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Seeking cost-effective ways to improve traffic congestion in Honolulu

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Acting Director Alfred Tanaka
Department of Transportation Services
City and County of Honolulu
650 S. King Street, 3rd Floor
Honolulu, Hawaii 96813

**DRAFT ONLY —
DO NOT QUOTE**

Dear Mr. Tanaka:

Comments on the December Scoping Meetings

The Scoping Meeting conducted by Parsons Brinckerhoff and the City and County of Honolulu Department of Transportation Services (DTS) on December 13, 2005, provided insufficient information for the public to understand the alternatives discussed — particularly the elimination of reversible HOT lanes. We refer to the material available both at the meeting and on line at the www.honolulustransit.com website.

While Parsons Brinckerhoff and DTS showed that the “Development of Initial Set of Alternatives” emerged from “Technical Methods” and “Evaluation Measures,”ⁱ they refused to disclose the quantitative data that they developed during this process thus denying a “full public access to key decisions.”

For “significant public involvement” as specified by the Federal Transit Administration (FTA), the public must have some rudimentary understanding of the costs and benefits of each of the alternatives considered — both those accepted and those rejected.

The costs must include capital and operating costs. The benefits (or disbenefits) must include forecast travel time changes, patronage and traffic congestion impacts. Only with this information can the public be truly involved in the process.

In short, the ‘system planning’ process has failed to follow the FTA process, as follows:

- A. The public has not been involved to the extent required.
- B. The projected capital costs, operating costs, financing, travel times, patronage and traffic congestion for the alternatives have not been available.
- C. The process has failed to define adequately the “specific transportation problems” and to evaluate how each alternative addresses them.
- D. The “level of effort” exerted in developing the alternatives has been inadequate.
- E. The alternatives are insufficient.

A. The public has not been involved to the extent required.

“The goal of this [joint FTA/FHWA] policy statement is to aggressively support proactive public involvement at all stages of planning and project development. State departments of transportation, metropolitan planning organizations, and transportation providers are required to develop, with the public, effective involvement processes which are tailored to local conditions. The performance standards for these proactive public involvement processes include early and continuous involvement; reasonable public availability of technical and other information; collaborative input on alternatives, evaluation criteria and mitigation needs; open public meetings where matters related to Federal-aid highway and transit programs are being considered; and open access to the decision-making process prior to closure.”

http://www.fta.dot.gov/grant_programs/transportation_planning/planning_environment/3854_8227_ENG_HTML.htm

“The overall objective of an area's public involvement process is that it be proactive, provide complete information, timely public notice, full public access to key decisions, and opportunities for early and continuing involvement (23CFR450.212(a) and 450.316(b)(1)).”

http://www.fhwa.dot.gov/environment/pub_inv/q2.htm

Far from “aggressively supporting proactive public involvement,” our Hawaii elected officials, who through their offices are part of the process, have acted contrary to the spirit of FTA policy by misleading the public about the prospects for rail transit. For example,

- They continually allude to a relief of traffic congestion by building rail transit.ⁱⁱ
- They continuously use the term “light” rail when, in reality, they are planning for a “heavy” rail line.ⁱⁱⁱ
- They imply that the half-percent increase in the county General Excise Tax will be sufficient to pay for rail.^{iv}

B. The projected capital costs, operating costs, travel times, patronage, financing and traffic congestion have not been made available to the public.

“During systems planning, the analysis of alternatives focuses on identifying fatal flaws and a preliminary analysis of cost-effectiveness ... Three types of information are particularly important for evaluating cost-effectiveness: transit patronage, capital cost, and operating and maintenance cost.” PTMTTP. Part I. p. 2-9.

“When local officials seek [FTA] approval to initiate alternatives analysis, the results of system planning studies are used by [FTA] to decide whether to participate in further detailed study of guideway alternatives in the corridor. Much of the information needed to make these decisions should be available in reports produced during the system planning phase.” PTMTTP. Part I, p. 2-12

“These definitions [of alternatives] are sufficient to address such general concerns as ranges of costs, ridership potential and financial feasibility. More basically, they provide the information necessary for decisionmakers and other stakeholders to confirm that no reasonable alternative (in terms of meeting corridor needs) is being excluded from the analysis, as well as understand the magnitude of the costs and benefits associated with the various options for improving conditions in the corridor.” [Additional Guidance on Local Initiation of Alternatives Analysis Planning Studies](#)

The documentation required by systems planning^v concerning public transit patronage data, capital cost and operating and maintenance costs, as required by PTMTTPP, Part I, 2, has been either withheld from the public or not developed at all.

During the scoping meeting, we asked Mr. Hamayasu for cost data for the alternatives and he told us that the City did not have any. Since cost estimates are at the bedrock of scoping decisions it seemed strange that they were not available. This was especially true since Parsons Brinckerhoff had eliminated the reversible High-Occupancy Toll (HOT) lanes proposal on the grounds of “cost and funding concerns.”^{vi}

Subsequent to the Scoping Meeting, Gordon Lum, Executive Director of the Oahu Metropolitan Planning Organization (OMPO) told us informally that the capital costs developed by their consultant were \$2.5 billion each for both the reversible HOT lanes proposal, from Waipahu to the Keehi Interchange (± 12 miles), and also the elevated heavy rail line from Kapolei to UH (± 25 miles).

We asked to see the working for those calculations but Lum told us that their consultants, Kaku Associates, had only given them the number; there was no backup for it. He also said OMPO subsequently conveyed these costs to both DTS and the Hawaii State Department of Transportation (HDOT) and both had found them reasonable.

Failing any other explanation, we have to assume that Parsons Brinckerhoff used the OMPO costs in eliminating the reversible HOT lanes from the Alternatives Analysis.

The capital costs cited by OMPO are unreasonable. These costs, on a per mile basis, amount to \$100 million per mile for the heavy rail line and \$200 million per mile for the HOT lanes.

They would have us believe that a simple elevated *two*-lane highway (HOT lanes is merely the operating method) put out to bid would cost twice as much as a non-bid heavy rail line with all its attendant equipment, rolling stock, trains, and massive stations each with escalators, elevators, stairs.

The Tampa *three* lane elevated highway due to open shortly is being built for \$46 million per mile and that includes a costly error by a contractor. The public authority responsible for it estimates they could duplicate it for \$28 million per mile. Even allowing for Hawaii’s politically induced high costs that tend to double Mainland prices, it still does not come close to the OMPO estimate of \$200 million per mile.

No travel time comparisons are available. Since travel time is a major determinant of patronage forecasts and since HOT lanes may well offer a much faster journey for both autos and buses this information should have been available.

The trip from Mililani to UH is an example:

- Neither the rail line nor the HOT lanes will be going to Mililani, from Mililani to the H1/H2 merge, both rail and HOT lanes alternatives will take the same time by bus. At the H1/H2 merge, the train option would require a transfer whereas buses on HOT lanes would not.

- Buses on the 10-12 miles of HOT lanes traveling at 55-60 mph to Pier 16 will take half as much time as trains on the heavy rail line.
- Pier 16 to UH is 4.2 miles and we anticipate that trains would be take half as much time as buses for this much shorter distance.

The time savings for the buses on HOT lanes will not be offset by the time lost by the bus alternative on the shorter in town leg. The net result of the time taken for these two journeys would be that HOT lanes would offer a faster journey than trains.

No patronage forecasts for the various alternatives were available. Mr. Hamayasu told us during the meeting that while OMPO had developed ridership data for the rail, they had not shared it with DTS. We find this troubling since Mr. Hamayasu is Vice-Chair of OMPO's Technical Advisory Committee (TAC).

OMPO told us that while they had developed ridership forecasts for the various alternatives they would not show us the working of the calculations. We appealed this refusal to the Hawaii Office of Information Practices and OMPO now admits that their forecasts were "intuitive" and therefore there was no working paper to show us.^{vii}

We had asked for the working paper since 360,000± daily rail ridership shown on their [Strategic Planning Concepts](#) chart (p. 6) for the Kapolei to University of Hawaii (UH) rail alternative would be an 80 percent increase over current ridership and a 50 percent increase in per capita ridership for 2030.

No Metropolitan Statistical Area (MSA) that has built a rail line in recent times has experienced an increase in the percentage of commuters using public transportation in a similar 20-year period, 1980-2000. We, therefore, find the ridership forecast preposterous failing a detailed explanation.

Financing plan was not available.

The financing plan needs to show the impacts of the half percent General Excise tax. We believe that it would only fund a third of the heavy rail and the public needs to know the correct amount of the future taxes they will face.

Funding problems insufficiently explained. Mr. Hamayasu told us that one of the reasons the reversible HOT lanes was eliminated was because of "funding concerns" and that was because FTA had told him that they would not fund HOT lanes. We asked him if he had such an opinion in writing and he said he had not. Since FTA officials have told us that, while they would have to see the precise plans for such a HOT lanes project, if it provided priority and uncongested travel for buses, they believed they would.

In any case, the FTA does not require that funding be in place in order to analyze the alternatives. If it did, it would have to reject the rail alternatives since the half-percent increase in the State General Excise Tax does not begin to cover the capital and operating costs. In addition, the 1992 Rail Plan had no funding in place at any time during the whole process.

Traffic congestion estimates are not available. Since HOT lanes promise to move far more cars off the Oahu's highways than would a rail line, it is imperative that preliminary estimates be made available to the public.

C. The process has failed to define adequately the "specific transportation problems" and to evaluate how each alternative addresses them as required by PTMTTP, Part I, 1.2.

"This analysis includes the identification of specific transportation problems in the corridor; the definition of reasonable alternative strategies to address these problems; the development of forecasts for these alternatives in terms of environmental, transportation, and financial impacts; and an evaluation of how each alternative addresses transportation problems, goals, and objectives in the corridor."

The process merely discusses "improved person-mobility" as though that will improve traffic congestion.

"The purpose of the Honolulu High-Capacity Transit Corridor Project is to provide improved person-mobility in in the highly congested east-west corridor between Kapolei and the University of Hawaii at Manoa (UH Manoa), confined by the Waianae and Koolau ranges to the north, and the ocean to the south." http://www.honolulutransit.org/pdfs/scoping_info.pdf

Parsons Brinckerhoff implies in the "Project Purpose" that the problem is one of insufficient "person mobility." If defined this way, one set of alternatives will be preferable. If on the other hand, Parsons Brinckerhoff were to define the problem as "traffic congestion hampering the movement of autos and goods vehicles," then another set of alternatives will be preferred.

After all, national, state and city formal transportation goals are as follows:

"Advance accessible, efficient, intermodal transportation for the movement of people and goods." Federal Transportation Policy.

"To create a transportation system which will enable people and goods to move safely, efficiently, and at reasonable cost." City and County of Honolulu, *General Plan for the City and County of Honolulu*

"To provide for the safe, economic, efficient, and convenient movement of people and goods." *State of Hawaii, Hawaii State Plan*

Rail transit does absolutely nothing for the movement of goods "safely, efficiently and at reasonable cost." Parsons Brinckerhoff has entirely overlooked that goods move by roads on Oahu, while admitting that traffic congestion, and the movement of goods, will not benefit from a rail line.^{viii}

This community needs a definition of the transportation problem with which everyone can agree and that is without doubt going to be traffic congestion. We do not have a public transportation problem we have a traffic congestion problem.

As required by regulation the alternatives must address the "stated transportation problem."

"The key principal in the identification of alternatives is that they directly address the stated transportation problem in the corridor ..." [PTMTTP, Part II. 2. p. 3.](#)

Hawaii has the fewest urban miles of highway of any state in the U.S. Highway construction in Honolulu has not kept pace with residential growth. Since no

Metropolitan Statistical Area (MSA) in the U.S. has reduced traffic congestion by improving public transportation, we can only reduce it by increasing highway facilities and improving highway management and the Texas Transportation Institute concurs in that.

“The difference between lane-mile increases and traffic growth compares the change in supply and demand. If roadway capacity has been added at the same rate as travel, the deficit will be zero.”

[2005 Urban Mobility Report. Texas Transportation Institute.](#)

D. The “level of effort” exerted in developing the alternatives during scoping has been insufficient.

“The system planning effort should recognize the difference between the foregoing of precision and the sacrifice of accuracy in the technical work, so that estimates of costs and impacts, while coarse, are at least approximate indicators of the potential merits of the alternatives. The level of effort must be designed so that additional effort would not result in the choice of a different preferred alternative.” [PTMTTPP, Part II, 2.2](#), p. 2. [emphasis added]

E. The alternatives are insufficient.

“There's small choice in rotten apples.”

This line from Shakespeare’s *Taming of the Shrew* is, appropriately, the opening line in the FTA’s introduction to *Evaluation of the Alternatives*. [PTMTTPP, Part II, Sec. 9](#).

Each prior rail transit effort has suffered from the same problem; the range of alternatives studied were inadequate. Disinterested experts have all commented on it.

"Finally, the most serious deficiency of analyses done to date is the failure to devise and evaluate meaningful alternatives to HART. The so-called "alternatives analysis" is seriously deficient and the bus alternative considered in them can only be considered as "straw men." Dr. John Kain, Chair of Harvard’s Economics Department. 1978.^{ix}

"In particular, what is lacking is a serious investigation of several viable dedicated busway options." Dr. Robert Cervero, Professor of Urban and Regional Planning, UC-Berkeley. 1991.^x

Many more examples are available from experts’ critiques of the 1990 Alternatives Analysis.^{xi}

We have suggested a two-lane reversible HOT lanes project between Pier 16 and the H1/H2 merge near Waialeale. This would provide congestion free travel for public transportation users and, in addition, have the advantage of taking a significant number of automobiles off the regular freeways. More importantly, it meets the requirements needed to maximize public transportation use, as was explained so succinctly by Dr. Melvin Webber, now Emeritus Professor of Urban Planning, UC-Berkeley here in Honolulu 20 years ago,

"Commuters choose among available transport modes mostly on the basis of comparative money costs and time costs of the total commute trip, door-to-door. Other attributes, such as comfort and privacy, are trivial as compared with expenditures of dollars and minutes. Commuters charge up the time spent in waiting for and getting into a vehicle at several times the rate they apply to travel inside a moving vehicle. This means that the closer a vehicle comes to both a commuter’s house and workplace, the more likely he is to use that vehicle rather than some other. It also means that the fewer the number of transfers between vehicles, the better"^{xii}

As we have detailed in this letter, the “level of effort” in data development so far is insufficient to justify the elimination of the HOT lanes alternative at this stage.

Parsons Brinckerhoff has substituted, in place of the reversible HOT lanes, a Managed Lanes Alternative, a two-lane elevated highway with one lane in each direction for,

“buses, paratransit vehicles and vanpool vehicles. The lanes would be managed to maintain free-flow speeds for buses, while simultaneously allow High-Occupancy Vehicles (HOVs) and variable pricing for toll-paying single vehicles.”

Parsons Brinckerhoff has designed this to fail the “alternatives analysis” process. We do not necessarily fault Parsons Brinckerhoff; as U-C Berkeley’s Professor Robert Cervero said of the 1992 choice of rail, “it is less a reflection on the work of the consultants [Parsons Brinckerhoff] and more an outcome of pressures exerted by various political and special interest groups.”^{xiii}

The Managed Lane Alternative is a “straw man” designed to make the rail transit line look good in comparison. Professor Kain has written extensively about such tactics, “Nearly all, if not all, assessments of rail transit systems have used costly and poorly designed all-bus alternatives to make the proposed rail systems appear better than they are.”^{xiv}

Summary.

Parsons Brinckerhoff’s decision made prior to the Scoping Meeting to eliminate the reversible HOT lanes alternative (these can also be termed Bus/Rapid Transit or Virtual Exclusive Busway), between approximately the H1/H2 merge and Pier 16, was completely unjustified.

Parsons Brinckerhoff made this decision without any disclosure of the impacts of HOT lanes on traffic congestion, patronage, cost, or any other quantitative details that would allow the public to understand the decision. Nor did Parsons Brinckerhoff explain the selection criteria used in eliminating HOT lanes — let alone the weighting of the criteria in the scoring process.

Parsons Brinckerhoff did not explain that, all else being equal, rail transit will create visual blight across the more attractive parts of Honolulu’s central city whereas HOT lanes would not.

All in all, the process so far makes a mockery of the public involvement process as defined in the preamble to Hawaii’s Uniform Information Practices Act:

[§92F-2] Purposes; rules of construction. In a democracy, the people are vested with the ultimate decision-making power. Government agencies exist to aid the people in the formation and conduct of public policy. Opening up the government processes to public scrutiny and participation is the only viable and reasonable method of protecting the public's interest. Therefore the legislature declares that it is the policy of this State that the formation and conduct of public policy—the discussions, deliberations, decisions, and action of government agencies—shall be conducted as openly as possible.

Accordingly, we believe that Parsons Brinckerhoff, OMPO and DTS should revisit the process leading up to the Scoping Meeting and redevelop the alternatives according to FTA rules and guidance.

Sincerely,

HONOLULUTRAFFIC.COM



Cliff Slater
Chair

cc: Ms. Donna Turchie
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Endnotes:

ⁱ [Scoping Meeting, page 4.3.](#)

ⁱⁱ “Judging by how much traffic has worsened in just in the past few years, that’s probably a conservative prediction. The only way to prevent it is to act now to address the problem. Our quality of life is at stake. Rail transit is a key element in the solution.” Congressman Neil Abercrombie. Honolulu Advertiser. April 17, 2005

“Hannemann said the yet-to-be-determined form of transit would run from Kapolei to downtown and the University of Hawai’i-Manoa. He said the system will help all parts of the island, easing traffic overall because “there’ll be less cars on the road.””
<http://the.honoluluadvertiser.com/article/2005/May/12/ln/ln02p.html>

ⁱⁱⁱ DTS and elected officials continually refer to “light rail” despite constant criticism from us and others.

^{iv} Half per cent will pay for about one-third of the projected rail line.

^v “1.2.1 Systems Planning. Systems planning refers to the continuing, comprehensive, and coordinated transportation planning process carried out by metropolitan planning organizations - in cooperation with state Departments of Transportation, local transit operators, and affected local governments - in urbanized areas throughout the country. This planning process results in the development of long range multimodal transportation plans and short term improvement programs, as well as a number of other transportation and air quality analyses.” [Procedures and Technical Methods for Transit Project Planning \(PTMTTP\), Part I, 1.”](#)

^{vi} [Scoping Information package, December 5, 2005.](#) page 3-1.

^{vii} [Letter from the Office of Information Practices to Slater and Lum.](#)

^{viii} [Honolulu Advertiser article, December 14, 2005.](#)

^{ix} *Seminar on Urban Mass Transit* (transcript). Office of the Legislative Auditor, State of Hawaii. January 1978. Dr. John Kain, Chairman, Dept. of City and Regional Planning, Harvard University.

^x Quoted from “An Evaluation of the Honolulu Rapid Transit Development Project's Alternative Analysis and Draft Environmental Impact Statement.” Hawaii Office of State Planning and University of Hawaii. May 1990. Robert Cervero, Professor of Urban and Regional Planning at the University of California, Berkeley, and a member of the Editorial Board, *Journal of the American Planning Association*.

^{xi} [An Evaluation of the Honolulu Rapid Transit Development Project's Alternative Analysis and Draft Environmental Impact Statement. Hawaii Office of State Planning and University of Hawaii. May 1990.](#)

^{xii} Dr. Melvin Webber, UC Berkeley. Address to the Governor's Conference on Videotex, Transportation and Energy Conservation. Hawaii State Dept. of Planning and Economic Development. July 1984.

^{xiii} “An Evaluation of the Honolulu Rapid Transit Development Project's Alternative Analysis and Draft Environmental Impact Statement.” Hawaii Office of State Planning and University of Hawaii. May 1990.

^{xiv} [Kain, John F. “The Use of Straw Men in the Economic Evaluation of Rail Transport Projects.” *American Economic Review*, Vol. 82, No. 2, Papers and Proceedings of the Hundred and Fourth Annual Meeting of the American Economic Association \(May, 1992\) , pp. 487-493.](#)