



SR-710 Study

Alternatives Analysis Report

---

## Appendix C

Performance of Preliminary Set of Alternatives



| Criteria and Measures for Initial Evaluation  |   |  |                |  | Measurement Scales   |  |  | Alternatives |            |          |          |          |          |          |          |          |           |           |           |           |           |                          |                          |                          |   |   |
|---|---|--|----------------|--|--|--|--|--------------|------------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|--------------------------|--------------------------|--------------------------|---|---|
| Primary Element of Need (see Elements of Need Technical Memorandum, dated February 2, 2012)   | Objective Statements                        | Evaluation Criterion                                 | Measure Number | Performance Measure  | Worst/Low Likely Outcome   | Moderate/Medium Likely Outcome   | Best/High Likely Outcome   | 1) No Build  | 2) TSM/TDM | 3) BRT-1 | 4) BRT-2 | 5) BRT-3 | 6) BRT-4 | 7) BRT-5 | 8) BRT-6 | 9) BRT-7 | 10) LRT-1 | 11) LRT-2 | 12) LRT-3 | 13) LRT-4 | 14) LRT-5 | 15) Commuter Rail-1 (CR) | 16) Commuter Rail-2 (CR) | 17) Commuter Rail-3 (CR) |   |   |
|   |   |  |                |  | ●  | ◐  | ◑  | ○            | ◐          | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗        | ◘         | ◙         | ◚         | ◛         | ◜         | ◝                        | ◞                        | ◟                        | ◠ | ◡ |
| <b>1) Regional Transportation System</b> (regional travel speeds low; regional travel delays high; regional travel times are unpredictable)   | 1) Minimize travel time                     | Trip travel time                                     | 1.1.1          | Assessment of changes in multimodal travel times for a range local and regional trips.                     | Will likely increase/decrease travel times about equally, or have negative effect on travel time               | Will likely decrease travel times on limited number of trips.  | Will likely decrease travel time on many trips.  | ◐            | ◑          | ◒        | ◓        | ◔        | ◕        | ◖        | ◗        | ◘        | ◙         | ◚         | ◛         | ◜         | ◝         | ◞                        | ◟                        | ◠                        | ◡ |   |
|   |   | Total travel time                                    | 1.1.2          | Assessment of total travel time regionwide.  | Likely to increase or have a negligible effect on total VHT  | Potential for a slight decrease in total VHT   | Potential for more than a slight decrease in total VHT   | ○            | ○          | ○        | ○        | ○        | ○        | ○        | ○        | ○        | ○         | ○         | ◐         | ○         | ◑         | ○                        | ○                        | ○                        | ○ | ○ |
|   |   | Travel time reliability                              | 1.1.3          | Percent of facilities in study area with dedicated or managed operations.                                  | Minimal new dedicated facilities   | Moderate level of dedicated or managed facilities  | Greater than 10 miles of dedicated or managed facilities   | ○            | ○          | ◐        | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗         | ◘         | ◙         | ◚         | ◛         | ◜                        | ◝                        | ◞                        | ◟ | ◠ |
|   | 2) Improve connectivity and mobility        | Access to regional freeway system                    | 1.2.1          | Number of new connections to existing highway facilities   | No change or potentially reduce freeway access and connections.  | Moderate benefits to freeway access and connections.   | Major benefits and/or more than three connections to existing freeways                                     | ○            | ◐          | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗        | ◘         | ◙         | ◚         | ◛         | ◜         | ◝                        | ◞                        | ◟                        | ◠ | ◡ |
|   |   | Employment, health care, and education accessibility | 1.2.2          | Assessment of changes in travel time to employment bases, using both transit and highway modes.            | Will likely increase/decrease travel times about equally, or have minimal effect on travel time for work trips | Will likely decrease travel time significantly on a limited number of work trips.                                      | Will likely decrease travel time significantly on many work trips.   | ○            | ◐          | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗        | ◘         | ◙         | ◚         | ◛         | ◜         | ◝                        | ◞                        | ◟                        | ◠ | ◡ |
|   |   | Access to regional transit system                    | 1.2.3          | Number of new connections to existing bus and rail facilities  | Changes to bus and rail connections unlikely   | Add some new connections to the transit network  | Add significant new connections to the transit network   | ○            | ◐          | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗        | ◘         | ◙         | ◚         | ◛         | ◜         | ◝                        | ◞                        | ◟                        | ◠ | ◡ |
|   |   | North-south throughput                               | 1.2.4          | Total north/south travel served  | Not likely to result in a noticeable increase in north-south capacity.   | Likely to result in a small increase in north-south capacity   | Likely to result in a major increase in north-south capacity   | ○            | ○          | ◐        | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗         | ◘         | ◙         | ◚         | ◛         | ◜                        | ◝                        | ◞                        | ◟ | ◠ |
| <b>2) Freeway system in study area</b> (over-capacity north/south travel demand affects mobility; high delays and unpredictable travel times on study are freeways; freeway system users take longer trips; high accident rates on freeways due to congestion)  | 3) Reduce congestion on freeway system      | Level of congestion on study area freeways           | 1.3.1          | Ability to attract trips from congested freeway segments in the core network in study area.                | Likely to have a negligible change on freeway operations   | Likely to have some improvement in capacity but little change in trip making   | Likely to provide sufficient capacity to shift trips away from congested freeways, and improve operations. | ○            | ○          | ◐        | ○        | ○        | ◐        | ◑        | ◒        | ◓        | ◔         | ◕         | ◖         | ◗         | ◘         | ◙                        | ◚                        | ◛                        | ◜ | ◝ |
| <b>3) Local Street system</b> (affected by excess freeway traffic; operates at low speeds; out-of-place freeway trips cause high levels of congestion)  | 4) Reduce congestion on local street system | Local arterials traffic operations                   | 1.4.1          | Assessment of the shift in trips from congested arterials.   | Negligible change in arterial travel   | Minor change in arterial traffic volume and operations due to additional capacity on the surface street and/or freeway | Major change in arterial traffic volumes that will noticeably improve performance.                         | ○            | ○          | ◐        | ○        | ○        | ○        | ○        | ◐        | ○        | ○         | ○         | ◐         | ◑         | ◒         | ○                        | ○                        | ○                        | ○ |   |
| <b>4) Transit system in study area</b> (operational deficiencies of the highway system affects transit; low travel speeds for buses and increased delay for peak hour trips; north/south transit network is constrained by slow speeds on the arterial network) | 5) Increase transit ridership               | New transit ridership                                | 1.5.1          | Increase in transit ridership  | Small increase in ridership  | Medium increase in transit ridership   | Large increase in transit ridership with the addition of new routes.                                       | ○            | ◐          | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗        | ◘         | ◙         | ◚         | ◛         | ◜         | ◝                        | ◞                        | ◟                        | ◠ |   |
|   |   | Transit accessibility                                | 1.5.2          | Percentage of study area population/employment within 1/4 mile of transit stop with high frequency service | Limited improvement in percentage population or employment within 1/4 mile of major transit lines              | Moderate improvement in percentage population or employment within 1/4 mile of major transit lines                     | Significant improvement in percentage population or employment within 1/4 mile of major transit lines      | ○            | ◐          | ◑        | ◒        | ◓        | ◔        | ◕        | ◖        | ◗        | ◘         | ◙         | ◚         | ◛         | ◜         | ◝                        | ◞                        | ◟                        | ◠ |   |

| Criteria and Measures for Initial Evaluation  |   |  |                |   | Measurement Scales  |  |   | Alternatives |            |          |          |          |          |          |          |          |           |           |           |           |           |                          |                          |                          |   |
|---|---|--|----------------|---|---|--|---|--------------|------------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|--------------------------|--------------------------|--------------------------|---|
| Additional Values and Concerns  | Objective Statements  | Evaluation Criterion   | Measure Number | Performance Measure   | Worst/Low Likely Outcome  | Moderate/Medium Likely Outcome   | Best/High Likely Outcome  | 1) No Build  | 2) TSM/TDM | 3) BRT-1 | 4) BRT-2 | 5) BRT-3 | 6) BRT-4 | 7) BRT-5 | 8) BRT-6 | 9) BRT-7 | 10) LRT-1 | 11) LRT-2 | 12) LRT-3 | 13) LRT-4 | 14) LRT-5 | 15) Commuter Rail-1 (CR) | 16) Commuter Rail-2 (CR) | 17) Commuter Rail-3 (CR) |   |
|   |   |  |                |   | ●   | ◐  | ◑   |              |            |          |          |          |          |          |          |          |           |           |           |           |           |                          |                          |                          |   |
| <b>Environmental &amp; Communities</b> (Improve environmental conditions related to transportation sources within local communities within the study area)  | 6) Minimize environmental and community impacts related to transportation | Right-of-way footprint for projects  | 1.6.1          | Acres of right-of-way (all land uses)   | Large area of right-of-way acquisition required   | Medium area right-of-way acquisition required  | Low area of right-of-way acquisition required   | ◑            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        |   |
|   |   | Potential for effects to recreational resources                                  | 1.6.2          | Recreational sites within proximate distance  | Major effects to recreational sites (>2 sites)  | Moderate effects to recreational sites (1-2 sites)   | Minimal effects to recreational sites (0 sites)   | ◑            | ◐          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        |   |
|   |   | Potential for effects to known cultural/historic resources                       | 1.6.3          | Concentration of known cultural sites/historical districts or buildings within proximate distance | Major effects to cultural/historic resources (>100 resources)                                 | Moderate effects to cultural/historic resources (51-100 resources)   | Minor effects to cultural/historic resources (1-50 resources)                                 | ◑            | ◐          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        | ◑ |
|   |   | Potential for air quality effects  | 1.6.4          | Length through sensitive receptor areas   | Major effect to sensitive receptors within the vicinity of the project alignment              | Moderate effect to sensitive receptors within the vicinity of the project alignment                        | Minimal effect to sensitive receptors within the vicinity of the project alignment            | ◑            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        | ◑ |
|   |   | Potential for visual effects on communities                                      | 1.6.5          | Visual intrusion into communities   | Visibility of alternative to adjacent land use - (elevated)                                   | Visibility of alternative to adjacent land use - (at-grade)  | Visibility of alternative to adjacent land use - (depressed)                                  | ◑            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        | ◑ |
|   |   | Potential for effects on Environmental Justice populations                       | 1.6.6          | Environmental Justice populations within proximate distance                                       | Traverses environmental justice populations (>15 census tracts meeting 2 or more EJ criteria) | Traverses environmental justice populations (6-15 census tracts meeting 2 or more EJ criteria)             | Traverses environmental justice populations (0-5 census tracts meeting 2 or more EJ criteria) | ◑            | ◐          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        | ◑ |
| <b>Consistency with Plans</b> (Implement the goals and objectives of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and Long Range Transportation Plan (LRTP) relating to this study area) | 7) Assure consistency with regional plans and strategies                  | Consistency with draft SCAG RTP/SCS regarding corridor                           | 1.7.1          | Implements one or more of the RTP/SCS goals/objectives  | Meets 0-1 goals/objectives  | Meets 2-3 goals/objectives   | Meets 4 or more goals/objectives  | ◐            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        |   |
|   |   | Consistency with Measure R intent for corridor                                   | 1.7.2          | Implements one or more of the goals/objectives  | Meets 0-1 goals/objectives  | Meets 2-3 goals/objectives   | Meets 4 or more goals/objectives  | ◐            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        |   |
|   |   | Metro LRTP intent for corridor   | 1.7.3          | Implements one or more of the goals/objectives  | Meets 0 goals/objectives  | Meets 1 goal/objective   | Meets 2 or more goals/objectives  | ◐            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        | ◑ |
| <b>Provide Financially Feasible Transportation Solutions</b>  | 8) Maximize cost-efficiency of public investments                         | Cost-effectiveness (Construction costs used as proxy for the initial evaluation) | 1.8.1          | Relative construction costs (Construction costs used as proxy for the initial evaluation)         | Greater than approximately \$4 billion  | Approximately \$2-to-4 billion   | Less than approximately \$2 billion   | ◑            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        |   |
|   |   | Financial feasibility  | 1.8.2          | Potential for funding   | No significant local/regional funding would be available                                      | A moderate portion of cost can be funded with local/regional funding                                       | Potentially all/most of investment can be funded using local/regional funding                 | ◑            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        |   |
|   |   | Technical feasibility  | 1.8.3          | Technology demonstrated to be feasible  | Technology does not yet exist.  | Similar technologies have been successfully completed showing reasonability that technology can be applied | Examples of same type projects have been successfully completed                               | ◑            | ◑          | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑        | ◑         | ◑         | ◑         | ◑         | ◑         | ◑                        | ◑                        | ◑                        |   |

| Criteria and Measures for Initial Evaluation  |   |  |                |  | Measurement Scales   |  |  | Alternatives      |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|---|---|--|----------------|--|--|--|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|--|--|--|--|--|
| Primary Element of Need (see Elements of Need Technical Memorandum, dated February 2, 2012)   | Objective Statements                        | Evaluation Criterion                                 | Measure Number | Performance Measure  | Worst/Low Likely Outcome   | Moderate/Medium Likely Outcome   | Best/High Likely Outcome   | 18) Freeway-1 (F) | 19) Freeway-2 (F) | 20) Freeway-3 (F) | 21) Freeway-4 (F) | 22) Freeway-5 (F) | 23) Freeway-6 (F) | 24) Freeway-7 (F) | 25) Freeway-8 (F) | 26) Freeway-9 (F) | 27) Freeway-10 (F) | 28) Freeway-11 (F) | 29) Highway/Arterial-1 (H) | 30) Highway/Arterial-2 (H) | 31) Highway/Arterial-3 (H) | 32) Highway/Arterial-4 (H) | 33) Highway/Arterial-5 (H) | 34) Highway/Arterial-6 (H) | 35) Highway/Arterial-7 (H) | 36) Highway/Arterial-8 (H) | 37) Highway/Arterial-9 (H) | 38) Highway/Arterial-10 (H) | 39) Highway/Arterial-11 (H) | 40) Highway/Arterial-12 (H) | 41) Highway/Arterial-13 (H) | 42) Advanced Technology |  |  |  |  |  |
|   |   |  |                |  |  |  |  |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
| <b>1) Regional Transportation System</b> (regional travel speeds low; regional travel delays high; regional travel times are unpredictable)   | 1) Minimize travel time                     | Trip travel time                                     | 1.1.1          | Assessment of changes in multimodal travel times for a range local and regional trips.                     | Will likely increase/decrease travel times about equally, or have negative effect on travel time               | Will likely decrease travel times on limited number of trips.  | Will likely decrease travel time on many trips.  |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|   |   | Total travel time                                    | 1.1.2          | Assessment of total travel time regionwide.  | Likely to increase or have a negligible effect on total VHT  | Potential for a slight decrease in total VHT   | Potential for more than a slight decrease in total VHT   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|   |   | Travel time reliability                              | 1.1.3          | Percent of facilities in study area with dedicated or managed operations.                                  | Minimal new dedicated facilities   | Moderate level of dedicated or managed facilities  | Greater than 10 miles of dedicated or managed facilities   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|   | 2) Improve connectivity and mobility        | Access to regional freeway system                    | 1.2.1          | Number of new connections to existing highway facilities   | No change or potentially reduce freeway access and connections.  | Moderate benefits to freeway access and connections.   | Major benefits and/or more than three connections to existing freeways                                     |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|   |   | Employment, health care, and education accessibility | 1.2.2          | Assessment of changes in travel time to employment bases, using both transit and highway modes.            | Will likely increase/decrease travel times about equally, or have minimal effect on travel time for work trips | Will likely decrease travel time significantly on a limited number of work trips.                                      | Will likely decrease travel time significantly on many work trips.   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|   |   | Access to regional transit system                    | 1.2.3          | Number of new connections to existing bus and rail facilities  | Changes to bus and rail connections unlikely   | Add some new connections to the transit network  | Add significant new connections to the transit network   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|   |   | North-south throughput                               | 1.2.4          | Total north/south travel served  | Not likely to result in a noticeable increase in north-south capacity.   | Likely to result in a small increase in north-south capacity   | Likely to result in a major increase in north-south capacity   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
| <b>2) Freeway system in study area</b> (over-capacity north/south travel demand affects mobility; high delays and unpredictable travel times on study are freeways; freeway system users take longer trips; high accident rates on freeways due to congestion)  | 3) Reduce congestion on freeway system      | Level of congestion on study area freeways           | 1.3.1          | Ability to attract trips from congested freeway segments in the core network in study area.                | Likely to have a negligible change on freeway operations   | Likely to have some improvement in capacity but little change in trip making   | Likely to provide sufficient capacity to shift trips away from congested freeways, and improve operations. |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
| <b>3) Local Street system</b> (affected by excess freeway traffic; operates at low speeds; out-of-place freeway trips cause high levels of congestion)  | 4) Reduce congestion on local street system | Local arterials traffic operations                   | 1.4.1          | Assessment of the shift in trips from congested arterials.   | Negligible change in arterial travel   | Minor change in arterial traffic volume and operations due to additional capacity on the surface street and/or freeway | Major change in arterial traffic volumes that will noticeably improve performance.                         |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
| <b>4) Transit system in study area</b> (operational deficiencies of the highway system affects transit; low travel speeds for buses and increased delay for peak hour trips; north/south transit network is constrained by slow speeds on the arterial network) | 5) Increase transit ridership               | New transit ridership                                | 1.5.1          | Increase in transit ridership  | Small increase in ridership  | Medium increase in transit ridership   | Large increase in transit ridership with the addition of new routes.                                       |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |
|   |   | Transit accessibility                                | 1.5.2          | Percentage of study area population/employment within 1/4 mile of transit stop with high frequency service | Limited improvement in percentage population or employment within 1/4 mile of major transit lines              | Moderate improvement in percentage population or employment within 1/4 mile of major transit lines                     | Significant improvement in percentage population or employment within 1/4 mile of major transit lines      |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |  |  |  |

| Criteria and Measures for Initial Evaluation  |   |  |                |   | Measurement Scales  |  |   | Alternatives      |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|---|---|--|----------------|---|---|--|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|--|--|
| Additional Values and Concerns  | Objective Statements  | Evaluation Criterion   | Measure Number | Performance Measure   | Worst/Low Likely Outcome  | Moderate/Medium Likely Outcome   | Best/High Likely Outcome  | 18) Freeway-1 (F) | 19) Freeway-2 (F) | 20) Freeway-3 (F) | 21) Freeway-4 (F) | 22) Freeway-5 (F) | 23) Freeway-6 (F) | 24) Freeway-7 (F) | 25) Freeway-8 (F) | 26) Freeway-9 (F) | 27) Freeway-10 (F) | 28) Freeway-11 (F) | 29) Highway/Arterial-1 (H) | 30) Highway/Arterial-2 (H) | 31) Highway/Arterial-3 (H) | 32) Highway/Arterial-4 (H) | 33) Highway/Arterial-5 (H) | 34) Highway/Arterial-6 (H) | 35) Highway/Arterial-7 (H) | 36) Highway/Arterial-8 (H) | 37) Highway/Arterial-9 (H) | 38) Highway/Arterial-10 (H) | 39) Highway/Arterial-11 (H) | 40) Highway/Arterial-12 (H) | 41) Highway/Arterial-13 (H) | 42) Advanced Technology |  |  |
|   |   |  |                |   |   |  |   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
| <b>Environmental &amp; Communities</b> (Improve environmental conditions related to transportation sources within local communities within the study area)  | 6) Minimize environmental and community impacts related to transportation | Right-of-way footprint for projects  | 1.6.1          | Acres of right-of-way (all land uses)   | Large area of right-of-way acquisition required   | Medium area right-of-way acquisition required  | Low area of right-of-way acquisition required   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Potential for effects to recreational resources                                  | 1.6.2          | Recreational sites within proximate distance  | Major effects to recreational sites (>2 sites)  | Moderate effects to recreational sites (1-2 sites)   | Minimal effects to recreational sites (0 sites)   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Potential for effects to known cultural/historic resources                       | 1.6.3          | Concentration of known cultural sites/historical districts or buildings within proximate distance | Major effects to cultural/historic resources (>100 resources)                                 | Moderate effects to cultural/historic resources (51-100 resources)   | Minor effects to cultural/historic resources (1-50 resources)                                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Potential for air quality effects  | 1.6.4          | Length through sensitive receptor areas   | Major effect to sensitive receptors within the vicinity of the project alignment              | Moderate effect to sensitive receptors within the vicinity of the project alignment                        | Minimal effect to sensitive receptors within the vicinity of the project alignment            |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Potential for visual effects on communities                                      | 1.6.5          | Visual intrusion into communities   | Visibility of alternative to adjacent land use - (elevated)                                   | Visibility of alternative to adjacent land use - (at-grade)  | Visibility of alternative to adjacent land use - (depressed)                                  |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Potential for effects on Environmental Justice populations                       | 1.6.6          | Environmental Justice populations within proximate distance                                       | Traverses environmental justice populations (>15 census tracts meeting 2 or more EJ criteria) | Traverses environmental justice populations (6-15 census tracts meeting 2 or more EJ criteria)             | Traverses environmental justice populations (0-5 census tracts meeting 2 or more EJ criteria) |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
| <b>Consistency with Plans</b> (Implement the goals and objectives of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and Long Range Transportation Plan (LRTP) relating to this study area) | 7) Assure consistency with regional plans and strategies                  | Consistency with draft SCAG RTP/SCS regarding corridor                           | 1.7.1          | Implements one or more of the RTP/SCS goals/objectives  | Meets 0-1 goals/objectives  | Meets 2-3 goals/objectives   | Meets 4 or more goals/objectives  |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Consistency with Measure R intent for corridor                                   | 1.7.2          | Implements one or more of the goals/objectives  | Meets 0-1 goals/objectives  | Meets 2-3 goals/objectives   | Meets 4 or more goals/objectives  |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Metro LRTP intent for corridor   | 1.7.3          | Implements one or more of the goals/objectives  | Meets 0 goals/objectives  | Meets 1 goal/objective   | Meets 2 or more goals/objectives  |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
| <b>Provide Financially Feasible Transportation Solutions</b>  | 8) Maximize cost-efficiency of public investments                         | Cost-effectiveness (Construction costs used as proxy for the initial evaluation) | 1.8.1          | Relative construction costs (Construction costs used as proxy for the initial evaluation)         | Greater than approximately \$4 billion  | Approximately \$2-to-4 billion   | Less than approximately \$2 billion   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Financial feasibility  | 1.8.2          | Potential for funding   | No significant local/regional funding would be available                                      | A moderate portion of cost can be funded with local/regional funding                                       | Potentially all/most of investment can be funded using local/regional funding                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |
|   |   | Technical feasibility  | 1.8.3          | Technology demonstrated to be feasible  | Technology does not yet exist.  | Similar technologies have been successfully completed showing reasonability that technology can be applied | Examples of same type projects have been successfully completed                               |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |                            |                            |                            |                            |                            |                            |                            |                            |                            |                             |                             |                             |                             |                         |  |  |