North Hollywood to Pasadena
Bus Rapid Transit (BRT) Corridor
Planning and Environmental Study
Conceptual Capital Cost Report
Update

TABLE OF CONTENTS

1.0 I	ntroduction	1
1.1	Project Description	1
1.2	Purpose and Scope	1
1.3	Proposed Project and Route Options	1
2.0 E	Estimate Methodology and Development	5
2.1	Overall Approach and Format	5
2.2	Project Elements, Quantities, and Cost Data	6
2.3	General Cost Assumptions and Parameters	7
2.4	Contingency	7
3.0 C	Capital Cost Categories	9
3.1	SCC 10: Guideway and Track Elements	9
3.2	SCC 20: Stations, Stops, Terminals, Intermodal	9
3.3	SCC 30: Support Facilities: Yards, Shops, Admin. Buildings	10
3.4	SCC 40: Sitework and Special Conditions	10
3.5	SCC 50: Systems	12
3.6	SCC 60: Right-of-Way, Land, Existing Improvements	13
3.7	SCC 70: Vehicles	14
3.8	SCC 80: Professional Services	14
4.0 C	Cost Estimate Summary	15
Appe	endix A – Cost Estimate Workbooks	17

LIST OF FIGURES

rigure 1 - Proposed Project and Route Options	ed Project and Route Options	3
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LIST OF TABLES

Table 1 – Proposed Project Segments (in bold) and Route Options	3
Table 2 – FTA SCC Capital Cost Estimate Category Descriptions	5
Table 3 – Allocated Contingency per FTA Standard Cost Category	8
Table 4 – Professional Services - Percentage Applied to Construction Cost	14
Table 5 – Cost Estimate Summary for the Proposed Project	15
Table 6 – Contingency Summary	15
Table 7 – Cost Estimate Summary for the Proposed Project by Route Option	16

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
В	CA 134	Los Angeles / Burbank	Mixed-Flow	1.4	0
С	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

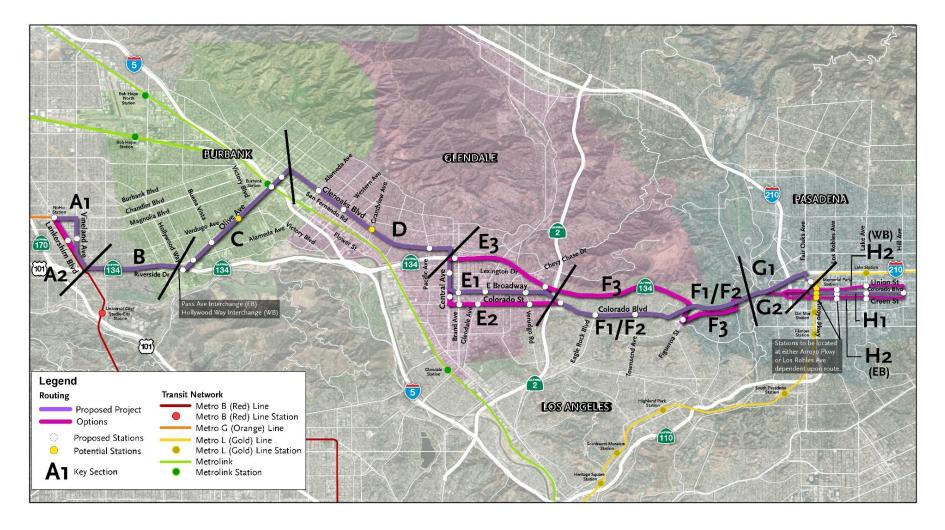


Figure 1 – Proposed Project and Route Options

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, sounds 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	В	С	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



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

11601 Wilshire Blvd., Suite 500 | Los Angeles | California | 90025 310-207-6900 | 310-207-6906 (f) | www.lelandsaylor.com



PROJECT: NORTH HOLLYWOOD TO PASADENA BRT

JOB NUMBER: 18-074r6 LOCATION: LOS ANGELES, CA PREPARED BY: SF, IS, JN

CLIENT: KIMLEY HORN AND ASSOCIATES BID DATE:

DESCRIPTION: CAPITAL COST ESTIMATE ESTIMATE DATE: **10/2/2020**

CONTENTS

SECTION	DESCRIPTION	PAGE
1	OVERALL SUMMARY OF ESTIMATE	3
II	ESTIMATE DETAIL	12



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**

DIV #	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL
1.00	Proposed Project - Project Wide Elements				\$ 52,42
2.00	Proposed Project - Route Option A1				\$ 29,624
3.00	Route Option A2				\$ 16,593
4.00	Proposed Project - Route Option B (All on CA 134. No Work for this Option)				
5.00	Proposed Project - Route Option C				\$ 59,93
6.00	Proposed Project - Route Option D				\$ 59,02
7.00	Proposed Project - Route Option E1				\$ 36,590
8.00	Route Option E2				\$ 46,682
9.00	Route Option E3				\$ 10,348
10.00	Route Option F1				\$ 52,392
11.00	Proposed Project - Route Option F2				\$ 29,597
12.00	Route Option F3				\$ 4,40
13.00	Proposed Project - Route Option G1				\$ 4,79
14.00	Route Option G2				\$ 484
15.00	Proposed Project - Route Option H1				\$ 25,10
16.00	Route Option H2				\$ 23,34
	Proposed Project (A1, B, C, D, E1, F2, G1, H1)				\$ 297,096



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			(
tem	Unit	Unit Cost	
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	SF	0.60	
on Vineyard			
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	
<u> </u>			Ī
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	
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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			
tem	Unit	Unit Cost	Column1
Hazardous Material Allowance. G2	LS		
Hazardous Material Allowance. H1	LS		
Hazardous Material Allowance. H2	LS		
10.04 Environmental Mitigation			
Mitigation Material Allowance. None allowed	LS		
10.06 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	
0.07 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	3,500.00	
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 8' wide street parking	LF	1.86	
	LF	1.98	

UNII COSI MASIER SHEEI			
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	EA	20,000.00	
platform. (only where no AC is)			
Contractors General Conditions, insurance, bond. 10%x	%	12.00	
20-50. + bonds 1% + insur 1% =12%			
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
EO 02 Traction Dower Supply / Charging Station			
50.03 Traction Power Supply / Charging Station Charging Station only at H1 & H2	EA	1 275 000	Metro historical / recent pricing
Vehicle Chargers at Division	EA		Metro historical / recent pricing
50.05 Communications	LA	330,000	Metro historical / recent pricing
Fiber Optic Ductbank	LF	175.00	
Station systems/comms (PA, CCTV, Next bus, cabinet	LS	150,000.00	
etc.) Per platform	LJ	150,000.00	
etti, i ei piatioiiii			
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	

ltem	Unit	Unit Cost	Column1
60.01 - Purchase or lease of real estate. Allow esc 10% fla	ıt		
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

MAIN WORKSHEET-BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project (Route Options A1, B, C, D, E1, F2, G1, H1)

Today's Date Yr of Base

10/2/20 2020

2024 Yr of Revenue Ops

	Quantity	Base Year Dollars w/o	Base Year Dollars	Base Year Dollars	Base Year Dollars	Base Year Dollars	Base Year Dollars	Escalation Per Annum @ 3% =	YOE Dollars Total
		Contingency (X000)	Allocated Contingency (X000)	Allocated Contingency %	TOTAL (X000)	Percentage of Construction Cost	Percentage of Total Project Cost	7.50% (X000)	(X000)
40 CHIDEWAY 9 TRACK ELEMENTS (route miles)	0.00	0	0	70	0	0%	0%		0
10 GUIDEWAY & TRACK ELEMENTS (route miles) 10.01 Guideway: Surface Streets	0.00		U		0	U%	0%		
10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	15,920	4,776		20,696	12.7%	7.5%	1,552	22,248
20.01 At-grade station, stop, shelter, mall, terminal, platform		15,920	4,776	30%	20,696	12.7%	7.5%	1,552	22,248
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 20.06 Automobile parking multi-story structure		0	0		0				
20.06 Automobile parking multi-story structure 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	0.00	0	0		0	0.070	0.070		
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	76,738	23,021	0521	99,759	61.1%	36.2%	7,482	107,241
40.01 Demolition, Clearing, Earthwork		2,226	668	30%	2,894	1.8%	1.1%	217	3,111
40.02 Site Utilities, Utility Relocation 40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		6,535 223	1,961 67	30% 30%	8,496 289	5.2%	3.1%	637 22	9,133 311
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0	30%	0	0.2%	0.1%	22	311
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		10,885	3,265	30%	14,150	8.7%	5.1%	1,061	15,211
40.07 Automobile, bus, van accessways including roads, parking lots		39,041	11,712	30%	50,753	31.1%	18.4%	3,807	54,560
40.08 Temporary Facilities and other indirect costs during construction		17,191 637	5,157	30% 30%	22,348	13.7%	8.1%	1,676 62	24,024 890
40.09 Public Art Allowance 50 SYSTEMS	0.00	35,421	191 7,281	30%	828	0.5% 26.2%	0.3% 15.5%	3,203	45,905
50.01 Train control and signals	0.00	0	0		42,702 0	20.276	15.5%	3,203	45,505
50.02 Traffic signals and crossing protection		9.870	2,871	29%	12,741	7.8%	4.6%	956	13.697
50.03 Traction power supply: substations		8,350	0	0%	8,350	5.1%	3.0%	626	8,976
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		11,601	3,480	30%	15,081	9.2%	5.5%	1,131	16,212
50.06 Fare collection system and equipment		600	180	30%	780	0.5%	0.3%	59	839
50.07 Central Control		5,000	750	15%	5,750	3.5%	2.1%	431	6,181
Construction Subtotal (10 - 50)	0.00	128,079	35,079		163,157	100.0%	59.2%	12,237	175,394
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	1,450	435	200/	1,885		0.7%	400	2,074
60.01 Purchase or lease of real estate 60.02 Relocation of existing households and businesses		1,450	435 0	30%	1,885 0			189	
70 VEHICLES	0	21,708	3,256		24,964		9.1%	3,935	28,899
70.04 Bus		20,400	3,060	15%	23,460	14.4%	8.5%	3,698	20,033
70.05 Other		288	43	15%	331			52	
70.06 Non-revenue vehicles		0	0		0				
70.07 Spare parts		1,020	153	15%	1,173			185	
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	60,368	0		60,368		21.9%	3,353	63,721
80.01 Project Development		9,789			9,789	6.0%	3.6%	441	10,230
80.02 Final Design		13,053			13,053	8.0%	4.7%	587	13,640
80.03 Project Management for Design and Construction		16,316 8,158			16,316 8,158	10.0% 5.0%	5.9%	734 612	17,050 8,770
80.04 Construction Administration & Management 80.05 Professional Liability and other Non-Construction Insurance		1,632			1,632	1.0%	3.0% 0.6%	122	1,754
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		6,526			6,526	4.0%	2.4%	489	7,016
80.07 Surveys, Testing, Investigation, Inspection		3,263			3,263	2.0%	1.2%	245	3,508
80.08 Start up		1,632			1,632	1.0%	0.6%	122	1,754
Subtotal (10 - 80)	0.00	211,605	38,770		250,375		91%		270,088
90 UNALLOCATED CONTINGENCY					25,037		9%		27,009
Subtotal (10 - 90)	0.00				275,412		100%		297,097
100 FINANCE CHARGES	0.00				EXCLUDED		4000/		EXCLUDED
Total Project Cost (10 - 100)	0.00				275,412		100%		297,097
Allocated Contingency as % of Base Yr Dollars w/o Contingency Unallocated Contingency as % of Base Yr Dollars w/o Contingency					18.32% 11.83%				
Total Contingency as % of Base Yr Dollars w/o Contingency					30.15%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$252,532
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$371,371
YOE Total Project Cost per Mile (X000)									

MAIN WORKSHEET-BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Project Wide Elements

Today's Date Yr of Base Year \$

10/2/20 2020 2024

Yr of Revenue Ops

	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 10.02 Guideway: Freeway					0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	0	0		0	0.0%	0.0%		0
20.01 At-grade station, stop, shelter, mall, terminal, platform		-	-		0	0.070	5.575		
20.02 Aerial station, stop, shelter, mall, terminal, platform					0				
20.03 Underground station, stop, shelter, mall, terminal, platform					0				
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.					0				
20.05 Joint development 20.06 Automobile parking multi-story structure				<u> </u>	0				
20.07 Elevators, escalators					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				
30.02 Light Maintenance Facility					0				
30.03 Heavy Maintenance Facility					0				
30.04 Storage or Maintenance of Way Building 30.05 Yard and Yard Track					0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	637	191		828	6.5%	1.8%	62	890
40.01 Demolition, Clearing, Earthwork					0	51575	11070		
40.02 Site Utilities, Utility Relocation					0				
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments					0				
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks 40.05 Site structures including retaining walls, sound walls					0				
40.06 Pedestrian / bike access and accommodation, landscaping					0				
40.07 Automobile, bus, van accessways including roads, parking lots 40.08 Temporary Facilities and other indirect costs during construction					0				
40.09 Public Art Allowance		637	191	30%	828	6.5%	1.8%	62	890
50 SYSTEMS	0.00	11,080	894		11,974	93.5%	25.6%	898	12,872
50.01 Train control and signals		0	0		0				
50.02 Traffic signals and crossing protection		0	0		0	10 =01			
50.03 Traction power supply: substations		5,600	0	0%	5,600	43.7%	12.0%	420	
50.04 Traction power distribution: catenary and third rail 50.05 Communications		0	0		0				
50.06 Fare collection system and equipment		480	144	30%	624	4.9%	1.3%	47	671
50.07 Central Control		5,000	750	15%	5,750	44.9%	12.3%	431	6,181
Construction Subtotal (10 - 50)	0.00	11,717	1,085		12,802	100.0%	27.4%	960	13,763
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	0	0		0				0
60.01 Purchase or lease of real estate 60.02 Relocation of existing households and businesses		0	0		0				
70 VEHICLES	0	21,708	3,256		24,964	195.0%	53.4%	3,935	28,899
70.04 Bus		20,400	3,060	15%	23,460	183.2%	50.2%	3,698	
70.05 Other		288	43	15%	331	2.6%	0.7%	52	
70.06 Non-revenue vehicles		0	0	450/	0	/	/	0	
70.07 Spare parts 80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	0.00	1,020 4,737	153 0	15%	1,173 4,737	9.2% 0.0%	2.5% 10.1%	185 263	5,000
80.01 Project Development	0.00	768	0		768	6.0%	1.6%	35	3,000
80.02 Final Design		1,024			1,024	8.0%	2.2%	46	
80.03 Project Management for Design and Construction		1,280			1,280	10.0%	2.7%	58	
80.04 Construction Administration & Management		640			640	5.0%	1.4%	48	
80.05 Professional Liability and other Non-Construction Insurance		128 512			128 512	1.0%	0.3%	10 38	
80.06 Legal; Permits; Review Fees by other agencies, cities, etc. 80.07 Surveys, Testing, Investigation, Inspection		256			256	4.0% 2.0%	1.1% 0.5%	19	
80.08 Start up		128			128	1.0%	0.5%	10	
Subtotal (10 - 80)	0.00	38,162	4,341		42,503		91%		47,662
90 UNALLOCATED CONTINGENCY		•			4,250		9%		4,766
Subtotal (10 - 90)	0.00				46,754		100%		52,428
100 FINANCE CHARGES	0.00				40.754		4000/		E0 (00
Total Project Cost (10 - 100) Allocated Contingency as % of Base Yr Dollars w/o Contingency	0.00				46,754 11.38%		100%		52,428
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					11.14%				
Total Contingency as % of Base Yr Dollars w/o Contingency					22.51%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$44,564
YOE Construction Cost per Mile (X000) YOE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$65,535
YOE Total Project Cost per Mile (X000)									400,000
7 . 1									

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

,,,			Total Cost w/o	Allocated	Allocated	Total Cost w/	
Item	Unit Unit Cost	Quantity	Contingency	Contingency	Contingency	Contingency	Description
Proposed Project - Project Wide Elements		ζ,	- continue control	contingency	continue general		
,							
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	l ,						
ferry, trolley, etc.							
Not used			\$ -	30%	\$ -	\$ - \$ -	
			\$ -	30%	\$ -	\$ -	
Total Costs - 20.04			\$ -		\$ -	\$ -	
20.05 - Joint development					_		
Not used			\$ -	30%		\$ -	
Table 10 at 20 at			\$ -	30%		\$ -	
Total Costs - 20.05			\$ -		\$ -	\$ -	
20.05 Automobile modified modified and the state of							
20.06 - Automobile parking multi-story structure			¢	2007	¢	¢.	
Not used			\$ -	30%	\$ -	\$ -	

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

Project Wide Elements - SCC 40 SITEWORK & SPECIAL CONDITIONS

			Total Cost w/o	Allocated	Allocated	Total Cost w/	
Item	Unit Unit Cost	Quantity	Contingency	Contingency	Contingency	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,						
andscaping						
See separate Estimates for each sector						
	\$	-	30% \$	-	\$ -	
	\$	-	30% \$	-	\$ -	
	\$	-	30% \$	-	\$ -	
Total Costs - 40.06	\$	-	\$	-	\$ -	
10.07 - Automobile, bus, van accessways including						
oads, 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	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

						otal Cost w/o	Allocated		llocated		otal Cost w/	
Item	Unit	Unit Cost		Quantity	C	Contingency	Contingency	Cor	ntingency		ontingency	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	i											
rail												
Not used					\$	-	30%		-	\$	-	
Total Costs - 50.04					\$ \$	-	30%	\$ \$	<u>-</u>	\$ \$	<u> </u>	
					•			•		•		
50.05 - Communications												
See separate Estimates for each sector					۸.		30%	<u>د</u>		۸.		
					\$	-	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	

Project Wide Elements - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit Unit Cost	Quantity	Total Cost w	-	Allocated Contingency		cated	Total Cost w/	Description
			Contingenc	<u>, y</u>	contingency	Contil	igency	Contingency	
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

			To	tal Cost w/o	Allocated	ŀ	Allocated	T	otal Cost w/	
ltem	Unit Unit C	ost Quantity	C	ontingency	Contingency	Со	ntingency	C	ontingency	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			ċ	_	30%	Ċ	_	Ś	_	
Not used			ب خ	_	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 2020 Year \$

Yr of Revenue Ops 2024

Proposed Project - Route Option A I								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	0.00		-		0	0 70	0 70		
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 20.07 Elevators, escalators		0	0		0				
	0.00	0	0		0	0.0%	0.0%		0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS 30.01 Administration Building: Office, sales, storage, revenue counting	0.00	0	0		0	0.0%	0.0%		U
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 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 50.05 Communications		531	0	200/	0	0.00/	0.50/	50	740
		0	159 0	30%	690	3.8%	2.5%	52	742
50.06 Fare collection system and equipment 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	100.076	1.2%	33	358
60.01 Purchase or lease of real estate	0.00	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 1,451		+	1,088 1,451	6.0%	3.9%	49 65	1,137 1,516
80.02 Final Design 80.03 Project Management for Design and Construction		1,451		-	1,451	8.0% 10.0%	5.2% 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 Unallocated Contingency as % of Base Yr Dollars w/o Contingency					20.37% 12.04%				
Total Contingency as % of Base Yr Dollars w/o Contingency Total Contingency as % of Base Yr Dollars w/o Contingency					32.41%				
Jnallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$25,181
OE Construction Cost per Mile (X000)								()	,,,
OE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$37,031
OE Total Project Cost per Mile (X000)									

A1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity		Cost w/o ngency	Allocated Contingency	Alloc Contin	cated ngency	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	vinelar	nd 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.										Inboard/outboard platforms are counted as 1# station (2 platforms 12'x100'=2400 sf)
Demo. (e) road pavement. See 40.01.										See 40.01
Concrete platform, 8" depth. 2 platforms side by side.	SF	\$ 55.61	2,400	\$	133,464	30%	\$	40,039	\$ 173,50	33 Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$ 56.05	-		134,520	30%		40,356		76 Assume 12". Incl exc, rock base, conc footings/Pad.
Tactile surfacing	SF	\$ 50.00			20,000	30%		6,000		00 200x2'w
Bus shelter	EA	\$ 18,000.00	8	\$	144,000	30%	\$	43,200	\$ 187,20	Of 4 per platform as per 7-15 meeting (glass dome roof, stages) mesh cladding, seating)
Railing (SS)	LF	\$ 350.00	200	\$	70,000	30%	\$	21,000	\$ 91,00	00 length of platform
Station Marker	EA	\$ 35,000.00	2	\$	70,000	30%	\$	21,000	\$ 91,00	00 1 per platform. Large totem pole or sim
Trash Receptacle	EA	\$ 5,500.00	4	\$	22,000	30%	\$	6,600	\$ 28,60	00 2 per platform. Blast resistant.
Advertising Kiosk	EA	\$ 10,000.00	2	\$	20,000	30%	\$	6,000	\$ 26,00	00 1 per platform
Station Signage	LS	\$ 10,000.00	1	\$	10,000	30%	\$	3,000	\$ 13,00	OO 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	\$ 97,50	OO Allowance per center station /w 2 platforms
Bike rack	EA	\$ 1,200.00	4	\$	4,800	30%	\$	1,440	\$ 6,24	10 2 per platform. 7 bike rake. Loop type
Total Costs - 20.01				\$	703,784		\$	211,135	\$ 914,93	19
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%			\$ -	
						3070	Ų			

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

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				\$ -	Ş	-	\$ -	

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

ltem	Unit	Unit C	Cost	Quantity	al Cost w/o ntingency	Allocated Contingency	C	Allocated Contingency	Total Cost w/ Contingency	Description
0.01 - 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	
0.02 - Site Utilities, Utility Relocation										
Survey all (e) utilities & document. Video / Grnd penetrating radar/(e) as builts.	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 If
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 world
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	

Allowance 10% of 40.01 Total Costs - 40.03 10.04 - Environmental mitigation, e.g. wetlands, nistoric/archeologic, parks NOT USED Total Costs - 40.04	LS	\$ 262,333	10%		6,233	30% \$	7,870	\$ 34,103	10% is specified as per previous estimate
10.04 - Environmental mitigation, e.g. wetlands, nistoric/archeologic, parks NOT USED			:	\$ 2					
istoric/archeologic, parks NOT USED					6,233	\$	7,870	\$ 34,103	
nistoric/archeologic, parks NOT USED									
NOT USED									
Total Costs - 40.04				\$	-	30% \$	-	\$ -	
Total Costs - 40.04				, \$	-	30% \$	-	\$ -	
				\$	-	\$	-	\$ -	
10.05 - Site structures including retaining walls, sound									
walls									
NOT USED				\$	-	30% \$	-	\$ -	
				, \$	-	30% \$	-	\$ -	
Total Costs - 40.05			;	\$	=	\$	=	\$ -	
40.06 - Pedestrian / bike access and accommodation,									
andscaping									
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	\$ 4	0,392	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	\$ 10	0,815	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	\$ 4	1,580	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	3If striping per If of margin
Margins between bike & mixed flow lanes	LF	\$ 3.60	2,024	\$	7,286	30% \$	2,186	\$ 9,472	3If striping per If of margin
Concrete separator at contraflow bike lanes	LF	\$ 90.00	4,060	\$ 36	5,400	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	\$ 2	3,562	30% \$	7,069	\$ 30,631	Assume solid 24" wide striping
Sidewalks									
Reconstruction sidewalk at reduction & expansion	SF	\$ 14.00	23,376	\$ 32	7,264	30% \$	98,179	\$ 425,443	
areas									
Curb & gutter	LF	\$ 40.00	1,698	\$ 6	7,920	30% \$	20,376	\$ 88,296	
Reconstruct (e) & or (n) curb ramp	EA	\$ 3,500.00	26	\$ 9	1,000	30% \$	27,300	\$ 118,300	
Sidewalk amenities									
Replace street trees	EA	\$ 6,000.00	10	\$ 6	0,000	30% \$	18,000	78,000	Allowance based on Google
Relocate parking meters	EA	\$ 1,500.00	12	\$ 1	8,000	30% \$	5,400	\$ 23,400	Allowance based on Google
Total Costs - 40.06				\$ 1,15	5,993	\$	346,798	 1,502,791	

0.07 - 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	'	- /	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 If 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 If of thermoplastic striping
8' WIDE PARKING - CURBSIDE - striping	LF	\$ 1.98	5,517	\$ 10,924	30% \$	3,277	\$	14,201	Allow 5517 If 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	3If of 4" striping per If 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	\$	•	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			

40.08 - Temporary Facilities and other indirect costs during construction									
Mobilization + Demobilization	EA	\$ 220,000.00	1	\$ 220,000	30%	6 \$	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%	6 \$	10,440	\$ 45,238	Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	6,641	\$ 297,384	30%	6 \$	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%	6 \$	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	al Cost w/o ntingency	Allocated Contingency	C	Allocated Contingency	Total Cost w/ Contingency	Description
50.01 - Train control and signals										
NOT USED					\$ -	30%		-	\$ -	NOT USED
Total Costs - 50.01					\$ -	30%	\$	-	\$ -	
50.02 - Traffic signals and crossing protection										(n) signal intersections. Modify (e) signals @ intersections
Minimal Improvements	EA	\$ 2	20,000.00		\$ -	30%	\$	-	\$ -	
Moderate Improvements	EA	\$ 15	50,000.00	3	\$ 450,000	30%	\$	135,000	\$ 585,000	Weddington, McCormick, Huston
Significant Improvements	EA	\$ 25	50,000.00	3	\$ 750,000	30%	\$	225,000	\$ 975,000	Vineland/Chandler, Hortense, Kling
Major Improvements	EA	\$ 35	50,000.00	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	Un	nit Cost	Quantity		otal 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% S		\$ \$	-	
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
				- commigency				
70.01 - Light Rail				\$ -	30%	\$ -	\$ -	
NOT USED								
Total Costs - 70.01				\$ -	!	\$ -	\$ -	
70.02 - Heavy Rail				_				
NOT USED				\$ - \$ -	30%		\$ -	
				\$ -	30% 5		\$ - \$ -	
Total Costs - 70.02				\$ -	;	-	\$ -	
70.03 - Commuter Rail								
NOT USED								
				\$ -	30%	.	\$ -	
Total Costs - 70.03				\$ - \$ -		\$ -	\$ - \$ -	
70.04 - Bus								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ -	30% 5	-	\$ - \$ - \$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	
70.05 - Other								
NOT USED				\$ -	30%	\$ -	\$ -	
				\$ - \$ -	30%	- \$ -	\$ -	
Total Costs - 70.05				\$ -	!	\$ -	\$ - \$ - \$ -	
70.06 - Non-revenue vehicles								
NOT USED				\$ -	30%	\$ -	\$ -	
1101 0325				\$ -	30%		, ,	
Total Costs - 70.06				\$ -		\$ -	\$ - \$ - \$ -	
70.07 - Spare parts				¢.	200/		<u> </u>	
NOT USED				\$ -	30% 5	-	\$ -	
Total Costs - 70.07				\$ - \$ -	30% 5	\$ - \$ -	\$ - \$ - \$ -	

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

	1	I = 1/	1 - 1	1 - 1	I = 1/	I = v	I = v		
	Quantity	Base Year Dollars w/o	Base Year Dollars	Base Year Dollars	Base Year Dollars	Base Year Dollars	Base Year Dollars	Escalation Per Annum @ 3% =	YOE Dollars Total
		Contingency	Allocated	Allocated	TOTAL	Percentage	Percentage	7.50%	(X000)
		(X000)	Contingency	Contingency	(X000)	of Construction	of Total	(X000)	` ′
			(X000)	%		Cost	Project Cost		
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 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	0.00	0	0		0	0.070	0.070		
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 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	000/	0				400
50.02 Traffic signals and crossing protection		310	93	30%	403	3.9%	2.6%	30	433
50.03 Traction power supply: substations 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	30 /6	0	0.770	4.5%	32	142
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					0				
70.06 Non-revenue vehicles	-				0				
70.07 Spare parts					0				
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	3.00	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	0.00				1,410		9%		1,509
Subtotal (10 - 90) 100 FINANCE CHARGES	0.00				15,510 0		100% 0%		16,594
Total Project Cost (10 - 100)	0.00				15,510		100%		16,594
Allocated Contingency as % of Base Yr Dollars w/o Contingency	0.00				20.30%	l	100 /6		10,334
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%			Low (-15%)	\$14,105
YOE Construction Cost per Mile (X000)									
YOE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$20,742
YOE Total Project Cost per Mile (X000)									

A2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Hai	it Cost	Quantity		tal Cost w/o ontingency	Allocated		Allocated	otal Cost w/ contingency	Description
Route Option A2. Paved.	LF	Uni	n/a	5,977		134 ramps	Contingency	CO	nungency	 ontingency	Description
Route Option A2. Unimproved.	LF		n/a	1,400		handler to					
Noute Option A2. Onniproved.			11/ 0	1,400		Magnolia					
			ſ	7,377							
			L	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 regd 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											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	1 per platform for this station
Trash Receptacle	EA	\$	5,500.00	4	\$	22,000	30%		6,600	,	2 per platform
Advertising Kiosk	EA	\$	10,000.00	2		20,000	30%		6,000		1 per platform
Station Signage	EA	\$	10,000.00	1	\$	10,000	30%	\$	3,000	\$ 13,000	Code, wayfaring, system, safety. allowance Perstation
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					\$	_	\$ -	Ś		\$ 	

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

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

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

A2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

ltem	Unit	Unit (Cost	Quantity	al Cost w/o	Allocated Contingency	llocated ntingency	otal 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 builts.	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				Ļ		200/ ¢		ć	
NOT USED				\$	-	30% \$	-	\$	-
Total Costs - 40.05				\$	-	\$	-	\$	-

1											
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	
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 (20	Olf)
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	
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) (n) concrete road.	base,
(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.	SF	\$	2.75	23,767		65,358	30% \$	19,608		84,966 Allowance to extend AC up all side rds for	or 30lf
Haul off asphalte millings	TON	Ś	33.60	3,022	Ś	101,539	30% \$	30,462	Ś	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	Ś	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	
Dus latte reu patiti	3	Ç	3.30	30,703	ڔ	101,121	JU/0 J	20,130	ب	273,204 Inclinoplastic reu, 12 w	

Total Costs - 40.08				Ś	1,777,282	\$	533,185	Ċ	2,310,467	
Note: All Contractors overhead/profits Incl in prices.										
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% of 20-50.	%	\$ 7,036,054.1	1 12.00%	\$	844,326	30% \$	253,298	\$	1,097,624 1	2% of 10-50.
A2 - Other Vineland Blvd utility modifications	LS	\$ 150,000.00) 1	\$	150,000	30% \$	45,000	Þ	195,000	
Utility modifications @ stations	LOC	\$ 125,000.00		\$	250,000	30% \$	75,000	•	325,000	
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	-,		267,650	30% \$	80,295	•	•	er paved LF of total alignment
SWPPP	LF	\$ 5.24	- / -		31,319	30% \$	9,396	•	,	er LF of paved total alignment
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	5,977	Ş	13,986	30% \$	4,196	\$	18,182 P	er LF of paved total alignment
Mobilization + Demobilization	EA	\$ 220,000.00		\$	220,000	30% \$	66,000	•	•	Illowance per selected sector
0.08 - Temporary Facilities and other indirect costs luring construction										
Total Costs - 40.07				\$	2,749,097	\$	824,729	\$	3,573,826	
Concrete K rail	LF	\$ 140.00	3,975	\$	556,500	30% \$	166,950	\$	723,450	
Demo in 40.01		•	,	•	412,092	·			•	/0 X 3/0343 SI
Rebuild deteriorated roadway (soft spots) 5% of overlay.	SF	\$ 21.90) 18,817	ċ	412,092	30% \$	123,628	ć	E2E 720 E	% x 376343 sf
Misc signage above pavement level	LS	\$ 10,000.00) 1	\$	10,000	30% \$	3,000	\$	13,000 p	ole signs etc
Double yellow lane line w/ markers	LF	\$ 8.50	1,706	\$	14,501	30% \$	4,350	\$	18,851 I	hermoplastic
Intermittent 4" lane line w/ markers	LF 	\$ 3.75	,		10,249	30% \$	3,075	•	,	hermoplastic
Solid 4"or 6" wide lane line w/ markers	LF	•	11,155		,		13,386	•	•	hermoplastic & \$4.44 ea yellow markers

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	Ş	-		\$	-	30%	Ş	-	\$ -	
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	1,3	20 \$	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

Unit	Unit	Cost	Quantity			Allocated Contingency					Description
EA EA	\$ \$	50,000.00	1	L \$	•			-		65,000 -	
				\$	50,000		\$	15,000	\$	65,000	
				\$ \$	- - -			- -	\$ \$	<u>-</u>	
	EA		, ,	EA \$ 50,000.00 1	EA \$ 50,000.00 1 \$	EA \$ 50,000.00 1 \$ 50,000 EA \$ - \$ -	EA \$ 50,000.00 1 \$ 50,000 30% EA \$ - \$ 30%	EA \$ 50,000.00 1 \$ 50,000 30% \$ EA \$ 50,000 \$	EA \$ 50,000.00 1 \$ 50,000 30% \$ 15,000 EA \$ 50,000 \$ \$ 15,000 \$	EA \$ 50,000.00 1 \$ 50,000 30% \$ 15,000 \$ EA \$ 50,000 \$ \$ 15,000 \$ \$ \$	EA \$ 50,000.00 1 \$ 50,000 30% \$ 15,000 \$ 65,000 EA \$ - \$ - 30% \$ - \$ -

A2 - SCC 70 - VEHICLES (NOT USED)

				Total Cost w/o	A	llocated	A	llocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Contingency		ntingency		ntingency	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				\$ -			Ś	-	\$ -	

70.05 - Other						
NOT USED	\$	-	30% \$	-	\$ -	
	\$	-				
Total Costs - 70.05	\$	-	\$	-	\$ -	
70.00 No						
70.06 - Non-revenue vehicles						
NOT USED	\$	-	30% \$	-	\$ -	
	\$	-				
Total Costs - 70.06	\$	-	\$	-	\$ -	
70.07 - Spare parts						
			200/ 6			
NOT USED	\$	-	30% \$	-	\$ -	
	<u> </u>	-				
Total Costs - 70.07	\$	-	\$	-	\$ -	

MAIN WORKSHEET-BUILD ALTERNATIVE

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option B (All on CA 134. No Work for this Option)

Today's Date Yr of Base

10/2/20 2020

Year \$ 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)	18.35	0	0		0				0
10.01 Guideway: Surface Streets	16.42				0				
10.02 Guideway: Freeway	1.93				0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	0	0		0			0	
20.01 At-grade station, stop, shelter, mall, terminal, platform		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	18.35	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	18.35	0	0		0			0	
40.01 Demolition, Clearing, Earthwork		0	0		0				
40.02 Site Utilities, Utility Relocation		0	0		0				
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		0	0		0				
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks 40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		0	0		0				
40.07 Automobile, bus, van accessways including roads, parking lots		0	0		0				
40.08 Temporary Facilities and other indirect costs during construction		0	0		0				
50 SYSTEMS	18.35	0	0		0			0	
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		0	0		0				
50.06 Fare collection system and equipment		0	0		0				
50.07 Central Control		0	0		0				
Construction Subtotal (10 - 50)	18.35	0	0		0			0	
60 ROW, LAND, EXISTING IMPROVEMENTS	18.35	0	0		0			0	0
60.01 Purchase or lease of real estate					0				
60.02 Relocation of existing households and businesses 70 VEHICLES (NOT USED)	0	0	0		0 0				
70.04 Bus		U	U		0				
70.04 Bus 70.05 Other					0				
70.05 Other 70.06 Non-revenue vehicles					0				
70.07 Spare parts	_				0				
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	18 35	0	0		0			0	0
80.01 Project Development	10.55	0	0		0			0	0
80.02 Final Design		0	0		0			0	0
80.03 Project Management for Design and Construction		0	0	 	0			0	0
80.04 Construction Administration & Management		0	0	 	0			0	0
80.05 Professional Liability and other Non-Construction Insurance		0	0	 	0			0	0
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		0	0	 	0			0	0
80.07 Surveys, Testing, Investigation, Inspection		0	0		0	-		0	0
80.08 Start up		0	0	 	0			0	0
Subtotal (10 - 80)	18.35	0	0		0			U	0
90 UNALLOCATED CONTINGENCY	10.33				0				0
Subtotal (10 - 90)	18 35				0				0
100 FINANCE CHARGES	10.00								
Total Project Cost (10 - 100)	18 35				0				0
Allocated Contingency as % of Base Yr Dollars w/o Contingency	10.00				#DIV/0!				
Unallocated Contingency as % of Base Yr Dollars W/o Contingency					#DIV/0!				

Unallocated Contingency as % of Base Yr Dollars w/o Continge Total Contingency as % of Base Yr Dollars w/o Contingency Unallocated Contingency as % of Subtotal (10 - 80) YOE Construction Cost per Mile (X000) YOE Total Project Cost per Mile Not Including Vehicles (X000)

YOE Total Project Cost per Mile (X000)

#DIV/0! #DIV/0!

Low (-15%)

\$0

\$0

High (+25%)

B - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

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

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 GUID	EWAY & TRACK ELEMENTS (route miles)	0.00	0	0	,,,	0	0%	0%		0
	Guideway: Surface Streets	0.00	U	U		0	U 76	U 76		
	Guideway: Freeway					0				
20 STAT	IONS, STOPS, TERMINALS, INTERMODAL (number)	0	3,902	1,171		5,073	13.8%	9.1%	380	5,454
	At-grade station, stop, shelter, mall, terminal, platform		3,902	1,171	30%	5,073	13.8%	9.1%	380	5,454
	Aerial station, stop, shelter, mall, terminal, platform		0	0		0				0
	Underground station, stop, shelter, mall, terminal, platform		0	0	-	0				0
	Other stations, landings, terminals: Intermodal, ferry, trolley, etc. Joint development		0	0		0			 	0
	Automobile parking multi-story structure		0	0		0				0
	Elevators, escalators		0	0		0				0
30 SUPP	ORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
	Administration Building: Office, sales, storage, revenue counting		0	0		0				
	Light Maintenance Facility		0	0		0				
	Heavy Maintenance Facility Storage or Maintenance of Way Building		0	0		0				
	Storage or Maintenance of Way Building Yard and Yard Track		0	0	 	0			 	
	VORK & SPECIAL CONDITIONS	0.00	19,743	5,923		25,666	70.0%	45.8%	1,925	27,591
	Demolition, Clearing, Earthwork		1,055	317	30%	1,372	3.7%	2.4%	103	1,475
	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
	Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0		0				
	Site structures including retaining walls, sound walls Pedestrian / bike access and accommodation, landscaping		0 4,765	0 1,429	30%	0 6,194	16.9%	11.1%	465	6,659
	Automobile, bus, van accessways including roads, parking lots		7,461	2,238	30%	9,699	26.4%	17.3%	727	10,426
	Temporary Facilities and other indirect costs during construction		4,152	1,246	30%	5,398	14.7%	9.6%	405	5,803
50 SYST		0.00	4,576	1,373		5,949	16.2%	10.6%	446	6,395
	Train control and signals		1,390	0 417	30%	1,807	4.00/	0.00/	136	1,943
	Traffic signals and crossing protection Traction power supply: substations		0	0	30%	0	4.9%	3.2%	130	1,943
	Traction power supply. Substations Traction power distribution: catenary and third rail		0	0		0				
	Communications		3,186	956	30%	4,142	11.3%	7.4%	311	4,452
	Fare collection system and equipment		0	0		0				
50.07	Central Control		0	0		0				
Constru	ction Subtotal (10 - 50)	0.00	28,222	8,466		36,688	100.0%	65.5%	2,752	39,440
	, LAND, EXISTING IMPROVEMENTS	0.00	500	150		650		1.2%	65	715
	Purchase or lease of real estate		500	150 0	30%	650 0	1.8%	1.2%	65	
	Relocation of existing households and businesses CLES (NOT USED)	0	0	0		0				
70.04			-			0				
70.05	Other					0				
70.06	Non-revenue vehicles					0				
	Spare parts					0				
	ESSIONAL SERVICES (applies to Cats. 10-50)	0.00	13,575	0		13,575	37.0%	24.2%	754	14,328
	Project Development		2,201 2,935			2,201 2,935	6.0% 8.0%	3.9%	99 132	2,300 3,067
	Final Design Project Management for Design and Construction		3,669			3,669	10.0%	5.2% 6.6%	165	3,834
	Construction Administration & Management		1,834			1,834	5.0%	3.3%	138	1,972
	Professional Liability and other Non-Construction Insurance		367			367	1.0%	0.7%	28	394
	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
	Start up		367			367	1.0%	0.7%	28	394
	(10 - 80)	0.00	42,296	8,616		50,913		90.9%		54,483
	LOCATED CONTINGENCY	0.00				5,091		9%	1	5,448
	(10 - 90) ANCE CHARGES	0.00				56,004 0		100% 0%		59,931
	pject Cost (10 - 100)	0.00				56,004		100%		59,931
	Contingency as % of Base Yr Dollars w/o Contingency	0.00				20.37%		10070		00,001
MIDCALED	ed Contingency as % of Base Yr Dollars w/o Contingency					12.04%				
Unallocate						32.41%				
Unallocate Total Con	tingency as % of Base Yr Dollars w/o Contingency								1 (4	050 010
Unallocate Total Con Unallocate	tingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$50,942
Unallocate Total Con Unallocate YOE Cons	tingency as % of Base Yr Dollars w/o Contingency								Low (-15%) High (+25%)	\$50,942 \$74,914

C - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

						tal Cost w/o			Allocated		tal Cost w/	
tem	Unit	Uni	it Cost	Quantity	С	ontingency	Contingency	Cc	ontingency	Co	ntingency	Description
Proposed Project - Route Option C. Paved.	LF		n/a	11,472								
Proposed Project - Route Option C. Unimproved.	LF		n/a	- 44 472								
				2.17mls	l							
20.01 - At-grade station, stop, shelter, mall, terminal, platform				2.1711113								
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 If 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			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 02 Hadamand Astronomy												
20.03 - Underground station, stop, shelter, mall, terminal	,											
platform					٠,		200/	Ļ		Ļ		
NOT USED					\$ ¢	-	30%		-	\$	-	
					<u>ې</u>	-	30%	\$ \$	-	Ş	-	

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	ė	-	\$	-	Ś	-	

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

				Total Co	st w/o	Allocated	Al	located	Tota	al Cost w/	
ltem	Unit	Unit Cost	Quantity	Conting	-	Contingency		tingency		=	Description
30.01 - Administration Building: Office, sales, storage,											
revenue counting											
NOT USED				Ś	_	30%	Ś	_	Ś	_	
				\$	_	30%		-	\$	-	
Total Costs - 30.01				\$	-		\$	-	\$	-	
30.02 - Light Maintenance Facility											
NOT USED											
1101 0325				Ś	_	30%	Ś	_	Ś	_	
				\$	_	30%		-	\$	-	
Total Costs - 30.02				\$	-		\$	-	\$	-	

30.03 - Heavy Maintenance Facility NOT USED	\$ - -	30% \$ 30% \$	-	\$ \$	- -	
Total Costs - 30.03	\$ -	30% \$ \$	-	\$	<u>-</u> -	
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	tal Cost w/o ontingency	Allocated Contingency	Allocated	otal Cost w/ ontingency	Description
40.01 - Demolition, Clearing, Earthwork									
Demo. (e) conc sidewalk at stations	SF	\$	10.00	13,340	\$ 133,400	30%	\$ 40,020	\$ · ·	These stations are located on (e) sidewalk 4, 5, 6, 7, 8, & 9.
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	955+5734
Demo deteriorated pavement sections (5%)									Not reqd at C Stations. Sidewalk reduction/expansions are separate
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	LF	\$ 8.26	17,354	\$	143,344	30% \$	43,003	\$	186,347 Per LF of paved total alignment
penetrating radar/ (e) as builts.									
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
Total Costs - 40.03				\$	105,541	\$	31,662	\$	137,204
historic/archeologic, parks NOT USED Total Costs - 40.04				\$ \$	- - -	30% \$ 30% \$	-	\$ \$	- - -
101011 00313 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 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	SF	\$ 30.45	5,000	\$ 152,250	30% \$	45,675	197,925	Incl exc (e) base / subgrade, compact, (n) base, (r
Olive, See 40.01 for demo.								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		
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		
AC Overlay (2") incl cross sts	TON	\$ 115.50	10,412	\$ 1,202,586	30% \$	360,776	1,563,362	2 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 If of thermoplastic striping
Chevron pavement markings	SF	\$ 6.00	50,169	\$ 301,014	30% \$	90,304	391,318	8 8116If
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	9 5% x 1,297,674 sf
Total Costs - 40.07				\$ 7,460,684	\$	2,238,205	9,698,889	1

40.08 - Temporary Facilities and other indirect costs during construction								
Mobilization + Demobilization	EA	\$ 220,000.00	1 \$	\$ 220,000	30% \$	66,0	00 \$	286,000 Allowance per selected sector
Street sweeping, SD Vac clearing during construction.	LF	\$ 2.34	17,354 \$	\$ 40,608	30% \$	12,1	33 \$	52,791 Per LF of paved total alignment
SWPPP	LF	\$ 5.24	17,354 \$	\$ 90,935	30% \$	27,2	80 \$	118,215 Per LF of paved total alignment
Traffic Control, Staging, pedestrian control, safety	LF	\$ 44.78	17,354 \$	\$ 777,112	30% \$	233,1	34 \$	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% \$	907,1	21 \$	3,930,856 12% of 10-50.
Note: All Contractors overhead /profits Incl in prices.								
Total Costs - 40.08			\$	\$ 4,152,391	\$	1,245,7	L7 \$	5,398,108

C - SCC 50 SYSTEMS

						Tot	tal Cost w/o	Allocated	,	Allocated	To	otal Cost w/	
tem	Unit	Uni	t Cost	Quantity			ontingency	Contingency		ontingency		=	Description
50.01 - Train control and signals													
NOT USED						۲		30%	Ļ		Ś		
NOT USED						ې د	-	30%		-	¢	-	
Total Costs - 50.01						\$	-	30/6	\$	-	\$	-	
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						Ś	_	30%	Ś	_	\$	_	
						Ś	_	30%		_	\$	_	
Total Costs - 50.03						Ś	_	3070	Ś	_	ς.	_	

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

ltem	Unit	Unit C	Cost	Quantity			al Cost w/o ntingency	Allocated Contingency		llocated	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	\$ 390,00	0
Allowance, (n) signalized intersection, incl Q jump.	EA	\$	50,000.00		4	\$	200,000	30%	\$	60,000	\$ 260,00	0
Total Costs - 60.01						\$	500,000		\$	150,000	\$ 650,00	0
60.02 - Relocation of existing households and businesses												
						\$	-	30%		-	\$ -	
Total Costs - 60.02						\$ \$	-	30%	\$ \$	-	\$ - \$ -	

C - SCC 70 - VEHICLES (NOT USED)

			Total C	ost w/o	Allocate	ed	Alloca	ited	Total Cost w/	
ltem	Unit Unit Cost	Quantity			Continge				Contingency	Description
70.01 - Light Rail			\$	-	3	30%	\$	-	\$ -	
NOT USED			\$	-		30%		-	\$ -	
Total Costs - 70.01			\$	-			\$	-	\$ -	
70.02 - Heavy Rail										
NOT USED			\$	-	3	30%	\$	-	\$ -	
Total Costs - 70.02			\$ \$	-	\$	0	\$ \$	- -	\$ - \$ -	
70.03 - Commuter Rail										
NOT USED			\$	-	3	30%	\$	-	\$ -	
			\$ \$ \$	-		0	\$	-	\$ - \$ -	
Total Costs - 70.03			\$	-	\$	0	\$	-	\$ -	
70.04 - Bus		<u> </u>								
NOT USED			¢	_	:	30%	¢	_	¢ -	
NOT OSES			\$	-		30%	\$	_	\$ -	
Total Costs - 70.04			\$	-	<u> </u>	70 70	\$ \$ \$	-	\$ - \$ - \$ -	
70.05 - Other										
NOT USED			\$	-	3	30%	\$	-	\$ -	
			\$	-		30%	\$	-	\$ - \$ - \$ -	
Total Costs - 70.05			\$	-			\$	-	\$ -	
70.06 - Non-revenue vehicles										
NOT USED			\$	_		30%	\$	_	ς .	
NOT OJED			\$ \$	-		20 /0 20%	¢	-	\$ - \$ -	
Total Costs - 70.06			\$	-		30%	\$	-	\$ - \$ - \$ -	
70.07 - Spare parts										
NOT USED			\$	-	3	30%	\$	-	\$ -	
			\$	_		30% 30%	\$		\$ - \$ - \$ -	
Total Costs - 70.07			Ś	_			\$	_	\$ -	

MAIN WORKSHEET-BUILD

North Hollywood to Pasadena Bus Rapid Transit

YOE Total Project Cost per Mile Not Including Vehicles (X000)

YOE Total Project Cost per Mile (X000)

Los Angeles County, California

Proposed Project - Route Option D

10/2/20 Today's Date Yr of Base Year \$ 2020

Yr of Revenue Ops 2024

High (+25%)

\$73,783

	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	_	0.554	700		0	0.40/	0.00/	210	0.500
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	2,554 2,554	766 766	30%	3,320 3,320	9.1% 9.1%	6.0% 6.0%	249 249	3,569 3,569
20.01 At-grade station, stop, shelter, mall, terminal, platform 20.02 Aerial station, stop, shelter, mall, terminal, platform		2,554	0	30%	0	9.1%	0.0%	249	3,309
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	0.00	19,577	0 5.972		0	CO E0/	40.40/	1.000	27.250
40 SITEWORK & SPECIAL CONDITIONS 40.01 Demolition, Clearing, Earthwork	0.00	471	5,873 141	30%	25,450 612	69.5% 1.7%	46.1% 1.1%	1,909	27,359 658
40.02 Site Utilities, Utility Relocation		720	216	30%	936	2.6%	1.7%	70	1,006
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		47	14	30%	61	0.2%	0.1%	5	66
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0	5075	0	0.270	0.170		- 55
40.05 Site structures including retaining walls, sound walls		0	0		0				
40.06 Pedestrian / bike access and accommodation, landscaping		1,193	358	30%	1,551	4.2%	2.8%	116	1,667
40.07 Automobile, bus, van accessways including roads, parking lots 40.08 Temporary Facilities and other indirect costs during construction		12,975 4,171	3,893 1,251	30% 30%	16,868 5,422	46.1%	30.6%	1,265 407	18,133 5,829
50 SYSTEMS	0.00	6,034	1,810	30 //	7,844	14.8% 21.4%	9.8% 14.2%	588	8,433
50.01 Train control and signals	0.00	0	0		0	21.470	17.2 /0	300	0,400
50.02 Traffic signals and crossing protection		3,910	1,173	30%	5,083	13.9%	9.2%	381	5,464
50.03 Traction power supply: substations		0	0		0	10.070	0.270		
50.04 Traction power distribution: catenary and third rail		0	0		0				
50.05 Communications		2,124	637	30%	2,761	7.5%	5.0%	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	28,165	8,450		36,615	100.0%	66.4%	2,746	39,361
60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	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 70 VEHICLES (NOT USED)	0	0	0		0				
70.04 Bus	-	U	0		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	13,547	0		13,547	37.0%	24.6%	752	14,300
80.01 Project Development		2,197			2,197	6.0%	4.0%	99	2,296
80.02 Final Design		2,929			2,929	8.0%	5.3%	132	3,061
80.03 Project Management for Design and Construction		3,661			3,661	10.0%	6.6%	165	3,826
80.04 Construction Administration & Management		1,831			1,831	5.0%	3.3%	137	1,968
80.05 Professional Liability and other Non-Construction Insurance		366			366	1.0%	0.7%	27	394
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		1,465			1,465	4.0%	2.7%	110 55	1,574
80.07 Surveys, Testing, Investigation, Inspection 80.08 Start up		732 366			732 366	2.0%	1.3%	27	787 394
Subtotal (10 - 80)	0.00	41,713	8,450		50,162	1.0%	0.7% 90.9%	21	53,661
90 UNALLOCATED CONTINGENCY	0.00	41,710	0,400		5,016		9%		5,366
Subtotal (10 - 90)	0.00				55,178		100%		59,027
100 FINANCE CHARGES	0.00				33,3		,		
Total Project Cost (10 - 100)	0.00				55,178		100%		59,027
Allocated Contingency as % of Base Yr Dollars w/o Contingency	•			'	20.26%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency					12.03%				
Total Contingency as % of Base Yr Dollars w/o Contingency Unallocated Contingency as % of Subtotal (10 - 80)					32.28% 10.00%			Low (15%)	\$50.472
YOE Construction Cost per Mile (X000)					10.0070			Low (-15%)	\$50,173
YOE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$73.783

D - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

						tal Cost w/o	Allocated		llocated		Total Cost w/	
tem		Uni	it Cost	Quantity	Co	ontingency	Contingency	Co	ntingency		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/SOC
Concrete pad for bus parking	SF	\$	56.05	6,500		364,325	30%		109,298			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		•	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		•	1 per platform
Trash Receptacle	EA	\$	5,500.00	16	-	88,000	30%		26,400			2 per platform
Advertising Kiosk	EA	\$	10,000.00	8		80,000	30%		24,000			1 per platform
Station Signage & misc.	EA	\$	10,000.00	4		40,000	30%		12,000			Code, wayfaring, system, safety.
		•	.,		•	-,			,		,,,,,,	allowance Per station
Bike rack	EA	\$	1,200.00	16	Ś	19,200	30%	Ś	5,760	Ś	24.960	2 per platform
Electric power supply & platform lighting	EA	\$	75,000.00	4	-	300,000	30%		90,000			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%	ċ		\$		
NOT 03ED					۶ \$	-	30%		-	ې خ	-	
Total Costs - 20.03					ç		30%	۶ \$	-	۶ \$		
Total Costs - 20.05					۰ 			۰ 	-	۶ 		
20.04 - Other stations, landings, terminals: Intermodal, ferry, trolley	,											
etc.												
NOT USED					\$	-	30%	\$	-	\$	-	
					\$	-	30%	\$	-	\$	-	
Total Costs - 20.04					Ś			\$		\$		

	 <u> </u>	•	<u> </u>			•
20.05 - Joint development						
NOT USED	\$ -	30% \$	- :	5	-	
	\$ -	30% \$	- :	5	-	
Total Costs - 20.05	\$ -	\$	- :	\$	-	
20.06 - Automobile parking multi-story structure						
NOT USED	\$ -	30% \$	- :	5	-	
	\$ -	30% \$	- :	5	-	
Total Costs - 20.06	\$ -	\$	- :	\$	-	
20.07 - Elevators, escalators						
NOT USED	\$ -	30% \$	- :	5	-	
	\$ -	30% \$	- :	5	-	
Total Costs - 20.07	\$ -	\$	- :	5	-	

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

				Total	Cost w/o	Allocated	٨١١	ocated		Total Cost w/	
Item	Unit Un	it Cost	Quantity		ingency	Contingency		tingency		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				Ś	_	30%	Ś	_	\$	_	
				Ś	_	30%		_	Ś	_	
Total Costs - 30.02				Ś	-		Ś	_	Ś	-	
				•			•				
			·		·						
30.03 - Heavy Maintenance Facility											
NOT USED				\$	-	30%		-	Ş	-	
				\$	-	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

						tal Cost w/o	Allocated		llocated		Total Cost w/	
tem	Unit	Ur	it Cost	Quantity	Co	ontingency	Contingency	Cor	ntingency		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	Ś	8.26	17,825	ć	147,235	30%	Ļ	44,170	Ļ	101 405	Per LF of paved total alignment
Company all (a) utilities Q described by Mides (Consider a restriction and and (a)		4	0.20	17.025	٠.	147 225	200/	۲.	44 170	۲.	101 405	Day I F of moved total allowers
, , ,		'		,	•	•			-			
Potholing crew	LF	\$	4.08	17,825	Ş	72,726	30%	Ş	21,818	Ş	94,544	Per LF of paved total alignment
	LOC	Ś		_	_			_		_		
Utility modifications @ stations	LOC	۲	25,000.00	8	\$	200,000	30%	\$	60,000	\$	260,000	Allowance @ Inlets, levels & SD adjustments throughout Glenoaks. Pe
Utility modifications @ stations D. Other Glenoaks Blvd- utility modifications	LS	\$	25,000.00		\$	300,000		·	90,000		·	Allowance @ Inlets, levels & SD
,					·	,	30%	·	,		·	Allowance @ Inlets, levels & SD adjustments throughout Glenoaks. Pe platform Allowance @ Inlets, levels &SD

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/archeolog	ic,						
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. 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?
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

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

Total Costs - 40.07					\$	12,975,205		\$:	3,892,562	\$	16,867,767	
40.01												
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in	SF	\$	21.90	57,800	\$	1,265,820	30%	\$	379,746	\$	1,645,566	5% x 1,155,963 sf
Misc signage above pavement level	LS	\$	50,000.00	1		50,000	30%		15,000		•	pole signs etc
natuscape in median,25%	31	ڔ	30.00	20,112	۲	003,300	30%	۲	181,008	ب	764,308	
Hardscape in median, 75%	SF	\$ \$	30.00	20,112		603,360	30%		181,008		784,368	
Landscaping in median, 75%	SF	\$ \$	40.00 15.00	60,336		905,040	30%		271,512		1,176,552	
Median curb & gutter	LF	\$	40.00	14,973	ė	598,920	30%	ċ	179,676	ċ	778,596	
Double yellow lane line w/ markers	LF	\$	8.50	6,269	\$	53,287	30%	\$	15,986	\$	69,272	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
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
Chevron pavement markings	SF	\$	6.00	44,096	\$	264,576	30%	\$	79,373	\$	343,949	8912 If
Bus lane red paint	SF	\$	3.30	345,865	\$	1,141,355	30%	\$	342,406	\$	1,483,761	
Road letters "bus lane"	EA	\$	200.00	462	\$	92,400	30%	\$	27,720	\$	120,120	
Directional arrows	EA	\$	75.00	319	\$	23,925	30%	\$	7,178	\$	31,103	
8' wide street parking - striped	LF	\$	1.40	635	\$	889	30%	\$	267	\$	1,156	
Replace hatched crosswalks @ cross streets	SF	\$	3.00	16,200	\$	48,600	30%	\$	14,580	\$	63,180	
AC Overlay (2") incl cross sts	TON	\$	115.50	9,275	\$	1,071,263	30%	\$	321,379	\$	1,392,641	2" thick
Haul off asphalte millings	TON	\$	33.60	9,275	\$	311,640	30%	\$	93,492	\$	405,132	
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
Milling (E) asphalte road paving.	SF	\$	2.75	723,607		1,989,920	30%		596,976			Millings 145lbs/fc
(N) AC on conc subbase	TON		115.50	1,547		178,640	30%		53,592			2" thick
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.
Decemptivist 2014, unpayed median into readular on Clancella See	CE	ċ	20.45	120,000	Ļ	2 007 000	200/	۲.	1 100 200	¢	F 000 000	20 w Inclove (a)haca/subgrada
Survey crew	LF	\$	8.60	16,825	\$	144,695	30%	\$	43,409	\$	188,104	Per LF of paved total alignment

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

D - SCC 50 SYSTEMS

Item	Unit	Unit	t Cost	Quantity		otal Cost w/o Contingency	Allocated Contingency		Allocated ntingency		Total Cost w/ Contingency	Description
				· ·		<u> </u>	<u> </u>					·
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	;	3 \$	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	1) \$	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	
FO 02. Trackion november symply, substations												
50.03 - Traction power supply: substations NOT USED					\$		30%	ċ		\$		
NOT OSED					>	-	30%	Þ	-	Ş	-	
Total Costs - 50.03					\$			ć		\$		

FO.O.A. Transition manuar distribution, saturage, and third will							
50.04 - Traction power distribution: catenary and third rail NOT USED		\$	-	30% \$	-	\$	-
Total Costs - 50.04		\$	-	\$	-	\$	-
0.05 - 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
0.06 - Fare collection system and equipment							
Ticket Vending Machine	EA \$ 120,000.00	- \$	-	30% \$	-	\$	- 1 per platform
Total Costs - 50.06		\$	-	\$	-	\$	-
0.07 - Central Control							
NOT USED		\$ \$	-	30% \$ 30% \$	-	\$ \$	-
Total Costs - 50.07		\$		\$		\$	-

D - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

ltem	Unit Unit Cost	Quantity	Total Cost v Contingen	-		Alloca Conting		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)

			Total Cost w/o		Allocated	Total Co		
Item	Unit Unit Cost	Quantity	Contingency	Contingency	Contingency	Conting	ency Descr	iption
70.01 - Light Rail			\$ -	30%	\$ -	\$	-	
NOT USED			\$ -	30%			-	
Total Costs - 70.01			\$ -		\$ -	\$	-	
70.02 - Heavy Rail								
NOT USED			ċ	30%	ċ	ċ		
NOT USED			\$ - \$ -	30%	\$ - \$ -	\$ \$	-	
Total Costs - 70.02			\$ -		\$ -	\$ \$	-	
70.03 - Commuter Rail								
NOT USED			\$ -	30%	\$ -		-	
			\$ -	30%	\$ -	\$ \$	-	
Total Costs - 70.03			\$ -		\$ -	\$	-	
70.04 - Bus								
NOT USED			\$ -	30%	\$ -	¢	_	
NOT USED			\$ -	30%	\$ -	ς ς	-	
Total Costs - 70.04			\$ -	30%	\$ -	\$ \$	-	
70.05 - Other								
NOT USED			\$ -	30%	¢ -	¢	-	
NOT OSED			\$ -	30%	¢	ć	-	
Total Costs - 70.05			\$ -	30%	\$ -	\$ \$ \$	-	
70.05								
70.06 - Non-revenue vehicles			A	2001	^	<u> </u>		
NOT USED			\$ -	30%	> -	\$	- -	
Total Costs - 70.06			\$ - \$ -	30%	\$ -	\$ \$ \$		
Total Costs - 70.00			, -		- -	,	-	
70.07 - Spare parts								
NOT USED			\$ -	30%	\$ -	\$	-	
			\$ -	30%	\$ -	\$ \$ \$	-	
Total Costs - 70.07			<u>.</u>	2370	<u> </u>			

MAIN WORKSHEET-BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

YOE Total Project Cost per Mile (X000)

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 0	30%	3,436 0	15.3%	1.1%	258	3,693
20.02 Aerial station, stop, shelter, mall, terminal, platform 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 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	0 321	200/	0 1,391	0.00/	0.50/	101	4.405
50.02 Traffic signals and crossing protection		1,070	0	30%	0	6.2%	0.5%	104	1,495
50.03 Traction power supply: substations 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	3070	0	12.370	0.970	201	2,300
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	0.00	8,326	0		0	27.00/	24.20/	460	0.700
80 PROFESSIONAL SERVICES (applies to Cats. 10-50) 80.01 Project Development	0.00	1,350	U		8,326 1,350	37.0% 6.0%	24.3% 0.3%	462 61	8,788 1,411
80.02 Final Design		1,800	 		1,800	8.0%	0.3%	81	1,881
80.03 Project Management for Design and Construction		2,250	 		2,250	10.0%	0.4%	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 Jnallocated Contingency as % of Base Yr Dollars w/o Contingency Total Contingency as % of Base Yr Dollars w/o Contingency Jnallocated Contingency as % of Subtotal (10 - 80) YOE Construction Cost per Mile (X000)					20.33% 12.03% 32.37% 10.00%			Low (-15%)	\$31,102
OE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$45,738

E1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

					_					_		
ltem	Unit	11-	nit Cost	Quantity		tal Cost w/o ontingency	Allocated Contingency		located tingency		otal Cost w/ ontingency	Description
Proposed Project - Route Option E1. Paved.	LF	UI	iit Cost	11,837		ontingency	Contingency	Con	tiligelicy		ontingency	Description
Proposed Project - Route Option E1. Unimproved.	LF		n/a	,								
Troposed Project Modele Option 227 Chimiproved			, u	11,837	I							
				2.24mls	•							
20.01 - At-grade station, stop, shelter, mall, terminal,												
platform												
NUMBER OF STATIONS. Station 14 , 15, 16, 17. Side	4 stat	tions	, 8 platforms									
Demo. (e) sidewalk. See 40.01												
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 If
Tactile surfacing	SF	\$	50.00	1,560	\$	78,000	30%	\$	23,400	\$	101,400	II
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					\$	_		Ś	_	Ś	_	

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% \$ 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

				Total Cost w/o		Allocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingency	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%	¢ _	¢ _	
NOT OSED				\$ \$ -	30%		\$ -	
				\$ -	30%		\$ -	
Total Costs - 30.03				\$ -	3070	\$ -	\$ -	
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				\$ -	3070	\$ -	<u> </u>	

E1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

					To	otal Cost w/o	Allocated		Allocated	T	otal Cost w/	
Item	Unit	Ur	nit Cost	Quantity	C	Contingency	Contingency	Cc	ontingency	C	ontingency	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 builts.	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 & statio 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	ς.	17,225	

40.04 - Environmental mitigation, e.g. wetlands,											
historic/archeologic, parks											
Not used				\$	-	30%		-	\$	-	
				\$		30%		-	<u>\$</u>	-	
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?
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			Allowance based on Google
Work at other misc adjacent elements	LS	\$	4	•	400,000	30%		120,000			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	

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

Total Costs - 40.07					\$	5,709,977		\$	1,712,993	\$	7,422,970	
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
5 5 .		-	•	_	•	•		•	•	-	•	
Misc signage above pavement level	LS	\$	30,000.00	1	\$	30,000	30%	¢	9,000	¢	39 000	pole signs etc
Double yellow lane line w/ markers	LF	\$	8.50	8,533	\$	72,531	30%	\$	21,759	\$	94,290	Thermoplastic
Intermittent 4" lane line w/ markers	LF	\$	3.75	2,460		9,225	30%	•	2,768	-	•	Thermoplastic
Solid 4"or 6" wide lane line w/ markers	LF	\$	4.00	23,404		93,616	30%	•	28,085	-	•	Thermoplastic & yellow markers
Chevron pavement markings	SF	\$	6.00	8,667		52,002	30%	•	15,601	-	•	1575 lf
Bus lane red paint	SF	\$	3.30	196,395	\$	648,104	30%	\$	194,431	\$	842,535	Thermoplastic red, 12' w
Road letters "bus lane"	EA	\$	200.00	497	\$	99,400	30%	\$	29,820	\$	129,220	Thermoplastic
Directional arrows	EA	\$	75.00	276	\$	20,700	30%	\$	6,210	\$	26,910	Thermoplastic
8' wide street parking - striped	LF	\$	1.98	1,888	\$	3,738	30%	\$	1,121	\$	4,860	Allow 1888 If of thermoplastic striping
7' wide street parking - striped	LF	\$	1.86	9,768	\$	18,168	30%	\$	5,451	\$	23,619	Allow 9768 If of thermoplastic striping
Replace hatched crosswalks @cross streets	SF	\$	3.00	16,200	\$	48,600	30%	\$	14,580	\$	63,180	
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
Haul off asphalte millings	TON	\$	33.60	9,405	\$	316,008	30%	\$	94,802	\$	410,810	30lf 781467 x2"x145lbs / 2000=
Milling (E) asphalte road paving@ cross sts	SF	\$	2.75	45,600	\$	125,400	30%	Ş	37,620	\$	163,020	Allowance to extend AC up all side rds fo
Milling (E) asphalte road paving.	SF	\$	2.75	735,867		2,023,634	30%	•	607,090	-	2,630,725	
Survey crew	LF	\$	8.60	11,837	•	101,798	30%	•	30,539	-	•	Per LF of total alignment

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.

Total Costs - 40.08 \$ 2,694,359 \$ 808,308 \$ 3,502,666

E1 - SCC 50 SYSTEMS

ltem	Unit	Un	nit Cost	Quantity		Continge		Allocated Contingency	Allocated ontingency		otal Cost w/ contingency	Description
50.01 - Train control and signals												
NOT USED					ç	;	-	30% 30%	-	\$ ¢	-	
Total Costs - 50.01					\$	<u> </u>	-	30%	\$ -	\$	-	
50.02 - Traffic signals and crossing protection												
Minimal Improvements	EA	\$	20,000.00	2:	1 \$	S 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	<u>.</u>	1 \$	5 150	0,000	30%	\$ 45,000	\$	195,000	Cedar
Significant Improvements	EA	\$	250,000.00		2 \$,000	30%	150,000		650,000	
Major Improvements	EA	\$	350,000.00		ç	;	<i>-</i>	30%	-	\$	-	
System Integration	EA	\$	-		Ş	5	-	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

ltem	Unit	Unit	: Cost	Quantity	1		al Cost w/o ntingency	Allocated Contingency		llocated ntingency		otal Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate													
Allowance, Side stations Allowance, (n) signalized intersection, incl Q jump. None	EA EA		50,000.00		4	\$	200,000	30% 30%		60,000	\$ \$	260,000 -	
Total Costs - 60.01						\$	200,000		\$	60,000	\$	260,000	
60.02 - Relocation of existing households and businesses						\$	-	30%		-	\$	-	
Total Costs - 60.02						Ş \$	-	30%	Ş \$	-	\$ \$	-	

E1 - SCC 70 - VEHICLES (NOT USED)

				Total Cost v	v/o	Allocated	Allo	cated	Tota	Cost w/	
Item	Unit	Unit Cost	Quantity	Contingen	cy (Contingency	Conti	ngency	Cont	ingency	Description
						2001	_				
70.01 - Light Rail				Ş -	•	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	خ	_	30% \$	_	\$	-	
NOT OSED	ې *				ب خ		
	\$	-	30% \$	-	<u> </u>	-	
Total Costs - 70.04	\$	-	\$	-	\$	-	
70.05 - Other							
NOT USED	\$	-	30% \$	-	\$	-	
	Ś	_	30% \$	_	Ś	-	
Total Costs - 70.05	\$	-	\$	-	\$	-	
70.06 - Non-revenue vehicles							
NOT USED	\$	_	30% \$	_	\$	_	
1101 0325	ç	_	30% \$	_	ć	_	
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

YOE Construction Cost per Mile (X000)
YOE Total Project Cost per Mile Not Including Vehicles (X000)
YOE Total Project Cost per Mile (X000)

Route Option E2

10/2/20 Today's Date Yr of Base Year \$

High (+25%)

\$58,353

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			2.17		0				
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	3,157	947	000/	4,103	14.3%	9.4%	308	4,411
20.01 At-grade station, stop, shelter, mall, terminal, platform 20.02 Aerial station, stop, shelter, mall, terminal, platform		3,157 0	947	30%	4,103 0	14.3%	1.1%	308	4,411
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 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.g. wetlands, historic/archeologic, parks		0	0		0				
40.05 Site structures including retaining walls, sound walls 40.06 Pedestrian / bike access and accommodation, landscaping		2,330	0 699	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 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	50%	0	12.070	0.070	200	0,7.10
50.07 Central Control					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%	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) 70.04 Bus	0	U	0		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		1,433 287	-		1,433 287	5.0%	0.4%	107 21	1,541 308
80.05 Professional Liability and other Non-Construction Insurance 80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		1,147	 	+	1,147	1.0% 4.0%	0.1%	86	1,233
80.07 Surveys, Testing, Investigation, Inspection		573	 		573	2.0%	0.3%	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%		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 Unallocated Contingency as % of Base Yr Dollars w/o Contingency					20.35% 12.03%				
Total Contingency as % of Base Yr Dollars w/o Contingency					32.38%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$39,680

E2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

					To	otal Cost w/o	Allocated	Allo	ocated	T	otal Cost w/	
Item	Unit	Ur	nit Cost	Quantity	С	ontingency	Contingency	Cont	ingency	(Contingency	Description
Route Option E2. Paved.	LF		n/a	14,812								
Route Option E2. Unimproved.	LF		n/a		l							
				14,812 2.81 mls								
20.01 - At-grade station, stop, shelter, mall, terminal,				2.01 11113								
platform												
NUMBER OF STATIONS. Station 14, 18, 19, 20, 21. Side												
												Stations 14,18,19,20,21. is 9660sf. 905
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 If 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					Ļ		200/	۲		۲		
NOT USED					\$	-	30%	•	-	\$	-	
Total Costs - 20.02					\$ \$	-	30%	\$ \$	-	\$ \$	-	

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

ltem	Unit	Unit Cost	Quantity	Total Cost w Contingenc	•	Allocated Contingency	cated ngency	Total C	Cost w/	Description
30.01 - Administration Building: Office, sales, storage,										
evenue 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% \$	- \$	_	
1101 0325	ζ ,	_	30% \$	- Ś	_	
Total Costs - 30.05	<u> </u>		\$	- \$	-	
,	Y		T	Τ		

E2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

Item	Unit	Unit (Cost	Quantity	otal Cost w/o Contingency	Allocated Contingency	Allocated ontingency	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 builts.	LF	\$	8.26 1	.5,000	\$	123,900	30%	\$	37,170	\$	161,070	Per LF of total alignment
Potholing crew	LF	\$	4.08 1	.5,000	\$	61,200	30%	\$	18,360	\$	79,560	Per LF of total alignment
Utility modifications @ stations	LOC	\$ 125,00	00.00	5	\$	625,000	30%	\$	187,500	\$		Allowance @ (n) sidewalk work & station access. Inlets, level & SD adjustments. 9 platforms
E2 Other Colorado- utility modifications.	LS	\$ 200,00	00.00	1	\$	200,000	30%	\$	60,000	\$	260,000	•
Power pole relocation	EA	\$ 20,00	00.00	10	\$	200,000	30%	\$	60,000	\$	260,000	Allowance
Total Costs - 40.02					\$	1,210,100		\$	363,030	\$	1,573,130	
Allowance 10% of 40.01 Total Costs - 40.03	LS	\$ 206,72	29.52	10%	\$ \$	20,673 20,673	30%	\$ \$	6,202 6,202		26,875 26,875	
					\$	20,673		\$	6,202	\$	26,875	
40.04 - Environmental mitigation, e.g. wetlands,												
historic/archeologic, parks NOT USED					۲		0%	۲		Ļ		
NOT USED					\$ \$	-	0%		-	۶ \$	-	
Total Costs - 40.04					\$	-		\$	-	\$	-	
40.05 - Site structures including retaining walls, sound												
walls												
NOT USED					\$	-	0%		-	\$	-	
Total Costs - 40.05					Ş c	-	0%	\$ \$	-	\$ ¢	-	
10tal CUStS - 40.05					Þ	-		Ş	-	Þ	-	

1											
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
Bike lane margins											
Concrete separator at contraflow bike lanes	LF	\$	90.00	6,186	\$	556,740	30% \$	167,022	\$	723,762	painted conc curb 3'wx8"h, 2769 If
SIDEWALKS Reconstruction sidewalk at reduction & expansion	SF	\$	14.00	7,588	¢	106,232	30% \$	31,870	¢	138,102	
areas	31	ڔ	14.00	7,300	٦	100,232	30% \$	31,670	ڔ	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	SF	\$	35.00	9,660		338,100	30% \$	101,430	•	,	(e) sidewalk at stations is 905LF varies 6'-
accommodate (n) access configurations. (905lf)	51	Y	33.00	3,000	Y	330,100	3070 Ç	101,430	Υ	433,330	16'w
Reconstruct (e) & or (n) curb ramp	EA	\$	3,500.00	82	\$	287,000	30% \$	86,100	Ś	373,100	10 W
(,,,		•	.,		·	,,,,,,,		,	•	,	
Sidewalk amenities at (n) stations											
Replace street trees	EA	\$	6,000.00	20	•	120,000	30% \$	36,000	•	•	Allowance based on Google
Work at other misc adjacent elements	EA		.00,000.00		\$	500,000	30% \$	150,000			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
Bardera hatabadan arawalla Garara da ata	C.E.	¢	2.00	44000	_				_		
Replace hatched crosswalks @ cross streets	SF	\$	3.00	14,800	Ş	44,400	30% \$	13,320	Ş	57,720	

Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50 Note: All Contractors overhead /profits Incl in prices.	%	\$	19,687,253	12%	\$	2,362,470	30% \$	708,741	,	3,071,211	12% of 10-50.
Contractors General Conditions, insurance, bonds for	%	\$	19,687,253	12%	\$	2,362,470	30% \$	708,741	ب	3,071,211	12% 01 10-50.
,						2 262 472	200/ 4	708,741	¢	2 071 211	130/ of 10 FO
Traffic Control, Staging, pedestrian control, safety	LF	\$	44.78	14,812	\$	663,281	30% \$	198,984	\$	862,266	Per LF of total alignment
SWPPP	LF	\$	5.24	14,812	•	77,615	30% \$	23,284	•	,	Per LF of total alignment
Street sweeping, SD Vac clearing during construction.	LF	\$	2.34	14,812	\$	34,660	30% \$	10,398	\$	45,058	Per LF of total alignment
Mobilization + Demobilization	EA	\$	220,000.00	1	\$	220,000	30% \$	66,000	\$	286,000	Allowance per selected sector
40.08 - Temporary Facilities and other indirect costs						7,612,320		2,203,070		3,630,667	
Total Costs - 40.07					Ś	7,612,928	Ś	2,283,878	\$	9,896,807	
Rebuild deteriorated roadway (soft spots) 5% of overlay. Demo in 40.01	SF	\$	21.90	43,577	>	954,336	30% \$	286,301	>	1,240,037	5% x 871555 sf
Misc signage above pavement level	LS	\$ \$	30,000.00	1	\$	30,000	30% \$	9,000	•		pole signs etc
Solid striping	LF	\$	1.98	28,027		55,493	30% \$	16,648	•	72,141	
Double yellow lane line w/ markers	LF	\$	8.50	5,980	•	50,830	30% \$	15,249	\$	66,079	Thermoplastic
Intermittent 4" lane line w/ markers	LF	\$	3.75	7,448	\$	27,930	30% \$	8,379	\$	36,309	markers Thermoplastic
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
Chevron pavement markings	SF	\$	6.00	55,569	\$	333,414	30% \$	100,024	\$	433,438	5708 lf
Bus lane red paint	SF	\$	3.30	232,914	\$	768,616	30% \$	230,585	\$	999,201	Thermoplastic red, 12' w
	EA	\$	200.00	532	•	106,400	30% \$	31,920	•		Thermoplastic
Road letters "bus lane"	EA	\$	75.00	325	Ş	24,375	30% \$	7,313	\$	31,688	Thermoplastic

E2 - SCC 50 SYSTEMS

Unit	Unit Cost	Quantity		•	Allocated Contingency				-	Description
			\$	-	0%	\$	-	\$	-	
			\$	-	0%	\$	-	\$	-	
			\$	-		\$	-	\$	-	
	Unit	Unit Unit Cost	Unit Unit Cost Quantity		\$ - \$ -	Unit Unit Cost Quantity Contingency Contingency \$ - 0% \$ - 0%	Unit Unit Cost Quantity Contingency Contin	Unit Unit Cost Quantity Contingency Contingency Contingency \$ - 0% \$ - \$ - 0% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	Unit Unit Cost Quantity Contingency Contin	Unit Unit Cost Quantity Contingency Contingency Contingency Contingency \$ - 0% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$

Minimal Improvements	50.02 - Traffic signals and crossing protection										
Significant Improvements		EA	\$ 20,000.00	15 \$	\$	300,000	30% \$	90,000	\$	390,000	Lexington, California, Wilson, Broadway, Private St, Americana, Louise, Everett,
Significant Improvements	Moderate Improvements	EA	\$ 150,000.00	3 \$	\$	450,000	30% \$	135,000	\$	585,000	Glendale, Verdugo, Campus,
Major Improvements		EA	\$ 250,000.00	3 \$	\$	750,000		225,000	\$		
System Integration		EA				-				-	, ,
50.03 - Traction power supply: substations NOT USED SO.04 - Traction power distribution: catenary and third rail NOT USED SO.05 - Communications Station systems/comms (PA, CCTV, Nextbus, cabinet, etc) Fibre optic ductbank LF S 175.00 6,600 S 1,505,000 S 3,451,500 Total Costs - 50.05 SO.05 - Fare collection system and equipment Tricket Vending Machine EA S 120,000.00 - S - S - 30% S - S - 1 per platform		EA		\$	\$	-		-		-	
NOT USED	Total Costs - 50.02			\$	\$	1,500,000	\$	450,000	\$	1,950,000	
S	50.03 - Traction power supply: substations			٠	4		20% ¢		¢		
Solid Costs - 50.03 Solid Costs - 50.03 Solid Costs - 50.04 Traction power distribution: catenary and third rail Solid Costs - 50.04 Solid Costs - 50.05 Solid Cos	NOTUSED					-		-	>	-	
NOT USED	Total Costs - 50.03			 \$	<u>></u> \$	<u> </u>	30% \$ \$		\$ \$	-	
\$ - 30% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	50.04 - Traction power distribution: catenary and third rail										
Solution 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 etc.) Total Costs - 50.05 \$ 2,655,000 \$ 796,500 \$ 3,451,500 \$ 3,451,500 \$ 3,451,500 \$ 5,006 - Fare collection system and equipment EA \$ 120,000.00 - \$ - 30% \$ - \$ - 1 per platform 1 per platfo	NOT USED					-		-	\$ \$	-	
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 etc. 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 - 50.04			\$	\$	-	\$	-	\$	-	
etc) 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	50.05 - Communications										
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		LS	\$ 150,000.00	10 \$	\$	1,500,000	30% \$	450,000	\$	1,950,000	Allowance. 1 set up/cabinet per platform
50.06 - Fare collection system and equipment Ticket Vending Machine EA \$ 120,000.00 - \$ - 30% \$ - \$ - 1 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
Ticket Vending Machine EA \$ 120,000.00 - \$ - 30% \$ - \$ - 1 per platform	Total Costs - 50.05			\$	\$	2,655,000	\$	796,500	\$	3,451,500	
Total Costs - 50.06 \$ - \$ - \$ -	50.06 - Fare collection system and equipment Ticket Vending Machine	EA	\$ 120,000.00	- \$	\$	-	30% \$	-	\$	_	1 per platform
	Total Costs - 50.06			<u> </u>	\$		<u> </u>		Ś		

E2 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

ltem	Unit	Unit Cost	Quantity	otal 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 Continger		Allocated Contingency		llocated ntingency		Cost w/ ingency	Description
70.04 Light Dail				ć	_	30%	ċ	_	Ś		
70.01 - Light Rail NOT USED				ب د		0%		-	ې د	-	
Total Costs - 70.01				<u>ې</u>	-	0%	۶ \$		\$ \$		
Total Costs - 70.01				Ş	-		Ş	-	Ş	-	
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%	¢	_	\$	_	
1101 0325				\$	_	0%		-	\$ \$	-	
Total Costs - 70.04				\$	-	070	\$	-	\$	-	

70.05 - Other					
NOT USED	\$ -	30% \$	- \$	-	
	\$ -	0% \$	- \$	-	
Total Costs - 70.05	\$ -	\$	- \$	-	
70.05 Non voyonyo yakislos					
70.06 - Non-revenue vehicles		200/ 4			
NOT USED	\$ -	30% \$	- Ş	-	
	\$ -	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 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	0.00	0	0		0	00.40/	05.40/	4	0.000
40 SITEWORK & SPECIAL CONDITIONS 40 01 Demolition Clearing Farthwork	0.00	1,867 59	560 18	30%	2,426 77	38.4%	25.1%	175	2,602 83
40.01 Demolition, Clearing, Earthwork 40.02 Site Utilities, Utility Relocation		688	206	30%	894	1.2% 14.1%	0.1% 1.1%	67	961
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		6	206	30%	8	0.1%	0.0%	1	8
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0	0070	0	0.170	0.070	·	
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 40.08 Temporary Facilities and other indirect costs during construction		40 521	12 156	30% 30%	52 678	0.8%	0.1%	<u>4</u> 51	<u>56</u> 729
50 SYSTEMS	0.00	1,662	499	30 /6	2,161	10.7% 34.2%	0.8% 22.3%	162	2,323
50.01 Train control and signals	0.00	0	0		0	34.270	22.570	102	2,323
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	200/	130		1.3%	13	143
60.01 Purchase or lease of real estate 60.02 Relocation of existing households and businesses		100	30 0	30%	130			13	
70 VEHICLES (NOT USED)	0	0	0		Ö				
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 80.03 Project Management for Design and Construction		506 633		-	506 633			23 28	529 661
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 Unallocated Contingency as % of Base Yr Dollars w/o Contingency Total Contingency as % of Base Yr Dollars w/o Contingency Unallocated Contingency as % of Subtotal (10 - 80) YOE Construction Cost per Mile (X000)					20.39% 12.04% 32.43% 10.00%			Low (-15%)	\$8,796
YOE Total Project Cost per Mile Not Including Vehicles (X000) YOE Total Project Cost per Mile (X000)								High (+25%)	\$12,935

E3 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

					To	tal Cost w/o	Allocated	Alloca	ted	Total Cost w/	
Item	Unit	U	nit Cost	Quantity	С	ontingency	Contingency	Conting	ency	Contingency	Description
Route Option E3. Paved	LF		n/a	-		<u> </u>				<u> </u>	•
Route Option E3. Unimproved	LF		n/a	-							
				-							
This route is on the (e) Ventura Freeway. There are only 2 stations on E3. No other improvements.											
E3 uses (e) on & off ramps @ Sanchez /Goode and at Harvey											
20.01 - At-grade station, stop, shelter, mall, terminal,											
platform NUMBER OF STATIONS. Station 22,23 Side											Stations 22&23 is 4200 sf. 350 lf.
Demo. (e) sidewalk. See 40.01											See 40.01
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%		4,092		Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$	56.05	3,440		192,812	30%		7,844		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%	\$ 1	0,500	\$ 45,500	
Shelter/Seating/Screen	EA	\$	18,000.00	14	\$	252,000	30%	\$ 7	5,600	\$ 327,600	
Railing (SS)	LF	\$	350.00	350	\$	122,500	30%	\$ 3	6,750	\$ 159,250	
Station Marker	EA	\$	35,000.00	4	\$	140,000	30%	\$ 4	2,000	\$ 182,000	2 per station for this group
Trash Receptacle	EA	\$	5,500.00	8	\$	44,000	30%	\$ 1	3,200	\$ 57,200	2 per platform
Advertising Kiosk	EA	\$	10,000.00	4	\$	40,000	30%	\$ 1	2,000	\$ 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%	\$ 6	0,000	\$ 260,000	Allowance per station w/ 2 platforms
Total Costs - 20.01					\$	1,337,820		\$ 40	1,346	\$ 1,739,166	
20.02 - Aerial station, stop, shelter, mall, terminal,											
platform											
NOT USED					\$	_	30%	\$	_	\$ -	
Total Costs - 20.02					\$	-	3070	\$	-	\$ -	
20.03 - Underground station, stop, shelter, mall,											
terminal, platform											
NOT USED					\$	-	30%	\$	-	\$ -	
					\$	<u>-</u>	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

				Total Cost w/o		Allocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingency	Contingency	Description
20.01 Administration Buildings Office color storage								
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%	\$ -	\$ -	
NOT OSED				- د			ب	
				<u> </u>	0%	Ş -	\$ -	
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% \$	- 5	;	·	
	\$	-	0% \$;		
	\$	-	0% \$	- 5	;		
Total Costs - 30.04	\$	-	\$	- \$,	ı.	
30.05 - Yard and Yard Track							
NOT USED	\$	_	0% \$	- 5			
	Š	_	0% \$	{			
	Ś	_	0% \$		· •		
Total Costs - 30.05	\$	-	\$	- \$	•	ı.	

E3 - SCC 40 SITEWORK & SPECIAL CONDITIONS

		_	_	То	tal Cost w/o	Allocated		Allocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	C	ontingency	Contingency	C	Contingency	Contingency	Description
40.01 - Demolition, Clearing, Earthwork										
Demo. (e) conc sidewalk at stations	SF	\$ 10.00	4,200	\$	42,000	30%		•	\$ 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 builts.	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					Ş	-	\$	-	\$ -	
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		Allowances
Work at other misc adjacent elements	EA	\$	100,000.00		\$	200,000	30% \$	60,000	260,000	Allowances
Relocate parking meters	EA	\$	1,500.00	40		60,000	30% \$	18,000	,	Allowances
	LS	\$	15,000.00	1	\$	15,000	30% \$	4,500	\$ 19,500	
Remove/restripe (e) rd surfaces	LO	•								

Total Costs - 40.08					\$ 521,393		\$	156,418	\$ 677,811
Note: All Contractors overhead /profits Incl in prices.									
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.
Traffic Control, Staging, pedestrian control, safety. Inclin other sectors.	EA EA	Ş	-	2	-	30%	•	-	\$ At 2 stations onlyAt 2 stations only
Mobilization + Demobilization. Incl in other sectors. SWPPP. Incl in other sectors	EΛ	¢		2	\$ -	30% 30%		-	\$ - At 2 stations only
40.08 - Temporary Facilities and other indirect costs during construction									
Total Costs - 40.07					\$ 40,000		\$	12,000	\$ 52,000
for striping removal and reconfiguration with (n) striping to suit (n) BRT layouts i.e. to paving areas not subject to (n) work Survey crew	EA	\$	5,000.00	2	10,000	30%		3,000	13,000 At 2 platforms only
0.07 - Automobile, bus, van accessways including oads, parking lots Allowance for work on adjacent (e) roadway paving	LOC	\$	15,000	2	\$ 30,000	30%	\$	9,000	\$ 39,000 At 2 platforms only

E3 - SCC 50 SYSTEMS

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

1								
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			\$	-	0% \$	-	\$	-
			\$	-	0% \$	-	\$	<u> </u>
Total Costs - 50.03			\$	-	\$	-	\$	•
50.04 - Traction power distribution: catenary and third rail								
			\$	-	0% \$	-	\$	-
			\$	-	0% \$	-	\$	<u> </u>
Total Costs - 50.04			\$	-	\$	-	Ş	·
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
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			\$	-	0% \$	-	\$	-
			\$	-	0% \$	-	\$	
Total Costs - 50.07			\$	-	\$	-	\$	

E3 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Un	it Cost	Quantity		tal Cost w/o ontingency	Allocated Contingency	C	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. None	EA	\$	-		\$	-	30%	\$	-	\$ -	
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)

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

\$ -	30% \$	-	\$	-			
\$ -	\$	-	\$	-			
\$ -	30% \$	-	\$	-			
\$ -	\$	-	\$	-			
\$ -	30% Ś	-	\$	_			
\$ -	\$	-	<u>\$</u>	-			
\$ \$ \$ \$	\$ - \$ - \$ -	\$ - 30% \$ \$ - \$	\$ - 30% \$ - \$ - \$ -	\$ - \$ - \$ \$ - \$ \$ - \$ - \$ \$ - \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

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

		T 0 17	D V	D V	D V	D V	Dans Vees	Dees Veer	L EI-ti D I	VOE Delless
		Quantity	Base Year Dollars w/o	Base Year Dollars	Base Year Dollars	Base Year Dollars	Base Year Dollars	Base Year Dollars	Escalation Per Annum @ 3% =	YOE Dollars Total
			Contingency	Allocated	Allocated	TOTAL	Percentage	Percentage	7.50%	(X000)
			(X000)	Contingency	Contingency	(X000)	of Construction	of Total	(X000)	· · ·
				(X000)	%		Cost	Project Cost		
0 GUID	EWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01	Guideway: Surface Streets					0				
10.02	Guideway: Freeway					0				
	IONS, STOPS, TERMINALS, INTERMODAL (number)	0	2,121	636		2,757	8.5%	5.6%	207	2,963
	At-grade station, stop, shelter, mall, terminal, platform		2,121	636	30%	2,757	8.5%	0.6%	207	2,963
	Aerial station, stop, shelter, mall, terminal, platform		0	0		0				
	Underground station, stop, shelter, mall, terminal, platform		0	0		0				
	Other stations, landings, terminals: Intermodal, ferry, trolley, etc. Joint development		0	0		0				
	Automobile parking multi-story structure		0	0		0				
	Elevators, escalators		0	0		0				
	ORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
	Administration Building: Office, sales, storage, revenue counting		0	0		0				
	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				
	Yard and Yard Track		0	0		0				
	VORK & SPECIAL CONDITIONS	0.00	16,541	4,962		21,503	66.4%	43.9%	1,613	23,116
	Demolition, Clearing, Earthwork		121	36	30%	157	0.5%	0.0%	12	169
	Site Utilities, Utility Relocation		1,390 12	417	30%	1,807 16	5.6%	0.4%	135 1	1,942 17
	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0	30%	0	0.0%	0.0%	1	17
	Site structures including retaining walls, sound walls		0	0		0				
	Pedestrian / bike access and accommodation, landscaping		1,171	351	30%	1,522	4.7%	0.4%	114	1,637
	Automobile, bus, van accessways including roads, parking lots		10,237	3,071	30%	13,308	41.1%	3.1%	998	14,306
	Temporary Facilities and other indirect costs during construction	0.00	3,610 6,263	1,083 1,879	30%	4,693 8,142	14.5% 25.1%	1.1% 16.6%	352 611	5,046 8,753
50 SYST	Train control and signals	0.00	0,203	0		0,142	25.1%	10.0%	011	0,753
	Traffic signals and crossing protection		4,670	1,401	30%	6,071	18.7%	1.4%	455	6,526
	Traction power supply: substations		0	0	50%	0	10.7 70	1.470	100	0,020
	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				
Constru	ction Subtotal (10 - 50)	0.00	24,925	7,477		32,402	100.0%	66.2%	2,430	34,832
	LAND, EXISTING IMPROVEMENTS	0.00	100	30		130		0.3%	13	143
	Purchase or lease of real estate		100	30	30%	130	0.4%	0.0%	13	
	Relocation of existing households and businesses CLES (NOT USED)	0	0	0		0 0				
70.04			U	0		0				
	Other					0				
	Non-revenue vehicles					0				
	Spare parts					0				
80 PROF	ESSIONAL SERVICES (applies to Cats. 10-50)	0.00	11,989	0		11,989	37.0%	24.5%	666	12,655
	Project Development		1,944			1,944	6.0%	0.3%	87	2,032
80.01	1 Toject Development						8.0%	0.4%	117	2,709
80.02	Final Design		2,592			2,592				
80.02 80.03	Final Design Project Management for Design and Construction		3,240			3,240	10.0%	0.5%	146	3,386
80.02 80.03 80.04	Final Design Project Management for Design and Construction Construction Administration & Management		3,240 1,620			3,240 1,620	10.0% 5.0%	0.4%	122	1,742
80.02 80.03 80.04 80.05	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance		3,240 1,620 324			3,240 1,620 324	10.0% 5.0% 1.0%	0.4% 0.1%	122 24	1,742 348
80.02 80.03 80.04 80.05 80.06	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc.		3,240 1,620 324 1,296			3,240 1,620 324 1,296	10.0% 5.0% 1.0% 4.0%	0.4% 0.1% 0.3%	122 24 97	1,742 348 1,393
80.02 80.03 80.04 80.05 80.06 80.07	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection		3,240 1,620 324 1,296 648			3,240 1,620 324 1,296 648	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2%	122 24 97 49	1,742 348 1,393 697
80.02 80.03 80.04 80.05 80.06 80.07 80.08	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up	0.00	3,240 1,620 324 1,296 648 324	7 507		3,240 1,620 324 1,296 648 324	10.0% 5.0% 1.0% 4.0%	0.4% 0.1% 0.3% 0.2% 0.1%	122 24 97	1,742 348 1,393 697 348
80.02 80.03 80.04 80.05 80.06 80.07 80.08	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up [10 - 80]	0.00	3,240 1,620 324 1,296 648	7,507		3,240 1,620 324 1,296 648 324 44,521	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9%	122 24 97 49	1,742 348 1,393 697 348 47,630
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up [10 - 80] LOCATED CONTINGENCY	0.00	3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521 4,452	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9%	122 24 97 49	1,742 348 1,393 697 348 47,630 4,763
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up [10 - 80]	0.00	3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9%	122 24 97 49	1,742 348 1,393 697 348 47,630
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90)	0.00	3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521 4,452	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9%	122 24 97 49	1,742 348 1,393 697 348 47,630 4,763
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FINA Total Pro	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES Dject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency		3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521 4,452 48,973	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	122 24 97 49	1,742 348 1,393 697 348 47,630 4,763 52,393
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FIN. Total Pro Allocated	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES oject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency and Contingency as % of Base Yr Dollars w/o Contingency		3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521 4,452 48,973 20,28% 12,03%	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	122 24 97 49	1,742 348 1,393 697 348 47,630 4,763 52,393
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal Pro Allocated Unallocated Unallocated	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES Diect Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ad Contingency as % of Base Yr Dollars w/o Contingency tingency as % of Base Yr Dollars w/o Contingency		3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521 4,452 48,973 20,28% 12,03% 32,31%	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	122 24 97 49 24	1,742 348 1,393 697 348 47,630 4,763 52,393
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FIN. Total Pro Allocated Unallocated Unallocated Unallocated	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES Digect Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ad Contingency as % of Base Yr Dollars w/o Contingency ingency as % of Base Yr Dollars w/o Contingency ad Contingency as % of Subtotal (10 - 80)		3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521 4,452 48,973 20,28% 12,03%	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	122 24 97 49	1,742 348 1,393 697 348 47,630 4,763 52,393
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FIN Total Pro Allocated Unallocated Unallocatet YOE Cons	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES Diect Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency ad Contingency as % of Base Yr Dollars w/o Contingency tingency as % of Base Yr Dollars w/o Contingency		3,240 1,620 324 1,296 648 324	7,507		3,240 1,620 324 1,296 648 324 44,521 4,452 48,973 20,28% 12,03% 32,31%	10.0% 5.0% 1.0% 4.0% 2.0%	0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	122 24 97 49 24	1,742 348 1,393 697 348 47,630 4,763 52,393

F1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Unit LF	- 01	it Cost	Quantity 13,749 - 13,749.00 2.61mls]	Contingency	Contingency	Contingency		ontingency	Description
			13,749.00]						
			2.61mls	•						
										Stations 24 = 2000sf
										Station 25, 26 =4400sf
										See 40.01
LF	\$	5.00			800				,	40' ea platform 160 lf station 24 only
SF		66.74	•		133,480					Incl exc, rock base, conc footings/SOG.
SF	\$	55.61	4,400	\$	244,684	30% \$			318,089	
SF	\$	56.05	7,300	\$	409,165	30% \$	122,750	\$	531,915	Assume 12". Incl exc, rock base, conc
										1 stations 24. / 2 platforms w/ sidewalks
SF	\$	50.00	,		60,000	30%	,		78,000	
EA	\$	18,000.00	24	\$	432,000	30% \$	129,600	\$	561,600	4 per platform
LF	\$	350.00	600	\$	210,000		,	\$	273,000	
EA	\$	35,000.00	6	\$	210,000	30% \$	63,000	\$	273,000	2 per station for this group
EA	\$	5,500.00	12	\$	66,000	30% \$	19,800	\$	85,800	2 per platform
EA	\$	10,000.00	6	\$	60,000	30%	18,000	\$	78,000	1 per platform
EA	\$	10,000.00	3	\$	30,000	30%	9,000	\$	39,000	Code, wayfaring, system, safety. allowand
										Per station
EA	\$	1,200.00	12	\$	14,400	30%	4,320	\$	18,720	2 per platform
EA	\$	100,000.00	1	\$	100,000	30%	30,000	\$	130,000	Allowance per station w/ 2 platforms
EA	\$	75,000.00	2	\$	150,000	30% \$	45,000	\$	195,000	
				\$	2,120,529	(636,159	\$	2,756,688	
	SF SF SF EA LF EA EA	SF \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	SF \$ 66.74 SF \$ 55.61 SF \$ 56.05 SF \$ 50.00 EA \$ 18,000.00 EA \$ 35,000.00 EA \$ 35,000.00 EA \$ 10,000.00 EA \$ 10,000.00 EA \$ 10,000.00 EA \$ 1,200.00 EA \$ 1,200.00 EA \$ 1,200.00	SF \$ 66.74 2,000 SF \$ 55.61 4,400 SF \$ 56.05 7,300 SF \$ 56.05 7,300 SF \$ 50.00 1,200 EA \$ 18,000.00 24 LF \$ 350.00 600 EA \$ 35,000.00 6 EA \$ 5,500.00 12 EA \$ 10,000.00 3 EA \$ 1,200.00 12 EA \$ 100,000.00 1	SF \$ 66.74 2,000 \$ SF \$ 55.61 4,400 \$ SF \$ 56.05 7,300 \$ SF \$ 50.00 1,200 \$ EA \$ 18,000.00 24 \$ LF \$ 350.00 600 \$ EA \$ 35,000.00 6 \$ EA \$ 5,500.00 12 \$ EA \$ 10,000.00 6 \$ EA \$ 10,000.00 3 \$ EA \$ 100,000.00 12 \$ EA \$ 100,000.00 1 \$ EA \$ 75,000.00 2 \$	SF \$ 66.74 2,000 \$ 133,480 SF \$ 55.61 4,400 \$ 244,684 SF \$ 56.05 7,300 \$ 409,165 SF \$ 50.00 1,200 \$ 60,000 EA \$ 18,000.00 24 \$ 432,000 LF \$ 350.00 600 \$ 210,000 EA \$ 35,000.00 6 \$ 210,000 EA \$ 5,500.00 12 \$ 66,000 EA \$ 10,000.00 6 \$ 60,000 EA \$ 10,000.00 3 \$ 30,000 EA \$ 1,200.00 12 \$ 14,400 EA \$ 100,000.00 1 \$ 100,000 EA \$ 75,000.00 2 \$ 150,000	SF \$ 66.74 2,000 \$ 133,480 30% \$ SF \$ 55.61 4,400 \$ 244,684 30% \$ SF \$ 56.05 7,300 \$ 409,165 30% \$ SF \$ 50.00 1,200 \$ 60,000 30% \$ EA \$ 18,000.00 24 \$ 432,000 30% \$ EA \$ 35,000.00 600 \$ 210,000 30% \$ EA \$ 5,500.00 12 \$ 66,000 30% \$ EA \$ 10,000.00 6 \$ 60,000 30% \$ EA \$ 10,000.00 3 \$ 30,000 30% \$ EA \$ 1,200.00 12 \$ 14,400 30% \$ EA \$ 100,000.00 1 \$ 100,000 30% \$ EA \$ 100,000.00 2 \$ 150,000 30% <td>SF \$ 66.74 2,000 \$ 133,480 30% \$ 40,044 SF \$ 55.61 4,400 \$ 244,684 30% \$ 73,405 SF \$ 56.05 7,300 \$ 409,165 30% \$ 122,750 SF \$ 50.00 1,200 \$ 60,000 30% \$ 18,000 EA \$ 18,000.00 24 \$ 432,000 30% \$ 129,600 LF \$ 350.00 600 \$ 210,000 30% \$ 63,000 EA \$ 35,000.00 6 \$ 210,000 30% \$ 63,000 EA \$ 5,500.00 12 \$ 66,000 30% \$ 18,000 EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 EA \$ 10,000.00 3 \$ 30,000 30% \$ 4,320 EA \$ 1,200.00 12 \$ 14,400 30% \$ 4,320 EA \$ 100,000.00 1 \$ 100,000 30% \$ 30,000 EA \$ 100,000.00 2 \$ 150,000</td> <td>SF \$ 66.74 2,000 \$ 133,480 30% \$ 40,044 \$ SF \$ 55.61 4,400 \$ 244,684 30% \$ 73,405 \$ SF \$ 56.05 7,300 \$ 409,165 30% \$ 122,750 \$ SF \$ 50.00 1,200 \$ 60,000 30% \$ 18,000 \$ EA \$ 18,000.00 24 \$ 432,000 30% \$ 129,600 \$ LF \$ 350.00 600 \$ 210,000 30% \$ 63,000 \$ EA \$ 35,000.00 6 \$ 210,000 30% \$ 63,000 \$ EA \$ 5,500.00 12 \$ 66,000 30% \$ 19,800 \$ EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 \$ EA \$ 10,000.00 3 \$ 30,000 \$ \$ 9,000 \$ EA \$ 10,000.00 3 \$ 14,400 30% \$ 4,320 \$ EA \$ 100,000.00</td> <td>SF \$ 66.74 2,000 \$ 133,480 30% \$ 40,044 \$ 173,524 SF \$ 55.61 4,400 \$ 244,684 30% \$ 73,405 \$ 318,089 SF \$ 56.05 7,300 \$ 409,165 30% \$ 122,750 \$ 531,915 SF \$ 50.00 1,200 \$ 60,000 30% \$ 122,750 \$ 531,915 SF \$ 50.00 1,200 \$ 60,000 30% \$ 129,600 \$ 78,000 EA \$ 18,000.00 24 \$ 432,000 30% \$ 129,600 \$ 561,600 LF \$ 350,000 600 \$ 210,000 30% \$ 63,000 \$ 273,000 EA \$ 35,000.00 6 \$ 210,000 30% \$ 63,000 \$ 273,000 EA \$ 5,500.00 12 \$ 66,000 30% \$ 19,800 \$ 85,800 EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 \$ 78,000 EA \$ 10,000.00 3 \$ 30,000 \$ 30% \$ 9,000 \$ 39,000 EA \$ 1,200.00 12 \$ 14,400 30% <td< td=""></td<></td>	SF \$ 66.74 2,000 \$ 133,480 30% \$ 40,044 SF \$ 55.61 4,400 \$ 244,684 30% \$ 73,405 SF \$ 56.05 7,300 \$ 409,165 30% \$ 122,750 SF \$ 50.00 1,200 \$ 60,000 30% \$ 18,000 EA \$ 18,000.00 24 \$ 432,000 30% \$ 129,600 LF \$ 350.00 600 \$ 210,000 30% \$ 63,000 EA \$ 35,000.00 6 \$ 210,000 30% \$ 63,000 EA \$ 5,500.00 12 \$ 66,000 30% \$ 18,000 EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 EA \$ 10,000.00 3 \$ 30,000 30% \$ 4,320 EA \$ 1,200.00 12 \$ 14,400 30% \$ 4,320 EA \$ 100,000.00 1 \$ 100,000 30% \$ 30,000 EA \$ 100,000.00 2 \$ 150,000	SF \$ 66.74 2,000 \$ 133,480 30% \$ 40,044 \$ SF \$ 55.61 4,400 \$ 244,684 30% \$ 73,405 \$ SF \$ 56.05 7,300 \$ 409,165 30% \$ 122,750 \$ SF \$ 50.00 1,200 \$ 60,000 30% \$ 18,000 \$ EA \$ 18,000.00 24 \$ 432,000 30% \$ 129,600 \$ LF \$ 350.00 600 \$ 210,000 30% \$ 63,000 \$ EA \$ 35,000.00 6 \$ 210,000 30% \$ 63,000 \$ EA \$ 5,500.00 12 \$ 66,000 30% \$ 19,800 \$ EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 \$ EA \$ 10,000.00 3 \$ 30,000 \$ \$ 9,000 \$ EA \$ 10,000.00 3 \$ 14,400 30% \$ 4,320 \$ EA \$ 100,000.00	SF \$ 66.74 2,000 \$ 133,480 30% \$ 40,044 \$ 173,524 SF \$ 55.61 4,400 \$ 244,684 30% \$ 73,405 \$ 318,089 SF \$ 56.05 7,300 \$ 409,165 30% \$ 122,750 \$ 531,915 SF \$ 50.00 1,200 \$ 60,000 30% \$ 122,750 \$ 531,915 SF \$ 50.00 1,200 \$ 60,000 30% \$ 129,600 \$ 78,000 EA \$ 18,000.00 24 \$ 432,000 30% \$ 129,600 \$ 561,600 LF \$ 350,000 600 \$ 210,000 30% \$ 63,000 \$ 273,000 EA \$ 35,000.00 6 \$ 210,000 30% \$ 63,000 \$ 273,000 EA \$ 5,500.00 12 \$ 66,000 30% \$ 19,800 \$ 85,800 EA \$ 10,000.00 6 \$ 60,000 30% \$ 18,000 \$ 78,000 EA \$ 10,000.00 3 \$ 30,000 \$ 30% \$ 9,000 \$ 39,000 EA \$ 1,200.00 12 \$ 14,400 30% <td< td=""></td<>

NOT USED	\$	-	30% \$	- \$	-	
	\$	-	30% \$	- \$	-	
Total Costs - 20.03	\$	-	\$	- \$	-	
20.04 - Other stations, landings, terminals:						
Intermodal, ferry, trolley, etc.						
NOT USED	\$	-	30% \$	- \$ - \$	-	
Total Costs - 20.04	\$ \$	-	30% \$ \$	- \$ - \$	-	
20.05 - Joint development						
NOT USED	\$	-	30% \$	- \$ - \$	-	
Total Costs 20.05	\$	-	30% \$	- \$	-	
Total Costs - 20.05	,	-	, 	- >	-	
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30% \$	- \$	-	
	\$	-		- \$	-	
Total Costs - 20.06	\$	-	\$	- \$	-	
20.07. Flouritaire annihitaire						
20.07 - Elevators, escalators	^		200/ ¢	ć		
NOT USED	\$ \$	-	30% \$ 30% \$	- \$ - \$	-	
Total Costs - 20.07	\$	-	\$	- \$ - \$	-	

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

ltem	Unit	Unit Cost	Quantity	Total Cost w Contingenc	•	Allocated Contingency		Allocated ontingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage,										
revenue counting NOT USED				\$ -		30%	\$	-	\$ -	
				\$ -		30%		-	\$ -	
Total Costs - 30.01				\$ - \$ -		30%	\$ \$	-	\$ - \$ -	
				·			•			
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						
30.05 - Yard and Yard Track NOT USED	\$		30% \$	_	\$ 	
	\$ \$	- -	30% \$ 30% \$	- -	\$ - -	

F1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

					To	otal Cost w/o	Allocated		Allocated	To	tal Cost w/	
Item	Unit	Unit Co	st	Quantity		Contingency	Contingency	C	ontingency		ntingency	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 builts.	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		\$	250,000	30%	\$	75,000			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	\$ 1	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%		-	\$	-	
Total Costs - 40.05					\$ \$	-	30%	\$	-	\$ \$	-	
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

ROSSWALK											
Continental crosswalk 24" wide striping	LF	\$	5.50	6,311	\$	34,711	30% \$	10,413	\$	45,124	Assume solid 24" wide striping?
IDEWALKS											
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	Ś	5,582	30% \$	1,674	Ś	7.256	122 If x5'w
New 22'w sidewalk	SF	\$	9.80	12,870		126,126	30% \$	37,838		,	585lf x22w
Curb & gutter	LF	\$	40.00	849	•	33,960	30% \$	10,188	-	44,148	330 7.2
Reconstruct (e) & or (n) curb ramp	EA	\$	3,500.00	44		154,000	30% \$	46,200	-	•	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	
						1,171,027	•	•			
0.07 - Automobile, bus, van accessways including						1,171,027	·				
						1,171,027	<u> </u>	<u> </u>			
0.07 - Automobile, bus, van accessways including	LF	\$	8.60	12,860		110,596	30% \$	33,179			Per LF of total alignment
0.07 - Automobile, bus, van accessways including pads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on	LF SF	\$	8.60 30.45	12,860 58,662	\$		<u>`</u>		\$	143,775	Incl exc (e) base/ subgrade, compact, (n)
0.07 - Automobile, bus, van accessways including pads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo.	SF	\$	30.45	58,662	\$	110,596 1,786,258	30% \$	33,179 535,877	\$	143,775 2,322,135	Per LF of total alignment Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std)
0.07 - Automobile, bus, van accessways including pads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase	SF TON	\$	30.45 115.50	58,662 709	\$ \$	110,596 1,786,258 81,851	30% \$ 30% \$ 30% \$	33,179 535,877 24,555	\$ \$	143,775 2,322,135 106,406	Incl exc (e) base/ subgrade, compact, (n)
O.07 - Automobile, bus, van accessways including pads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving.	SF TON SF	\$ \$	30.45 115.50 2.75	58,662 709 793,081	\$ \$ \$	110,596 1,786,258 81,851 2,180,974	30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292	\$ \$ \$	143,775 2,322,135 106,406 2,835,266	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std)
0.07 - Automobile, bus, van accessways including pads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase	SF TON	\$	30.45 115.50	58,662 709	\$ \$ \$	110,596 1,786,258 81,851	30% \$ 30% \$ 30% \$	33,179 535,877 24,555	\$ \$ \$	143,775 2,322,135 106,406 2,835,266	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std)
O.07 - Automobile, bus, van accessways including pads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving.	SF TON SF	\$ \$	30.45 115.50 2.75	58,662 709 793,081	\$ \$ \$ \$	110,596 1,786,258 81,851 2,180,974	30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292	\$ \$ \$ \$	143,775 2,322,135 106,406 2,835,266	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds fo
O.07 - Automobile, bus, van accessways including bads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving. Milling (E) asphalte road paving @ cross sts	SF TON SF SF	\$ \$ \$ \$	30.45 115.50 2.75 2.75	58,662 709 793,081 46,933	\$ \$ \$ \$ \$	110,596 1,786,258 81,851 2,180,974 129,067	30% \$ 30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292 38,720	\$ \$ \$ \$ \$	143,775 2,322,135 106,406 2,835,266 167,787 441,561	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds fo
O.07 - Automobile, bus, van accessways including bads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving. Milling (E) asphalte road paving @ cross sts Haul off asphalte millings	SF TON SF SF	\$ \$ \$ \$	30.45 115.50 2.75 2.75 33.60	58,662 709 793,081 46,933 10,109	\$ \$ \$ \$ \$	110,596 1,786,258 81,851 2,180,974 129,067 339,662	30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292 38,720 101,899	\$ \$ \$ \$ \$	143,775 2,322,135 106,406 2,835,266 167,787 441,561	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds fo 30lf
O.07 - Automobile, bus, van accessways including bads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving. Milling (E) asphalte road paving @ cross sts Haul off asphalte millings AC Overlay (2") incl cross sts	SF TON SF SF TON TON	\$ \$ \$ \$ \$	30.45 115.50 2.75 2.75 33.60 115.50	58,662 709 793,081 46,933 10,109 10,109	\$ \$ \$ \$ \$ \$	110,596 1,786,258 81,851 2,180,974 129,067 339,662 1,167,590	30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292 38,720 101,899 350,277	\$ \$ \$ \$ \$ \$	143,775 2,322,135 106,406 2,835,266 167,787 441,561 1,517,866 34,320	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds fo 30If
O.07 - Automobile, bus, van accessways including bads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving. Milling (E) asphalte road paving @ cross sts Haul off asphalte millings AC Overlay (2") incl cross sts Replace hatched crosswalks @ cross streets	SF TON SF SF TON TON SF	\$ \$ \$ \$ \$	30.45 115.50 2.75 2.75 33.60 115.50 3.00	58,662 709 793,081 46,933 10,109 10,109 8,800	\$ \$ \$\$\$\$	110,596 1,786,258 81,851 2,180,974 129,067 339,662 1,167,590 26,400	30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292 38,720 101,899 350,277 7,920 3,784 4,478	\$ \$ \$\$\$ \$\$\$\$	143,775 2,322,135 106,406 2,835,266 167,787 441,561 1,517,866 34,320 16,399	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds fo 30lf 145lbs/CF. (n) asphalt. Allow (n) 2" AC
O.07 - Automobile, bus, van accessways including bads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving. Milling (E) asphalte road paving @ cross sts Haul off asphalte millings AC Overlay (2") incl cross sts Replace hatched crosswalks @ cross streets 8' wide street parking - striped	SF TON SF SF TON TON SF LF	\$ \$ \$ \$ \$ \$	30.45 115.50 2.75 2.75 33.60 115.50 3.00 1.98	58,662 709 793,081 46,933 10,109 10,109 8,800 6,371	\$ \$ \$\$\$ \$\$\$\$	110,596 1,786,258 81,851 2,180,974 129,067 339,662 1,167,590 26,400 12,615	30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292 38,720 101,899 350,277 7,920 3,784	\$ \$ \$\$\$ \$\$\$\$	143,775 2,322,135 106,406 2,835,266 167,787 441,561 1,517,866 34,320 16,399 19,403	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds fo 30lf 145lbs/CF. (n) asphalt. Allow (n) 2" AC Allow 3647 If of thermoplastic striping
O.07 - Automobile, bus, van accessways including bads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving. Milling (E) asphalte road paving @ cross sts Haul off asphalte millings AC Overlay (2") incl cross sts Replace hatched crosswalks @ cross streets 8' wide street parking - striped Directional arrows	SF TON SF SF TON TON SF LF	\$ \$ \$ \$ \$ \$	30.45 115.50 2.75 2.75 33.60 115.50 3.00 1.98	58,662 709 793,081 46,933 10,109 10,109 8,800 6,371 199	\$ \$ \$ \$ \$ \$ \$ \$	110,596 1,786,258 81,851 2,180,974 129,067 339,662 1,167,590 26,400 12,615 14,925	30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292 38,720 101,899 350,277 7,920 3,784 4,478	\$ \$ \$ \$ \$ \$ \$ \$ \$	143,775 2,322,135 106,406 2,835,266 167,787 441,561 1,517,866 34,320 16,399 19,403 118,300	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds fo 30lf 145lbs/CF. (n) asphalt. Allow (n) 2" AC Allow 3647 If of thermoplastic striping Thermoplastic
O.07 - Automobile, bus, van accessways including bads, parking lots Survey crew Reconstruct 20'w, unpaved median into roadway on Broadway, See 40.01 for demo. (N) AC on conc subbase Milling (E) asphalte road paving. Milling (E) asphalte road paving @ cross sts Haul off asphalte millings AC Overlay (2") incl cross sts Replace hatched crosswalks @ cross streets 8' wide street parking - striped Directional arrows Road letters "bus lane"	SF TON SF SF TON TON SF LF EA EA	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30.45 115.50 2.75 2.75 33.60 115.50 3.00 1.98 75.00 200.00	58,662 709 793,081 46,933 10,109 10,109 8,800 6,371 199 455	\$ \$ \$\$\$ \$\$\$\$	110,596 1,786,258 81,851 2,180,974 129,067 339,662 1,167,590 26,400 12,615 14,925 91,000	30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$ 30% \$	33,179 535,877 24,555 654,292 38,720 101,899 350,277 7,920 3,784 4,478 27,300	\$ \$ \$\$\$ \$\$\$\$ \$\$\$\$	143,775 2,322,135 106,406 2,835,266 167,787 441,561 1,517,866 34,320 16,399 19,403 118,300 858,781	Incl exc (e) base/ subgrade, compact, (n) base, (n) concrete road. (conc city std) Allowance to extend AC up all side rds for 30lf 145lbs/CF. (n) asphalt. Allow (n) 2" AC Allow 3647 If of thermoplastic striping Thermoplastic Thermoplastic

Total Costs - 40.08					\$	3,610,384		\$	1,083,115	\$	4,693,499	
Note: All Contractors overhead /profits Incl in prices.												
30 mo. Mob & Demob separate. 12% 20-50												
Contractors General Conditions, insurance, bonds for	%	\$	22,254,049	12%	\$	2,670,486	30%	\$	801,146	\$	3,471,632	12% of 10-50.
Traffic Control, Staging, pedestrian control, safety	LF	\$	44.78	13,749	\$	615,680	30%	\$	184,704	\$	800,384	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
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
Mobilization + Demobilization	EA	\$	220,000.00	1	•	220,000	30%	•	66,000		•	Allowance per selected sector
40.08 - Temporary Facilities and other indirect costs during construction												
Total Costs - 40.07					\$	10,236,781		\$	3,071,034	\$	13,307,816	
overlay. Demo in 40.01	J1	Ţ	21.50	05,001	Y	1,313,122	30%	Y	713,317	Y	1,755,056	370 A 1,200,022 31
Rebuild deteriorated roadway (soft spots) 5% of	LS SF	۶ \$	21.90	63,001	•	1,379,722	30%		413,917		•	5% x 1,260,022 sf
Hardscape in median 25% Misc signage above pavement level	SF	\$ \$	30.00 50,000.00	17,615 1	•	528,450 50,000	30% 30%		158,535 15,000			25% - allow hardscape. In narrow areas. Pole signs etc
Handarana is madism 250/	C.E.	,	20.00	17.645	,	530,450	200/	¢	450 525	<u>۸</u>	606.005	irrigation. Mostly 10'w. In narrow areas allow hardscape.
Landscaping in median 75%	SF	\$	15.00	52,844	\$	792,660	30%	\$	237,798	\$	1,030,458	75% - allow topsoil, planting, drainage, NO
Median curb & gutter	LF	\$	40.00	16,846	\$	673,840	30%	\$	202,152	\$	875,992	Allow conc curb & gutter
Double yellow lane line w/ markers	LF	\$	8.50	6,849	\$	58,217	30%	\$	17,465	\$	75,681	Thermoplastic
Intermittent 4" lane line w/ markers	LF	\$	3.75	21,114	•	79,178	30%	•	23,753	•	102,331	Thermoplastic

F1 - SCC 50 SYSTEMS

				Total Co	st w/o	Allocated	Allocate	ed	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Conting	ency	Contingency	Continge	ncy	Contingency	Description
50.01 - Train control and signals										
				\$	-	30%	\$	-	\$ -	
				\$	-	30%	\$	-	\$ -	
Total Costs - 50.01				\$	-		\$	-	\$ -	

50.02 - Traffic signals and crossing protection

Minimal Improvements Moderate Improvements Significant Improvements Major Improvements	EA EA EA	\$ \$ \$ \$	20,000.00 150,000.00 250,000.00 350,000.00	1 2 2 11	\$ \$	20,000 300,000 500,000 3,850,000	30% \$ 30% \$ 30% \$ 30% \$	6,000 90,000 150,000 1,155,000	\$ \$	390,000 650,000	College View El Rio, Glen Iris Harvey, Ellenwood Summer, Sierra Villa, Eagle Rock, Caspar,
System Integration	EA	\$	-		\$	-	30% \$	-	\$	-	Maywood, Hermosa, Argus, Townsend, Dahlia, Loreta, Eagle Vista
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											
141					\$ \$	-	30% \$ 30% \$	-	\$ \$	<u>-</u>	
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	Uni	it Cost	Quantity		tal Cost w/o ontingency	Allocated Contingency	llocated ntingency	tal Cost w/ ntingency	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)

				Total Cost w/o	Allocated	Allocated	Total Cost w/	•
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingenc	y 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 B								
70.04 - Bus					/			
NOT USED				Ş -	30%		\$ -	
				\$ -	30%		\$ -	
Total Costs - 70.04				\$ -		\$ -	\$ -	

'0.05 - Other							
NOT USED	\$	_	30% \$	_	\$	_	
1101 0325	Ś	_	30% \$	_	Ś	-	
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	Ś	-	Ś	-	\$	-	

MAIN WORKSHEET-BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Proposed Project - Route Option F2

10/2/20 Today's Date 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)
	EWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
	Guideway: Surface Streets Guideway: Freeway					0				
	ONS, STOPS, TERMINALS, INTERMODAL (number)	0	2,122	637		2,759	15.1%	10.0%	207	2,966
	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				
	Underground station, stop, shelter, mall, terminal, platform		0	0		0				
	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
	Joint development		0	0		0	_			
	Automobile parking multi-story structure Elevators, escalators		0	0		0				
	ORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	0	0
	Administration Building: Office, sales, storage, revenue counting	0.00	0	0		0	0.070	0.070		
30.02	Light Maintenance Facility		0	0		0				
	Heavy Maintenance Facility		0	0		0				
	Storage or Maintenance of Way Building		0	0		0				
	Yard and Yard Track	0.00	0 420	0 2,826		0	00.00/	44.00/	040	40.404
	VORK & SPECIAL CONDITIONS Demolition, Clearing, Earthwork	0.00	9,420 79	2,826	30%	12,246 102	66.9%	44.3% 0.0%	918 8	13,164 110
	Site Utilities, Utility Relocation		650	195	30%	845	4.6%	0.0%	63	909
	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				
	Site structures including retaining walls, sound walls		0	0	200/	0	5.00/	0.40/	01	1 162
	Pedestrian / bike access and accommodation, landscaping Automobile, bus, van accessways including roads, parking lots		832 5,481	250 1,644	30% 30%	1,081 7,125	5.9% 38.9%	0.4% 2.9%	81 534	1,163 7,659
	Temporary Facilities and other indirect costs during construction		2,371	711	30%	3,082	16.8%	1.3%	231	3,313
50 SYST	EMS	0.00	2,543	763		3,306	18.1%	11.9%	248	3,554
	Train control and signals		0	0		0				
	Traffic signals and crossing protection		950	285	30%	1,235	6.7%	0.5%	93	1,328
	Traction power supply: substations		0	0		0				
	Traction power distribution: catenary and third rail Communications		1,593	478	30%	2,071	11.3%	0.8%	155	2.226
	Fare collection system and equipment		0	0	0070	0	11.570	0.070	100	2,220
	Central Control		0	0		0				
Construc	tion Subtotal (10 - 50)	0.00	14,085	4,226		18,311	100.0%	66.2%	1,373	19,684
	LAND, EXISTING IMPROVEMENTS	0.00	50	15		65		0.2%	7	72
	Purchase or lease of real estate		50	15	30%	65	0.4%	0.0%	7	
	Relocation of existing households and businesses ELES (NOT USED)	0	0	0		0 0				
70.04						0				
70.05	Other					0				
70.06	Non-revenue vehicles					0				
	Spare parts					0				
	ESSIONAL SERVICES (applies to Cats. 10-50)	0.00	6,775	0		6,775	37.0%	24.5%	376	7,151
	Project Development Final Design		1,099 1,465			1,099 1,465	6.0% 8.0%	0.3%	49 66	1,148 1,531
	Project Management for Design and Construction		1,831			1,831	10.0%	0.4%	82	1,913
	Construction Administration & Management		916			916	5.0%	0.4%	69	984
	Professional Liability and other Non-Construction Insurance		183			183	1.0%	0.1%	14	197
	Legal; Permits; Review Fees by other agencies, cities, etc.		732			732	4.0%	0.3%	55	787
	Surveys, Testing, Investigation, Inspection		366			366	2.0%	0.2%	27	394
	Start up	0.00	183	4044		183	1.0%	0.1%	14	197
Subtotal	(10 - 80) LOCATED CONTINGENCY	0.00	20,910	4,241		25,151 2,515		90.9%		26,907 2,691
Subtotal		0.00				27,666		100%		29,597
	ANCE CHARGES	0.00				,000		.3070		
	ject Cost (10 - 100)	0.00				27,666		100%		29,597
	Contingency as % of Base Yr Dollars w/o Contingency					20.28%				
	ed Contingency as % of Base Yr Dollars w/o Contingency					12.03% 32.31%				
	ingency as % of Base Yr Dollars w/o Contingency ed Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$25,158
	struction Cost per Mile (X000)									
	Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$36,997
	Project Cost per Mile (X000)									

F2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Item	Unit	Unit Cost	Quantity		al Cost w/o ntingency	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 If ea station
Concrete platform #24 Side, 8" depth	SF	\$ 66.74			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 Sidewalk modifications @ side stations. See 40.05	SF	\$ 56.05	7,300	\$	409,165	30%	\$	122,750	\$	531,915	Assume 12". Incl exc, rock base, conc
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			210,000	30%	\$	63,000	\$	273,000	
Station Marker	EA	\$ 35,000.00		\$	210,000	30%		63,000			2 per station for this group
Trash Receptacle	EA	\$ 5,500.00			66,000	30%	•	19,800			2 per platform
Advertising Kiosk	EA	\$ 10,000.00		\$	60,000	30%		18,000			1 per platform
Station Signage & misc.	EA	\$ 10,000.00			30,000	30%	•	9,000			Code, wayfaring, system, safety. allowance
Bike rack	EA	\$ 1,200.00			14,400	30%		4,320			2 per platform
Electric power supply & platform lighting. Side Electric power supply & platform lighting. Center	EA EA	\$ 100,000.00 \$ 75,000.00			100,000 150,000	30% 30%	•	30,000 45,000		130,000 195,000	Allowance per station w/ 2 platforms
Total Costs - 20.01				\$	2,122,129		Ś	636,639	Ś	2,758,768	

20.02 - Aerial station, stop, shelter, mall, terminal,						
platform						
NOT USED	\$	_	30% \$	- \$		_
NOT 03EB	\$	-	30% \$ 30% \$	- ¢		_
Total Costs - 20.02	\$	-	30% \$ 30% \$ \$	- \$	<u> </u>	-
20.03 - Underground station, stop, shelter, mall,						
terminal, platform						
NOT USED	Ś	_	30% \$	- Ś		_
	Ś	_	30% \$	- Ś	;	_
Total Costs - 20.03	\$	-	30% \$ 30% \$ \$	- \$		-
20.04 - Other stations, landings, terminals:						
ntermodal, ferry, trolley, etc.						
NOT USED	\$	-	30% \$ 30% \$ \$	- \$;	-
	\$	-	30% \$	- \$	•	-
Total Costs - 20.04	\$	-	\$	- \$	1	-
20.05 - Joint development						
NOT USED	\$	-	30% \$	- \$		-
	\$	-	30% \$	- \$ - \$		-
Total Costs - 20.05	\$	-	\$	- \$		-
20.06 - Automobile parking multi-story structure						
NOT USED	\$	-	30% \$	- \$		-
	\$	_	30% \$	- \$ - \$	<u> </u>	-
Total Costs - 20.06	\$	-	\$	- \$		-
20.07 - Elevators, escalators				- \$ - \$		
NOT USED	\$	-	30% \$	- \$;	-
	\$	<u> </u>	30% \$	- \$		-
Total Costs - 20.07	\$	-	\$	- \$		-

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

			Total Cost w/o		Allocated	Total Cost w/	
ltem	Unit Unit Cost	Quantity	Contingency	Contingency	Contingency	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	Un	nit Cost	Quantity		tal Cost w/o ontingency	Allocated Contingency		Allocated Contingency		otal Cost w/ Contingency	Description
IO.01 - Demolition, Clearing, Earthwork				•		<u> </u>	<u> </u>		<u> </u>		<u> </u>	(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			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	Ş	36,500	30%	Ş	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 builts.	LF	\$	8.26	11,372	\$	93,933	30%	\$	28,180	\$	122,113	Per LF of total alignment
Potholing crew	LF	ċ	4.08	11,372	ċ	46,398	30%	ċ	13,919	ċ	60 317	Per LF of total alignment
Utility modifications @ stations. Side			125,000.00	,	\$	250,000	30%	•	75,000	•		Allowance @ (n) sidewalk work & station
otility modifications & stations, side	LOC	Ş	123,000.00	2	Ş	230,000	30%	Ļ	73,000	ڔ	323,000	access. Inlets, level & SD adjustments. 6
Utility modifications @ stations. Center	LOC	\$	25,000.00	4	\$	100,000	30%	\$	30,000	\$	130,000	
F2 Other Colorado- utility modifications @ station	LS	\$	40,000.00	1	\$	40,000	30%	\$	12,000	\$	52,000	
platform.		·	,			,		•	,	·	,	
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%	Ś	_	\$	_	
					\$	_	30%	•	_	\$	_	
					\$			\$		\$		

0.05 - Site structures including retaining walls, sound											
walls NOT USED					\$	_	30% \$	_	\$		
NOTUSED					•	-	•	-	•	-	
Total Costs - 40.05					\$ \$		30% \$		\$ \$		
Total Costs - 40.05					<u> </u>	-	\$		<u> </u>		
40.06 - Pedestrian / bike access and accommodation, landscaping											
BIKE LANES											
5'wide bike lane - single 6" stripe				2,784		3,675	30% \$	1,102		4,777	
5'w bike lane - green paint				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. (200If)	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			910 lf x5'w
New 7'w sidewalk	LF	\$	9.15	667	\$	6,103	30% \$	1,831			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	т.	6,000.00	24		144,000	30% \$	43,200	•		Allowance based on Google
Work at other misc adjacent elements	EA		,	1		100,000	30% \$	30,000			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			-		Ś	831,917	\$	249,575	<u>\$</u>	1,081,492	

40.07 - Automobile, bus, van accessways including (e) median left in at F2 but removed F1.

Total Costs - 40.07					\$	5,480,528		\$	1,644,158	\$	7,124,687	
overlay. Demo in 40.01												
Rebuild deteriorated roadway (soft spots) 5% of	SF	\$	21.90	49,720		1,088,868	30%	\$	326,660		•	5% x 1,260,022 sf
Misc signage above pavement level	LS	\$	50,000.00	1	\$	50,000	30%	\$	15,000	\$	65,000	Pole signs etc
Hardscape in median 25%	SF	\$	30.00	3,146	\$	94,380	30%	\$	28,314	\$	122,694	hardscape. 25% - allow hardscape. In narrow areas.
Lanuscaping in ineulali 75%	3F	Ş	15.00	9,437	Ş	141,333	30%	ې	42,407	Ş	104,022	irrigation. Mostly 10'w. In narrow areas allo
Median curb & gutter Landscaping in median 75%	LF SF	\$ \$	40.00 15.00	2,733 9,437		109,320 141,555	30% 30%	•	32,796 42,467		,	Allow conc curb & gutter 75% - allow topsoil, planting, drainage, NO
Double yellow lane line w/ markers	LF	\$	8.50	3,113		26,461	30%	\$	7,938		34,399	Thermoplastic
Intermittent 4" lane line w/ markers	LF	\$	3.75	18,958	\$	71,093	30%	\$	21,328	\$	92,420	Thermoplastic
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
Chevron markings	SF	\$	6.00	2,390	\$	14,340	30%	\$	4,302	\$	18,642	LF of median measured 2390x11=29590sf
Diagonal hatch striping at side of ramps	SF	\$	3.00	10	\$	30	30%	\$	9	\$	39	
Bus lane red paint	SF	\$	3.30	171,568	\$	566,174	30%	\$	169,852	\$	736,027	Thermoplastic red, 12' w
Road letters "bus lane"	EA	\$	200.00	455		91,000	30%	•	27,300			Thermoplastic
Directional arrows	EA	\$	75.00	248	\$	18,600	30%	\$	5,580	Ś	24 180	Thermoplastic
8' wide street parking - striped	LF	\$	1.98	10,075	\$	19,949	30%	\$	5,985	\$	25,933	Allow 3647 If of thermoplastic striping
AC Overlay (2")	TON	\$	115.50	7,979	\$	921,575	30%	\$	276,472	\$	1,198,047	145lbs/CF. (n) asphalt. Allow (n) 2" AC
Haul off asphalte millings	TON		33.60	7,979		268,094	30%	•	80,428		348,523	
Milling (E) asphalte road paving.	SF	ς .	2.75	662,939	\$	1,823,083	30%	\$	546,925	Ġ	2,370,008	
Survey crew	LF	\$	8.60	11,372	\$	97,799	30%	\$	29,340	\$	127,139	Per LF of total alignment
pads, parking lots												

40.08 - Temporary Facilities and other indirect costs	
during construction	

Mobilization + Demobilization Street sweeping, SD Vac clearing during construction.	EA LF	'.	220,000.00	1 12,256	220,000 28,679	30% \$ 30% \$	66,000 8,604	•	,	Allowance per selected sector Per LF of paved total alignment
SWPPP Traffic Control, Staging, pedestrian control, safety	LF LF	\$ \$	5.24 44.78	12,256 12,256	64,221 548,824	30% \$ 30% \$	19,266 164,647	•	,	Per LF of paved total alignment Per LF of paved total alignment
Contractors General Conditions, insurance, bonds for 30 mo. Mob & Demob separate. 12% 20-50	%	\$ 1	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

F2 - SCC 50 SYSTEMS

Item	Unit	Unit Cost	Quantity		al Cost w/o entingency	Allocated Contingency	c	Allocated Contingency		otal Cost w/ ontingency	Description
50.01 Tunin control and signals											
50.01 - Train control and signals				۲.		200/	۲		۲.		
NOT USED				\$ \$	-	30%	-	-	\$ \$	-	
				\$	-	30%		-	\$	-	
Total Costs - 50.01				Ş	-		\$	-	\$	-	
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%	Ś	45,000	Ś	195,000	
Significant Improvements		\$ 250,000.00		\$	250,000	30%		75,000		325,000	•
Major Improvements		\$ 350,000.00		Ś	350,000	30%	•	105,000		455,000	
System Integration	EA			\$	-	30%	-	-	\$	-	
Total Costs - 50.02				\$	950,000		\$	285,000	\$	1,235,000	

0.03 - Traction power supply: substations										
NOT USED			\$, -	30%	\$	-	\$	-	
			\$		30%			\$		
Total Costs - 50.03			\$	-		\$	-	\$	-	
50.04 - Traction power distribution: catenary and third	1									
rail										
NOT USED			\$		30%		-	\$	-	
			\$		30% \$			<u>\$</u>		
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						_		_		
10.07 - Central Control					30%	ċ	_	\$	_	
NOT LISED			5	-	30/0 .	•				
NOT USED			\$ \$		30%		-	\$	-	

F2 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

ltem	Unit	Unit Cost	Quantity		Total Cost w/o Contingency	Allocated Contingency	C	Allocated Contingency	Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate										
Allowance, Side stations Allowance, (n) signalized intersection, incl Q jump. None	EA EA	\$ 50,000.00 \$ -	1	1 5	50,000	30% :		15,000 -		0
Total Costs - 60.01				Ş	50,000	;	\$	15,000	\$ 65,00	0
60.02 - Relocation of existing households and businesses						2007	¢		6	
Tables Con				- 5	-	30% : 30% :		-	\$ - \$ -	
Total Costs - 60.02				,						

F2 - SCC 70 - VEHICLES (NOT USED)

Item	Unit Unit Cost	Quantity	Total Co Contin		Allocated Contingency		ocated ingency		Cost w/	Description
item	Onit Onit cost	Quantity	Conting	sericy	Contingency	Cont	iligelicy	Cont	ingenicy	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	\$	-	\$	- \$	-	
0.06 - Non-revenue vehicles						
NOT USED	\$	-	30% \$	- \$	-	
	\$	-	30% \$	- \$	-	
Total Costs - 70.06	\$	-	\$	- \$	-	
70.07 - Spare parts						
NOT USED	\$	-	30% \$	- \$	-	
	\$	-	30% \$	- \$	-	
Total Costs - 70.07	ċ	_	Ś	- \$	_	

MAIN WORKSHEET-BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

Route Option F3

Today's Date Yr of Base Year \$

e \$ 2019

10/2/20

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 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 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	0.00	0	0		0	0.070	0.070		
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	0001	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 4	95 1	30% 30%	412 5	15.4%	1.2%	31 0.39	443
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments 40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0	30%	0	0.2%	0.0%	0.39	6
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		40 221	12 66	30% 30%	52 287	1.9%	0.1%	4 22	56 309
40.08 Temporary Facilities and other indirect costs during construction 50 SYSTEMS	0.00	531	159	30%	690	10.7% 25.7%	0.8% 16.8%	52	742
50.01 Train control and signals	0.00	0	0		0	20.1 /0	10.070	32	172
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	0.00	0	0 619		0	100.00/	07.00/	224	
Construction Subtotal (10 - 50) 60 ROW, LAND, EXISTING IMPROVEMENTS	0.00	2,063 50	15		2,682 65	100.0%	65.2% 1.6%	201 7	2,883 72
60.01 Purchase or lease of real estate	0.00	50	15	30%	65		1.6%	7	12
60.02 Relocation of existing households and businesses		0	0	0070	0			,	
70 VEHICLES (NOT USED)	0	0	0		0		0.0%		
70.04 Bus					0				
70.05 Other					0				
70.06 Non-revenue vehicles 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	0.00	161	-		161	01.070	2-4.170	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 27			54 27			2	58 29
80.08 Start up Subtotal (10 - 80)	0.00	3,105	634		3,739		90.9%	2	4,001
90 UNALLOCATED CONTINGENCY	0.00	0,100	004		374		9%		400
Subtotal (10 - 90)	0.00				4,113		100%		4,402
100 FINANCE CHARGES									
Fotal 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 Total Contingency as % of Base Yr Dollars w/o Contingency					12.04% 32.45%				
Jnallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$3,741
YOE Construction Cost per Mile (X000)								(1270)	,
YOE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$5,502
YOE Total Project Cost per Mile (X000)									

F3 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

					Т	otal Cost w/o	Allocated	Allocated	Total Cost w/	
Item	Unit	Unit	t Cost	Quantity		Contingency	Contingency	Contingency	Contingency	Description
						<u> </u>	<u> </u>	<u> </u>	<u> </u>	·
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										
Station27 Side. 10x50+12x100=2200sf										
Demo. (e) sidewalk. See 40.01										See 40.01
Red curve for bus maneuvering	15	ċ	F 00	160	ċ	800	30%	\$ 240	ć 1.0	10 80' ea platform 160 lf ea station
Concrete platform, 8" depth, side	LF SF	\$ \$	5.00 66.74	2,200		146,828	30%			76 Station 27 is 2200 sf
	SF SF	۶ \$	56.05							14 Assume 12". Incl exc, rock base, conc
Concrete pad for bus parking Sidewalk modifications @ side stations. See 40.05	SF.	Þ	50.05	3,600	Þ	201,780	30%	\$ 60,534	\$ 202,3	14 ASSUME 12 . MICHERC, FOCK DASE, COMC
Tactile surfacing	SF	\$	50.00	300	\$	15,000	30%	\$ 4,500	\$ 19,5	00
Shelter/Seating/Screen	EA	\$	18,000.00	8	\$	144,000	30%	\$ 43,200	\$ 187,2	00 4 per platform
Railing (SS) None										
Station Marker	EA	\$	35,000.00	2	\$	70,000	30%	\$ 21,000	\$ 91,0	00 2 per station for this group
Trash Receptacle	EA	\$	5,500.00	4	\$	22,000	30%	\$ 6,600	\$ 28,6	00 2 per platform
Advertising Kiosk	EA	\$	10,000.00	2	\$	20,000	30%	\$ 6,000	\$ 26,0	00 1 per platform
Station Signage & misc.	LS	\$	10,000.00	1	\$	10,000	30%	\$ 3,000	\$ 13,00	OO Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$	1,200.00	4	\$	4,800	30%	\$ 1,440	\$ 6,24	10 2 per platform
Total Costs - 20.01					\$	635,208		\$ 190,562	\$ 825,7	70
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	Ś	-	30% \$	- \$	-	
	Ś	-	30% \$	- \$	-	
Total Costs - 20.05	\$	-	\$	- \$	-	
20.06 - Automobile parking multi-story structure						
Not used	\$	-	30% \$	- \$	-	
	\$	-	30% \$	- \$	-	
Total Costs - 20.06	\$	-	\$	- \$	-	
OZ Flavetow condetous						
20.07 - Elevators, escalators	_		4			
Not used	\$	-	30% \$	- \$	-	
	\$	-	30% \$	- \$	-	
Total Costs - 20.07	\$	-	\$	- \$	-	

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

				Total Cost w/o	Allocated	Allocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingency	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								
_				ċ	200/	ċ	ė	
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

				1	Total Cost w/o	Allocated		Allocated	•	Total Cost w/	
tem	Unit	Unit Cost	Quantity		Contingency	Contingency	С	Contingency		Contingency	Description
10.01 - 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	
10.02 - Site Utilities, Utility Relocation											
Survey all (e) utilities & document. Video/ Grnd penetrating radar/ (e) as builts.	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	

									ı
0.03 - Haz. mat'l, contam'd soil removal/mitigation, round water treatments									
Allowance 10% of 40.01	LS	\$ 40,000.00	10%	\$	4,000	30% \$	1,200	\$	5,200
Total Costs - 40.03				\$	4,000	\$	1,200	\$	5,200
0.04 - Environmental mitigation, e.g. wetlands,									
istoric/archeologic, parks Not used				\$	_	30% \$		\$	
Not used				۶ \$	-	30% \$ 30% \$	-	\$ \$	- -
Total Costs - 40.04				\$	-	\$	-	\$	-
0.05 - Site structures including retaining walls, sound									
valls									
Retaining wall & foundation. 6' h	LF	\$ 700		\$	-	30% \$	-	\$	•
Total Costs - 40.05				\$	-	\$	-	\$	-
0.06 - Pedestrian / bike access and accommodation, andscaping									
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
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
0.07 - Automobile, bus, van accessways including oads, parking lots									
Curb extension for north departures to accommodate station & pedestrian circulation	e 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

40.08 - Temporary Facilities and other indirect costs during construction						
Mobilization + Demobilzation.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 % \$ 1,841,708 30 mo. Mob & Demob separate. 12% 20-50	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	

F3 - SCC 50 SYSTEMS

				-	Allocated				-	
Unit	Unit Cost	Quantity	Cont	ingency	Contingency	Con	tingency		Contingency	Description
			\$	-	30%	\$	-	\$	-	
			\$	-	30%	\$	-	\$	-	
			\$	-	;	\$	-	\$	-	
EA	\$ 20,000.00		\$	-	30%	\$	-	\$	-	
EA	\$ 150,000.00		\$	-	30%	\$	-	\$	-	
EA	\$ 250,000.00		\$	-	30%	\$	-	\$	-	
EA	\$ 350,000.00		\$	-	30%	\$	-	\$	-	
EA	\$ -		\$	-	30% \$	\$	-	\$	-	
			\$	-	•	\$	-	\$	-	
			\$	-	30% \$	\$	-	\$	-	
			\$	-	5	\$	-	\$	-	
	EA EA EA EA	EA \$ 150,000.00 EA \$ 250,000.00 EA \$ 350,000.00	EA \$ 20,000.00 EA \$ 150,000.00 EA \$ 250,000.00 EA \$ 350,000.00	Unit Unit Cost Quantity Cont	\$ - \$ - \$ - \$ - \$ - EA \$ 20,000.00 \$ - EA \$ 150,000.00 \$ - EA \$ 250,000.00 \$ - EA \$ 350,000.00 \$ - EA \$ - \$ -	Unit Unit Cost Quantity Contingency Contingency	Unit Unit Cost Quantity Contingency Contingency	Unit Unit Cost Quantity Contingency Contingency Contingency	Unit Unit Cost Quantity Contingency Contingency Contingency	Unit Unit Cost Quantity Contingency Contingency Contingency

50.04 - Traction power distribution: catenary and third	l								
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	Un	it Cost	Quantity	Total Cost w/o Contingency	Allocated Contingency	_	Allocated Contingency		Total Cost w/ Contingency	Description
60.01 - Purchase or lease of real estate					Contingency	contingency		Contingency		Contingency	
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					\$ -	;	Ş	-	Ş	-	

F3 - SCC 70 - VEHICLES (NOT USED)

			Total Cost w/o	Allocated	Allocated	Total Cost w/	
Item	Unit Unit Co	st Quantity	Contingency	Contingency	Contingency	Contingency	Description
					<u>.</u>		
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

YOE Total Project Cost per Mile (X000)

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 Dollar 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		775	000		0	22/			
0 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	775	233	000/	1,008	34.5%	22.5%	76	1,083
20.01 At-grade station, stop, shelter, mall, terminal, platform		775 0	233	30%	1,008	34.5%	2.6%	76	1,083
20.02 Aerial station, stop, shelter, mall, terminal, platform	l	0	0		0				
20.03 Underground station, stop, shelter, mall, terminal, platform20.04 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				
0 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	0.00	0	0		0	0.070	0.070		
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				
0 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		240	72	30%	311	40.70/	0.00/	23	335
40.06 Pedestrian / bike access and accommodation, landscaping 40.07 Automobile, bus, van accessways including roads, parking lots		0	0	30%	0	10.7%	0.8%	23	333
40.08 Temporary Facilities and other indirect costs during construction		245	73	30%	318	10.9%	0.8%	24	342
0 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	
60.02 Relocation of existing households and businesses 70 VEHICLES (NOT USED)	0	0	0		0 0		0.0%		
70.04 Bus					0		0.070		
70.05 Other					0				
70.06 Non-revenue vehicles					0				
70.07 Spare parts					0				
0 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
ubtotal (10 - 80)	0.00	3,415	655		4,070		90.9%		4,356
0 UNALLOCATED CONTINGENCY					407		9%		436
subtotal (10 - 90)	0.00				4,477		100%		4,792
00 FINANCE CHARGES									
otal Project Cost (10 - 100)	0.00				4,477		100%		4,792
llocated Contingency as % of Base Yr Dollars w/o Contingency					19.18% 11.92%				
Inallocated Contingency as % of Base Yr Dollars w/o Contingency otal Contingency as % of Base Yr Dollars w/o Contingency					11.92% 31.10%				
nallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$4,073
OE Construction Cost per Mile (X000)								(12.0)	, ,,
OE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$5,989
OF Total Project Cost per Mile (X000)								,,	, ,

G1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

				Tot	al Cost w/o	Allocated		Allocated		Total Cost w/	
tem	Unit	Unit Cost	Quantity	Co	ntingency	Contingency	Со	ntingency		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.											Assume 100x12 = 1200 sf x 2
Side											platforms=2400sf
The BRT will operate on mixed flow streets without											No dim listed for station platform
improvements other than station 28											
Demo. (e) sidewalk. See 40.01											see 40.01
Red curve for bus maneuvering	LF	\$ 5.0	160	\$	800	30%	ς	240	ς	1 0/10	40" @ ea end of platform
Concrete platform, 8" depth	SF	\$ 66.7		•	160,176	30%	•	48,053	•		Incl exc, rock base, conc footings/SOG
Concrete pad for bus parking	SF	\$ 56.0	,	•	123,310	30%	-	36,993			Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side stations. See 40.05	31	у 30.0.	2,200	Y	123,310	3070	Y	30,333	Ţ	100,303	1 stations / 2 platforms w/ sidewalks
Tactile surfacing	SF	\$ 50.0	0 400	\$	20,000	30%	\$	6,000	\$	26,000	1 stations / 2 platforms w/ slacewarks
Shelter/Seating/Screen	EA	\$ 18,000.0		\$	144,000	30%		43,200			4 per platform
Railing (SS) None	_, .	φ 10,000.0		\$	-	3070	\$	-	\$	-	i per piatroim
Station Marker	EA	\$ 35,000.0	0 2	т	70,000	30%		21,000	\$	91 000	2 per station for this group
Trash Receptacle	EA	\$ 5,500.0		\$	22,000	30%		6,600	•		2 per platform
Advertising Kiosk	EA	\$ 10,000.0		•	20,000	30%		6,000	-		1 per platform
Station Signage & misc.	EA	\$ 10,000.0		\$	10,000	30%		3,000			Code, wayfaring, system, safety.
Station signage a misc.	2, ,	φ 10,000.0		Y	10,000	3070	Υ	3,000	Ψ	13,000	allowance Per station
Bike rack	EA	\$ 1,200.0) 4	\$	4,800	30%	\$	1,440	\$	6,240	2 per platform
Electric power supply & platform lighting	EA	\$ 100,000.0	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%	Ś	_	\$	-	
				\$	-	30%		_	\$	-	
Total Costs - 20.02				\$		23/0	Ś		ċ		

20.03 - Underground station, stop, shelter, mall,						
terminal, platform						
NOT USED	\$ _	30% \$	_	\$	_	
1101 0025	\$ _	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	\$ -	Ś		Ś		

G1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

					To	otal Cost w/o	Allocated	1	Allocated		Total Cost w/	
Item	Unit	Ur	nit Cost	Quantity	C	Contingency	Contingency	Co	ontingency		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 builts. 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 & statio 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	Ś	3,094	

										ı
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	SF	\$ 35.00	1,200	\$ 42,000	30%	\$	12,600	\$	54,600	(e) sidewalk at stations is 200LF varies 6'-
accommodate (n) access configurations. (1200lf)										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		\$ 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 % \$ 2,038,766 12% \$ 244,652 30% \$ 73,396 \$ 318,047 12% of 10-50.

30 mo. Mob & Demob separate. 12% 20-50

Note: All Contractors overhead /profits Incl in prices.

Total Costs - 40.08 \$ 244,652 \$ 73,396 \$ 318,047

G1 - SCC 50 SYSTEMS

					Fotal Cost w/o	Allocated		ocated		otal Cost w/	
tem	Unit	Unit	Cost	Quantity	Contingency	Contingency	Cont	ingency	(Contingency	Description
0.01 - Train control and signals											
Not used				ç	-	0%	\$	-	\$	_	
Total Costs - 50.01				\$	-		\$	-	\$	-	
0.02 - Traffic signals and crossing protection	on										
0.02 - Traffic signals and crossing protection	on										
0.02 - Traffic signals and crossing protection Minimal Improvements	on EA	\$	20,000	ç	-		\$	-	\$	-	
		\$ \$	20,000 150,000	ç	- -		\$ \$	- -	\$ \$	- -	
Minimal Improvements	EA			Ç	- - -		\$ \$ \$		\$ \$ \$	- - -	
Minimal Improvements Moderate Improvements	EA EA	\$	150,000	ç	- - -		\$ \$ \$		\$ \$ \$ \$	- - -	
Minimal Improvements Moderate Improvements Significant Improvements	EA EA EA	\$	150,000 250,000	\$ \$ \$ \$ \$ \$	-	0%	\$ \$ \$ \$	-	\$ \$ \$ \$	-	

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

60.02 - Relocation of existing households and						-
businesses						ı
	\$ -	30% \$	-	\$ -		ı
	\$ -	30% \$	-	\$ -		
Total Costs - 60.02	\$ -	\$	-	\$ -		٦

G1 - SCC 70 - VEHICLES (NOT USED)

Unit	Unit Cost	Quantity	Total Cost w/c Contingency \$ - \$ - \$ -	Allocated Contingency 30% 0%	Cont	ocated ingency - - -		Total Cost w/ Contingency	Description
			\$ - \$ -	30%	\$	-	\$ \$ \$	-	
			\$ -		\$	-	\$ \$ \$	- -	
			<u>,</u>		\$		\$ \$	<u>-</u>	
			\$ -			-	\$	_	
			\$ -	30%	\$	-	\$	-	
			\$ -	0%		-	\$	-	
			\$ -		\$	-	\$	-	
			\$ -	30%	\$	-	\$	-	
			\$ -			-	\$	-	
			\$ -		\$	-	\$	-	
			\$ -	30%	\$	_	\$	_	
			\$ -			_	\$	_	
			\$ -	0,0	\$	-	\$	-	
				\$ - \$ - \$ - \$ - \$ - \$ -	\$ - 30% \$ - 0% \$ - \$ - \$ - 30% \$ - 0%	\$ - 30% \$ \$ - 0% \$ \$ - \$ \$ \$ - 30% \$ \$ - 0% \$	\$ - 30% \$ - \$ - 0% \$ - \$ - \$ - \$ - 30% \$ - \$ - 0% \$ -	\$ - 30% \$ - \$ \$ - 0% \$ - \$ \$ - \$ - \$ \$ - \$	\$ - 30% \$ - \$ - \$ - 0% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

70.05 - Other							
NOT USED	\$	-	30% \$	-	\$	-	
	Ś	_	0% \$	_	Ś	_	
Total Costs - 70.05	\$	-	\$	-	\$	-	
70.06 - Non-revenue vehicles							
NOT USED	\$	-	30% \$	-	\$	-	
	\$	-	0% \$	-	\$	-	
Total Costs - 70.06	\$	-	\$	-	\$	-	
70.07 - Spare parts							
	A		200/ 6				
NOT USED	\$	-	30% \$	-	\$	-	
	\$	-	0% \$	-	\$	-	
Total Costs - 70.07	\$	-	\$	-	\$	-	

MAIN WORKSHEET-BUILD

North Hollywood to Pasadena Bus Rapid Transit

Los Angeles County, California

YOE Construction Cost per Mile (X000)

YOE Total Project Cost per Mile (X000)

YOE Total Project Cost per Mile Not Including Vehicles (X000)

Route Option G2

10/2/20 Today's Date Yr of Base Year \$ 2020

Yr of Revenue Ops 2024

High (+25%)

\$606

	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 20.02 Aerial station, stop, shelter, mall, terminal, platform		0	0		0			U	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 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	101070	0.070	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 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 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	100.070	0.0%	0	0
60.01 Purchase or lease of real estate	0.00	0	0		0	0.0%	0.0%	-	
60.02 Relocation of existing households and businesses		0	0		0	0.070	0.070		
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	0.00	407	40		0	40.00/	07.40/	-	400
80 PROFESSIONAL SERVICES (applies to Cats. 10-50) 80.01 Project Development	0.00	107	16 3		123 20	42.6% 6.9%	27.1% 4.4%	7	130 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 Total Contingency as % of Base Yr Dollars w/o Contingency					10.65% 17.12%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$412
YOE Construction Cost per Mile (X000)								,,	

G2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

Optional Route length G2. Unimproved

LF

1,821 0.34 mls

				Total Cost w/o		Allocated		Total Cost w/	
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingency	'	Contingency	Description
L									
This G2 optional route will operate on (e) street systems	i								
There is no (n) stations or road improvements									
20.01 - At-grade station, stop, shelter, mall, terminal,									
platform									
				\$ -	30%		\$	-	
				\$ -	30%		\$	-	
				\$ -	30%		\$	-	
				\$ -	30%	Ş -	\$	-	
Total Costs - 20.01				\$ -		\$ -	\$		
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.				¢.	200/	¢	۲.		
				\$ - \$ -	30% 0%		\$	-	
Total Costs - 20.04				\$ - \$ -	0%	\$ -	<u>ې</u>	<u>-</u>	
10ta C03t3 - 20.04				-		, -	Ą	-	
<u>!</u>									

20.05 - Joint development							
20.03 Joint development	¢	_	30% \$	_ <		_	
	ب خ			7	,		
Tatal Casta 20 05	\$ *		0% \$	-	<u>, </u>	-	
Total Costs - 20.05	\$	-	\$	- \$	•	-	
20.06 - Automobile parking multi-story structure							
	\$	=	30% \$	- \$	5	-	
	\$	-	0% \$	- \$,	-	
Total Costs - 20.06	\$	-	\$	- \$	3	-	
20.07 - Elevators, escalators							
	\$	-	30% \$	- \$	5	-	
	\$	-	0% \$	- \$;	-	
Total Costs - 20.07	\$	-	\$	- \$	3	-	

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

Item	Unit	Unit Cost	Quantity	Total Cost w,			ocated ingency	Total Cost w/ Contingency	Description
30.01 - Administration Building: Office, sales, storage, revenue counting				ė	000			ć	
Total Costs - 30.01				\$ - \$ -	0%	\$	-	\$ - \$ -	
30.02 - Light Maintenance Facility				ċ	0.00	: ċ		ć	
Total Costs - 30.02				\$ - \$ -	070	\$ \$	-	\$ - \$ -	
30.03 - Heavy Maintenance Facility				ć	000			ć	
Total Costs - 30.03				\$ - \$ -	0%	\$ \$	-	\$ - \$ -	
30.04 - Storage or Maintenance of Way Building				•				<u> </u>	
Total Costs - 30.04				\$ -	0%	\$	-	\$ - \$ -	

30.05 - Yard and Yard Track						
	\$ -	0% \$	- \$	-		
Total Costs - 30.05	\$ -	\$	- \$			

G2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

				Total C	ost w/o	Allocated	All	ocated		Total Cost w/	
ltem	Unit	Unit Cost	Quantity	Contin	gency	Contingency	Cont	ingency		Contingency	Description
40.01 - Demolition, Clearing, Earthwork											
40.01 - Demontion, Clearing, Earthwork				\$	_	30%	¢	_	¢	_	
				\$	_	30%	\$	_	ς ,	_	
				\$	-	0%	\$	_	\$	_	
Total Costs - 40.01				\$	-		\$	-	\$	- -	
40.02 - Site Utilities, Utility Relocation											
, , , , , , , , , , , , , , , , , , , ,				\$	_	30%	\$	-	\$	-	
				\$	-	30% 30% 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				¢.		007	ć		ć		
Total Costs 40.04				\$ \$	-	0%	\$ \$	-	<u>\$</u>	-	
Total Costs - 40.04				\$	-		ş	-	Ş	-	
40.05 - Site structures including retaining walls, sound walls											
				\$ \$	-	0%	\$	-	\$ \$	-	

40.0C Redestries / hills assessed assessment detical							
40.06 - Pedestrian / bike access and accommodation, landscaping							
			\$	-	30% \$	-	\$ -
			\$	-	30% \$	-	\$ -
			\$	-	30% \$	-	\$ -
			\$	-	30% \$	-	\$ -
			\$	-	30% \$	-	\$ -
			\$	-	30% \$	-	\$ -
			\$	-	0% \$	-	\$ -
Total Costs - 40.06			\$	-	\$	-	\$ -
40.07 - Automobile, bus, van accessways including							
roads, parking lots							
iloaus, parking lots			\$	-	0% \$	_	\$ -
Total Costs - 40.07			\$	-	\$	-	\$ -
40.08 - Temporary Facilities and other indirect costs							
during construction							
Contractors General Conditions, insurance, bonds for	%	\$ 250,000	12% \$	30,000	30% \$	9,000	\$ 39,000 12% of 10-50.
30 mo. Mob & Demob separate. 12% 20-50							
Total Costs - 40.08			\$	30,000	\$	9,000	\$ 39,000

G2 - SCC 50 SYSTEMS

ltem	Unit	Unit	: Cost	Quantity		tal Cost w/o	Allocated Contingency		Allocated		Total Cost w/ Contingency	Description
				•		<u> </u>					<u> </u>	•
50.01 - Train control and signals					¢	_	0%	ċ	_	Ś	_	
Total Costs - 50.01					\$	-	078	\$	-	\$	-	
50.02 - Traffic signals and crossing protection												
Minimal Improvements	EA	\$	20,000	C) \$	-	30%	\$	-	\$	-	
Moderate Improvements	EA	\$	150,000	C) \$	-	30%	\$	-	\$	-	
Significant Improvements	EA	\$	250,000	C) \$	-	30%	\$	-	\$	-	
Major Improvements	EA	\$	350,000	C) \$	-	30%	\$	-	\$	-	
System Integration	EA	\$	250,000	1	L \$	250,000	0%	\$	-	\$	250,000)
Total Costs - 50.02					\$	250,000		\$	-	\$	250,000)

50.03 - Traction power supply: substations					
Sold Traction power supply? Substations	\$ -	0% \$	- \$	-	
Total Costs - 50.03	\$ -	0% \$ \$	- \$	-	
50.04 - Traction power distribution: catenary and third					
rail .					
	\$ -	0% \$ \$	- \$ - \$	-	
Total Costs - 50.04	\$ -	\$	- \$	-	
50.05 - Communications					
	\$ -	30% \$	- \$	-	
	\$ -	30% \$ 30% \$ 0% \$	- \$ - \$ - \$	-	
	\$ -	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 Allowance, (n) signalized intersection, incl Q jump. None	EA EA	\$ 50,000.00		\$ - \$ -	30% 30%	•	\$ - \$ -	
Total Costs - 60.01				\$ -		\$ -	\$ -	

60.02 - Relocation of existing households and businesses				
	\$ -	0% \$	-	\$ -
	\$ -	0% \$	-	\$ -
Total Costs - 60.02	\$ -	\$	-	\$ -

G2 - SCC 70 - VECHICLES (NOT USED)

				Total Cost w/o	Allocated	Allocated	Total Cost	:w/
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingency	Continger	ncy Description
70.01 - Light Rail				\$ - \$ -	30% 0%		\$ \$	-
Total Costs - 70.01				\$ -	0%	\$ - \$ -	\$	-
70.02 - Heavy Rail				\$ -	0%	\$ -	\$	_
Total Costs - 70.02				\$ - \$ -	• • • • • • • • • • • • • • • • • • • •	\$ - \$ -	\$	-
70.03 - Commuter Rail				ć	00/	ć	ć	
Total Costs - 70.03				\$ - \$ -	0%	\$ -	\$	-
70.04 - Bus				\$ -	0%	\$ -	\$	_
Total Costs - 70.04				\$ - \$ -	070	\$ - \$ -	\$	-
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		<u> </u>		\$ -		\$ -	\$	-

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	Base Year	Base Year	Base Year	Base Year Dollars	Base Year Dollars	Escalation Per	YOE Dollars
			Dollars w/o	Dollars	Dollars	Dollars	Percentage	Percentage	Annum @ 3% =	Total
			Contingency (X000)	Allocated	Allocated	TOTAL	of	of	7.50% (X000)	(X000)
			(۸000)	Contingency (X000)	Contingency %	(X000)	Construction Cost	Total Project Cost	(۸000)	
				` '	70			-		
10 GUIDE	EWAY & TRACK ELEMENTS (route miles)	0.00	0	0		0	0%	0%		0
10.01	Guideway: Surface Streets					0				
10.02	Guideway: Freeway					0				
20 STATI	ONS, STOPS, TERMINALS, INTERMODAL (number)	0	3,219	966		4,185	27.6%	17.8%	314	4,499
	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				
	Underground station, stop, shelter, mall, terminal, platform		0	0		0				
	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0		0				
	Joint development		0	0		0				
	Automobile parking multi-story structure		0	0		0				
	Elevators, escalators		0	0		0				
		0.00	0	0		0	0.00/	0.00/	0	0
	ORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0		0	0.0%	0.0%	U	U
	Administration Building: Office, sales, storage, revenue counting			0		0				
	Light Maintenance Facility		0							
	Heavy Maintenance Facility		0	0		0				
	Storage or Maintenance of Way Building		0	0		0				
	Yard and Yard Track		0	0		0				
	ORK & SPECIAL CONDITIONS	0.00	4,597	1,379		5,977	39.4%	25.5%	448	6,425
	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				
	Site structures including retaining walls, sound walls		0	0		0				
	Pedestrian / bike access and accommodation, landscaping		1,333	400	30%	1,733	11.4%	0.9%	130	1,863
	Automobile, bus, van accessways including roads, parking lots		780 1,496	234 449	30% 30%	1,014 1,944	6.7%	0.5%	76 146	1,090 2,090
	Temporary Facilities and other indirect costs during construction	0.00	4,532	499	30%	-	12.8%	1.0%		
50 SYST		0.00				5,022	33.1%	21.4%	377	5,398
	Train control and signals		0	0	00/	0				101
	Traffic signals and crossing protection		150	0	0%	150	1.0%	0.1%	11	161
	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				
	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				
Construc	tion 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
	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 VEHIC	CLES (NOT USED)	0	0	0		0		0.0%		
70.04	Bus					0				
70.05	Other					0				
	Non-revenue vehicles		İ			0				
	Spare parts					0				
	ESSIONAL SERVICES (applies to Cats. 10-50)	0.00	5,618	0		5,618	37.0%	24.0%	312	5,930
		0.00	911	-		911	6.0%	0.3%	41	952
							0.070	-	55	1,269
	Project Development Final Design						8 00%			1,209
80.02	Final Design		1,215			1,215	8.0%	0.4%		1 507
80.02 80.03	Final Design Project Management for Design and Construction		1,215 1,518			1,215 1,518	10.0%	0.5%	68	1,587
80.02 80.03 80.04	Final Design Project Management for Design and Construction Construction Administration & Management		1,215 1,518 759			1,215 1,518 759	10.0% 5.0%	0.5% 0.4%	68 57	816
80.02 80.03 80.04 80.05	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance		1,215 1,518 759 152			1,215 1,518 759 152	10.0% 5.0% 1.0%	0.5% 0.4% 0.1%	68 57 11	816 163
80.02 80.03 80.04 80.05 80.06	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc.		1,215 1,518 759 152 607			1,215 1,518 759 152 607	10.0% 5.0% 1.0% 4.0%	0.5% 0.4% 0.1% 0.3%	68 57 11 46	816 163 653
80.02 80.03 80.04 80.05 80.06 80.07	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection		1,215 1,518 759 152			1,215 1,518 759 152	10.0% 5.0% 1.0%	0.5% 0.4% 0.1%	68 57 11	816 163
80.02 80.03 80.04 80.05 80.06 80.07 80.08	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up		1,215 1,518 759 152 607 304 152			1,215 1,518 759 152 607 304 152	10.0% 5.0% 1.0% 4.0%	0.5% 0.4% 0.1% 0.3%	68 57 11 46	816 163 653
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80)	0.00	1,215 1,518 759 152 607 304	2,955		1,215 1,518 759 152 607 304 152 21,321	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9%	68 57 11 46 23	816 163 653 326 163 22,824
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up	0.00	1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1%	68 57 11 46 23	816 163 653 326 163
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up [10 - 80] LOCATED CONTINGENCY	0.00	1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9%	68 57 11 46 23	816 163 653 326 163 22,824
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up [10 - 80] LOCATED CONTINGENCY	0.00	1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9%	68 57 11 46 23	816 163 653 326 163 22,824 2,282
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FINA	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES	0.00	1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132 23,453	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	68 57 11 46 23	816 163 653 326 163 22,824 2,282 25,106
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FINA Total Pro	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90)		1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9%	68 57 11 46 23	816 163 653 326 163 22,824 2,282
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FINA Total Pro Allocated Unallocate	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES ject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency d Contingency as % of Base Yr Dollars w/o Contingency		1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132 23,453	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	68 57 11 46 23	816 163 653 326 163 22,824 2,282 25,106
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FINA Total Pro Allocated Unallocated	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) MNCE CHARGES Jiget Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency		1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132 23,453 16,09% 11,61% 27,70%	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	68 57 11 46 23	816 163 653 326 163 22,824 2,282 25,106
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FINA Total Pro Allocated d Unallocated Total Cont	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) ANCE CHARGES ject Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency d Contingency as % of Base Yr Dollars w/o Contingency		1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132 23,453 16,09% 11,61%	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	68 57 11 46 23	816 163 653 326 163 22,824 2,282 25,106
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 100 FINA Total Pro Allocated d Unallocated Total Cont Unallocate	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) NNCE CHARGES Dect Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency dt Contingency as % of Base Yr Dollars w/o Contingency ingency as % of Base Yr Dollars w/o Contingency		1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132 23,453 16,09% 11,61% 27,70%	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	68 57 11 46 23 11	816 163 653 326 163 22,824 2,282 25,106
80.02 80.03 80.04 80.05 80.06 80.07 80.08 Subtotal 90 UNAL Subtotal 100 FINA Total Pro Allocated Cont Unallocatet YOE Cons	Final Design Project Management for Design and Construction Construction Administration & Management Professional Liability and other Non-Construction Insurance Legal; Permits; Review Fees by other agencies, cities, etc. Surveys, Testing, Investigation, Inspection Start up (10 - 80) LOCATED CONTINGENCY (10 - 90) NNCE CHARGES Dect Cost (10 - 100) Contingency as % of Base Yr Dollars w/o Contingency dd Contingency as % of Base Yr Dollars w/o Contingency ingency as % of Base Yr Dollars w/o Contingency dd Contingency as % of Subtotal (10 - 80)		1,215 1,518 759 152 607 304 152	2,955		1,215 1,518 759 152 607 304 152 21,321 2,132 23,453 16,09% 11,61% 27,70%	10.0% 5.0% 1.0% 4.0% 2.0%	0.5% 0.4% 0.1% 0.3% 0.2% 0.1% 90.9% 9% 100%	68 57 11 46 23 11	816 163 653 326 163 22,824 2,282 25,106

H1 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

				Total Cost w/o	Allocated	Allocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingency	Contingency	Description
Proposed Project - Route Option H1. Unimproved.	LF		11,592					
			(2.2) mls					
20.01 - At-grade station, stop, shelter, mall, terminal,								Station 29 200'x10'+100'x10'+100'x10'
platform								=4000sf. SIDE. 3 platforms
								Station 30 200'x10' x 2 =4000sf. SIDE. 2
								platforms.
NUMBER OF STATIONS. Station 29,30,31,32 Side								Station 31 200x10+80x10+100x10=3800sf.
								Side. 3 platforms. Station 32. 100x10+100x10+100x10=3000sf.
								Side. 3 platforms (eastern terminus)
The option is for either stations 29 or 30 to be in								Total 10800sf. Of platforms
segment H1. Total 3 stations are allowed this segment.								Total 10000si. Of platforms
segment H1. Total 5 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	0							
& excavating (e) sidewalks, removing trees, landscape,	O							
(n) sidewalks, curbs, gutters, paving, SD drainage. Also								
installing (n) infrastructure for electric bus charging								
moderate for elective bus charging								
Assume the levelor range will be consisted to other 23.								
Assume the layover zone will be separate to station 32								
Locations of station 32 for H1 & H2 differ.								44000 (5 (5 (1))) (4200 (5 (5 (1)))
								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 980If of adj sidewalk.
Tactile surfacing	SF	\$	50.00	2,600	\$	130,000	30% \$	39,000	\$	169,000	30011 01 day side wark.
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	\$		Code, wayfaring, system, safety. allowance
Dila wash	г.	۲.	1 200 00	12	,	14 400	200/ 6	4 220	<u>,</u>		Per station
Bike rack	EA	\$	1,200.00	12 3	\$ \$	14,400	30% \$ 30% \$	4,320			2 per platform
Electric power supply & platform lighting. Side	LS	\$ ¢	100,000.00		•	300,000	•	90,000		390,000	
Relocate (e) Pasadena station. Allowance Total Costs - 20.01	EA	\$	25,000	1	\$ \$	25,000 3,219,441	30% \$	7,500 965,832		32,500 4,185,274	
20.02 - Aerial station, stop, shelter, mall, terminal,											
platform Not used					,		30% \$				
Not used					\$ \$	-	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	Ś	_	30% \$	_	Ś	-	
	\$	-	30% \$	-	\$	-	
Total Costs - 20.07	Ś	_	\$		Ś	-	

H1 - SCC 40 SITEWORK & SPECIAL CONDITIONS

					To	otal Cost w/o	Allocated		Allocated	Tot	al Cost w/	
tem	Unit	Un	nit Cost	Quantity	C	Contingency	Contingency	(Contingency	Co	ntingency	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 builts.	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%	-			78,000	Allowance for 1 poles only @ea station
Total Costs - 40.02					\$	766,000		\$	229,800	\$	995,800	

0.03 - Haz. mat'l, contam'd soil removal/mitigation,										
round water treatments										
Allowance 10% of 40.01	LS	\$ 202,520.00	10%	\$	20,252	30% \$	6,076	\$	26,328	
Fotal Costs - 40.03				\$	20,252	\$	6,076	\$	26,328	
0.04 - Environmental mitigation, e.g. wetlands,										
istoric/archeologic, parks										
Not used				\$ \$	-	30% \$	-	\$	-	
					-	30% \$		\$ \$	-	
Fotal Costs - 40.04				\$	-	\$, 	-	
0.05 - Site structures including retaining walls, sound										
ralls										
Not used				\$ \$	-	30% \$ 30% \$	-	\$	-	
otal Costs - 40.05				<u>ې </u>	<u> </u>	50% \$ \$		Ś		
0.06 - Pedestrian / bike access and accommodation, andscaping										
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	LS	\$ 30,000.00	3	\$	90,000	30% \$	27,000		117,000	Allowance \$750 ea station
3 stations for replacing trees, light poles, parking										
meters, hardscape, curb extensions, rose bowl blue										
line etc										
Sidewalk amenities at (n) stations										
	EA	\$ 6,000.00		\$	240,000	30% \$	72,000		312,000	
Replace street trees						200/ 6	120 000	Ċ	520 000	At stations
Replace street trees Work at other misc adjacent elements	EA	\$ 100,000.00	4		400,000	30% \$	120,000			At stations
Replace street trees		100,000.00 1,500.00	4 100		400,000 150,000	30% \$	45,000		195,000	At Stations

40.07 - Automobile, bus, van accessways including roads, parking lots											
		750 000 00			750.000	2004		225 222		075 000	All A7501
H1 layover adjacent station 32. See note above.	LS	\$ 750,000.00	1	•	750,000	30% \$	•	225,000	•	•	Allowance \$750k
Survey crew. 3 stations	EA	\$ 5,000.00	6	Ş	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)											Alignment or EA
Mobilization + Demobilization. Incl in other sectors	EA		1	\$	-	30% \$	\$	-	\$	-	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

				Total Cost w/o	Allocated	Allocated	Total Cost v	n/
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingen	cy Contingend	cy Description
50.01 - Train control and signals Not used								
				\$ - \$ -	30% 30%	•	¢	-
Total Costs - 50.01				\$ -	30%	\$ -	<u>, , , , , , , , , , , , , , , , , , , </u>	-

Minimal Improvements												
Moderate Improvements	50.02 - Traffic signals and crossing protection											
Significant Improvements	Minimal Improvements	EA	\$	-	\$	-	30% \$		-		-	
Major inprovements	Moderate Improvements	EA	150,000	-	\$	-	30% \$		-		-	
System Integration	Significant Improvements	EA	250,000	-	\$	-	30% \$		-	\$	-	
Total Costs - 50.02 \$ 150,000 \$ - \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,	Major Improvements	EA	\$ •	-	\$	-	30% \$		-	\$	-	
20.03 - Traction power supply: substations Assume Facility to be at ea end of routes from function of the reging station. Only required at H1, H2, A1 & A2 is (e) EA \$ 1,375,000	System Integration	EA	\$ 150,000	1	\$	150,000	0% \$		-	\$	150,000	
Assume Facility to be at ea end of routes Tharging station. Only required at H1, H2. A1 & A2 is (e) EA \$ 1,375,000 2 \$ 2,750,000 0% \$ - \$ 2,750,000 inclusive of alloc. contingency inclusive	Total Costs - 50.02				\$	150,000	\$		-	\$	150,000	
Total Costs - 50.03 S 2,750,000 S - \$ 2,750,000 Two at PCC station; Pricing from Metro inclusive of alloc. contingency Total Costs - 50.03 S 2,750,000 S - \$ 2,750,000 Two at PCC station; Pricing from Metro inclusive of alloc. contingency Total Costs - 50.03 S 2,750,000 S - \$ 2,750,000 Two at PCC station; Pricing from Metro inclusive of alloc. contingency Total Costs - 50.03 S 2,750,000 S - \$ 2,750,000 Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; Pricing from Metro inclusive of alloc. contingency Two at PCC station; PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. contingency Two at PCC station; PCC station inclusive of alloc. Contingency Two at PCC station; PCC station inclusive of alloc. Contingency Two at PCC station inclusive of alloc. Contingency Two at PCC station inclusive of alloc. Contingency Two at PCC station inclusive of alloc. Contingency Tw	50.03 - Traction power supply: substations											Assume Easility to be at an end of routes
10.04 - Traction power distribution: catenary and third 10.05 - Communications 10.05 - Com	Charging station. Only required 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
Station systems/comms (PA, CCTV, Nextbus, cabinet, EB 120,000.00 1 120,000 1	Total Costs - 50.03				\$	2,750,000	\$		-	\$	2,750,000	
Station systems/comms (PA, CCTV, Nextbus, cabinet, 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 Fotal Costs - 50.05 \$ 1,512,000 \$ 453,600 \$ 1,965,600 Code - Fare collection system and equipment ricket Vending Machine EA \$ 120,000.00 1 \$ 120,000 30% \$ 36,000 \$ 156,000 1 per platform - only at PCC station Fotal Costs - 50.06 \$ 120,000 \$ 36,000 \$ 156,000 \$ 156,000 Cotal Costs - 50.06 \$ 120,000 \$ 36,000 \$ 156,000 \$ 156,000	Not used Total Costs - 50.04					-					-	
Etc. Fibre optic ductbank, 2 stations only	60.05 - Communications											
1,512,000	Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,000.00	7	\$	1,050,000	30% \$	3:	15,000	\$	1,365,000	
0.06 - Fare collection system and equipment Ficket 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 O.07 - Central Control Not used \$ - 30% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	Fibre optic ductbank, 2 stations only	LF	\$ 175.00	2,640	\$	462,000	30% \$	13	38,600	\$	600,600	1/4 mile of duct construction per station
Total Costs - 50.06 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 DOT - Central Control Not used \$ - 30% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	Total Costs - 50.05				\$	1,512,000	\$	4!	53,600	\$	1,965,600	
Total Costs - 50.06 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 DOT - Central Control Not used \$ - 30% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	0.06 - Fare collection system and equipment											
0.07 - Central Control Not used \$ - 30% \$ - \$ - \$ - 30% \$ - \$ -	Ticket Vending Machine	EA	\$ 120,000.00	1	\$	120,000	30% \$	3	36,000	\$	156,000	1 per platform - only at PCC station
Not used \$ - 30% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	Total Costs - 50.06				\$	120,000	\$.	36,000	\$	156,000	
Not used \$ - 30% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	50.07 - Central Control											
T +++++ T	Not used					-	-		-		-	
	Total Costs - 50.07				\$ \$	-	30% \$		-	\$ \$	-	

H1 - SCC 60 - ROW, LAND, EXISTING IMPROVEMENTS

Item	Unit	Hr	nit Cost	Quantity	Т	otal Cost w/o	Allocated		Allocated	Т	otal Cost w/	Description
ttem	Oilit			Quantity	(Contingency	Contingency	(Contingency	(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. None	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					\$	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)

		Total Cost w/o	Allocated	Allocated	Total Cost w/	
Unit Unit Cost	Quantity	Contingency	Contingency	Contingency	Contingency	Description
		ć	200/	ć	ć	
		ب				
		\$ -	30%	\$ -	\$ -	
		\$ -		\$ -	\$ -	
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		\$ -	30%	\$ -	\$ -	
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	Unit Unit Cost	Unit Unit Cost Quantity	\$ - \$ - \$ - \$ - \$ - \$ -	\$ - 30% \$ - 30% \$ - 30% \$ - 30% \$ - 30% \$ - 30%	\$ - 30% \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ - \$	\$ - 30% \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$

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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

	1	I = v	I = 1/	I = 1/		T = 1/	T = 1/		V0= 5 !!
	Quantity	Base Year Dollars w/o	Base Year Dollars	Escalation Per Annum @ 3% =	YOE Dollars Total				
		Contingency	Allocated	Allocated	TOTAL	Percentage	Percentage	7.50%	(X000)
		(X000)	Contingency	Contingency	(X000)	of Construction	of Total	(X000)	(71000)
		ļ , , , ,	(X000)	%	, ,	Cost	Project Cost		
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			\vdash	
30.04 Storage or Maintenance of Way Building		0	0		0				
30.05 Yard and Yard Track	0.00	0	0		0				
40 SITEWORK & SPECIAL CONDITIONS	0.00	4,626	1,388 29	200/	6,014	42.8%	27.5%	451	6,465
40.01 Demolition, Clearing, Earthwork		96 875	263	30%	125 1,138	0.9%	0.1%	9 85	134
40.02 Site Utilities, Utility Relocation		10	3	30%	1,138	8.1%	0.6%	85	1,223
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments 40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		0	0	30%	0	0.1%	0.0%	 	13
40.04 Environmental miligation, e.g. wetlands, historic/archeologic, parks 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	00/	0	L			
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	000/	0	47.00/	4.00/	100	0.000
50.05 Communications		1,905	572	30%	2,477	17.6%	1.3%	186	2,662
50.06 Fare collection system and equipment 50.07 Central Control		120	36 0		156 0			+	
Construction Subtotal (10 - 50)	0.00	11,509	2,553		14,062	100.0%	64.4%	1,024	15,086
	0.00	450	135		585	100.0%	2.7%	59	644
60 ROW, LAND, EXISTING IMPROVEMENTS 60.01 Purchase or lease of real estate	0.00	450	135	30%	585	4.2%	0.4%	59	044
60.02 Relocation of existing households and businesses		0	0	30 /6	0	4.270	0.476	39	
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%	4	2,122
Subtotal (10 - 90)	0.00				21,834		100%		23,343
100 FINANCE CHARGES							44	4	
Total Project Cost (10 - 100)	0.00				21,834		100%		23,343
Allocated Contingency as % of Base Yr Dollars w/o Contingency Unallocated Contingency as % of Base Yr Dollars w/o Contingency					15.66% 11.57%				
Total Contingency as % of Base Yr Dollars w/o Contingency					27.23%				
Unallocated Contingency as % of Subtotal (10 - 80)					10.00%			Low (-15%)	\$19,842
YOE Construction Cost per Mile (X000)								()	, ,,,,,,,,
								111 (. O.E.)	\$20,470
YOE Total Project Cost per Mile Not Including Vehicles (X000)								High (+25%)	\$29,179

H2 - SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

					1	Total Cost w/o	Allocated		Allocated	Total Cost w/	
ltem	Unit	Uni	t Cost	Quantity		Contingency	Contingency	С	Contingency	Contingency	Description
Route Option H2. Unimproved	LF			18713							
Route Option H2. Paved.	LF			675							
				19388							
NUMBER OF STATIONS. 4 side & 1 center station on H2.											6300 sf of platform in 5 stations
Total of Five stations on H2											·
Stations 33 or 34 on Green. Side											(570 If of platform)
Stations 37 or 38 on Union. Side											Station 33 12x100 side Station 38 10x70 side
Stations 35 side, 32 side, 36 center.											station 35 12x100 side Station 36 12x100, side, not shown Station 32 10x200 side
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											
Locations of station 32 for H1 & H2 differ.											
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	546,60	Incl exc, rock base, conc footings/SOG.
Concrete pad for bus parking	SF	\$	56.05	6,170	\$	345,829	30%	\$	103,749	449,57	Assume 12". Incl exc, rock base, conc
Sidewalk modifications @ side station. See 40.05.					\$	-	30%	\$	- 5	-	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	•	2 per platform, plus extra at Hill
Advertising Kiosk	EA	\$	10,000.00	6		60,000	30%		18,000	•	1 per platform, plus extra at Hill
Station Signage & misc.	EA	\$	10,000.00	5		50,000	30%		15,000		 Code, wayfaring, system, safety. allowance Per station
Bike rack	EA	\$	1,200.00	12	ς .	14,400	30%	\$	4,320	19 720	2 per platform, plus extra at Hill
Electric power supply & platform lighting. Side	EA	\$	100,000.00	3		300,000	30%		90,000	•	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% \$	- ¢	_	
1101 0325	\$	_		- ¢		
Tabel Contr. 20.03	 \$		30% \$	- \$ - \$	-	
Total Costs - 20.02	,	-	, 	- \$	<u>-</u>	
20.03 - Underground station, stop, shelter, mall,						
terminal, platform						
NOT USED	\$	_	30% \$	- ¢	_	
NOT OSED	\$	-	30% \$. ¢	-	
Total Costs - 20.03	\$	-	\$	- \$ - \$ - \$	-	
20.04 - Other stations, landings, terminals: Intermodal,						
ferry, trolley, etc.						
NOT USED	¢	_	30% \$	- ¢	_	
NOTOSED	ç		30% ¢	- y		
Tabel Carte 20.04	, , , , , , , , , , , , , , , , , , ,		30% \$	- \$ - \$	<u>-</u>	
Total Costs - 20.04	,	-	, 	- \$	<u>-</u>	
20.05 - Joint development						
NOT USED	\$	-	30% \$	- \$	-	
	\$	-	30% \$	- \$	-	
Total Costs - 20.05	\$	-	\$	- \$ - \$	-	
20.06 - Automobile parking multi-story structure						
NOT USED	\$	_	30% \$	- ¢	_	
NOT OSED	\$			-		
Total Costs - 20.06	, , , , , , , , , , , , , , , , , , ,		30% \$	- \$ - \$ - \$	<u>-</u>	
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

				Total Cost w/o	Allocated	Allocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Contingency	Contingency	Contingency	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%	\$ -	\$ -	
NOT USED				¢ _	30%		¢	
				, - , -	30%		ç -	
Total Costs - 30.02				\$ -	3070	\$ -	\$ -	
Total costs - 30.02				<u> </u>		, -	, -	
30.03 - Heavy Maintenance Facility								
NOT USED				\$ -	30%	\$ -	\$ -	
1				\$ -	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				Ċ	30%	ċ _	\$ -	
1101 0325				\$ -	30%		, ,	
				\$ - \$ -	30%		, - , -	
Total Costs - 30.05				\$ -	3076	\$ -	\$ -	
10101 00313 30103				· ·		-	· -	

H2 - SCC 40 SITEWORK & SPECIAL CONDITIONS

					Total Cost w/o	Allocated	,	Allocated	Total Cost w/	
tem	Unit	Unit	t Cost	Quantity	Contingency	Contingency	Co	ontingency	Contingency	Description
0.01 - 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 builts.	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 & statio access. Inlets, level & SD adjustments. 4 platforms
H2 Other Green & Union- utility modifications.	EA	\$	_	1	\$ _	30%	\$	-	\$ _	F
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					\$ -		\$	-	\$ -	

New 5'w sidewalk New 22'w sidewalk LF	; ; ; ;	35.00	1 6,300	\$ \$	100,000	30% \$ 30% \$ \$	30,000	\$ \$	130,000	5 stations including station 32 which wil
Total Costs - 40.05 20.06 - Pedestrian / bike access and accommodation, andscaping Allowance for misc work & interfacing w/ (e) surfaces at a stations for protection or replacing trees, light poles, parking meters, hardscape, curb extensions, relocations etc Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter Remove/restripe (e) rd surfaces Lidewalks New 5'w sidewalk Line Costs and accommodation, and surfaces at LS 5F \$	35.00		\$	-	30% \$	-	\$	-	9	
Allowance for misc work & interfacing w/ (e) surfaces at stations for protection or replacing trees, light poles, parking meters, hardscape, curb extensions, relocations etc. Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter Remove/restripe (e) rd surfaces Sidewalks New 5'w sidewalk New 22'w sidewalk	5F \$	35.00		\$	-	\$	-	\$	-	9
Allowance for misc work & interfacing w/ (e) surfaces at is stations for protection or replacing trees, light poles, parking meters, hardscape, curb extensions, relocations etc Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter Remove/restripe (e) rd surfaces Sidewalks New 5'w sidewalk New 22'w sidewalk	5F \$	35.00		\$	100,000	30% \$	30,000	\$	130,000	<u> </u>
stations for protection or replacing trees, light poles, parking meters, hardscape, curb extensions, relocations etc Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter Remove/restripe (e) rd surfaces Sidewalks New 5'w sidewalk New 22'w sidewalk LE	5F \$	35.00		\$	100,000	30% \$	30,000	\$	130,000	<u> </u>
stations for protection or replacing trees, light poles, parking meters, hardscape, curb extensions, relocations etc Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter Remove/restripe (e) rd surfaces Sidewalks New 5'w sidewalk New 22'w sidewalk	5F \$	35.00		Ý	100,000	30/0 \$	30,000	Y	130,000	<u> </u>
parking meters, hardscape, curb extensions, relocations etc Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter Remove/restripe (e) rd surfaces LS LS LS LS LS LS LS LS LS L	.F \$		6,300							have considerable interface w/adjacent
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter LF Remove/restripe (e) rd surfaces LS idewalks New 5'w sidewalk LF New 22'w sidewalk LF	.F \$		6,300							surfaces
Reconstruct (e) sidewalk system at stations to accommodate (n) access configurations. (570lf) (n) Curb & Gutter Remove/restripe (e) rd surfaces idewalks New 5'w sidewalk New 22'w sidewalk LF	.F \$		6,300							34.14665
(n) Curb & Gutter Remove/restripe (e) rd surfaces Sidewalks New 5'w sidewalk New 22'w sidewalk LF		50.00		\$	220,500	30% \$	66,150	\$	286,650	
Remove/restripe (e) rd surfaces Sidewalks New 5'w sidewalk New 22'w sidewalk LF		F0 00								
idewalks New 5'w sidewalk New 22'w sidewalk LF	.S \$	50.00	570	\$	28,500	30% \$	8,550	\$	37,050	
New 5'w sidewalk New 22'w sidewalk LF		75,000.00	1	\$	75,000	30% \$	22,500	\$	97,500	
New 22'w sidewalk										
	.F \$	9.80	1,140	\$	11,172	30% \$	3,352	\$	14,524	228 lf x5'w
Pacanstruct (a) & or (n) such ramp	.F \$	9.80	1,140	\$	11,172	30% \$	3,352	\$	14,524	228 lf x5'w
Reconstruct (e) & or (ii) curb rainp	A \$	3,500.00	6	\$	21,000	30% \$	6,300	\$	27,300	
Sidewalk amenities at (n) stations										
Replace street trees EA	:A \$	6,000.00	20	\$	120,000	30% \$	36,000	\$	156,000	Allowance based on Google
Work at other misc adjacent elements EA		•		\$	200,000	30% \$	60,000		,	At stations
Relocate parking meters EA	:A \$	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										
oads, parking lots										(n) AC 36 400x66 & 32 325x66=47850s
Milling (E) asphalte road paving @ 12'w section Arroyo/Green	SF \$	2.75	1,000	\$	2,750	30% \$	825	\$	3,575	125x12=1500sf
Milling (E) asphalte road paving @ stations 36 & 32	SF \$	2.75	47,850	\$	131,588	30% \$	39,476	\$	171.064	36 400lf & 32 325 lf
Haul off asphalte millings TO			597		20,048	30% \$	6,014		26,062	
AC Overlay (2") @ stations 36 &32			579	•	66,836	30% \$	20,051		•	145lbs/CF. (n) asphalt. Allow (n) 2" AC
, , , -					•		•	•	2,703	175103/Ci. (ii) aspilait. Allow (ii) 2 AC
AC Overlay (2") @ 12'w section Arroyo/Green TO Continental crosswalks, 24" w striping SF			18 2,000		2,079 11,000	30% \$ 30% \$	624 3,300		•	2 at station 36 100x10x2#

Note: All Contractors overhead /profits Incl in prices.										
Note: All Contractors are those districts and in unions										
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.
Traffic Control, Staging, pedestrian control, safety.	LF	\$	44.78	725	\$ 32,466	30% \$	9,740	\$	42,205	
SWPPP (Small area only. Does not apply to the whole alignment. Allow a lump of \$10k	LS	\$	10,000.00		\$ 50,000	30% \$	15,000		65,000	
			•				·			
Street sweeping, SD Vac clearing during construction.	LS	\$	10,000.00	5	\$ 50,000	30% \$	15,000	¢	65,000	
during construction (5 stations & 2 areas of paving) Mobilization + Demobilization	LS	\$	75,000.00	1	\$ 75,000	30% \$	22,500	\$	97,500	
40.08 - Temporary Facilities and other indirect costs										
Total Costs - 40.07					\$ 1,380,028	\$	414,008	\$	1,794,037	
H2 layover adjacent station 32. See note above.	LS	\$	750,000.00	1	\$ 750,000	30% 30% \$	225,000	\$	975,000	
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
Curb & gutter	LF	\$	40.00	1,450	\$ 58,000	30% \$	17,400	\$	75,400	
Misc signage above pavement level	EA	\$	30,000.00	5	\$ 150,000	30% \$	45,000	\$	195,000	Pole signs etc @ station 36 32
Intermittent 4" lane line w/ markers	LF	\$	3.75	650	\$ 2,438	30% \$	731	\$	3,169	Thermoplastic
Bus lane red paint	SF	\$	3.30	6,400	\$ 21,120	30% \$	6,336	\$	27,456	Thermoplastic red, 12' w x725
Road letters "bus lane"	EA	\$	200.00	4	\$ 800	30% \$	240	\$		Thermoplastic
Directional arrows	EA	\$	75.00	13	975	30% \$	293		1,268	Thermoplastic
Chevron pavement markings	SF	\$	6.00	1,393	8,358	30% \$	2,507		10,865	Ar stat 36 & some in hill
Loading area, cross hatch striping	SF	Ś	6.00	2,000	12,000	30% \$	3,600		•	200x10
Chevron pavement markings	SF	Ś	6.00	14,400	86,400	30% \$	25,920		·	Middle of road. Median length measured.
8' wide street parking - solid striped	LF	\$	1.40	1,150	\$ 1,610	30% \$	483	\$	2,093	Allow 1150 If of thermoplastic striping

H2 - SCC 50 SYSTEMS

					Tot	tal Cost w/o	Allocated		Allocated		Total Cost w/	
Item	Unit	Unit Cost	Quanti	ty	Co	ontingency	Contingency	С	ontingency		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	\$ 2	0,000	0	Ś	_	30%	Ś	_	\$	_	
Moderate Improvements	EA		0,000	0		_	30%		_	\$	_	
Significant Improvements	EA		0,000	0		_	30%		_	\$	_	
Major Improvements	EA		0,000	0		_	30%		_	\$	_	
System Integration	EA		0,000	1		250,000	0%		-	\$	250,000	
Total Costs - 50.02					\$	250,000		\$	-	\$	250,000	
50.03 - Traction power supply: substations Charging station. Only regd at H1, H2. A1, A2 is (e)	EA	¢ 127	5,000	2	ċ	2,750,000	0%	ć	_	\$	2,750,000	Two at PCC station; Pricing from Metro
Charging Station. Only requiating, nz. A1, A2 is (e)	EA	\$ 1,37	5,000	۷ .	Þ	2,750,000	0%	Þ	-	Þ	2,750,000	inclusive of alloc. contingency
Total Costs - 50.03					\$	2,750,000		\$	-	\$	2,750,000	
50.04 - Traction power distribution: catenary and third												
Not used					\$	_	30%	Ś	-	\$	_	
					; \$	_	30%		-	\$	_	
Total Costs - 50.04					\$	-		\$	-	\$	-	
50.05 - Communications												
Station systems/comms (PA, CCTV, Nextbus, cabinet, etc)	LS	\$ 150,0	00.00	5	\$	750,000	30%	\$	225,000	\$	975,000	Allowance. 1 set up/cabinet per platform
Fibre optic ductbank	LF	\$ 1	75.00 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	Ś	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	Uni	t Cost	Quantity	Total Cost w/o	Allocated		Allocated	Total Cost w/	Description
item	Oilit	···		Quantity	Contingency	Contingency	(Contingency	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)

				Tota	al Cost w/o	Allocated		Allocated	Total Cost w/	
Item	Unit	Unit Cost	Quantity	Co	ntingency	Contingency	Co	ontingency	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	\$ -	\$	- \$	-	