform 160 lf ea station																																																																																																																																																																																													
Concrete platform, 8" depth	SF	\$ 66.74	4,200	\$ 280,308	30%	\$ 84,092	\$ 364,400	Incl exc, rock base, conc footings/SOG.																																																																																																																																																																																													
Concrete pad for bus parking	SF	\$ 56.05	3,440	\$ 192,812	30%	\$ 57,844	\$ 250,656	Assume 12". Incl exc, rock base, conc																																																																																																																																																																																													
Sidewalk modifications @ side stations. See 40.05.								2 stations / 4 platforms w/ sidewalks. 980																																																																																																																																																																																													
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Railing (SS)	LF	\$ 350.00	350	\$ 122,500	30%	\$ 36,750	\$ 159,250																																																																																																																																																																																														
Station Marker	EA	\$ 35,000.00	4	\$ 140,000	30%	\$ 42,000	\$ 182,000	2 per station for this group																																																																																																																																																																																													
Trash Receptacle	EA	\$ 5,500.00	8	\$ 44,000	30%	\$ 13,200	\$ 57,200	2 per platform																																																																																																																																																																																													
Advertising Kiosk	EA	\$ 10,000.00	4	\$ 40,000	30%	\$ 12,000	\$ 52,000	1 per platform																																																																																																																																																																																													
Station Signage & misc.	EA	\$ 10,000.00	2	\$ 20,000	30%	\$ 6,000	\$ 26,000	Code, wayfaring, system, safety.																																																																																																																																																																																													
Bike rack	EA	\$ 1,200.00	8	\$ 9,600	30%	\$ 2,880	\$ 12,480	2 per platform																																																																																																																																																																																													
Electric power supply & platform lighting	EA	\$ 100,000.00	2	\$ 200,000	30%	\$ 60,000	\$ 260,000	Allowance per station w/ 2 platforms																																																																																																																																																																																													
Total Costs - 20.01				\$ 1,337,820		\$ 401,346	\$ 1,739,166																																																																																																																																																																																														
20.02 - Aerial station, stop, shelter, mall, terminal, platform																																																																																																																																																																																																					
NOT USED				\$ -	30%	\$ -	\$ -																																																																																																																																																																																														
Total Costs - 20.02				\$ -		\$ -	\$ -																																																																																																																																																																																														
20.03 - Underground station, stop, shelter, mall, terminal, platform																																																																																																																																																																																																					
NOT USED				\$ -	30%	\$ -	\$ -																																																																																																																																																																																														
				\$ -	0%	\$ -	\$ -																																																																																																																																																																																														
Total Costs - 20.03				\$ -		\$ -	\$ -																																																																																																																																																																																														

20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.04	\$	-		\$	-	\$ -
20.05 - Joint development						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.05	\$	-		\$	-	\$ -
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.06	\$	-		\$	-	\$ -
20.07 - Elevators, escalators						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.07	\$	-		\$	-	\$ -

E3 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 30.01				\$ -		\$ -	\$ -	
30.02 - Light Maintenance Facility								
NOT USED				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 30.02				\$ -		\$ -	\$ -	

30.03 - Heavy Maintenance Facility

NOT USED	\$	-	0%	\$	-	\$	-
	\$	-	0%	\$	-	\$	-
Total Costs - 30.03	\$	-		\$	-	\$	-

30.04 - Storage or Maintenance of Way Building

NOT USED	\$	-	0%	\$	-	\$	-
	\$	-	0%	\$	-	\$	-
	\$	-	0%	\$	-	\$	-
Total Costs - 30.04	\$	-		\$	-	\$	-

30.05 - Yard and Yard Track

NOT USED	\$	-	0%	\$	-	\$	-
	\$	-	0%	\$	-	\$	-
	\$	-	0%	\$	-	\$	-
Total Costs - 30.05	\$	-		\$	-	\$	-

E3 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at stations	SF	\$ 10.00	4,200	\$ 42,000	30%	\$ 12,600	\$ 54,600	22 & 23. Demo & haul off
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	3,440	\$ 17,200	30%	\$ 5,160	\$ 22,360	
Total Costs - 40.01				\$ 59,200		\$ 17,760	\$ 76,960	
40.02 - Site Utilities, Utility Relocation								
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	LOC	\$ 15,000.00	4	\$ 60,000	30%	\$ 18,000	\$ 78,000	At the 2 stations only. 4 platforms
Potholing crew	LOC	\$ 12,000.00	4	\$ 48,000	30%	\$ 14,400	\$ 62,400	At the 2 stations only. 4 platforms
Utility modifications @ stations	LOC	\$ 125,000.00	4	\$ 500,000	30%	\$ 150,000	\$ 650,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 4 platforms
Power pole relocation	LS	\$ 20,000.00	4	\$ 80,000	30%	\$ 24,000	\$ 104,000	Allowance \$20k per platform
Total Costs - 40.02				\$ 688,000		\$ 206,400	\$ 894,400	

**40.03 - Haz. mat'l, contam'd soil removal/mitigation,
ground water treatments**

Allowance 10% of 40.01	LS	\$ 59,200.00	10%	\$ 5,920	30%	\$ 1,776	\$ 7,696
Total Costs - 40.03				\$ 5,920		\$ 1,776	\$ 7,696

**40.04 - Environmental mitigation, e.g. wetlands,
historic/archeologic, parks**

NOT USED				\$ -	0%	\$ -	\$ -
				\$ -	0%	\$ -	\$ -
Total Costs - 40.04				\$ -		\$ -	\$ -

**40.05 - Site structures including retaining walls, sound
walls**

Retaining wall & foundation. 6' h	LF	\$ 700	100	\$ 70,000	30%	\$ 21,000	\$ 91,000	Assume 12' thick CMU/interlock blks
Total Costs - 40.05				\$ 70,000		\$ 21,000	\$ 91,000	

**40.06 - Pedestrian / bike access and accommodation,
landscaping**

Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (350lf)	SF	\$ 35.00	4,200	\$ 147,000	30%	\$ 44,100	\$ 191,100	(e) sidewalk at stations is 350LF varies 6'-16'w
Sidewalk amenities at (n) stations								
Replace street trees	EA	\$ 6,000.00	10	\$ 60,000	30%	\$ 18,000	\$ 78,000	Allowances
Work at other misc adjacent elements	EA	\$ 100,000.00	2	\$ 200,000	30%	\$ 60,000	\$ 260,000	Allowances
Relocate parking meters	EA	\$ 1,500.00	40	\$ 60,000	30%	\$ 18,000	\$ 78,000	Allowances
Remove/restripe (e) rd surfaces	LS	\$ 15,000.00	1	\$ 15,000	30%	\$ 4,500	\$ 19,500	
Total Costs - 40.06				\$ 482,000		\$ 144,600	\$ 626,600	

40.07 - Automobile, bus, van accessways including roads, parking lots

Allowance for work on adjacent (e) roadway paving for striping removal and reconfiguration with (n) striping to suit (n) BRT layouts i.e. to paving areas not subject to (n) work	LOC	\$	15,000	2	\$	30,000	30%	\$	9,000	\$	39,000	At 2 platforms only
Survey crew	EA	\$	5,000.00	2	\$	10,000	30%	\$	3,000	\$	13,000	At 2 platforms only
Total Costs - 40.07					\$	40,000		\$	12,000	\$	52,000	

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization. Incl in other sectors.					\$	-	30%	\$	-	\$	-	
SWPPP. Incl in other sectors	EA	\$	-	2	\$	-	30%	\$	-	\$	-	At 2 stations only
Traffic Control, Staging, pedestrian control, safety. Incl in other sectors.	EA			2	\$	-	30%	\$	-	\$	-	At 2 stations only
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$	4,344,940	12%	\$	521,393	30%	\$	156,418	\$	677,811	12% of 10-50.
Note: All Contractors overhead /profits Incl in prices.												
Total Costs - 40.08					\$	521,393		\$	156,418	\$	677,811	

E3 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$	-	0%	\$	-
				\$	-	0%	\$	-
Total Costs - 50.01				\$	-	\$	-	

50.02 - Traffic signals and crossing protection

Minimal Improvements	EA	\$ 20,000.00		\$ -	30%	\$ -	\$ -	
Moderate Improvements	EA	\$ 150,000.00		\$ -	30%	\$ -	\$ -	
Significant Improvements	EA	\$ 250,000.00		\$ -	30%	\$ -	\$ -	
Major Improvements	EA	\$ 350,000.00		\$ -	30%	\$ -	\$ -	
System Integration	EA	\$ -		\$ -	30%	\$ -	\$ -	

Total Costs - 50.02				\$ -		\$ -	\$ -	
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50.03 - Traction power supply: substations

NOT USED				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	

Total Costs - 50.03				\$ -		\$ -	\$ -	
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50.04 - Traction power distribution: catenary and third rail

				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	

Total Costs - 50.04				\$ -		\$ -	\$ -	
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50.05 - Communications

Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	8	\$ 1,200,000	30%	\$ 360,000	\$ 1,560,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 175.00	2,640	\$ 462,000	30%	\$ 138,600	\$ 600,600	1/4 mile of duct construction per station

Total Costs - 50.05				\$ 1,662,000		\$ 498,600	\$ 2,160,600	
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50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	-	\$ -	30%	\$ -	\$ -	1 per platform
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Total Costs - 50.06				\$ -		\$ -	\$ -	
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50.07 - Central Control

NOT USED				\$ -	0%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	

Total Costs - 50.07				\$ -		\$ -	\$ -	
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E3 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	2	\$ 100,000	30%	\$ 30,000	\$ 130,000	
Allowance, (n) signalized intersection, incl Q jump.	EA	\$ -		\$ -	30%	\$ -	\$ -	
None								
Total Costs - 60.01				\$ 100,000		\$ 30,000	\$ 130,000	
60.02 - Relocation of existing households and businesses								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

E3 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	
70.04 - Bus								
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	

70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option F1

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	2,121	636		2,757	8.5%	5.6%	207	2,963
20.01 At-grade station, stop, shelter, mall, terminal, platform		2,121	636	30%	2,757	8.5%	0.6%	207	2,963
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	16,541	4,962		21,503	66.4%	43.9%	1,613	23,116
40.01 Demolition, Clearing, Earthwork		121	36	30%	157	0.5%	0.0%	12	169
40.02 Site Utilities, Utility Relocation		1,390	417	30%	1,807	5.6%	0.4%	135	1,942
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		12	4	30%	16	0.0%	0.0%	1	17
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		1,171	351	30%	1,522	4.7%	0.4%	114	1,637
40.07 Automobile, bus, van accessways including roads, parking lots		10,237	3,071	30%	13,308	41.1%	3.1%	998	14,306
40.08 Temporary Facilities and other indirect costs during construction		3,610	1,083	30%	4,693	14.5%	1.1%	352	5,046
50 SYSTEMS	0.00	6,263	1,879		8,142	25.1%	16.6%	611	8,753
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		4,670	1,401	30%	6,071	18.7%	1.4%	455	6,526
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		1,593	478	30%	2,071	6.4%	0.5%	155	2,226
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	24,925	7,477		32,402	100.0%	66.2%	2,430	34,832
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	100	30		130	0.3%	0.0%	13	143
60.01 Purchase or lease of real estate		100	30	30%	130	0.4%	0.0%	13	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	11,989	0		11,989	37.0%	24.5%	666	12,655
80.01 Project Development		1,944			1,944	6.0%	0.3%	87	2,032
80.02 Final Design		2,592			2,592	8.0%	0.4%	117	2,709
80.03 Project Management for Design and Construction		3,240			3,240	10.0%	0.5%	146	3,386
80.04 Construction Administration & Management		1,620			1,620	5.0%	0.4%	122	1,742
80.05 Professional Liability and other Non-Construction Insurance		324			324	1.0%	0.1%	24	348
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		1,296			1,296	4.0%	0.3%	97	1,393
80.07 Surveys, Testing, Investigation, Inspection		648			648	2.0%	0.2%	49	697
80.08 Start up		324			324	1.0%	0.1%	24	348
Subtotal (10 - 80)	0.00	37,013	7,507		44,521	90.9%	9%		47,630
90 UNALLOCATED CONTINGENCY					4,452				4,763
Subtotal (10 - 90)	0.00				48,973	100%			52,393
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				48,973	100%			52,393
Allocated Contingency as % of Base Yr Dollars w/o Contingency					20.28%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					12.03%				
Total Contingency as % of Base Yr Dollars w/o Contingency					32.31%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$44,534
YOE Total Project Cost per Mile (X000)								High (+25%)	\$65,491

F1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Route Option F1. Paved.	LF		13,749					
			-					
F1 paving extends to the 134 ramps			13,749.00					
F2 paving is to Eagle Vista only			2.61mIs					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
								Stations 24 = 2000sf
NUMBER OF STATIONS. Station 24 (side) & 25,26 (center)								Station 25, 26 =4400sf
Demo. (e) sidewalk. See 40.01								See 40.01
Red curve for bus maneuvering	LF	\$ 5.00	160	\$ 800	30%	\$ 240	\$ 1,040	40' ea platform 160 lf station 24 only
Concrete platform #24 Side, 8" depth	SF	\$ 66.74	2,000	\$ 133,480	30%	\$ 40,044	\$ 173,524	Incl exc, rock base, conc footings/SOG.
Concrete platform #2&26 Center, 8" depth	SF	\$ 55.61	4,400	\$ 244,684	30%	\$ 73,405	\$ 318,089	
Concrete pad for bus parking	SF	\$ 56.05	7,300	\$ 409,165	30%	\$ 122,750	\$ 531,915	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side station. See 40.05.								1 stations 24. / 2 platforms w/ sidewalks
Tactile surfacing	SF	\$ 50.00	1,200	\$ 60,000	30%	\$ 18,000	\$ 78,000	
Shelter/Seating/Screen	EA	\$ 18,000.00	24	\$ 432,000	30%	\$ 129,600	\$ 561,600	4 per platform
Railing (SS)	LF	\$ 350.00	600	\$ 210,000	30%	\$ 63,000	\$ 273,000	
Station Marker	EA	\$ 35,000.00	6	\$ 210,000	30%	\$ 63,000	\$ 273,000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.00	12	\$ 66,000	30%	\$ 19,800	\$ 85,800	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	6	\$ 60,000	30%	\$ 18,000	\$ 78,000	1 per platform
Station Signage & misc.	EA	\$ 10,000.00	3	\$ 30,000	30%	\$ 9,000	\$ 39,000	Code, wayfaring, system, safety. allowance
								Per station
Bike rack	EA	\$ 1,200.00	12	\$ 14,400	30%	\$ 4,320	\$ 18,720	2 per platform
Electric power supply & platform lighting. Side	EA	\$ 100,000.00	1	\$ 100,000	30%	\$ 30,000	\$ 130,000	Allowance per station w/ 2 platforms
Electric power supply & platform lighting. Center	EA	\$ 75,000.00	2	\$ 150,000	30%	\$ 45,000	\$ 195,000	
Total Costs - 20.01				\$ 2,120,529		\$ 636,159	\$ 2,756,688	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								

NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 20.03	\$	-		\$	-	\$	-
20.04 - Other stations, landings, terminals:							
Intermodal, ferry, trolley, etc.							
NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 20.04	\$	-		\$	-	\$	-
20.05 - Joint development							
NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 20.05	\$	-		\$	-	\$	-
20.06 - Automobile parking multi-story structure							
NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 20.06	\$	-		\$	-	\$	-
20.07 - Elevators, escalators							
NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 20.07	\$	-		\$	-	\$	-

F1 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.01				\$	-		\$	-
30.02 - Light Maintenance Facility								
NOT USED				\$	-	30%	\$	-

	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.02	\$	-		\$	-	\$	-
30.03 - Heavy Maintenance Facility							
NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.03	\$	-		\$	-	\$	-
30.04 - Storage or Maintenance of Way Building							
NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.04	\$	-		\$	-	\$	-
30.05 - Yard and Yard Track							
NOT USED	\$	-	30%	\$	-	\$	-
	\$	-	30%	\$	-	\$	-
Total Costs - 30.05	\$	-		\$	-	\$	-

F1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at station 24	SF	\$ 10.00	2,000	\$ 20,000	30%	\$ 6,000	\$ 26,000	24 & 25. 37 cy demo & haul off
Demo. (e) road pavement at stations #25 & 26	SF	\$ 5.00	4,400	\$ 22,000	30%	\$ 6,600	\$ 28,600	26 & 27. 80 ton demo & haul off
Demo 20' w, unpaved (e) dirt median on Colorado.	SF	\$ 0.60	58,662	\$ 35,197	30%	\$ 10,559	\$ 45,756	
Demo sidewalk at reduction & expansion areas	SF	\$ 7.96	852	\$ 6,782	30%	\$ 2,035	\$ 8,816	
Demo curb & gutter	LF	\$ 4.00	142	\$ 568	30%	\$ 170	\$ 738	
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	7,300	\$ 36,500	30%	\$ 10,950	\$ 47,450	
Demo deteriorated pavement sections (5%)								Not reqd at F1 Stations. Sidewalk reduction/expansions are separate
Total Costs - 40.01				\$ 121,047		\$ 36,314	\$ 157,361	

40.02 - Site Utilities, Utility Relocation

Survey all (e) utilities & document. Video/Grnd penetrating radar/ (e) as built.	LF	\$ 8.26	13,749	\$ 113,567	30%	\$ 34,070	\$ 147,637	Per LF of paved total alignment
Potholing crew	LF	\$ 4.08	13,749	\$ 56,096	30%	\$ 16,829	\$ 72,925	Per LF of paved total alignment
Utility modifications @ stations. Side	LOC	\$ 125,000.00	2	\$ 250,000	30%	\$ 75,000	\$ 325,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 6 platforms
Utility modifications @ stations. Center	LOC	\$ 25,000.00	4	\$ 100,000	30%	\$ 30,000	\$ 130,000	
F1 Other Colorado- utility modifications @ stations.	LS	\$ 750,000.00	1	\$ 750,000	30%	\$ 225,000	\$ 975,000	
Power pole relocation	EA	\$ 20,000.00	6	\$ 120,000	30%	\$ 36,000	\$ 156,000	Allowance
Total Costs - 40.02				\$ 1,389,663		\$ 416,899	\$ 1,806,561	

40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments

Allowance 10% of 40.01	LS	\$ 121,047.1200	10%	\$ 12,105	30%	\$ 3,631	\$ 15,736	
Total Costs - 40.03				\$ 12,105		\$ 3,631	\$ 15,736	

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 40.04				\$ -		\$ -	\$ -	

40.05 - Site structures including retaining walls, sound walls

Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 40.05				\$ -		\$ -	\$ -	

40.06 - Pedestrian / bike access and accommodation, landscaping

BIKE LANES

5'wide bike lane - single 6" stripe	LF	\$ 1.32	18,851	\$ 24,883	30%	\$ 7,465	\$ 32,348	
5'w bike lane - green paint	SF	\$ 3.30	72,145	\$ 238,079	30%	\$ 71,424	\$ 309,502	
Road symbol "bike lane" incl small directional arrow	EA	\$ 200.00	114	\$ 22,800	30%	\$ 6,840	\$ 29,640	
Bike lane margins between bike/car	LF	\$ 1.32	31,093	\$ 41,043	30%	\$ 12,313	\$ 53,356	Striping

CROSSWALK

Continental crosswalk 24" wide striping	LF	\$	5.50	6,311	\$	34,711	30%	\$	10,413	\$	45,124	Assume solid 24" wide striping ?
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SIDEWALKS

Reconstruction sidewalk at reduction & expansion areas	SF	\$	14.00	1,846	\$	25,844	30%	\$	7,753	\$	33,597	Expand 6' - 13' 7' expansion
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (200lf)	SF	\$	35.00	2,000	\$	70,000	30%	\$	21,000	\$	91,000	(e) sidewalk at stations is 200LF varies 6'-16'w. Station 24 only
New 5'w sidewalk	SF	\$	9.15	610	\$	5,582	30%	\$	1,674	\$	7,256	122 lf x5'w
New 22'w sidewalk	SF	\$	9.80	12,870	\$	126,126	30%	\$	37,838	\$	163,964	585lf x22w
Curb & gutter	LF	\$	40.00	849	\$	33,960	30%	\$	10,188	\$	44,148	
Reconstruct (e) & or (n) curb ramp	EA	\$	3,500.00	44	\$	154,000	30%	\$	46,200	\$	200,200	Est 1 ea per 1,000 lf roadway
Sidewalk amenities at (n) stations												
Replace street trees	EA	\$	6,000.00	24	\$	144,000	30%	\$	43,200	\$	187,200	Allowance based on google
Work at other misc adjacent elements	EA	\$	100,000.00	1	\$	100,000	30%	\$	30,000	\$	130,000	Side station only
Relocate parking meters	EA	\$	1,500.00	100	\$	150,000	30%	\$	45,000	\$	195,000	Allowance based on google

Total Costs - 40.06

\$	1,171,027	\$	351,308	\$	1,522,335
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40.07 - Automobile, bus, van accessways including roads, parking lots

Survey crew	LF	\$	8.60	12,860	\$	110,596	30%	\$	33,179	\$	143,775	Per LF of total alignment
Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo.	SF	\$	30.45	58,662	\$	1,786,258	30%	\$	535,877	\$	2,322,135	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std)
(N) AC on conc subbase	TON	\$	115.50	709	\$	81,851	30%	\$	24,555	\$	106,406	
Milling (E) asphalte road paving.	SF	\$	2.75	793,081	\$	2,180,974	30%	\$	654,292	\$	2,835,266	
Milling (E) asphalte road paving @ cross sts	SF	\$	2.75	46,933	\$	129,067	30%	\$	38,720	\$	167,787	Allowance to extend AC up all side rds for 30lf
Haul off asphalte millings	TON	\$	33.60	10,109	\$	339,662	30%	\$	101,899	\$	441,561	
AC Overlay (2") incl cross sts	TON	\$	115.50	10,109	\$	1,167,590	30%	\$	350,277	\$	1,517,866	145lbs/CF. (n) asphalt. Allow (n) 2" AC
Replace hatched crosswalks @ cross streets	SF	\$	3.00	8,800	\$	26,400	30%	\$	7,920	\$	34,320	
8' wide street parking - striped	LF	\$	1.98	6,371	\$	12,615	30%	\$	3,784	\$	16,399	Allow 3647 lf of thermoplastic striping
Directional arrows	EA	\$	75.00	199	\$	14,925	30%	\$	4,478	\$	19,403	Thermoplastic
Road letters "bus lane"	EA	\$	200.00	455	\$	91,000	30%	\$	27,300	\$	118,300	Thermoplastic
Bus lane red paint	SF	\$	3.30	200,182	\$	660,601	30%	\$	198,180	\$	858,781	Thermoplastic red, 12' w
Chevron pavement markings	SF	\$	6.00	1,153	\$	6,918	30%	\$	2,075	\$	8,993	LF of median measured146lf
Solid 4" or 6" wide lane line w/ markers	LF	\$	4.00	16,565	\$	66,260	30%	\$	19,878	\$	86,138	Thermoplastic & \$4.44 ea yellow markers

Intermittent 4" lane line w/ markers	LF	\$ 3.75	21,114	\$ 79,178	30%	\$ 23,753	\$ 102,931	Thermoplastic
Double yellow lane line w/ markers	LF	\$ 8.50	6,849	\$ 58,217	30%	\$ 17,465	\$ 75,681	Thermoplastic
Median curb & gutter	LF	\$ 40.00	16,846	\$ 673,840	30%	\$ 202,152	\$ 875,992	Allow conc curb & gutter
Landscaping in median 75%	SF	\$ 15.00	52,844	\$ 792,660	30%	\$ 237,798	\$ 1,030,458	75% - allow topsoil, planting, drainage, NO irrigation. Mostly 10'w. In narrow areas allow hardscape.
Hardscape in median 25%	SF	\$ 30.00	17,615	\$ 528,450	30%	\$ 158,535	\$ 686,985	25% - allow hardscape. In narrow areas.
Misc signage above pavement level	LS	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	Pole signs etc
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	63,001	\$ 1,379,722	30%	\$ 413,917	\$ 1,793,638	5% x 1,260,022 sf
Total Costs - 40.07				\$ 10,236,781		\$ 3,071,034	\$ 13,307,816	

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	13,749	\$ 32,173	30%	\$ 9,652	\$ 41,824	Per LF of paved total alignment
SWPPP	LF	\$ 5.24	13,749	\$ 72,045	30%	\$ 21,613	\$ 93,658	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	13,749	\$ 615,680	30%	\$ 184,704	\$ 800,384	Per LF of paved total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 22,254,049	12%	\$ 2,670,486	30%	\$ 801,146	\$ 3,471,632	12% of 10-50.

Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08 **\$ 3,610,384** **\$ 1,083,115** **\$ 4,693,499**

F1 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	

50.02 - Traffic signals and crossing protection

Minimal Improvements	EA	\$ 20,000.00	1	\$ 20,000	30%	\$ 6,000	\$ 26,000	College View	
Moderate Improvements	EA	\$ 150,000.00	2	\$ 300,000	30%	\$ 90,000	\$ 390,000	El Rio, Glen Iris	
Significant Improvements	EA	\$ 250,000.00	2	\$ 500,000	30%	\$ 150,000	\$ 650,000	Harvey, Ellenwood	
Major Improvements	EA	\$ 350,000.00	11	\$ 3,850,000	30%	\$ 1,155,000	\$ 5,005,000	Summer, Sierra Villa, Eagle Rock, Caspar, Maywood, Hermosa, Argus, Townsend, Dahlia, Loreta, Eagle Vista	
System Integration	EA	\$ -		\$ -	30%	\$ -	\$ -		
Total Costs - 50.02				\$ 4,670,000		\$ 1,401,000	\$ 6,071,000		
50.03 - Traction power supply: substations									
				\$ -	30%	\$ -	\$ -		
				\$ -	30%	\$ -	\$ -		
Total Costs - 50.03				\$ -		\$ -	\$ -		
50.04 - Traction power distribution: catenary and third rail									
				\$ -	30%	\$ -	\$ -		
				\$ -	30%	\$ -	\$ -		
Total Costs - 50.04				\$ -		\$ -	\$ -		
50.05 - Communications									
Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	6	\$ 900,000	30%	\$ 270,000	\$ 1,170,000	Allowance. 1 set up/cabinet per platform	
Fibre optic ductbank	LF	\$ 175.00	3,960	\$ 693,000	30%	\$ 207,900	\$ 900,900	1/4 mile of duct construction per station	
Total Costs - 50.05				\$ 1,593,000		\$ 477,900	\$ 2,070,900		
50.06 - Fare collection system and equipment									
Ticket Vending Machine	EA	\$ 120,000.00	-	\$ -	30%	\$ -	\$ -	1 per platform	
Total Costs - 50.06				\$ -		\$ -	\$ -		
50.07 - Central Control									
NOT USED				\$ -	30%	\$ -	\$ -		
				\$ -	30%	\$ -	\$ -		
Total Costs - 50.07				\$ -		\$ -	\$ -		

F1 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	
Allowance, (n) signalized intersection, incl Q jump.	EA	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	
Total Costs - 60.01				\$ 100,000		\$ 30,000	\$ 130,000	
60.02 - Relocation of existing households and businesses								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

F1 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	
70.04 - Bus								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	

70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option F2

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	2,122	637		2,759	15.1%	10.0%	207	2,966
20.01 At-grade station, stop, shelter, mall, terminal, platform		2,122	637	30%	2,759	15.1%	1.1%	207	2,966
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	9,420	2,826		12,246	66.9%	44.3%	918	13,164
40.01 Demolition, Clearing, Earthwork		79	24	30%	102	0.6%	0.0%	8	110
40.02 Site Utilities, Utility Relocation		650	195	30%	845	4.6%	0.3%	63	909
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		8	2	30%	10	0.1%	0.0%	1	11
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		832	250	30%	1,081	5.9%	0.4%	81	1,163
40.07 Automobile, bus, van accessways including roads, parking lots		5,481	1,644	30%	7,125	38.9%	2.9%	534	7,659
40.08 Temporary Facilities and other indirect costs during construction		2,371	711	30%	3,082	16.8%	1.3%	231	3,313
50 SYSTEMS	0.00	2,543	763		3,306	18.1%	11.9%	248	3,554
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		950	285	30%	1,235	6.7%	0.5%	93	1,328
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		1,593	478	30%	2,071	11.3%	0.8%	155	2,226
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	14,085	4,226		18,311	100.0%	66.2%	1,373	19,684
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	50	15		65		0.2%	7	72
60.01 Purchase or lease of real estate		50	15	30%	65	0.4%	0.0%	7	72
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	6,775	0		6,775	37.0%	24.5%	376	7,151
80.01 Project Development		1,099			1,099	6.0%	0.3%	49	1,148
80.02 Final Design		1,465			1,465	8.0%	0.4%	66	1,531
80.03 Project Management for Design and Construction		1,831			1,831	10.0%	0.5%	82	1,913
80.04 Construction Administration & Management		916			916	5.0%	0.4%	69	984
80.05 Professional Liability and other Non-Construction Insurance		183			183	1.0%	0.1%	14	197
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		732			732	4.0%	0.3%	55	787
80.07 Surveys, Testing, Investigation, Inspection		366			366	2.0%	0.2%	27	394
80.08 Start up		183			183	1.0%	0.1%	14	197
Subtotal (10 - 80)	0.00	20,910	4,241		25,151		90.9%		26,907
90 UNALLOCATED CONTINGENCY					2,515		9%		2,691
Subtotal (10 - 90)	0.00				27,666		100%		29,597
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				27,666		100%		29,597
Allocated Contingency as % of Base Yr Dollars w/o Contingency					20.28%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					12.03%				
Total Contingency as % of Base Yr Dollars w/o Contingency					32.31%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$25,158
YOE Total Project Cost per Mile (X000)								High (+25%)	\$36,997

F2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Route Option F2. Paved.	LF		12,256					
Proposed Project - Route Option F2. Unimproved (eagle vista - CA 134 ramps)	LF		1,493					
NUMBER OF STATIONS. Station 24a (side) & 25a,26a (center)				13,749.00				
			2.61 mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
The route is the same as F1 but bike & bus lanes have different configuration up to Dahlia								Stations 24a=2000sf. Side
F2 paving is to Eagle Vista only. F1 paving is to the 134 ramps.								Station 25a, 26a =4400sf. Center
Demo. (e) sidewalk. See 40.01								See 40.01
Red curve for bus maneuvering	LF	\$ 5.00	480	\$ 2,400	30%	\$ 720	\$ 3,120	40' ea platform 160 lf ea station
Concrete platform #24 Side, 8" depth	SF	\$ 66.74	2,000	\$ 133,480	30%	\$ 40,044	\$ 173,524	
Concrete platform #2&26 Center, 8" depth	SF	\$ 55.61	4,400	\$ 244,684	30%	\$ 73,405	\$ 318,089	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	7,300	\$ 409,165	30%	\$ 122,750	\$ 531,915	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side stations. See 40.05								
Tactile surfacing	SF	\$ 50.00	1,200	\$ 60,000	30%	\$ 18,000	\$ 78,000	
Shelter/Seating/Screen	EA	\$ 18,000.00	24	\$ 432,000	30%	\$ 129,600	\$ 561,600	4 per platform
Railing (SS)	LF	\$ 350.00	600	\$ 210,000	30%	\$ 63,000	\$ 273,000	
Station Marker	EA	\$ 35,000.00	6	\$ 210,000	30%	\$ 63,000	\$ 273,000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.00	12	\$ 66,000	30%	\$ 19,800	\$ 85,800	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	6	\$ 60,000	30%	\$ 18,000	\$ 78,000	1 per platform
Station Signage & misc.	EA	\$ 10,000.00	3	\$ 30,000	30%	\$ 9,000	\$ 39,000	Code, wayfaring, system, safety. allowance
Bike rack	EA	\$ 1,200.00	12	\$ 14,400	30%	\$ 4,320	\$ 18,720	2 per platform
Electric power supply & platform lighting. Side	EA	\$ 100,000.00	1	\$ 100,000	30%	\$ 30,000	\$ 130,000	Allowance per station w/ 2 platforms
Electric power supply & platform lighting. Center	EA	\$ 75,000.00	2	\$ 150,000	30%	\$ 45,000	\$ 195,000	
Total Costs - 20.01				\$ 2,122,129		\$ 636,639	\$ 2,758,768	

20.02 - Aerial station, stop, shelter, mall, terminal, platform						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.02	\$	-	\$	-	\$	-
20.03 - Underground station, stop, shelter, mall, terminal, platform						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.03	\$	-	\$	-	\$	-
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.04	\$	-	\$	-	\$	-
20.05 - Joint development						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.05	\$	-	\$	-	\$	-
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.06	\$	-	\$	-	\$	-
20.07 - Elevators, escalators						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.07	\$	-	\$	-	\$	-

F2 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.01				\$ -		\$ -	\$ -	
30.02 - Light Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.02				\$ -		\$ -	\$ -	
30.03 - Heavy Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.03				\$ -		\$ -	\$ -	
30.04 - Storage or Maintenance of Way Building								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.04				\$ -		\$ -	\$ -	
30.05 - Yard and Yard Track								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.05				\$ -		\$ -	\$ -	

F2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								(e) median left in at F2 but removed F1.
Demo. (e) conc sidewalk at station 24a	SF	\$ 10.00	2,000	\$ 20,000	30%	\$ 6,000	\$ 26,000	24, 25, 26, & 27. 115 cy demo & haul off
Demo. (e) road pavement at stations #25 & 26	SF	\$ 5.00	4,400	\$ 22,000	30%	\$ 6,600	\$ 28,600	
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	7,300	\$ 36,500	30%	\$ 10,950	\$ 47,450	
Total Costs - 40.01				\$ 78,500		\$ 23,550	\$ 102,050	
40.02 - Site Utilities, Utility Relocation								
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	LF	\$ 8.26	11,372	\$ 93,933	30%	\$ 28,180	\$ 122,113	Per LF of total alignment
Potholing crew	LF	\$ 4.08	11,372	\$ 46,398	30%	\$ 13,919	\$ 60,317	Per LF of total alignment
Utility modifications @ stations. Side	LOC	\$ 125,000.00	2	\$ 250,000	30%	\$ 75,000	\$ 325,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 6 platforms
Utility modifications @ stations. Center	LOC	\$ 25,000.00	4	\$ 100,000	30%	\$ 30,000	\$ 130,000	
F2 Other Colorado- utility modifications @ station platform.	LS	\$ 40,000.00	1	\$ 40,000	30%	\$ 12,000	\$ 52,000	
Power pole relocation	EA	\$ 20,000.00	6	\$ 120,000	30%	\$ 36,000	\$ 156,000	Allowance, 1 per platform.
Total Costs - 40.02				\$ 650,330		\$ 195,099	\$ 845,430	
40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments								
Allowance 10% of 40.01	LS	\$ 78,500.00	10%	\$ 7,850	30%	\$ 2,355	\$ 10,205	
Total Costs - 40.03				\$ 7,850		\$ 2,355	\$ 10,205	
40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 40.04				\$ -		\$ -	\$ -	

40.05 - Site structures including retaining walls, sound walls

NOT USED		\$	-		30%	\$	-	\$	-
		\$	-		30%	\$	-	\$	-
Total Costs - 40.05		\$	-		\$	-	\$	-	

40.06 - Pedestrian / bike access and accommodation, landscaping

BIKE LANES												
5'wide bike lane - single 6" stripe	LF	\$	1.32	2,784	\$	3,675	30%	\$	1,102	\$	4,777	
5'w bike lane - green paint	SF	\$	3.30	13,920	\$	45,936	30%	\$	13,781	\$	59,717	
Road symbol "bike lane" incl small directional arrow	EA	\$	200.00	15	\$	3,000	30%	\$	900	\$	3,900	
Bike lane margins between bike/car lanes	LF	\$	1.32	2,945	\$	3,887	30%	\$	1,166	\$	5,054	2'wx8"h
CROSSWALK												
Continental crosswalk 24" wide striping	LF	\$	5.50	6,766	\$	37,213	30%	\$	11,164	\$	48,377	Assume solid 24" wide striping ?
SIDEWALKS												
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (200lf)	SF	\$	35.00	2,000	\$	70,000	30%	\$	21,000	\$	91,000	(e) sidewalk at stations is 200LF varies 6'-16'w. Station 24 only
New 5'w sidewalk	LF	\$	9.15	910	\$	8,327	30%	\$	2,498	\$	10,824	910 lf x5'w
New 7'w sidewalk	LF	\$	9.15	667	\$	6,103	30%	\$	1,831	\$	7,934	667x7'w
New 10'w sidewalk	LF	\$	9.15	299	\$	2,736	30%	\$	821	\$	3,557	299lf x10w
Curb & gutter	LF	\$	40.00	1,876	\$	75,040	30%	\$	22,512	\$	97,552	
Reconstruct (e) & or (n) curb ramp	EA	\$	3,500.00	52	\$	182,000	30%	\$	54,600	\$	236,600	
Sidewalk amenities at (n) stations												
Replace street trees	EA	\$	6,000.00	24	\$	144,000	30%	\$	43,200	\$	187,200	Allowance based on Google
Work at other misc adjacent elements	EA	\$	100,000.00	1	\$	100,000	30%	\$	30,000	\$	130,000	Side station only
Relocate parking meters	EA	\$	1,500.00	100	\$	150,000	30%	\$	45,000	\$	195,000	Allowance based on Google
Total Costs - 40.06		\$		831,917	\$			249,575	\$		1,081,492	

40.07 - Automobile, bus, van accessways including roads, parking lots

(e) median left in at F2 but removed F1.

Survey crew	LF	\$ 8.60	11,372	\$ 97,799	30%	\$ 29,340	\$ 127,139	Per LF of total alignment
Milling (E) asphalte road paving.	SF	\$ 2.75	662,939	\$ 1,823,083	30%	\$ 546,925	\$ 2,370,008	
Haul off asphalte millings	TON	\$ 33.60	7,979	\$ 268,094	30%	\$ 80,428	\$ 348,523	
AC Overlay (2")	TON	\$ 115.50	7,979	\$ 921,575	30%	\$ 276,472	\$ 1,198,047	145lbs/CF. (n) asphalt. Allow (n) 2" AC
8' wide street parking - striped	LF	\$ 1.98	10,075	\$ 19,949	30%	\$ 5,985	\$ 25,933	Allow 3647 lf of thermoplastic striping
Directional arrows	EA	\$ 75.00	248	\$ 18,600	30%	\$ 5,580	\$ 24,180	Thermoplastic
Road letters "bus lane"	EA	\$ 200.00	455	\$ 91,000	30%	\$ 27,300	\$ 118,300	Thermoplastic
Bus lane red paint	SF	\$ 3.30	171,568	\$ 566,174	30%	\$ 169,852	\$ 736,027	Thermoplastic red, 12' w
Diagonal hatch striping at side of ramps	SF	\$ 3.00	10	\$ 30	30%	\$ 9	\$ 39	
Chevron markings	SF	\$ 6.00	2,390	\$ 14,340	30%	\$ 4,302	\$ 18,642	LF of median measured 2390x11=29590sf
Solid 4" or 6" wide lane line w/ markers	LF	\$ 4.00	19,552	\$ 78,208	30%	\$ 23,462	\$ 101,670	Thermoplastic & \$4.44 ea yellow markers
Intermittent 4" lane line w/ markers	LF	\$ 3.75	18,958	\$ 71,093	30%	\$ 21,328	\$ 92,420	Thermoplastic
Double yellow lane line w/ markers	LF	\$ 8.50	3,113	\$ 26,461	30%	\$ 7,938	\$ 34,399	Thermoplastic
Median curb & gutter	LF	\$ 40.00	2,733	\$ 109,320	30%	\$ 32,796	\$ 142,116	Allow conc curb & gutter
Landscaping in median 75%	SF	\$ 15.00	9,437	\$ 141,555	30%	\$ 42,467	\$ 184,022	75% - allow topsoil, planting, drainage, NO irrigation. Mostly 10'w. In narrow areas allow hardscape.
Hardscape in median 25%	SF	\$ 30.00	3,146	\$ 94,380	30%	\$ 28,314	\$ 122,694	25% - allow hardscape. In narrow areas.
Misc signage above pavement level	LS	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	Pole signs etc
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	49,720	\$ 1,088,868	30%	\$ 326,660	\$ 1,415,528	5% x 1,260,022 sf
Total Costs - 40.07				\$ 5,480,528		\$ 1,644,158	\$ 7,124,687	

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	\$ 66,000	\$ 286,000	Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	12,256	\$ 28,679	30%	\$ 8,604	\$ 37,283	Per LF of paved total alignment
SWPPP	LF	\$ 5.24	12,256	\$ 64,221	30%	\$ 19,266	\$ 83,488	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	12,256	\$ 548,824	30%	\$ 164,647	\$ 713,471	Per LF of paved total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 12,575,978	12%	\$ 1,509,117	30%	\$ 452,735	\$ 1,961,853	12% of 10-50.

Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08				\$ 2,370,842		\$ 711,252	\$ 3,082,094	
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F2 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	
50.02 - Traffic signals and crossing protection								
Minimal Improvements	EA	\$ 20,000.00	10	\$ 200,000	30%	\$ 60,000	\$ 260,000	Summer, Sierra Villa, College View, Everton, Eagle Rock, Caspar, Maywood, Argus, Townsend, Loreta,
Moderate Improvements	EA	\$ 150,000.00	1	\$ 150,000	30%	\$ 45,000	\$ 195,000	Harvey
Significant Improvements	EA	\$ 250,000.00	1	\$ 250,000	30%	\$ 75,000	\$ 325,000	Dahlia,
Major Improvements	EA	\$ 350,000.00	1	\$ 350,000	30%	\$ 105,000	\$ 455,000	Hermosa
System Integration	EA	\$ -		\$ -	30%	\$ -	\$ -	
Total Costs - 50.02				\$ 950,000		\$ 285,000	\$ 1,235,000	

50.03 - Traction power supply: substations

NOT USED			\$	-	30%	\$	-	\$	-
			\$	-	30%	\$	-	\$	-
Total Costs - 50.03			\$	-		\$	-	\$	-

50.04 - Traction power distribution: catenary and third rail

NOT USED			\$	-	30%	\$	-	\$	-
			\$	-	30%	\$	-	\$	-
Total Costs - 50.04			\$	-		\$	-	\$	-

50.05 - Communications

Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	6	\$	900,000	30%	\$	270,000	\$	1,170,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 175.00	3,960	\$	693,000	30%	\$	207,900	\$	900,900	1/4 mile of duct construction per station
Total Costs - 50.05				\$	1,593,000		\$	477,900	\$	2,070,900	

50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	-	\$	-	30%	\$	-	\$	-	1 per platform
Total Costs - 50.06				\$	-		\$	-	\$	-	

50.07 - Central Control

NOT USED				\$	-	30%	\$	-	\$	-
				\$	-	30%	\$	-	\$	-
Total Costs - 50.07				\$	-		\$	-	\$	-

F2 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	
Allowance, (n) signalized intersection, incl Q jump. None	EA	\$ -		\$ -	30%	\$ -	\$ -	
Total Costs - 60.01				\$ 50,000		\$ 15,000	\$ 65,000	
60.02 - Relocation of existing households and businesses								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

F2 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
NOT USED				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	

70.04 - Bus						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.04	\$	-		\$	-	\$ -
70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option F3

Today's Date **10/2/20**

Yr of Base Year \$ **2019**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	635	191		826	30.8%	20.1%	62	888
20.01 At-grade station, stop, shelter, mall, terminal, platform		635	191	30%	826	30.8%	2.3%	62	888
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	897	269		1,165	43.5%	28.3%	87	1,253
40.01 Demolition, Clearing, Earthwork		40	12	30%	52	1.9%	0.1%	4	56
40.02 Site Utilities, Utility Relocation		317	95	30%	412	15.4%	1.2%	31	443
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		4	1	30%	5	0.2%	0.0%	0.39	6
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0	#DIV/0!	0	0.0%	0.0%	0.00	0
40.06 Pedestrian / bike access and accommodation, landscaping		275	82	30%	357	13.3%	1.0%	27	384
40.07 Automobile, bus, van accessways including roads, parking lots		40	12	30%	52	1.9%	0.1%	4	56
40.08 Temporary Facilities and other indirect costs during construction		221	66	30%	287	10.7%	0.8%	22	309
50 SYSTEMS	0.00	531	159		690	25.7%	16.8%	52	742
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		0	0		0			0	0
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		531	159	30%	690	25.7%	1.9%	52	742
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	2,063	619		2,682	100.0%	65.2%	201	2,883
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	50	15		65		1.6%	7	72
60.01 Purchase or lease of real estate		50	15	30%	65			7	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0		0.0%		
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	992	0		992	37.0%	24.1%	55	1,047
80.01 Project Development		161			161			7	168
80.02 Final Design		215			215			10	224
80.03 Project Management for Design and Construction		268			268			12	280
80.04 Construction Administration & Management		134			134			10	144
80.05 Professional Liability and other Non-Construction Insurance		27			27			2	29
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		107			107			8	115
80.07 Surveys, Testing, Investigation, Inspection		54			54			4	58
80.08 Start up		27			27			2	29
Subtotal (10 - 80)	0.00	3,105	634		3,739		90.9%		4,001
90 UNALLOCATED CONTINGENCY					374		9%		400
Subtotal (10 - 90)	0.00				4,113		100%		4,402
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				4,113		100%		4,402
Allocated Contingency as % of Base Yr Dollars w/o Contingency					20.41%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					12.04%				
Total Contingency as % of Base Yr Dollars w/o Contingency					32.45%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$3,741
YOE Total Project Cost per Mile (X000)								High (+25%)	\$5,502

F3 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
This route is on the (e) Ventura Freeway. There is 1 station 27 on F3 at Figuero. No other improvements.								
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
Station 27 Side. 10x50+12x100=2200sf								
Demo. (e) sidewalk. See 40.01								See 40.01
Red curve for bus maneuvering	LF	\$ 5.00	160	\$ 800	30%	\$ 240	\$ 1,040	80' ea platform 160 lf ea station
Concrete platform, 8" depth, side	SF	\$ 66.74	2,200	\$ 146,828	30%	\$ 44,048	\$ 190,876	Station 27 is 2200 sf
Concrete pad for bus parking	SF	\$ 56.05	3,600	\$ 201,780	30%	\$ 60,534	\$ 262,314	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side stations. See 40.05								
Tactile surfacing	SF	\$ 50.00	300	\$ 15,000	30%	\$ 4,500	\$ 19,500	
Shelter/Seating/Screen	EA	\$ 18,000.00	8	\$ 144,000	30%	\$ 43,200	\$ 187,200	4 per platform
Railing (SS) None								
Station Marker	EA	\$ 35,000.00	2	\$ 70,000	30%	\$ 21,000	\$ 91,000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.00	4	\$ 22,000	30%	\$ 6,600	\$ 28,600	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	2	\$ 20,000	30%	\$ 6,000	\$ 26,000	1 per platform
Station Signage & misc.	LS	\$ 10,000.00	1	\$ 10,000	30%	\$ 3,000	\$ 13,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	4	\$ 4,800	30%	\$ 1,440	\$ 6,240	2 per platform
Total Costs - 20.01				\$ 635,208		\$ 190,562	\$ 825,770	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.03				\$ -		\$ -	\$ -	

20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.						
Not used	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.04	\$	-	\$	-	\$	-
20.05 - Joint development						
Not used	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.05	\$	-	\$	-	\$	-
20.06 - Automobile parking multi-story structure						
Not used	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.06	\$	-	\$	-	\$	-
20.07 - Elevators, escalators						
Not used	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.07	\$	-	\$	-	\$	-

F3 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
Not used				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.01				\$	-	\$	-	\$
30.02 - Light Maintenance Facility								
Not used				\$	-	30%	\$	-
				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 30.02				\$	-	\$	-	\$

30.03 - Heavy Maintenance Facility						
Not used	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 30.03	\$	-	\$	-	\$	-
30.04 - Storage or Maintenance of Way Building						
Not used	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 30.04	\$	-	\$	-	\$	-
30.05 - Yard and Yard Track						
Not used	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 30.05	\$	-	\$	-	\$	-

F3 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at stations	SF	\$ 10.00	2,200	\$ 22,000	30%	\$ 6,600	\$ 28,600	Station 27. Demo & haul off. 34cy
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	3,600	\$ 18,000	30%	\$ 5,400	\$ 23,400	
Total Costs - 40.01				\$ 40,000		\$ 12,000	\$ 52,000	
40.02 - Site Utilities, Utility Relocation								
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	EA	\$ 15,000.00	1	\$ 15,000	30%	\$ 4,500	\$ 19,500	At the 1 station only
Potholing crew	EA	\$ 12,000.00	1	\$ 12,000	30%	\$ 3,600	\$ 15,600	At the 1 station only
Utility modifications @ stations	EA	\$ 125,000.00	2	\$ 250,000	30%	\$ 75,000	\$ 325,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 2 platforms
Power pole relocation	EA	\$ 20,000.00	2	\$ 40,000	30%	\$ 12,000	\$ 52,000	Allowance 1 per platform
Total Costs - 40.02				\$ 317,000		\$ 95,100	\$ 412,100	

**40.03 - Haz. mat'l, contam'd soil removal/mitigation,
ground water treatments**

Allowance 10% of 40.01	LS	\$	40,000.00	10%	\$	4,000	30%	\$	1,200	\$	5,200
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Total Costs - 40.03					\$	4,000		\$	1,200	\$	5,200
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**40.04 - Environmental mitigation, e.g. wetlands,
historic/archeologic, parks**

Not used					\$	-	30%	\$	-	\$	-
					\$	-	30%	\$	-	\$	-

Total Costs - 40.04					\$	-		\$	-	\$	-
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**40.05 - Site structures including retaining walls, sound
walls**

Retaining wall & foundation. 6' h	LF	\$	700		\$	-	30%	\$	-	\$	-
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Total Costs - 40.05					\$	-		\$	-	\$	-
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**40.06 - Pedestrian / bike access and accommodation,
landscaping**

Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (200lf)	SF	\$	35.00	2,200	\$	77,000	30%	\$	23,100	\$	100,100 (e) sidewalk at stations is 200LF varies 6'-16'w. Station 24 only
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Sidewalk amenities at (n) stations

Replace street trees	EA	\$	6,000.00	10	\$	60,000	30%	\$	18,000	\$	78,000
Work at other misc adjacent elements	EA	\$	100,000.00	1	\$	100,000	30%	\$	30,000	\$	130,000
Relocate parking meters	EA	\$	1,500.00	25	\$	37,500	30%	\$	11,250	\$	48,750

Total Costs - 40.06					\$	274,500		\$	82,350	\$	356,850
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**40.07 - Automobile, bus, van accessways including
roads, parking lots**

Curb extension for north departures to accommodate station & pedestrian circulation	LS	\$	20,000.00	1	\$	20,000	30%	\$	6,000	\$	26,000
Survey crew	EA	\$	5,000.00	1	\$	5,000	30%	\$	1,500	\$	6,500 At 1 station only
Remove/restripe (e) rd surfaces	LS	\$	15,000.00	1	\$	15,000	30%	\$	4,500	\$	19,500

Total Costs - 40.07					\$	40,000		\$	12,000	\$	52,000
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40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization. Incl in other sectors				\$	-	30%	\$	-	\$	-
SWPPP. Incl in other sectors				\$	-	30%	\$	-	\$	-
Street sweeping & Vac. Incl in other sectors				\$	-	30%	\$	-	\$	-
Traffic Control, Staging, pedestrian control, safety. Incl in other sectors				\$	-	30%	\$	-	\$	-
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$	1,841,708	12%	\$	221,005	30%	\$	66,301	\$ 287,306 12% of 10-50.

Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08				\$	221,005		\$	66,301	\$	287,306
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F3 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
Not used				\$	-	30%	\$	-
				\$	-	30%	\$	-
Total Costs - 50.01				\$	-		\$	-
50.02 - Traffic signals and crossing protection								
Minimal Improvements	EA	\$ 20,000.00		\$	-	30%	\$	-
Moderate Improvements	EA	\$ 150,000.00		\$	-	30%	\$	-
Significant Improvements	EA	\$ 250,000.00		\$	-	30%	\$	-
Major Improvements	EA	\$ 350,000.00		\$	-	30%	\$	-
System Integration	EA	\$ -		\$	-	30%	\$	-
Total Costs - 50.02				\$	-		\$	-
50.03 - Traction power supply: substations								
Not used				\$	-	30%	\$	-
Total Costs - 50.03				\$	-		\$	-

50.04 - Traction power distribution: catenary and third rail

Not used				\$	-	30%	\$	-	\$	-
Total Costs - 50.04				\$	-		\$	-	\$	-

50.05 - Communications

Systems/Comms (PA, CCTV, Nextbus, cabinet, etc)	EA	\$ 150,000.00	2	\$	300,000	30%	\$	90,000	\$	390,000	Allowance per platform
Fibre optic ductbank	LF	\$ 175.00	1,320	\$	231,000	30%	\$	69,300	\$	300,300	1/4 mile of duct construction per station
Total Costs - 50.05				\$	531,000		\$	159,300	\$	690,300	

50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	-	\$	-	30%	\$	-	\$	-	1 per platform
Total Costs - 50.06				\$	-		\$	-	\$	-	

50.07 - Central Control

Not used				\$	-	30%	\$	-	\$	-
				\$	-	30%	\$	-	\$	-
Total Costs - 50.07				\$	-		\$	-	\$	-

F3 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000	
Allowance, (n) signalized intersection, incl Q jump.	EA	\$ -		\$ -	30%	\$ -	\$ -	
None								
Total Costs - 60.01				\$ 50,000		\$ 15,000	\$ 65,000	
60.02 - Relocation of existing households and businesses								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

F3 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$ -	30%	\$ -	\$ -	
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail				\$ -	30%	\$ -	\$ -	
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail				\$ -	30%	\$ -	\$ -	
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	
70.04 - Bus				\$ -	30%	\$ -	\$ -	
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	
70.05 - Other				\$ -	30%	\$ -	\$ -	
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 70.05				\$ -		\$ -	\$ -	
70.06 - Non-revenue vehicles				\$ -	30%	\$ -	\$ -	
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 70.06				\$ -		\$ -	\$ -	
70.07 - Spare parts				\$ -	30%	\$ -	\$ -	
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 70.07				\$ -		\$ -	\$ -	

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option G1

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	775	233		1,008	34.5%	22.5%	76	1,083
20.01 At-grade station, stop, shelter, mall, terminal, platform		775	233	30%	1,008	34.5%	2.6%	76	1,083
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	827	248		1,076	36.8%	24.0%	81	1,156
40.01 Demolition, Clearing, Earthwork		24	7	30%	31	1.1%	0.1%	2	33
40.02 Site Utilities, Utility Relocation		317	95	30%	412	14.1%	1.1%	31	443
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		2	0.71	30%	3	0.1%	0.0%	0.23	3
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		240	72	30%	311	10.7%	0.8%	23	335
40.07 Automobile, bus, van accessways including roads, parking lots		0	0		0				
40.08 Temporary Facilities and other indirect costs during construction		245	73	30%	318	10.9%	0.8%	24	342
50 SYSTEMS	0.00	681	159		840	28.7%	18.8%	63	903
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		150	0		150	5.1%	0.4%	11	161
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		531	159	30%	690	23.6%	1.8%	52	742
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	2,283	640		2,923	100.0%	65.3%	219	3,143
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	50	15		65		1.5%	7	72
60.01 Purchase or lease of real estate		50	15	30%	65	2.2%	0.2%	7	72
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0		0.0%		
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	1,082	0		1,082	37.0%	24.2%	60	1,142
80.01 Project Development		175			175	6.0%	0.3%	8	183
80.02 Final Design		234			234	8.0%	0.4%	11	244
80.03 Project Management for Design and Construction		292			292	10.0%	0.5%	13	305
80.04 Construction Administration & Management		146			146	5.0%	0.4%	11	157
80.05 Professional Liability and other Non-Construction Insurance		29			29	1.0%	0.1%	2	31
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		117			117	4.0%	0.3%	9	126
80.07 Surveys, Testing, Investigation, Inspection		58			58	2.0%	0.2%	4	63
80.08 Start up		29			29	1.0%	0.1%	2	31
Subtotal (10 - 80)	0.00	3,415	655		4,070		90.9%		4,356
90 UNALLOCATED CONTINGENCY					407		9%		436
Subtotal (10 - 90)	0.00				4,477		100%		4,792
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				4,477		100%		4,792
Allocated Contingency as % of Base Yr Dollars w/o Contingency					19.18%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					11.92%				
Total Contingency as % of Base Yr Dollars w/o Contingency					31.10%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$4,073
YOE Total Project Cost per Mile (X000)								High (+25%)	\$5,989

G1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Route Option G1. Unimproved	LF		2,254 0.43 mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
NUMBER OF STATIONS. Station 28 at Holly/ Raymond. Side The BRT will operate on mixed flow streets without improvements other than station 28								Assume 100x12 = 1200 sf x 2 platforms=2400sf No dim listed for station platform
Demo. (e) sidewalk. See 40.01								see 40.01
Red curve for bus maneuvering	LF	\$ 5.00	160	\$ 800	30%	\$ 240	\$ 1,040	40" @ ea end of platform
Concrete platform, 8" depth	SF	\$ 66.74	2,400	\$ 160,176	30%	\$ 48,053	\$ 208,229	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	2,200	\$ 123,310	30%	\$ 36,993	\$ 160,303	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side stations. See 40.05								1 stations / 2 platforms w/ sidewalks
Tactile surfacing	SF	\$ 50.00	400	\$ 20,000	30%	\$ 6,000	\$ 26,000	
Shelter/Seating/Screen	EA	\$ 18,000.00	8	\$ 144,000	30%	\$ 43,200	\$ 187,200	4 per platform
Railing (SS) None				\$ -		\$ -	\$ -	
Station Marker	EA	\$ 35,000.00	2	\$ 70,000	30%	\$ 21,000	\$ 91,000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.00	4	\$ 22,000	30%	\$ 6,600	\$ 28,600	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	2	\$ 20,000	30%	\$ 6,000	\$ 26,000	1 per platform
Station Signage & misc.	EA	\$ 10,000.00	1	\$ 10,000	30%	\$ 3,000	\$ 13,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	4	\$ 4,800	30%	\$ 1,440	\$ 6,240	2 per platform
Electric power supply & platform lighting	EA	\$ 100,000.00	2	\$ 200,000	30%	\$ 60,000	\$ 260,000	Allowance per station platform
Total Costs - 20.01				\$ 775,086		\$ 232,526	\$ 1,007,612	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	

20.03 - Underground station, stop, shelter, mall, terminal, platform						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.03	\$	-		\$	-	\$ -
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.04	\$	-		\$	-	\$ -
20.05 - Joint development						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.05	\$	-		\$	-	\$ -
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.06	\$	-		\$	-	\$ -
20.07 - Elevators, escalators						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.07	\$	-		\$	-	\$ -

G1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at station	SF	\$ 10.00	1,200	\$ 12,000	30%	\$ 3,600	\$ 15,600	Station 28 (23cy)
Demo curb & gutter	LF	\$ 4.00	200	\$ 800	30%	\$ 240	\$ 1,040	
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	2,200	\$ 11,000	30%	\$ 3,300	\$ 14,300	
Total Costs - 40.01				\$ 23,800		\$ 7,140	\$ 30,940	
40.02 - Site Utilities, Utility Relocation								
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built. At station 28 only.	LS	\$ 15,000.00	1	\$ 15,000	30%	\$ 4,500	\$ 19,500	Allowance for 1 station only
Potholing crew. At station 28 only	LS	\$ 12,000.00	1	\$ 12,000	30%	\$ 3,600	\$ 15,600	Allowance for 1 station only
Utility modifications @ stations	EA	\$ 125,000.00	2	\$ 250,000	30%	\$ 75,000	\$ 325,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 2 platforms
Power pole relocation	EA	\$ 20,000.00	2	\$ 40,000	30%	\$ 12,000	\$ 52,000	Allowance for 2 poles only
Total Costs - 40.02				\$ 317,000		\$ 95,100	\$ 412,100	
40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments								
Allowance 10% of 40.01	LS	\$ 23,800.00	10%	\$ 2,380	30%	\$ 714	\$ 3,094	
Total Costs - 40.03				\$ 2,380		\$ 714	\$ 3,094	

40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks

Not used		\$	-		30%	\$	-	\$	-
		\$	-		0%	\$	-	\$	-
Total Costs - 40.04		\$	-			\$	-	\$	-

40.05 - Site structures including retaining walls, sound walls

Not used		\$	-		30%	\$	-	\$	-
		\$	-		0%	\$	-	\$	-
Total Costs - 40.05		\$	-			\$	-	\$	-

40.06 - Pedestrian / bike access and accommodation, landscaping

Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (1200lf)	SF	\$	35.00	1,200	\$	42,000	30%	\$	12,600	\$	54,600	(e) sidewalk at stations is 200LF varies 6'-16'w
Sidewalk amenities at (n) stations												
Replace street trees	EA	\$	6,000.00	10	\$	60,000	30%	\$	18,000	\$	78,000	
Work at other misc adjacent elements	EA	\$	100,000.00	1	\$	100,000	30%	\$	30,000	\$	130,000	
Relocate parking meters	EA	\$	1,500.00	25	\$	37,500	30%	\$	11,250	\$	48,750	
Total Costs - 40.06		\$			\$	239,500		\$	71,850	\$	311,350	

40.07 - Automobile, bus, van accessways including roads, parking lots

Not used		\$	-		30%	\$	-	\$	-
Total Costs - 40.07		\$	-			\$	-	\$	-

40.08 - Temporary Facilities and other indirect costs during construction

Mobilization + Demobilization. Incl in other sectors

Street sweeping, SD Vac clearing during construction.

Incl in other sectors

SWPPP. Incl in other sectors

Traffic Control, Staging, pedestrian control, safety. Incl in other sectors

Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 2,038,766	12%	\$ 244,652	30%	\$ 73,396	\$ 318,047	12% of 10-50.
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Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08				\$ 244,652		\$ 73,396	\$ 318,047	
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G1 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
Not used				\$ -	0%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	
50.02 - Traffic signals and crossing protection								
Minimal Improvements	EA	\$ 20,000		\$ -		\$ -	\$ -	
Moderate Improvements	EA	\$ 150,000		\$ -		\$ -	\$ -	
Significant Improvements	EA	\$ 250,000		\$ -		\$ -	\$ -	
Major Improvements	EA	\$ 350,000		\$ -		\$ -	\$ -	
System Integration	EA	\$ 150,000	1	\$ 150,000	0%	\$ -	\$ 150,000	
Total Costs - 50.02				\$ 150,000		\$ -	\$ 150,000	

50.03 - Traction power supply: substations

Not used				\$	-	30%	\$	-	\$	-
Total Costs - 50.03				\$	-		\$	-	\$	-

50.04 - Traction power distribution: catenary and third rail

Not used				\$	-	30%	\$	-	\$	-
Total Costs - 50.04				\$	-		\$	-	\$	-

50.05 - Communications

Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	2	\$	300,000	30%	\$	90,000	\$	390,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 175.00	1,320	\$	231,000	30%	\$	69,300	\$	300,300	1/4 mile of duct construction per station
Total Costs - 50.05				\$	531,000		\$	159,300	\$	690,300	

50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	-	\$	-	30%	\$	-	\$	-	1 per platform
Total Costs - 50.06				\$	-		\$	-	\$	-	

50.07 - Central Control

Not used				\$	-	30%	\$	-	\$	-
Total Costs - 50.07				\$	-		\$	-	\$	-

G1 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description	
60.01 - Purchase or lease of real estate									
Allowance, Side stations	EA	\$ 50,000.00	1	\$ 50,000	30%	\$ 15,000	\$ 65,000		
Allowance, (n) signalized intersection, incl Q jump.				\$ -	30%	\$ -	\$ -		
None									
Total Costs - 60.01				\$	50,000	\$	15,000	\$	65,000

60.02 - Relocation of existing households and businesses

			\$	-	30%	\$	-	\$	-
			\$	-	30%	\$	-	\$	-
Total Costs - 60.02			\$	-		\$	-	\$	-

G1 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$	-	30%	\$	-
				\$	-	0%	\$	-
Total Costs - 70.01				\$	-		\$	-
70.02 - Heavy Rail				\$	-	30%	\$	-
NOT USED				\$	-	0%	\$	-
Total Costs - 70.02				\$	-		\$	-
70.03 - Commuter Rail				\$	-	30%	\$	-
NOT USED				\$	-	0%	\$	-
Total Costs - 70.03				\$	-		\$	-
70.04 - Bus				\$	-	30%	\$	-
NOT USED				\$	-	0%	\$	-
Total Costs - 70.04				\$	-		\$	-

70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option G2

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	0	0		0	0.0%	0.0%	0	0
20.01 At-grade station, stop, shelter, mall, terminal, platform		0	0		0			0	0
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	30	9		39	13.5%	8.6%	3	42
40.01 Demolition, Clearing, Earthwork		0	0		0			0	0
40.02 Site Utilities, Utility Relocation		0	0		0			0	0
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		0	0		0			0	0
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0			0	0
40.05 Site structures including retaining walls, sound walls		0	0		0			0	0
40.06 Pedestrian / bike access and accommodation, landscaping		0	0		0			0	0
40.07 Automobile, bus, van accessways including roads, parking lots		0	0		0			0	0
40.08 Temporary Facilities and other indirect costs during construction		30	9	30%	39	13.5%	8.6%	3	42
50 SYSTEMS	0.00	250	0		250	86.5%	55.2%	19	269
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		250	0	0%	250	86.5%	55.2%	19	269
50.03 Traction power supply: substations		0	0		0				
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		0	0		0				
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	280	9		289	100.0%	63.8%	22	311
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	0	0		0		0.0%	0	0
60.01 Purchase or lease of real estate		0	0		0	0.0%	0.0%		
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0		0.0%		
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	107	16		123	42.6%	27.1%	7	130
80.01 Project Development		17	3		20	6.9%	4.4%	1	21
80.02 Final Design		23	3		27	9.2%	5.9%	1	28
80.03 Project Management for Design and Construction		29	4		33	11.5%	7.3%	1	35
80.04 Construction Administration & Management		14	2		17	5.8%	3.7%	1	18
80.05 Professional Liability and other Non-Construction Insurance		3	0		3	1.2%	0.7%	0	4
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		12	2		13	4.6%	2.9%	1	14
80.07 Surveys, Testing, Investigation, Inspection		6	1		7	2.3%	1.5%	0	7
80.08 Start up		3	0		3	1.2%	0.7%	0	4
Subtotal (10 - 80)	0.00	387	25		412		90.9%		440
90 UNALLOCATED CONTINGENCY					41		9%		44
Subtotal (10 - 90)	0.00				453		100%		485
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				453		100%		485
Allocated Contingency as % of Base Yr Dollars w/o Contingency					6.47%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					10.65%				
Total Contingency as % of Base Yr Dollars w/o Contingency					17.12%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$412
YOE Total Project Cost per Mile (X000)								High (+25%)	\$606

G2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Optional Route length G2. Unimproved

LF

1,821

0.34 mls

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
This G2 optional route will operate on (e) street systems There is no (n) stations or road improvements								
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.01				\$ -		\$ -	\$ -	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								
				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 20.03				\$ -		\$ -	\$ -	
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.								
				\$ -	30%	\$ -	\$ -	
				\$ -	0%	\$ -	\$ -	
Total Costs - 20.04				\$ -		\$ -	\$ -	

20.05 - Joint development						
	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.05	\$	-		\$	-	\$ -
20.06 - Automobile parking multi-story structure						
	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.06	\$	-		\$	-	\$ -
20.07 - Elevators, escalators						
	\$	-	30%	\$	-	\$ -
	\$	-	0%	\$	-	\$ -
Total Costs - 20.07	\$	-		\$	-	\$ -

G2 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
				\$ -	0%	\$ -	\$ -	
Total Costs - 30.01				\$ -		\$ -	\$ -	
30.02 - Light Maintenance Facility								
				\$ -	0%	\$ -	\$ -	
Total Costs - 30.02				\$ -		\$ -	\$ -	
30.03 - Heavy Maintenance Facility								
				\$ -	0%	\$ -	\$ -	
Total Costs - 30.03				\$ -		\$ -	\$ -	
30.04 - Storage or Maintenance of Way Building								
				\$ -	0%	\$ -	\$ -	
Total Costs - 30.04				\$ -		\$ -	\$ -	

30.05 - Yard and Yard Track

				\$	-	0%	\$	-	\$	-
Total Costs - 30.05				\$	-		\$	-	\$	-

G2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description	
40.01 - Demolition, Clearing, Earthwork				\$	-	30%	\$	-	
				\$	-	30%	\$	-	
				\$	-	0%	\$	-	
Total Costs - 40.01				\$	-		\$	-	
40.02 - Site Utilities, Utility Relocation				\$	-	30%	\$	-	
				\$	-	30%	\$	-	
				\$	-	30%	\$	-	
				\$	-	30%	\$	-	
				\$	-	0%	\$	-	
Total Costs - 40.02				\$	-		\$	-	
40.03 - Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									
Allowance 10% of 40.01	LS	\$	-	10%	\$	-	30%	\$	-
Total Costs - 40.03				\$	-		\$	-	
40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks				\$	-	0%	\$	-	
Total Costs - 40.04				\$	-		\$	-	
40.05 - Site structures including retaining walls, sound walls				\$	-	0%	\$	-	
Total Costs - 40.05				\$	-		\$	-	

40.06 - Pedestrian / bike access and accommodation, landscaping

\$	-	30%	\$	-	\$	-
\$	-	30%	\$	-	\$	-
\$	-	30%	\$	-	\$	-
\$	-	30%	\$	-	\$	-
\$	-	30%	\$	-	\$	-
\$	-	30%	\$	-	\$	-
\$	-	0%	\$	-	\$	-

Total Costs - 40.06

\$	-		\$	-	\$	-
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40.07 - Automobile, bus, van accessways including roads, parking lots

\$	-	0%	\$	-	\$	-
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Total Costs - 40.07

\$	-		\$	-	\$	-
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40.08 - Temporary Facilities and other indirect costs during construction

Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$	250,000	12%	\$	30,000	30%	\$	9,000	\$	39,000	12% of 10-50.
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Total Costs - 40.08

\$	30,000		\$	9,000	\$	39,000
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G2 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description		
50.01 - Train control and signals										
				\$	-	0%	\$	-		
Total Costs - 50.01				\$	-		\$	-		
50.02 - Traffic signals and crossing protection										
Minimal Improvements	EA	\$	20,000	0	\$	-	30%	\$	-	
Moderate Improvements	EA	\$	150,000	0	\$	-	30%	\$	-	
Significant Improvements	EA	\$	250,000	0	\$	-	30%	\$	-	
Major Improvements	EA	\$	350,000	0	\$	-	30%	\$	-	
System Integration	EA	\$	250,000	1	\$	250,000	0%	\$	250,000	
Total Costs - 50.02				\$	250,000		\$	-	\$	250,000

50.03 - Traction power supply: substations								
	\$	-	0%	\$	-	\$	-	
Total Costs - 50.03	\$	-		\$	-	\$	-	
50.04 - Traction power distribution: catenary and third rail								
	\$	-	0%	\$	-	\$	-	
Total Costs - 50.04	\$	-		\$	-	\$	-	
50.05 - Communications								
	\$	-	30%	\$	-	\$	-	
	\$	-	30%	\$	-	\$	-	
	\$	-	0%	\$	-	\$	-	
	\$	-	0%	\$	-	\$	-	
Total Costs - 50.05	\$	-		\$	-	\$	-	
50.06 - Fare collection system and equipment								
	\$	-	0%	\$	-	\$	-	
Total Costs - 50.06	\$	-		\$	-	\$	-	
50.07 - Central Control								
	\$	-	0%	\$	-	\$	-	
Total Costs - 50.07	\$	-		\$	-	\$	-	

G2 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side station. None	EA	\$ 50,000.00		\$ -	30%	\$ -	\$ -	
Allowance, (n) signalized intersection, incl Q jump. None	EA			\$ -	30%	\$ -	\$ -	
Total Costs - 60.01				\$ -		\$ -	\$ -	

60.02 - Relocation of existing households and businesses

			\$	-	0%	\$	-	\$	-
			\$	-	0%	\$	-	\$	-
Total Costs - 60.02			\$	-		\$	-	\$	-

G2 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$	-	30%	\$	-
				\$	-	0%	\$	-
Total Costs - 70.01				\$	-		\$	-
70.02 - Heavy Rail				\$	-	0%	\$	-
Total Costs - 70.02				\$	-		\$	-
70.03 - Commuter Rail				\$	-	0%	\$	-
Total Costs - 70.03				\$	-		\$	-
70.04 - Bus				\$	-	0%	\$	-
Total Costs - 70.04				\$	-		\$	-
70.05 - Other				\$	-	0%	\$	-
Total Costs - 70.05				\$	-		\$	-
70.06 - Non-revenue vehicles				\$	-	0%	\$	-
Total Costs - 70.06				\$	-		\$	-
70.07 - Spare parts				\$	-	0%	\$	-
Total Costs - 70.07				\$	-		\$	-

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option H1

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	3,219	966		4,185	27.6%	17.8%	314	4,499
20.01 At-grade station, stop, shelter, mall, terminal, platform		3,219	966	30%	4,185	27.6%	2.1%	314	4,499
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	4,597	1,379		5,977	39.4%	25.5%	448	6,425
40.01 Demolition, Clearing, Earthwork		203	61	30%	263	1.7%	0.1%	20	283
40.02 Site Utilities, Utility Relocation		766	230	30%	996	6.6%	0.5%	75	1,070
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		20	6	30%	26	0.2%	0.0%	2	28
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		1,333	400	30%	1,733	11.4%	0.9%	130	1,863
40.07 Automobile, bus, van accessways including roads, parking lots		780	234	30%	1,014	6.7%	0.5%	76	1,090
40.08 Temporary Facilities and other indirect costs during construction		1,496	449	30%	1,944	12.8%	1.0%	146	2,090
50 SYSTEMS	0.00	4,532	490		5,022	33.1%	21.4%	377	5,398
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		150	0	0%	150	1.0%	0.1%	11	161
50.03 Traction power supply: substations		2,750	0	0%	2,750	18.1%	1.4%	206	2,956
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		1,512	454	30%	1,966	12.9%	1.0%	147	2,113
50.06 Fare collection system and equipment		120	36	30%	156	1.0%	0.1%	12	168
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	12,349	2,835		15,183	100.0%	64.7%	1,139	16,322
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	400	120		520		2.2%	52	572
60.01 Purchase or lease of real estate		400	120	30%	520	3.4%	0.3%	52	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0		0.0%		
70.04 Bus		0	0		0				
70.05 Other		0	0		0				
70.06 Non-revenue vehicles		0	0		0				
70.07 Spare parts		0	0		0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	5,618	0		5,618	37.0%	24.0%	312	5,930
80.01 Project Development		911	0		911	6.0%	0.3%	41	952
80.02 Final Design		1,215	0		1,215	8.0%	0.4%	55	1,269
80.03 Project Management for Design and Construction		1,518	0		1,518	10.0%	0.5%	68	1,587
80.04 Construction Administration & Management		759	0		759	5.0%	0.4%	57	816
80.05 Professional Liability and other Non-Construction Insurance		152	0		152	1.0%	0.1%	11	163
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		607	0		607	4.0%	0.3%	46	653
80.07 Surveys, Testing, Investigation, Inspection		304	0		304	2.0%	0.2%	23	326
80.08 Start up		152	0		152	1.0%	0.1%	11	163
Subtotal (10 - 80)	0.00	18,367	2,955		21,321		90.9%		22,824
90 UNALLOCATED CONTINGENCY					2,132		9%		2,282
Subtotal (10 - 90)	0.00				23,453		100%		25,106
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				23,453		100%		25,106
Allocated Contingency as % of Base Yr Dollars w/o Contingency									16.09%
Unallocated Contingency as % of Base Yr Dollars w/o Contingency									11.61%
Total Contingency as % of Base Yr Dollars w/o Contingency									27.70%
Unallocated Contingency as % of Subtotal (10 - 80)									10.00%
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$21,341
YOE Total Project Cost per Mile (X000)								High (+25%)	\$31,383

H1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Proposed Project - Route Option H1. Unimproved.	LF		11,592 (2.2) mls					
20.01 - At-grade station, stop, shelter, mall, terminal, platform								Station 29 200'x10'+100'x10'+100'x10' =4000sf. SIDE. 3 platforms Station 30 200'x10' x 2 =4000sf. SIDE. 2 platforms. Station 31 200x10+80x10+100x10=3800sf. Side. 3 platforms. Station 32. 100x10+100x10+100x10=3000sf. Side. 3 platforms (eastern terminus) Total 10800sf. Of platforms
NUMBER OF STATIONS. Station 29,30,31,32.. Side								
The option is for either stations 29 or 30 to be in segment H1. Total 3 stations are allowed this segment.								
Stations 29 or 30 will have 2 platforms. Station 31 will have 3 platforms								
Station 32, Colorado/Hill will have 3 platforms & is the eastern terminus of main purple route. One of the 3 stations in H1 will have relocated components from an (e) Pasadena station The BRT will operate on mixed flow streets without improvements other than station 29 or 30 & 31.32								
A layover facility may be constructed at station 32, eastern terminus. Construction effects will include demo & excavating (e) sidewalks, removing trees, landscape, (n) sidewalks, curbs, gutters, paving, SD drainage. Also installing (n) infrastructure for electric bus charging								
Assume the layover zone will be separate to station 32 Locations of station 32 for H1 & H2 differ.								
								14080 sf of platform (1300 lf of platform)

Demo. (e) sidewalk. See 40.01								See 40.01
Red curve for bus maneuvering	LF	\$ 5.00	240	\$ 1,200	30%	\$ 360	\$ 1,560	40' @ ea end of platform
Concrete platform, 8" depth	SF	\$ 66.74	14,080	\$ 939,699	30%	\$ 281,910	\$ 1,221,609	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	18,040	\$ 1,011,142	30%	\$ 303,343	\$ 1,314,485	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side stations. See 40.05								Stations has 2 platforms w/ sidewalks. Total 980lf of adj sidewalk.
Tactile surfacing	SF	\$ 50.00	2,600	\$ 130,000	30%	\$ 39,000	\$ 169,000	
Shelter/Seating/Screen	EA	\$ 18,000.00	24	\$ 432,000	30%	\$ 129,600	\$ 561,600	4 per platform
Railing (SS). None	LF	\$ 350.00	-	\$ -	30%	\$ -	\$ -	
Station Marker	EA	\$ 35,000.00	6	\$ 210,000	30%	\$ 63,000	\$ 273,000	1 per platform
Trash Receptacle	EA	\$ 5,500.00	12	\$ 66,000	30%	\$ 19,800	\$ 85,800	2 per platform
Advertising Kiosk	EA	\$ 10,000.00	6	\$ 60,000	30%	\$ 18,000	\$ 78,000	1 per platform
Station Signage & misc.	EA	\$ 10,000.00	3	\$ 30,000	30%	\$ 9,000	\$ 39,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	12	\$ 14,400	30%	\$ 4,320	\$ 18,720	2 per platform
Electric power supply & platform lighting.Side	LS	\$ 100,000.00	3	\$ 300,000	30%	\$ 90,000	\$ 390,000	
Relocate (e) Pasadena station. Allowance	EA	\$ 25,000	1	\$ 25,000	30%	\$ 7,500	\$ 32,500	
Total Costs - 20.01				\$ 3,219,441		\$ 965,832	\$ 4,185,274	
20.02 - Aerial station, stop, shelter, mall, terminal, platform								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.02				\$ -		\$ -	\$ -	
20.03 - Underground station, stop, shelter, mall, terminal, platform								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.03				\$ -		\$ -	\$ -	
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 20.04				\$ -		\$ -	\$ -	

20.05 - Joint development						
Not used	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.05	\$	-		\$	-	\$ -
20.06 - Automobile parking multi-story structure						
Not used	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.06	\$	-		\$	-	\$ -
20.07 - Elevators, escalators						
Not used	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 20.07	\$	-		\$	-	\$ -

H1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at station	SF	\$ 10.00	10,800	\$ 108,000	30%	\$ 32,400	\$ 140,400	Station 29 or 30, 31, 32
Demo curb & gutter	LF	\$ 4.00	1,080	\$ 4,320	30%	\$ 1,296	\$ 5,616	
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	18,040	\$ 90,200	30%	\$ 27,060	\$ 117,260	
Total Costs - 40.01				\$ 202,520		\$ 60,756	\$ 263,276	
40.02 - Site Utilities, Utility Relocation								
								Price per station not alignment
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	LS	\$ 15,000.00	3	\$ 45,000	30%	\$ 13,500	\$ 58,500	Allowance per station only
Potholing crew.	LS	\$ 12,000.00	3	\$ 36,000	30%	\$ 10,800	\$ 46,800	Allowance per station only
Utility modifications @ stations	EA	\$ 125,000.00	5	\$ 625,000	30%	\$ 187,500	\$ 812,500	Allowance @(n) sidewalk work & station access. Inlets, level &SD adjustments. 6 platforms
H1 Other Colorado- utility modifications	LS	\$ -	1	\$ -	30%	\$ -	\$ -	
Power pole relocation	EA	\$ 20,000.00	3	\$ 60,000	30%	\$ 18,000	\$ 78,000	Allowance for 1 poles only @ea station
Total Costs - 40.02				\$ 766,000		\$ 229,800	\$ 995,800	

**40.03 - Haz. mat'l, contam'd soil removal/mitigation,
ground water treatments**

Allowance 10% of 40.01	LS	\$ 202,520.00	10%	\$ 20,252	30%	\$ 6,076	\$ 26,328
Total Costs - 40.03				\$ 20,252		\$ 6,076	\$ 26,328

**40.04 - Environmental mitigation, e.g. wetlands,
historic/archeologic, parks**

Not used				\$ -	30%	\$ -	\$ -
				\$ -	30%	\$ -	\$ -
Total Costs - 40.04				\$ -		\$ -	\$ -

**40.05 - Site structures including retaining walls, sound
walls**

Not used				\$ -	30%	\$ -	\$ -
				\$ -	30%	\$ -	\$ -
Total Costs - 40.05				\$ -		\$ -	\$ -

**40.06 - Pedestrian / bike access and accommodation,
landscaping**

Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (980lf)	SF	\$ 35.00	10,800	\$ 378,000	30%	\$ 113,400	\$ 491,400	(e) sidewalk at stations is 980LF varies 6'-16'w
Remove/restripe (e) rd surfaces	LS	\$ 75,000.00	1	\$ 75,000	30%	\$ 22,500	\$ 97,500	
Allowance for misc work & interface w/ (e) surfaces at 3 stations for replacing trees, light poles, parking meters, hardscape, curb extensions, rose bowl blue line etc	LS	\$ 30,000.00	3	\$ 90,000	30%	\$ 27,000	\$ 117,000	Allowance \$750 ea station
Sidewalk amenities at (n) stations								
Replace street trees	EA	\$ 6,000.00	40	\$ 240,000	30%	\$ 72,000	\$ 312,000	
Work at other misc adjacent elements	EA	\$ 100,000.00	4	\$ 400,000	30%	\$ 120,000	\$ 520,000	At stations
Relocate parking meters	EA	\$ 1,500.00	100	\$ 150,000	30%	\$ 45,000	\$ 195,000	
Total Costs - 40.06				\$ 1,333,000		\$ 399,900	\$ 1,732,900	

40.07 - Automobile, bus, van accessways including roads, parking lots

H1 layover adjacent station 32. See note above.	LS	\$ 750,000.00	1	\$ 750,000	30%	\$ 225,000	\$ 975,000	Allowance \$750k
Survey crew. 3 stations	EA	\$ 5,000.00	6	\$ 30,000	30%	\$ 9,000	\$ 39,000	No other work than at the 3 stations
Total Costs - 40.07				\$ 780,000		\$ 234,000	\$ 1,014,000	

40.08 - Temporary Facilities and other indirect costs during construction

(4 stations only at H1)								
Mobilization + Demobilization. Incl in other sectors	EA		1	\$ -	30%	\$ -	\$ -	Alignment or EA Per LF of paved total alignment
Street sweeping, SD Vac clearing during construction.	LOC	\$ 10,000.00	3	\$ 30,000	30%	\$ 9,000	\$ 39,000	Per ea station
SWPPP	LOC	\$ 7,500.00	3	\$ 22,500	30%	\$ 6,750	\$ 29,250	Per ea station
Traffic Control, Staging, pedestrian control, safety	LOC	\$ 20,000.00	6	\$ 120,000	30%	\$ 36,000	\$ 156,000	Per ea station
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 11,025,713	12%	\$ 1,323,086	30%	\$ 396,926	\$ 1,720,011	12% of 10-50.
Note: All Contractors overhead /profits Incl in prices.								
Total Costs - 40.08				\$ 1,495,586		\$ 448,676	\$ 1,944,261	

H1 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
Not used								
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	

50.02 - Traffic signals and crossing protection												
Minimal Improvements	EA	\$	20,000	-	\$	-	30%	\$	-	\$	-	
Moderate Improvements	EA	\$	150,000	-	\$	-	30%	\$	-	\$	-	
Significant Improvements	EA	\$	250,000	-	\$	-	30%	\$	-	\$	-	
Major Improvements	EA	\$	350,000	-	\$	-	30%	\$	-	\$	-	
System Integration	EA	\$	150,000	1	\$	150,000	0%	\$	-	\$	150,000	
Total Costs - 50.02					\$	150,000		\$	-	\$	150,000	
50.03 - Traction power supply: substations												
Charging station. Only required at H1, H2. A1 & A2 is (e)	EA	\$	1,375,000	2	\$	2,750,000	0%	\$	-	\$	2,750,000	Assume Facility to be at ea end of routes Two at PCC station; Pricing from Metro inclusive of alloc. contingency
Total Costs - 50.03					\$	2,750,000		\$	-	\$	2,750,000	
50.04 - Traction power distribution: catenary and third rail												
Not used					\$	-	30%	\$	-	\$	-	
Total Costs - 50.04					\$	-		\$	-	\$	-	
50.05 - Communications												
Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$	150,000.00	7	\$	1,050,000	30%	\$	315,000	\$	1,365,000	1 per platform but excl the relocated Pasadena
Fibre optic ductbank, 2 stations only	LF	\$	175.00	2,640	\$	462,000	30%	\$	138,600	\$	600,600	1/4 mile of duct construction per station
Total Costs - 50.05					\$	1,512,000		\$	453,600	\$	1,965,600	
50.06 - Fare collection system and equipment												
Ticket Vending Machine	EA	\$	120,000.00	1	\$	120,000	30%	\$	36,000	\$	156,000	1 per platform - only at PCC station
Total Costs - 50.06					\$	120,000		\$	36,000	\$	156,000	
50.07 - Central Control												
Not used					\$	-	30%	\$	-	\$	-	
					\$	-	30%	\$	-	\$	-	
Total Costs - 50.07					\$	-		\$	-	\$	-	

H1 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	3	\$ 150,000	30%	\$ 45,000	\$ 195,000	
Allowance, (n) signalized intersection, incl Q jump.	EA	\$ -		\$ -	30%	\$ -	\$ -	
None								
Allowance, charging and layover station at PCC	EA	\$ 250,000.00	1	\$ 250,000	30%	\$ 75,000	\$ 325,000	
Total Costs - 60.01				\$ 400,000		\$ 120,000	\$ 520,000	
60.02 - Relocation of existing households and businesses								
Not used				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

H1 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	
70.03 - Commuter Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.03				\$ -		\$ -	\$ -	

70.04 - Bus						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.04	\$	-		\$	-	\$ -
70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -

MAIN WORKSHEET - BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option H2

Today's Date **10/2/20**

Yr of Base Year \$ **2020**

Yr of Revenue Ops **2024**

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars Allocated Contingency %	Base Year Dollars TOTAL (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	Escalation Per Annum @ 3% = 7.50% (X000)	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01 Guideway: Surface Streets					0				
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	1,858	557		2,415	17.2%	11.1%	181	2,596
20.01 At-grade station, stop, shelter, mall, terminal, platform		1,858	557	30%	2,415	17.2%	1.3%	181	2,596
20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0		0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
20.05 Joint development		0	0		0				
20.06 Automobile parking multi-story structure		0	0		0				
20.07 Elevators, escalators		0	0		0				
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
30.01 Administration Building: Office, sales, storage, revenue counting		0	0		0				
30.02 Light Maintenance Facility		0	0		0				
30.03 Heavy Maintenance Facility		0	0		0				
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track		0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	4,626	1,388		6,014	42.8%	27.5%	451	6,465
40.01 Demolition, Clearing, Earthwork		96	29	30%	125	0.9%	0.1%	9	134
40.02 Site Utilities, Utility Relocation		875	263	30%	1,138	8.1%	0.6%	85	1,223
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		10	3	30%	12	0.1%	0.0%	1	13
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		825	247	30%	1,072	7.6%	0.6%	80	1,153
40.07 Automobile, bus, van accessways including roads, parking lots		1,380	414	30%	1,794	12.8%	1.0%	135	1,929
40.08 Temporary Facilities and other indirect costs during construction		1,441	432	30%	1,873	13.3%	1.0%	140	2,013
50 SYSTEMS	0.00	5,025	608		5,633	40.1%	25.8%	392	6,024
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		250	0	0%	250	1.8%	0.0%		
50.03 Traction power supply: substations		2,750	0	0%	2,750	19.6%	1.5%	206	2,956
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		1,905	572	30%	2,477	17.6%	1.3%	186	2,662
50.06 Fare collection system and equipment		120	36		156				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	0.00	11,509	2,553		14,062	100.0%	64.4%	1,024	15,086
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	450	135		585		2.7%	59	644
60.01 Purchase or lease of real estate		450	135	30%	585	4.2%	0.4%	59	
60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES (NOT USED)	0	0	0		0		0.0%		
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	5,203	0		5,203	37.0%	23.8%	289	5,492
80.01 Project Development		844			844	6.0%	0.3%	38	882
80.02 Final Design		1,125			1,125	8.0%	0.4%	51	1,176
80.03 Project Management for Design and Construction		1,406			1,406	10.0%	0.5%	63	1,469
80.04 Construction Administration & Management		703			703	5.0%	0.4%	53	756
80.05 Professional Liability and other Non-Construction Insurance		141			141	1.0%	0.1%	11	151
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		562			562	4.0%	0.3%	42	605
80.07 Surveys, Testing, Investigation, Inspection		281			281	2.0%	0.2%	21	302
80.08 Start up		141			141	1.0%	0.1%	11	151
Subtotal (10 - 80)	0.00	17,162	2,688		19,849		90.9%		21,221
90 UNALLOCATED CONTINGENCY					1,985		9%		2,122
Subtotal (10 - 90)	0.00				21,834		100%		23,343
100 FINANCE CHARGES									
Total Project Cost (10 - 100)	0.00				21,834		100%		23,343
Allocated Contingency as % of Base Yr Dollars w/o Contingency					15.66%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					11.57%				
Total Contingency as % of Base Yr Dollars w/o Contingency					27.23%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%				
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								Low (-15%)	\$19,842
YOE Total Project Cost per Mile (X000)								High (+25%)	\$29,179

H2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
Route Option H2. Unimproved	LF		18713					
Route Option H2. Paved.	LF		675					
			19388					
<p>NUMBER OF STATIONS. 4 side & 1 center station on H2. Total of Five stations on H2</p>								6300 sf of platform in 5 stations
<p>Stations 33 or 34 on Green. Side</p>								(570 lf of platform)
<p>Stations 37 or 38 on Union. Side</p>								Station 33 12x100 side
<p>Stations 35 side, 32 side, 36 center.</p>								Station 38 10x70 side
								station 35 12x100 side
								Station 36 12x100,side, not shown
								Station 32 10x200 side
<p>A layover facility may be constructed at station 32, eastern terminus. Construction effects will include demo & excavating (e) sidewalks, removing trees, landscape, (n) sidewalks, curbs, gutters, paving, SD drainage. Also installing (n) infrastructure for electric bus charging</p>								
<p>Locations of station 32 for H1 & H2 differ.</p>								
20.01 - At-grade station, stop, shelter, mall, terminal, platform								
Concrete platform, 8" depth. Side	SF	\$ 66.74	6,300	\$ 420,462	30%	\$ 126,139	\$ 546,601	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	6,170	\$ 345,829	30%	\$ 103,749	\$ 449,577	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side station. See 40.05.				\$ -	30%	\$ -	\$ -	5 stations
Red curve for bus maneuvering	LF	\$ 5.00	200	\$ 1,000	30%	\$ 300	\$ 1,300	40' @ ea end of platform
Tactile surfacing	SF	\$ 50.00	600	\$ 30,000	30%	\$ 9,000	\$ 39,000	
Shelter/Seating/Screen	EA	\$ 18,000.00	20	\$ 360,000	30%	\$ 108,000	\$ 468,000	4 per platform
Railing (SS). None	LF	\$ 350.00	-	\$ -	30%	\$ -	\$ -	
Station Marker	EA	\$ 35,000.00	6	\$ 210,000	30%	\$ 63,000	\$ 273,000	1 per platform, plus extra at Hill
Trash Receptacle	EA	\$ 5,500.00	12	\$ 66,000	30%	\$ 19,800	\$ 85,800	2 per platform, plus extra at Hill
Advertising Kiosk	EA	\$ 10,000.00	6	\$ 60,000	30%	\$ 18,000	\$ 78,000	1 per platform, plus extra at Hill
Station Signage & misc.	EA	\$ 10,000.00	5	\$ 50,000	30%	\$ 15,000	\$ 65,000	Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$ 1,200.00	12	\$ 14,400	30%	\$ 4,320	\$ 18,720	2 per platform, plus extra at Hill
Electric power supply & platform lighting. Side	EA	\$ 100,000.00	3	\$ 300,000	30%	\$ 90,000	\$ 390,000	Allowance per station
Total Costs - 20.01				\$ 1,857,691		\$ 557,307	\$ 2,414,998	

20.02 - Aerial station, stop, shelter, mall, terminal, platform						
NOT USED	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.02	\$	-	\$	-	\$	-
20.03 - Underground station, stop, shelter, mall, terminal, platform						
NOT USED	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.03	\$	-	\$	-	\$	-
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley, etc.						
NOT USED	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.04	\$	-	\$	-	\$	-
20.05 - Joint development						
NOT USED	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.05	\$	-	\$	-	\$	-
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.06	\$	-	\$	-	\$	-
20.07 - Elevators, escalators						
NOT USED	\$	-	30%	\$	-	\$
	\$	-	30%	\$	-	\$
Total Costs - 20.07	\$	-	\$	-	\$	-

H2 - SCC 30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN. BLDGS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.01				\$ -		\$ -	\$ -	
30.02 - Light Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.02				\$ -		\$ -	\$ -	
30.03 - Heavy Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.03				\$ -		\$ -	\$ -	
30.04 - Storage or Maintenance of Way Building								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.04				\$ -		\$ -	\$ -	
30.05 - Yard and Yard Track								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 30.05				\$ -		\$ -	\$ -	

H2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
40.01 - Demolition, Clearing, Earthwork								
Demo. (e) conc sidewalk at station	SF	\$ 10.00	6,300	\$ 63,000	30%	\$ 18,900	\$ 81,900	Station 33 or 34, 35, 32, 36, 37 or 38
Demo curb & gutter	LF	\$ 4.00	570	\$ 2,280	30%	\$ 684	\$ 2,964	
Demo. (e) road pavement & base at bus parking pad	SF	\$ 5.00	6,170	\$ 30,850	30%	\$ 9,255	\$ 40,105	
Total Costs - 40.01				\$ 96,130		\$ 28,839	\$ 124,969	
40.02 - Site Utilities, Utility Relocation								
								Price per station not alignment
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as built.	EA	\$ 15,000.00	5	\$ 75,000	30%	\$ 22,500	\$ 97,500	Allowance per station only
Potholing crew.	EA	\$ 12,000.00	5	\$ 60,000	30%	\$ 18,000	\$ 78,000	Allowance per station only
Utility modifications @ stations	LOC	\$ 125,000.00	4	\$ 500,000	30%	\$ 150,000	\$ 650,000	Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 4 platforms
H2 Other Green & Union- utility modifications.	EA	\$ -	1	\$ -	30%	\$ -	\$ -	
Power pole relocation	EA	\$ 20,000.00	10	\$ 200,000	30%	\$ 60,000	\$ 260,000	Allowance for 1 poles only @ea station
Tree work on Green, Pasadena	LF	\$ 10.00	4,000	\$ 40,000	30%	\$ 12,000	\$ 52,000	See Google. Allowance \$40k
Total Costs - 40.02				\$ 875,000		\$ 262,500	\$ 1,137,500	
40.03 - Haz. mat'l, contam'd soil removal/mitigation, Allowance 10% of 40.01								
	LS	\$ 96,130.00	10%	\$ 9,613	30%	\$ 2,884	\$ 12,497	
Total Costs - 40.03				\$ 9,613		\$ 2,884	\$ 12,497	
40.04 - Environmental mitigation, e.g. wetlands, historic/archeologic, parks								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 40.04				\$ -		\$ -	\$ -	

40.05 - Site structures including retaining walls, sound walls

NOT USED		\$	-		30%	\$	-	\$	-
		\$	-		30%	\$	-	\$	-
Total Costs - 40.05		\$	-			\$	-	\$	-

40.06 - Pedestrian / bike access and accommodation, landscaping

Allowance for misc work & interfacing w/ (e) surfaces at 5 stations for protection or replacing trees, light poles, parking meters, hardscape, curb extensions, relocations etc	LS	\$	100,000.00	1	\$	100,000	30%	\$	30,000	\$	130,000	5 stations including station 32 which will have considerable interface w/adjacent surfaces
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf)	SF	\$	35.00	6,300	\$	220,500	30%	\$	66,150	\$	286,650	
(n) Curb & Gutter	LF	\$	50.00	570	\$	28,500	30%	\$	8,550	\$	37,050	
Remove/restripe (e) rd surfaces	LS	\$	75,000.00	1	\$	75,000	30%	\$	22,500	\$	97,500	
Sidewalks												
New 5'w sidewalk	LF	\$	9.80	1,140	\$	11,172	30%	\$	3,352	\$	14,524	228 lf x5'w
New 22'w sidewalk	LF	\$	9.80	1,140	\$	11,172	30%	\$	3,352	\$	14,524	228 lf x5'w
Reconstruct (e) & or (n) curb ramp	EA	\$	3,500.00	6	\$	21,000	30%	\$	6,300	\$	27,300	
Sidewalk amenities at (n) stations												
Replace street trees	EA	\$	6,000.00	20	\$	120,000	30%	\$	36,000	\$	156,000	Allowance based on Google
Work at other misc adjacent elements	EA	\$	100,000.00	2	\$	200,000	30%	\$	60,000	\$	260,000	At stations
Relocate parking meters	EA	\$	1,500.00	25	\$	37,500	30%	\$	11,250	\$	48,750	
Total Costs - 40.06					\$	824,844		\$	247,453	\$	1,072,297	

40.07 - Automobile, bus, van accessways including roads, parking lots

												(n) AC 36 400x66 & 32 325x66=47850sf
Milling (E) asphalt road paving @ 12'w section Arroyo/Green	SF	\$	2.75	1,000	\$	2,750	30%	\$	825	\$	3,575	125x12=1500sf
Milling (E) asphalt road paving @ stations 36 & 32	SF	\$	2.75	47,850	\$	131,588	30%	\$	39,476	\$	171,064	36 400lf & 32 325 lf
Haul off asphalt millings	TON	\$	33.60	597	\$	20,048	30%	\$	6,014	\$	26,062	
AC Overlay (2") @ stations 36 & 32	TON	\$	115.50	579	\$	66,836	30%	\$	20,051	\$	86,887	145lbs/CF. (n) asphalt. Allow (n) 2" AC
AC Overlay (2") @ 12'w section Arroyo/Green	TON	\$	115.50	18	\$	2,079	30%	\$	624	\$	2,703	
Continental crosswalks, 24" w striping	SF	\$	5.50	2,000	\$	11,000	30%	\$	3,300	\$	14,300	2 at station 36 100x10x2#

8' wide street parking - solid striped	LF	\$ 1.40	1,150	\$ 1,610	30%	\$ 483	\$ 2,093	Allow 1150 lf of thermoplastic striping
Chevron pavement markings	SF	\$ 6.00	14,400	\$ 86,400	30%	\$ 25,920	\$ 112,320	Middle of road. Median length measured.
Loading area, cross hatch striping	SF	\$ 6.00	2,000	\$ 12,000	30%	\$ 3,600	\$ 15,600	200x10
Chevron pavement markings	SF	\$ 6.00	1,393	\$ 8,358	30%	\$ 2,507	\$ 10,865	Ar stat 36 & some in hill
Directional arrows	EA	\$ 75.00	13	\$ 975	30%	\$ 293	\$ 1,268	Thermoplastic
Road letters "bus lane"	EA	\$ 200.00	4	\$ 800	30%	\$ 240	\$ 1,040	Thermoplastic
Bus lane red paint	SF	\$ 3.30	6,400	\$ 21,120	30%	\$ 6,336	\$ 27,456	Thermoplastic red, 12' w x725
Intermittent 4" lane line w/ markers	LF	\$ 3.75	650	\$ 2,438	30%	\$ 731	\$ 3,169	Thermoplastic
Misc signage above pavement level	EA	\$ 30,000.00	5	\$ 150,000	30%	\$ 45,000	\$ 195,000	Pole signs etc @ station 36 32
Curb & gutter	LF	\$ 40.00	1,450	\$ 58,000	30%	\$ 17,400	\$ 75,400	
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$ 21.90	2,467	\$ 54,027	30%	\$ 16,208	\$ 70,235	5% x 49,350 sf
H2 layover adjacent station 32. See note above.	LS	\$ 750,000.00	1	\$ 750,000	30%	\$ 225,000	\$ 975,000	
Total Costs - 40.07				\$ 1,380,028		\$ 414,008	\$ 1,794,037	
40.08 - Temporary Facilities and other indirect costs during construction								
(5 stations & 2 areas of paving)								
Mobilization + Demobilization	LS	\$ 75,000.00	1	\$ 75,000	30%	\$ 22,500	\$ 97,500	
Street sweeping, SD Vac clearing during construction.	LS	\$ 10,000.00	5	\$ 50,000	30%	\$ 15,000	\$ 65,000	
SWPPP (Small area only. Does not apply to the whole alignment. Allow a lump of \$10k	LS	\$ 10,000.00	5	\$ 50,000	30%	\$ 15,000	\$ 65,000	
Traffic Control, Staging, pedestrian control, safety.	LF	\$ 44.78	725	\$ 32,466	30%	\$ 9,740	\$ 42,205	
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 10,275,771	12%	\$ 1,233,093	30%	\$ 369,928	\$ 1,603,020	12% of 10-50.
Note: All Contractors overhead /profits Incl in prices.								
Total Costs - 40.08				\$ 1,440,558		\$ 432,167	\$ 1,872,725	

H2 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.01				\$ -		\$ -	\$ -	
50.02 - Traffic signals and crossing protection								
Minimal Improvements	EA	\$ 20,000	0	\$ -	30%	\$ -	\$ -	
Moderate Improvements	EA	\$ 150,000	0	\$ -	30%	\$ -	\$ -	
Significant Improvements	EA	\$ 250,000	0	\$ -	30%	\$ -	\$ -	
Major Improvements	EA	\$ 350,000	0	\$ -	30%	\$ -	\$ -	
System Integration	EA	\$ 250,000	1	\$ 250,000	0%	\$ -	\$ 250,000	
Total Costs - 50.02				\$ 250,000		\$ -	\$ 250,000	
50.03 - Traction power supply: substations								
Charging station. Only reqd at H1, H2. A1, A2 is (e)	EA	\$ 1,375,000	2	\$ 2,750,000	0%	\$ -	\$ 2,750,000	Two at PCC station; Pricing from Metro inclusive of alloc. contingency
Total Costs - 50.03				\$ 2,750,000		\$ -	\$ 2,750,000	
50.04 - Traction power distribution: catenary and third rail								
Not used				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 50.04				\$ -		\$ -	\$ -	
50.05 - Communications								
Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	5	\$ 750,000	30%	\$ 225,000	\$ 975,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 175.00	6,600	\$ 1,155,000	30%	\$ 346,500	\$ 1,501,500	1/4 mile of duct construction per station
Total Costs - 50.05				\$ 1,905,000		\$ 571,500	\$ 2,476,500	

50.06 - Fare collection system and equipment

Ticket Vending Machine	EA	\$ 120,000.00	1	\$	120,000	30%	\$	36,000	\$	156,000	1 per platform
Total Costs - 50.06				\$	120,000		\$	36,000	\$	156,000	

50.07 - Central Control

NOT USED				\$	-	30%	\$	-	\$	-
				\$	-	30%	\$	-	\$	-
Total Costs - 50.07				\$	-		\$	-	\$	-

H2 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate								
Allowance, Side stations	EA	\$ 50,000.00	4	\$ 200,000	30%	\$ 60,000	\$ 260,000	
Allowance, (n) signalized intersection, incl Q jump.	EA	\$ -		\$ -	30%	\$ -	\$ -	
Allowance, charging and layover station at PCC	EA	\$ 250,000.00	1	\$ 250,000	30%	\$ 75,000	\$ 325,000	
Total Costs - 60.01				\$ 450,000		\$ 135,000	\$ 585,000	
60.02 - Relocation of existing households and businesses								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 60.02				\$ -		\$ -	\$ -	

H2 - SCC 70 - VEHICLES (NOT USED)

Item	Unit	Unit Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	Allocated Contingency	Total Cost w/ Contingency	Description
70.01 - Light Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.01				\$ -		\$ -	\$ -	
70.02 - Heavy Rail								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30%	\$ -	\$ -	
Total Costs - 70.02				\$ -		\$ -	\$ -	

70.03 - Commuter Rail						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.03	\$	-		\$	-	\$ -
70.04 - Bus						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.04	\$	-		\$	-	\$ -
70.05 - Other						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.05	\$	-		\$	-	\$ -
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.06	\$	-		\$	-	\$ -
70.07 - Spare parts						
NOT USED	\$	-	30%	\$	-	\$ -
	\$	-	30%	\$	-	\$ -
Total Costs - 70.07	\$	-		\$	-	\$ -