

SAMPLE PROJECTS

Highways- Development Banks

BR—101 Corredor Nordeste Project, Brazil, World Bank

A USD \$350M, World Bank financed project, to convert 336 kilometers of the BR-101 highway from a 2-lane highway to a 4-lane divided highway, improving the linkage of 3 state capital cities.

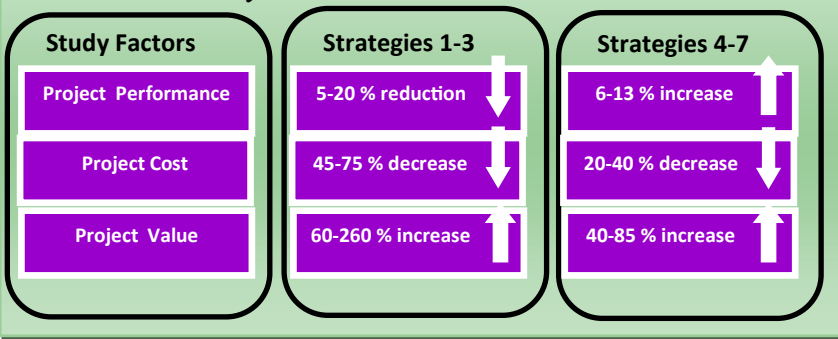
A value engineering study was carried out to ensure the investors of the following:

- Balanced project objectives & capital investments
- Review performance/resource trades-offs



The project review generated 7 strategies, allowing the investors to review performance vs capital investment trade-offs. The best strategy delivered a 260% improvement in project value.

BR-101 VE Study Results



Highways- Innovative Financing Project

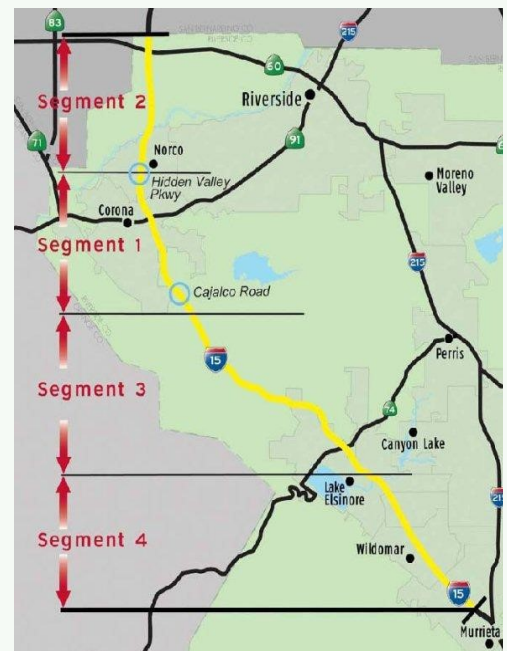
I-15 CIP Tolloed Expressway Lane Conversion Project, Riverside County Transportation Commission (RCTC), California

Original Project— a \$1.2 Billion, 44-mile long project to enhance capacity and operations. A multi-phase, long-duration project consisting of 4 segments, as shown to the right, with the following features:

- Segments 1,2 and 3: Build Express Lanes (TEs) and High Occupancy Vehicle Lanes (HOVLS)
- Segment 4: Only Build High Occupancy Vehicle Lanes (HOVLS) and Auxiliary Lanes

• *Revised Project*— A new, toll-feasible project was developed incorporating 5 alternatives developed during the project review. The new project limits, 15-mile northerly portion of the original project, creates greater toll payment incentive using congestion pricing principles. The new project costs only \$230 million— a fraction of the original value.

ORIGINAL I-15 CIP PROJECT



Construction traffic benefitted with a single construction phase over a shorter time-frame

