

February 22, 2008

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The Honorable Barbara Marshall, Chair
and Members of the City Council
Honolulu City Council
530 South King Street, Room 202
Honolulu, Hawaii 96813

Dear Chair Marshall and Councilmembers:

Pursuant to Resolution 07-376, CD1, FD1 (B), attached are 13 copies of the final report of the technology selection by the technology selection panel which was established by the same resolution.

By a majority vote, the selection panel selected the steel wheel on steel rail technology and listed the justifications by each member as documented in the report.

In order to comply with the requirements of the Sunshine Law, the panel members conducted two panel meetings opened to public (February 15 and 22, 2008). Individual members evaluated the information submitted by technology vendors in response to the Request for Information and submitted their results to the DTS staff and consultant for compilation. The DTS and consultant prepared a draft selection report based on the compiled information.

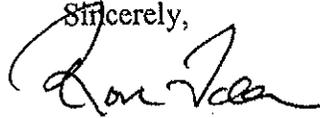
The draft copy of the report was presented and discussed by the panel during the panel meeting on February 22, 2008. A total of four public comments were also received during the meeting. The panel deliberated their findings and comments from both the panel members and the public and unanimously concluded that the findings reported in the draft report be made final at the end of the meeting.

The final selection report includes the brief background information, explanation of the selection process, and the conclusions of the selection evaluation by each panel member.

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On behalf of the panel members, I would like to extend my appreciation for the City and County of Honolulu to provide this opportunity to participate in the project and we hope that the panel's efforts be beneficial to the city. I would also like to extend my sincere appreciation for the City and County of Honolulu to provide this opportunity to participate in the project and we hope that the panel's efforts be beneficial to the city. I would also like to extend my sincere appreciation for the support and hospitality extended to me and the panel members by the City's project staff.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Tober", written in a cursive style.

Ron Tober
Chair, Technology Selection Panel

**HONOLULU HIGH-CAPACITY TRANSIT
CORRIDOR PROJECT**

**INDEPENDENT TECHNOLOGY
SELECTION PANEL REPORT**

February 22, 2008

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1.0 EXECUTIVE SUMMARY

Following the City Council's resolution to create an Independent Technology Selection Panel to review the RFI responses, and to make a technology selection decision, a five member panel was duly selected. The panel met for the first time on Friday, February 15, 2008, at a public meeting held in the Mission Memorial Auditorium where they received the RFI responses and various summary documents.

Between February 15 and February 21 the panel members reviewed this information individually and each panel member prepared a report that included his technology selection and his rationale for the selection. Panel members each chose to present their findings and their selections in individual ways.

On Friday, February 22, 2008 the panel met again at the Mission Memorial Auditorium to present their individual technology selections, and after open discussion, to announce jointly the final selection of a technology for the HHCTCP.

The panel members qualifications are shown in Section 3.0 of this report and a summary of the rationale for their individual technology selections is shown in Section 4.0.

The panel's joint choice of the technology selected for the HHCTCP: Steel Wheel/Steel Rail

The panel members made the following technology selections:

- Steve Barsony: Steel Wheel/Steel Rail
- Ken Knight: Steel Wheel/Steel Rail
- Henry Kolesar: Steel Wheel/Steel Rail
- Panos Prevedouros: Managed Lanes* (not consistent with the LPA)
- Ron Tober: Steel Wheel/Steel Rail

* Not a fixed guideway technology consistent with the requirement of the City Ordinance 07-001.

2.0 PROCESS DESCRIPTION

The Request For Information (RFI) process is commonly used by public agencies when they need to obtain detailed information in critical areas for a future procurement. In general, the RFI process is used during the planning process to obtain sufficient information to establish the specifications for a proposed project. The RFI process is allowable under §3-122-9.02 of the Hawaii Administrative Rules (HAR) on Procurement.

The RFI for the HHCTCP described the performance requirements for the project that were taken from the Alternatives Analysis and the Locally Preferred Alternative. The technology suppliers were asked to complete three questionnaires confirming that their proposed technology meets each performance requirement. They were asked to provide technical information that demonstrates compliance, or how they intend to mitigate non-compliance. The RFI and all addenda that were issued is included herein as Appendix A.

The three questionnaires include specific questions in the following areas:

- System Characteristics
 - Required train speed of 55 mph
 - Must be able to navigate through 150 ft. radius horizontal curves within the maintenance facility , 400 ft. radius horizontal curves on the elevated structure
 - Maximum grade of 6%
 - Stations lengths will not exceed 300 ft.
 - Line capacity 9,000 passengers per hour
 - End to end trip time of 40 minutes
 - Emergency evacuation
 - 3rd Rail or equivalent (no overhead contact system)
 - Fully automatic train operations
 - Noise and vibration requirements
 - ADA compliance
- Vehicle Characteristics
 - Electric propulsion
 - High floor
 - Dynamic braking
 - Fire performance to National Fire prevention Association (NFPA) 130
 - High reliability/high availability
 - Minimum vehicle life of 25 years
 - Ergonomic design to accommodate US 5th percentile female to 95th percentile male
 - Attractive appearance
 - ADA compliant
- Functionality of the Proposed System
 - Special guideway requirements
 - Maintenance facility requirements
 - Proprietary components or subsystems that restrict or limit competition
 - Interoperability of the system to accommodate different manufacturers in the future

- Availability of long term engineering and maintenance support
- Representative costs for similar systems
- The technological maturity of the proposed system

On January 23, 2008, the City Council met, debated, and passed Resolution No. 07-376, CD1, FD1 (B) to create an Independent Technology Selection Panel to review the RFI responses and to make a technology selection decision. The Resolution is included herein as Appendix B.

The potential suppliers' information was received by City and County of Honolulu Purchasing on January 24, 2008. The information contained was compiled by RTD staff and consultants into a comparative matrix that:

- Combines information from various technology suppliers to provide a comparison between technologies; and
- Lists the technologies in a side-by-side matrix for ease of analysis and comparison.

A group of nationally recognized systems and technology experts (Independent Technology Selection Panel) was selected. Two of the panel members were chosen by the Mayor, one was chosen by the Chairperson of the City Council, and one was chosen by the Chairperson of the Council's Committee on Transportation and Public Works. These four panel members then selected a fifth panel member who was designated as the Panel Chair. The charge to the Independent Technology Selection Panel is to select the fixed guideway technology for the Project. Selecting the technology does not mean selecting a specific vehicle supplier. In accordance with the Resolution, panel members have no expectation of performing any work related to the Project at a later date and have experience with at least two of the technologies under consideration. These technologies are monorail, rubber tire on concrete, steel wheels on steel rail, and urban maglev.

The panel first met in the Mission Memorial Auditorium in a Public Meeting on Friday, February 15, 2008. They were given brief descriptions of the Project and of the RFI process and their role therein, an overview of the technology requirements, the evaluation criteria, and evaluation methodology. They asked questions at several points throughout the presentations and discussed among themselves what their charge was and how they would proceed throughout the next week.

Individual tours of the 20-mile First Project alignment were offered to all of the panel members. Steve Barsony, Ken Knight, Henry Kolesar, and Ron Tober chose to take tours.

The panel members were sequestered from each other for the next week while they read and analyzed the RFI responses and the comparative matrix they were provided, and prepared with their own independent technology selections. RTD staff were available to answer questions and provide support to the panel members throughout the process. They analyzed the compiled potential suppliers' information, comparing each technology against the HHCTCP performance requirement and against each other, leading to a selected technology.

Their individual reports were delivered to project staff before the public meeting on Friday, February 22, 2008. Staff collected them and created a Powerpoint presentation from them for the final Public Meeting held on Friday, February 22, 2008.

The Independent Technology Selection Panel met in the Mission Memorial Auditorium in a Public Meeting on Friday, February 22, 2008. They were each given the reports from the other panel members as well as a brief overview of the contents of those reports in the form of the Powerpoint presentation. The panel members received public testimony from four individuals. Initially, one of the panel members selected a technology that was not consistent with the LPA. However, after discussion, he changed his selection to rubber tire. The panel members discussed their findings and agreed four to one on the selection as given in Section 5 of this report.

A future formal procurement process will be utilized to choose a vehicle supplier from among the various suppliers for the selected technology.

3.0 PANEL IDENTIFICATION

The following five individuals have been chosen as members of the Independent Technology Selection Panel established to select the vehicle technology for Honolulu's fixed guideway transit system.

Steve Barsony serves as the systems engineering expert and was chosen by the Council Transportation Committee Chair, Nestor Garcia. Prior to his retirement, Mr. Barsony served as Director of the Federal Transit Administration's Office of Engineering, Director of the Boeing Company's Office of Systems Engineering and with Ford Motor Company.

Mr. Barsony's post retirement positions include serving on a selection committee for the Metropolitan Atlanta Rapid Transit Authority (MARTA), as Chief Engineer for Aegir and as a consultant and technical advisor to the Science Applications International Corporation (SAIC).

Kenneth G. Knight is the panel's construction expert and was chosen by the Mayor. He has more than 45 years experience as a successful manager of large, multi-disciplinary national and international rapid rail transit projects. Mr. Knight has been involved in all stages of transit development from initial planning through design and construction to operation and management of the completed system.

Mr. Knight has professional, relevant experience with the Toronto Transit Commission, the Niagara Frontier Transportation Authority, the World Bank, Cansult Limited, DMJM + Harris, Capital Transit Consultants and Parsons, Brinckerhoff, Quade and Douglas, among others.

Henry Kolesar is an operations expert and was chosen by the Mayor. He has 25 years of relevant experience in the design and maintenance for a broad range of fixed guideway transit vehicles. As a former propulsion and systems engineer for Bombardier Transportation, he has engineering knowledge of steel wheel/steel rail and rubber tired fixed guideway technologies.

Mr. Kolesar is the current Group Manager of the Vehicle Maintenance Engineering for the San Francisco Bay Area Rapid Transit District, responsible for vehicle systems, maintenance and new-vehicle engineering, reliability analyses, maintenance planning, reliability –centered maintenance program and quality assurance on a fleet of 699 vehicles.

Panos Prevedouros has an advanced degree in transportation engineering and has been advising government in Hawaii in transportation public policy since 1990. He was chosen by Council Chair Barbara Marshall. He is a professor of Traffic and Transportation Engineering at the University of Hawaii at Manoa (UHM). Dr. Prevedouros serves as Developer and Coordinator of UHM's Traffic and Transportation Laboratory, Transportation Research Board Chair of the Freeway Simulation Subcommittee AHB20(2), President of the Hawaii Highway Users Alliance (HHUA) and on the Board of Scholars of the Grassroot Institute of Hawaii.

Dr. Prevedouros was a member of the Transit Advisory Task Force established by the Honolulu City Council in 2006 to review the Alternatives Analysis Report and to make findings and recommendations to assist the Council in the selection of a Locally Preferred Alternative.

Ron Tober is the fifth member of the panel and was selected by his fellow panelists. He has been General Manager and CEO of rail transit operating authorities in Cleveland, Seattle and most recently, Charlotte, North Carolina. Mr. Tober has also been responsible for agency rail and bus operations in Boston and Miami. Prior to his work with public agencies, he worked for the consulting firm of Barton-Aschman and performed transit studies in Chicago and Dallas. Mr. Tober is also a past chairman of the American Public Transportation Association.

4.0 INDIVIDUAL PANEL MEMBER REPORTS

Panel members each chose to present their findings and their selections in individual ways. Some prepared an evaluation summary and scored the requirements, and provided a narrative explaining their rationale for their scoring and selection. Others just provided the narrative along with their selection choice. Their complete evaluation summaries and narratives are included herein as Appendix C.

Provided below is the selection and brief bullet points indicating the main rationale for each panel member.

Steve Barsony

Selection: Steel Wheel/Steel Rail

Rationale:

- The most mature transit technology
- The most widely used and available transit technology, expected to provide the best competition in procurement
- Has high reliability without compromising the City's requirements
- This system has the best potential for vehicle and system interchangeability for future procurement

Ken Knight

Selection: Steel Wheel/Steel Rail

Rationale:

- System Reliability
- Operational Safety
- High-Speed Service Capability
- Non-Proprietary Systems

Henry Kolesar

Selection: Steel Wheel/Steel Rail

Rationale:

- Minimal risk, mature technology
- Highest level of initial competition
- Highest level of future competition

Panos Prevedouros

Selection: ~~Managed Lanes~~ Rubber Tire

Rationale:

- Traffic congestion with Rail will be far worse than today. Door-to-door trips on rail are too long and inconvenient = low ridership in most U.S. systems.

- Rubber tire technology, even with plain buses, offers comparable or superior capacity to SWSR technology. Long term, it will reduce Oahu’s dependency on diesel. Rail will require 70-90 MW – new HECO plant =110 MW (20 bg/y).
- Rubber tire technology: Much better acceleration, deceleration, turning ability, climbing ability. Lower weight, much lower price.
- Unlike the relative simplicity of HOT lanes and buses, rail is a complex electromechanical system with millions of wearing and weathering components. Mostly foreign technology and entirely “foreign” to Hawaii. It is a magnet for crime and drug trafficking.
- Advocates for rail who were strong proponent of rail in 2006 include Planners, Architects and College Students (ASUH). Recently these groups have some notable “change of heart.”

Ron Tober

Selection: Steel Wheel/Steel Rail

Rationale:

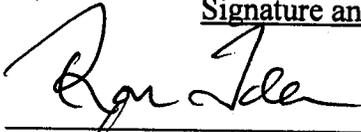
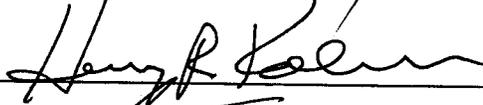
- First major transit system – long term investment, must be successful
- Greatest base of suppliers insuring good competition and long-term support
- Superior operational performance characteristics
- Better overall cost profile, particularly long term operations and maintenance costs
- Minimal risks associated with implementation and service delivery

5.0 SUMMARY OF INDIVIDUAL FINDINGS

Panel Member	Technology			
	Monorail	Rubber Tire	Steel Wheel/Steel Rail	Urban Maglev
Steve Barsony			X	
Ken Knight			X	
Henry Kolesar			X	
Panos Prevedouros		X		
Ron Tober			X	

We, the undersigned, acknowledge that the attached report fairly represents our individual selection decision, as well as the combined selection decision of the Independent Technology Selection Panel for the Honolulu High-Capacity Transit Corridor Project.

Panel Members are:

<u>Name/Title</u>	<u>Signature and Date</u>
Ron Tober, Panel Chairman	 2/22/08
Steve Barsony, Panel Member	 2/22/08
Kenneth Knight, Panel Member	 2/22/08
Henry Kolesar, Panel Member	 2/22/08
Dr. Panos Prevedouros, Panel Member	 2/22/08