

A Win-Win Right-Of-Way Policy for Orange County

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SUMMARY

1. There is no viable alternative to significantly increased freeway capacity, to meet the mobility challenge of our 30 year growth projection.
2. Right-of-way procurement has become the single largest obstacle to achieving the necessary freeway growth.
3. Recent ROW acquisition experience has resulted in increasingly hardened homeowner opposition and led OCTA to adopt a tacit policy of no freeway expansion beyond presently owned ROW.
4. The predictable consequences of this tacit freeway no-growth policy are disastrous — Orange county growth control by traffic strangulation.
5. The congestion delay time saving value of land used for freeway expansion is literally *hundreds* of times its value as built-up real estate.
6. Under present standard eminent domain policy, the entire benefit of that enormous value step-up is realized by freeway drivers.
7. Sharing even a small part of that benefit with affected home owners and cities could well turn them from righteously angry opponents to enthusiastic supporters of the necessary ROW acquisition.

SETTING

The intrinsic genius of the free enterprise system lies in its ability to encourage the trading of limited resources up to their highest, most valuable use, in such a way that every party to the trade, and society as a whole, wins. That principle should be — but unfortunately seems not to have been — kept in mind by OCTA in the consideration of right-of-way, sorely needed for Orange County freeway system expansion.

Understandably sensitive to the currently hot eminent domain issue, the Orange County Transportation Authority (OCTA) has tacitly adopted a policy severely limiting or ruling out the taking of residential property for freeway capacity expansion. Thus in the face of projected needs of three or four additional lanes (per direction), the just-passed Measure M Extension, would build only token single lane expansions, stated to be “generally within the existing right-of-way” for the I-5, I-405, SR-57, SR-55, and SR-91. Where the 1990 Measure M built more than 280 freeway lane-miles, now, with greater need, and 4 times greater total revenue, the Measure M extension is slated to build less than half as much, a meager 7% freeway capacity increase, nowhere near enough to keep up with OCTA projected 38% traffic growth much less correct the existing 32% shortfall as compared to the median US urban area.

The long-term consequences of this policy, if continued, will be disastrous — growth control by traffic strangulation.

There simply is no viable alternative to highways to handle anywhere near the projected 38% growth volume. Our entire present Orange County transit system handles less than 1.1%¹ of present travel volume; there is no reasonable possibility that it could be expanded to handle any significant part of that shortfall. As compared to roads, transit is orders of magnitude more expensive in terms of government cost, and despite being massively subsidized and least expensive to the passenger, it is the least publicly accepted alternative. The notion of satisfying any significant fraction of the projected 38% capacity shortfall with transit is absurd.

If we don't maintain adequate freeways, traffic congestion will simply continue to get worse until it is so miserable no one else wants to live here. Will we? Would you?

It need not be that way. A full perspective of the Right-of-Way issue must consider the economic value of the congestion it could relieve as freeway ROW, compared to its present real estate value. It seems clear that this has not been done.

THE TIME-SAVING VALUE OF ROW

The recent OCTA I-405 Major Investment Study is a case in point. The study team developed several alternatives ranging from a projected needed 3 and 4 lane "Max" alternative, to a minimal, one-lane "Min" (ultimately selected by staff and approved by the board of directors) which would displace 94 fewer homes but at the cost of 110 million person-hours per year more congestion time delay. So here we have the tradeoff: 94 more homes taken, or 110 million more person-hours per year lost travel-time.

The straightforward economic analysis² that *should* have been done with that data, appended hereto, shows that if we value travel time savings at the price people have demonstrated they are willing to pay for them, those additional travel time savings afforded by the Max alternative over the next 30 years, would have been worth over **\$37 billion** present value.

In effect,

*each of the 94 modest homes saved from eminent domain by the choice of the Min rather than Max alternative, will cost county drivers **\$400 million** in otherwise avoidable congestion delay.*

The 94 homes in question, immediately adjacent to the I-405 freeway are conservatively estimated to average less than \$500,000 each on the real estate market. Their potential time-saving value as freeway right of way is over **800 times** their present real estate market price. Such an immense value/price ratio

¹ OC 2004: Transit: 1.07 million ps-mi/day, Roads 108 million ps-mi/day. Source U.S. DOT

² See Appendix hereto.

is an overwhelming indicator of the economic feasibility of a non-coerced win-win purchase agreement if we were to share with the displaced home owners, even a small part of the benefit of conversion of the property to its immensely higher value use as ROW.

OCTA says that the decision for the lesser build alternative was forced by irresistible opposition of the homeowners. The evident fact is that OCTA didn't even consider — much less offer — a win-win solution or anything other than the traditional, one-sided, we-win-you-lose offer at real estate appraised value, backed up by the coercive threat of eminent domain. Of course home owners strongly opposed that one-sided deal.

Alternatively, for example, the Appendix shows that OCTA could have offered each of the 94 home owners, a 1.5 million dollar signing bonus, three times the real estate market value of their home,

- total project cost increase would be less than 8%,
- the vast majority of home owners would be *enthusiastic* sellers,
- we could have built the Max alternative, and
- the overall *net* project benefit to Orange County would be some \$36 billion greater than under the Min alternative. That's a win-win solution .

In the light of such an economic analysis, OCTA should reconsider all the inadequate, single lane Measure M expansion plans for the 5, 405, 57, 55, and 91, decided under the present tacit no-takings policy, actively pursue feasible win-win solutions that share the benefits of higher value use with the- displaced property owners and build the freeway capacity all studies show we sorely need.

(cont)

APPENDIX 1

ROW Time Savings Value Calculations

The simple economic analysis that should have been done, essentially reducing the value of the two competing elements, homes and travel-time savings to commensurate terms of Present Value, is given in the spreadsheet, Table 1 below. Cells in the shaded upper rows 5-10 are data taken directly from the OCTA/Parsons I-405 alternatives analysis.

Annual Travel Time Savings in row 6 are converted to dollar value in row 12 assuming a conservative Value Of Time (VOT) of 15 \$/hour (2006\$)³, less than 50% of the county hourly rate equivalent of median family income. In line 13, this annual series is converted to total net present value (in 2006\$) taking into account annual inflation and interest, conservatively assuming a real interest rate (real interest rate = interest rate – inflation rate) of 2% and summing over the 30 year lifetime of the measure. The present value of the yearly travel time saving in cell F13 is over **\$70 Billion** 2006 dollars. Congestion delay can be a very expensive drain on the county economy.

Each of the 94 modest homes saved by the choice of Min rather than Max alternative will cost the county drivers \$401 million in otherwise avoidable congestion delay.

The particular homes in question, immediately adjacent to the 405 freeway are modest. conservatively estimated to be worth less than \$0.5 million on the real estate market. Of course the home owners opposed the coercive taking of their homes at real-estate value.

Rows 18 through 21 show that we could have offered each of the 94 home owners \$2 million for their home, well *over four times market value*, at an added project cost of less than 10%; the vast majority of home owners would be delighted to sell: we could have built the Max alternative, and the overall *net* project benefit to Orange County would be some \$36 billion (D21) greater than under the selected Min alternative.

³ Derived from studies of revealed willingness to pay for travel time savings.

Table 1. Lifetime Net Present Value Analysis

	A	B	C	D	E	F	G
1	I-405 MIS	2005					
2	H:/I-405/I-405 MIS.xls						
3	9/20/2007						
4	MIS Findings	units	Min (4)	Max (8a)			
5	Construction Cost (incl ROW Acquisition)	Mill \$	500	2000			
6	Travel-Time Saving (TTS)	Mill ps-hr/yr	80	190			
7	Arterial Traf Red'n	K v-mi/d	81	200			
8	Increased Speed	mph incr	5	10			<- Shaded Cells from
9	Cost Effectiveness	Cost/ps-hr	\$ 0.58	\$ 0.91			OCTA / Parsons
10	Residence Takings	#	11	105			I-405 MIS
12	Value of TTS /yr	Mill\$/yr	1200	2850			
13	PresValue of TTS	Mill\$	\$27,413	\$65,106			
14	PV TT Savings, re Alt 4	Mill \$		\$37,693			
15	Pro Forma Win-Win Purchase						
16	#Sing Fam Res rel to Alt 4	#		94			
17	(PV TTS re #4) / (# SFR re 4)	Mill \$		\$ 401			<- time saving value foregone
18	Average Offer (e.g.)	Mill\$		2.00			per SFR taking avoided.
19	Cost increase factor	%		7.1%			<- add'l cost of x4 homes offer
20	Net OC Benefit	Mill \$	\$26,913	\$62,918			
21	Net OC Benefit re #4	Mill \$		\$36,005			<- Net Increase in overall OC benefit
22	Assumptions						
23	Avg. Market Value of Home, \$ mill		0.5				
24	ValueOfTime, \$/ps-hr		15				and added ROW cost
25	Real Interest, %		2%				<- Real Interest = Actual interest - Inflation
26	Project Lifetime, yrs		30				
27	Present Value Factor, yrs		22.84				



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