

#6 Willits Bypass Funding Strategy/Economic Analysis Study

In mid-summer 2006 Caltrans District 1 initiated the “Willits Bypass Funding Strategy/Economic Analysis Study”. At that time it was becoming apparent that the environmental stage of the project would soon be complete and final design and right-of-way acquisition could soon proceed. But complete construction funding had not been previously secured, and now construction costs had skyrocketed in Mendocino County, California, the nation, and worldwide. There were two obvious questions that needed to be answered: (1) What could be built with the construction funding that is currently available? and (2) If the project has to be constructed in phases, what is the preferred option and about how much will it cost?

To answer these questions, Caltrans assembled a multi-disciplinary team consisting of the following:

- Walter Bird, Right-of-Way
- Dave Kelley, Design
- Marc Friedheim, Structures Design
- John Webb, Environmental
- Cheryl Willis, Planning
- John Bulinski, Project Manager
- Phil Dow, Local Agency

This group was facilitated by:

- Mike Yancheff, Maintenance

Work on this study continued through September and a presentation of the draft and results was made to MCOG at the October meeting. The draft was finalized and presented to the District 1 Director on October 23 and to the Caltrans Director on December 1, 2006.

The conclusion of the study was that nothing could be built with existing construction funding. Construction of the full build project remains the District’s preferred choice because anything other than that will be functionally obsolete upon construction. The report goes on to say that “If it proves infeasible to obtain sufficient additional funding to pursue the full build project, the team recommends that lesser additional funding be sought in order to proceed with construction of the first phase of Option C.”

It should be noted that all costs in this study are expressed in 2006 dollars. Time and resources constraints necessitated that cost estimates for the 7 phased construction alternatives be rounded to the nearest \$10 increment.

The two-page Executive Summary of this study is attached for reference.

Willits Bypass Funding Strategy/Economic Analysis Study

Executive Summary

PROJECT DESCRIPTION:

1-Men-101 PM R43.1/51.3; 01-262000; in Mendocino County, construct four-lane freeway near Willits from 0.8 km south of Haehl OH to 0.8 km north of Reynolds Highway (Willits Bypass)

PROBLEM STATEMENT:

The Willits Bypass project is currently programmed in the State Transportation Improvement Plan (STIP) in the 2009/10 fiscal year at a cost of \$153-million. The current project cost estimate (four-lane freeway) is \$283-million. District 1 is exploring options to allow delivery of the project in phases closer to the programmed funding level, while meeting the purpose and need for this project. The statement of purpose and need identifies “Level of Service C” as this project’s functional objective.

ASSUMPTIONS:

All proposed work under each phase of each option is within the constraints identified in the environmental document. All costs estimates are reported in 2006 dollars.

ANALYSIS:

The team investigated the problems that create the need for this project. It identified traffic congestion, traffic safety and community affects as the critical problems this project will correct. The team categorized the costs of project components and the functions supported by the various items of work.

OPTIONS:

The team speculated on phasing and identified the following list of potential phased construction options. The first phase of all options propose using the two westerly lanes of the four-lane facility. None of the options offer a first phase that is deliverable at the current level of STIP funding. STIP funding (\$153-million) and costs stated below include right-of-way, mitigation and construction in 2006 dollars. Funding and cost figures are not escalated to the year of construction.

- **Option A:** build complete project, pave two westerly lanes, first phase cost = \$270-million, second phase cost = \$20-million, total cost = \$290-million
- **Option B:** build all bridges and viaducts and two westerly lanes, leaving easterly embankment and roadway for phase two; first phase cost = \$260-million, second phase cost = \$60-million, total cost = \$320-million
- **Option C:** build complete project but with only the westerly viaduct structure and two lanes of roadway across it, leaving easterly viaduct for the second phase; first phase cost = \$230-million, second phase cost = \$90-million, total cost = \$320-million
- **Option D:** build northern and southern interchanges, two westerly lanes and structures, leaving easterly lanes, embankment and structures for the second phase; first phase cost = \$220-million, second phase cost = \$100-million, total cost = \$320-million

- Option E: build the southern interchange, two westerly lanes and structures, leaving the northern interchange, embankment, easterly lanes and structures for the second phase; first phase cost = \$210-million, second phase cost = \$110-million, total cost = \$320-million
- Option F: build the northern interchange, two westerly lanes and structures, leaving the southern interchange, easterly lanes and structures for the second phase; first phase cost = \$200-million, second phase cost = \$120-million, total cost = \$320-million
- Option G: build northern and southern at-grade intersections and two westerly lanes and structures, leaving northern and southern interchanges, easterly lanes and structures for the second phase; first phase cost = \$190-million, second phase cost = \$130-million, total cost = \$320-million

EVALUATION:

The team speculated on criteria these phasing options must satisfy in order to be successful and identified the following (in decreasing rank of importance):

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| 1. <u>Functional first phase</u> | 5. <u>Relieve congestion</u> |
| 2. <u>Improve safety</u> | 6. <u>Cost of first phase</u> |
| 3. <u>Total cost</u> | 7. <u>Community benefits</u> |
| 4. <u>Reduce delay</u> | 8. <u>Environmental affects of second phase</u> |

The team evaluated the potential phasing options against the “full build” project using the above criteria in a Weighted Evaluation Matrix (attached). Option C received the highest scores and ranked first.

RECOMMENDATION:

The team was not able to identify a functional phased project option that fulfilled the purpose and need at the programmed funding level. Additionally, none of the phase one options will operate at “Level of Service C,” rendering them functionally obsolete upon construction.

The team recommends that the full build project remain the district’s preferred choice. The full build provides the functionality of four lanes and fulfills the complete range of project objectives at the lowest overall cost.

If it proves infeasible to obtain sufficient additional funding to pursue the full build project, the team recommends that lesser additional funding be sought in order to proceed with construction of the first phase of Option C. Additional funding should then be pursued to construct the second phase of Option C.