

SOUND TRANSIT

RESOLUTION NO. R98-38

**Awarding a contract to the General Motors Corporation,
Electro-Motive Division for the purchase of passenger rail equipment
BACKGROUND AND COMMENTS**

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Finance Committee	7/16/98	Recommend Board Approval	Paul W. Price , Commuter Rail Dir.	689-4760
Board of Directors	7/23/98	Approval	Judy Crow, Contract Specialist	689-4796

ACTION:

Approval of Resolution No. R98-38 awarding a contract to General Motors Corporation, Electro-Motive Division for the purchase of passenger rail equipment necessary for the operation of the Tacoma to Seattle commuter rail segment. This contract will supply six (6) locomotives, training and support manuals, at a cost not to exceed a net base proposal price of \$14,978,329.20 including taxes. Additionally, this resolution authorizes up to \$350,000.00 for spare parts associated with this purchase, resulting in a total contract award amount not to exceed \$15,329,329.20. An additional \$748,916.46 (5% of the base proposal price of \$14,978,329.20) is requested to be authorized as a contingency reserve to cover work order changes.

TABLE OF PROPOSED PRICE BY EMD

1) EMD Price (Six Locomotives)	\$14,978,329.20
2) Spare Parts	<u>350,000.00</u>
Contract Award	\$15,328,329.20
5% Contingency of BASE price	<u>748,916.46</u>
Potential Value of Contract	\$16,077,245.66

Execution of this contract in July of 1998 will provide for at least two (2) vehicles to be available in December 1999, for service start-up (two 3-car sets), with a continued delivery schedule of approximately two (2) additional vehicles per month, until delivery is completed in the Summer of the year 2000, for the net base proposal. The RFP also contains options for five (5) additional coaches to be awarded by a future Board action, upon completion of environmental review for the Tacoma-Lakewood and Seattle-Everett segments, which is expected to occur in the first half of 1999. Options, if exercised by the Board, will continue vehicle delivery until 2001 for the Lakewood-Tacoma and Seattle-Everett segments. This results in an approximate total contract

price (subject to escalator clauses) of \$27,810,270 and a contingency amount of \$1,390,514, for a total contract value of \$29,200,784.

BACKGROUND:

As described in *Sound Move*, *Sounder* Commuter Rail has an expected operational start-up of service in December of 1999. To meet this goal, the staff has been directed by the Board to develop specifications and go out for procurement for *Sounder* rail cars and locomotives. At the July 23 Board meeting, the award of the contract for locomotives is before the Board for action.

To develop the specifications, Sound Transit hired Raul V. Bravo and Associates, Inc., (RVB) as its technical assistant. RVB updated and broadened the specification to allow recent entries into the commuter rail market an opportunity to compete with a proven product. After modification by RVB, the specification was authorized to be released for procurement by the Executive Committee of the Board in February of 1998.

The locomotive offered by Boise is a re-manufactured unit. The technical characteristics and performance data are adequate for providing reliable service. However, life cycle costs are not as competitive as the EMD unit.

BID PROCESS:

This procurement process consisted of several steps. Consultant services were procured for the purpose of developing the technical specifications. A Request for Qualifications/Proposals entitled Request for Qualifications and Proposal for Consulting Services to Refine Public Domain Commuter Rail Vehicle Specifications, RFQ/RFP No. RTA/CR 27-97 was publicly advertised. Six (6) proposals were received on October 13, 1997.

The firm of Raul V. Bravo & Associates (RVB) was selected. One of the reasons that RVB was selected was because that firm has a broad breadth of experience with transit rail operations and a variety of rail vehicle manufacturers. RVB began their work by compiling the documents required to be reviewed and evaluated. This included the technical specifications for the locomotives, which were provided to the Sound Transit by North San Diego County Transit District, MTA/Los Angeles, Caltrans, Chicago METRA and Massachusetts Bay Transportation Authority.

RVB revised the public domain documents by doing the following:

- Specify a vehicle that is fully compliant with all applicable rules, regulations and industry recommended practices, including certain proposed rules under consideration by the Federal Railroad Administration;
- Open as many technical characteristics and performance requirements as possible to enhance vendor's participation;
- Providing for a performance simulation test that would model the trip time and fuel consumption during projected Sound Transit trips;

- Providing for a life cycle cost analysis that would allow Sound Transit to select the best value over the locomotive life, not just the initial capital cost.

RVB also assessed market conditions. They concluded that approximately four manufacturers, namely General Motors Corporation Electro-Motive Division, GEC Alsthom AMF, General Electric and Boise Locomotive Company were potential proposers and that the current market conditions were favorable to obtaining competitive proposals.

RVB reviewed the contract terms and conditions that Sound Transit staff had prepared. RVB recommended that certain modifications be made to the Contract Documents in order to reduce costs and expand the potential for receiving multiple proposers.

An advertisement was placed in the rail industry trade journal on January 26, 1998, announcing that Sound Transit was soliciting Letters of Interest from companies capable of providing commuter rail vehicles. We received three (3) Letters of Interest. Everyone who submitted a Letter of Interest was sent a Request for Proposals.

Prior to distributing the Request For Proposals (RFP) to the public, Sound Transit staff met with the Federal Transit Administration (FTA) for the purpose of reviewing the document for compliance with federal requirements. The FTA expressed no concern that the document somehow violated federal requirements or was in any way improper.

The document was publicly advertised and distributed at the cost of \$100. Five (5) copies of the document were distributed.

The RFP document included Sections 1-7, 1-9 and 1-10, which allowed prospective Proposers to ask questions of clarification by submitting a Request for Information (RFI) on the prescribed form. Sound Transit would, in accordance with the Contract Documents, respond to these RFIs via written Addenda. Staff received 84 RFIs which asked a variety of questions regarding the technical specifications and the contract terms and conditions. Many changes were made to the Contract Documents to respond to the RFIs. In most instances, requirements that were considered by some prospective proposers as being onerous or inequitable were modified.

PROPOSALS:

Two proposals were received on May 1, 1998; one from Boise and one for Electro-Motive Division of General Motors Corporation. The proposal evaluation process consists of two steps:

1. Evaluation of the initial proposals to determine the "competitive range" of proposers, from whom Best & Final Offers would be requested.
2. Evaluation of the Best & Final Offers.

The Evaluation Committee included representatives from the commuter rail department, legal department and contracts division as well as technical expertise from Raul V. Bravo & Associates. The evaluations to determine the "competitive range" used the criteria listed in the Request for Proposals:

- a. Price (Total Proposal Price plus Maintenance Cost Adjustment)
- b. Manufacturing Plan
- c. Experience in Building Commuter Rail Locomotives
- d. History of On-Time Performance
- e. Adequate Financial Resources

These criteria required that the Committee review a wide range of information comprising both technical and contract/legal issues.

The process allowed the Committee to conduct Evaluation Conferences, that is, a meeting with each proposer in turn to ask questions of clarification about a specific proposal. The Committee determined that both proposers were in the “competitive range.” A Request for Best & Final Offers was developed, which addressed issues that arose during the Evaluation Conferences and identified the criteria by which the Best & Final Offers (BAFO’s) would be evaluated. These criteria were designed to capture the meaningful differences between the two proposers, rather than concentrate on factors that were common to both proposers:

- a. Price (total Proposal Price plus the Performance Cost Adjustment)
- b. History of On-Time Performance
- c. Manufacturing Plan
- d. Life Cycle Costs

The most interesting part of these criteria was the criterion relating to Life Cycle Cost. Sound Transit made it known that we were interested not only in the initial capital cost, but in the total costs to own and operate and maintain the locomotives over the expected life of the locomotive. We didn’t just want the lowest price for buying a locomotive itself – we wanted the best value in operating it over the long term.

BAFO’s were submitted by both proposers on June 12, 1998. The Committee reviewed the BAFO’s and quickly determined that a crucial element was the Life Cycle Cost component of the evaluation. We heightened our scrutiny of this issue to ensure the accuracy, reliability and supportability of whatever conclusions we would reach.

To this end, we solicited the opinion of a third-party expert, Corporate Strategies, on the locomotive performance modeling data. This data resulted from computer modeling of the projected train trips that the locomotives would be making on our commuter rail routes. The proposers were invited to review this third-party data and validate it for their particular application. Both proposers accepted this invitation, reviewed the third-party data and confirmed its applicability and reliability for their particular locomotive product. Likewise, both proposers were asked to confirm, in writing, that the raw data used in developing maintenance costs analysis was accurate and reliable. They were asked to describe the source of their maintenance data. We now have letters in the file from both manufacturers containing the certification and information that we requested. In addition, we solicited third-party maintenance data, which we used to validate the information submitted by the proposer.

Evaluation Summary of Results

We used the results of this analysis to award points for each criterion related to the are summarized as follows:

	Boise	EMD
Adjusted proposal price (40 points-possible)	40	36
History of on-time performance (20 points)	15	19
Manufacturing plan (20 points)	17	18
Life Cycle Costs (20 points)	<u>12</u>	<u>20</u>
Total score	<u>84</u>	<u>93</u>

Evaluation – a. Economic Analysis

The crux of the scoring lies in the economic analysis, so it will be described in more detail:

The *Adjusted Proposal Price* is the sum of the average all-in purchase cost per locomotive and the Net Present Value (NPV) of its fuel cost over a 20-year period. Originally, the Adjusted Proposal Price was also to include the NPV of extraordinary running time costs and the NPV of truck frame replacement at 20 years (if a used truck frame were installed on the purchased locomotive). However, these two considerations were withdrawn once it was learned that: (i) there was virtually no difference in the running times of the two proposed locomotives, and both could reasonably satisfy the schedule assumptions being used by Sound Transit staff; and (ii) the truck frame on the Boise locomotive is remanufactured to effectively "new" condition, and therefore is functionally identical to the truck frame supplied by EMD.

Annual fuel costs were calculated based on: (i) fuel consumption estimates provided for each locomotive type, for five operating segments (i.e., Tacoma–Lakewood, Seattle–Tacoma, Seattle–Everett, Everett–Lakewood, and Lakewood–Everett); (ii) Sounder schedules provided by staff, which were used to calculate the average number of trips per day on each segment; and (iii) an assumed fuel inflation rate of 2% per year. The NPV of the fuel cost was calculated using a 6% discount rate, which approximates Sound Transit's long-term cost of capital.

Life Cycle Costs include the NPV of maintenance and overhaul costs calculated for a 20-year period. This calculation was based on annual, constant-dollar estimates provided by each proposer. These values were adjusted in two ways. First, labor costs were adjusted to reflect a common loaded wage rate. Boise had assumed \$16.00 per hour, whereas EMD had assumed \$38.00 per hour. To reconcile these differences, the labor costs for both proposers were adjusted to a mid-point labor cost rate of \$27.00 per hour, which more reasonably represents a Seattle labor rate.¹ Second, labor and materials costs were adjusted for inflation, using an annual inflation rate of 3.6%, derived from a regional economic forecast prepared in August 1997 by Conway & Associates. That forecast was used in Sound Transit's most recent financial forecast.

The results of this analysis are summarized in a table below:

BAFO Analysis 6/29, Comparison				
	Boise	EMD	Difference: high - low	Difference % of low bid
Adjusted Proposal Price (40 points)				
Average Purchase Cost	2,155,483	2,496,388	340,905	15.8%
NPV Fuel Cost	876,557	832,120	44,437	5.3%
NPV Truck Replacement*				
NPV Running Time Differential*				
Adjusted Proposal Price	3,032,040	3,328,508	296,468	9.8%
Rank	1	2		
Score	40	36		
Life Cycle Cost NPV (20 points)				
	2,783,544	1,068,637	1,714,907	160.5%
Rank	2	1		
Score	12	20 (1)		
<i>(1) EMD is 61% of the maintenance cost differential (high cost - low cost)</i>				
* excluded from the final comparison				
notes:				
All costs are expressed on a unit basis (I.e., cost per locomotive)				
"NPV" refers to net present value, which is the sum of annual costs (nominal\$) over 20 years operation, discounted at 6% per year.				
derivation of score:				
Maximum score is awarded to the first-ranked bidder (i.e., lowest cost).				
Score for the second-ranked bidder is calculated as follows:				
$(1 - ((\text{Cost differential} - \text{Low Cost}) / \text{Cost differential})) * \text{maximum points}$				

The bottom line is that the Life Cost Analysis indicates that the EMD product would be \$1,714,907 cheaper than the Boise product over the 20 year expected life span of a locomotive. This appears to be primarily due to the fact that the Boise product is a re-manufactured product and the EMD product is a new product. The overhaul costs for the Boise product are more expensive than for the EMD product.

Evaluation - b. Performance Analysis

In addition to the cost analysis, we evaluated the proposals on the basis of the performance analysis criteria listed in the Request for Best & Final Offers and History of On-Time Performance and Manufacturing Plan. A more detailed description of this analysis is summarized below:

HISTORY OF ON-TIME PERFORMANCE

<i>EMD</i> <i>19</i>	<i>BOISE LOCOMOTIVE</i> <i>15</i>
EMD is a long established manufacturer of both freight and passenger locomotives. They have consistently built quality products. EMD's product is well defined and proven.	Boise's new management took over the responsibilities of Morrison Knudsen in 1995. While MK's organization faced production problems, the new management appears to have overcome the problems. Nonetheless, there is somewhat more risk from a newer organization.
EMD has proven and demonstrated capabilities	BL has proven capabilities, but to a lesser scale than its competitor
EMD's production based approach is systematic and requires little use of change orders. The product offered is well defined and proven. EMD's on-time delivery record is good.	BL's on-time delivery record is good, however, they tend to encourage flexibility and change, which is normally a good thing, except where it promotes the unnecessary use of change orders.
EMD has a 40/50 passenger locomotive order backlog. Capacity constraints have been addressed by adding facilities, such as Super Steel with the Long Island Railroad order. However this introduces certain risks by having to manage and rely on subcontractors.	BL's backlog is small at 2 passenger locomotives during 1999. Boise's shops offer plenty of capacity.

MANUFACTURING PLAN

<i>EMD</i> <i>18</i>	<i>BOISE LOCOMOTIVE</i> <i>17</i>
EMD has several assembly facilities available.	BL has one facility available in Boise.
EMD operates its own plants; subs operate their plants. This condition introduces other parties and therefore coordination risks.	BL operates its own plant.
EMD has extensive human, economic and facilities resources.	BL has reasonable but limited resources. This could be a problem if new orders come in.
Shipping components to different sites complicates project. While it appears to be under control, certain coordinating risks remain	One site production simplifies project.
EMD's organization and approach is complete and comprehensive. Approach is production- based and relies on existing designs. No risks here	Approach is custom oriented. While more flexible, it could create difficulties in product configuration control and project management.
EMD's approach is complete and disciplined.	BL's approach is more flexible, but will require greater oversight.

In addition to the issues evaluated above, other important and unique technical features are worth mentioning. The features identified below are included in the EMD's proposal.

EMD is offering a proven product.

The F59 PHI model is a product which is fully designed and developed. By the time the Sound Transit units would enter production, 49 almost identical units would have been produced. 21 of these units are currently in production for Amtrak. This condition offers a level of comfort to Sound Transit, demonstrating overall performance and most importantly, maintenance and overhaul costs.

EMD offers a superior cab design.

The “Whisper Cab” design was introduced by EMD on the F59-PHI models. As the Federal Railroad Administration (FRA) continues to search for safer railroading, engineer’s fatigue is one important element. The design is in response to this particular issue, isolating the control cab from the main frame of the locomotive. The “Whisper Cab” design improves the operating environment for the crew over typical locomotives and enhances cab component reliability by reducing equipment vibration.

EMD offers the use of roller suspension bearings.

The EMD F59 uses roller bearings to support the traction motors on the locomotive's axles. The development of this bearing technology has been long desired by the nation's railroads. Prior to its introduction the traction motor was supported by a plain, oil & wick bearing, with higher maintenance costs. Although these plain bearings work well and are extremely easy to disassemble, they require constant monitoring of oil levels and wick conditions. If the oil level runs low, or the wick becomes glazed and unable to lubricate the bearing, then the bearing will seize and lock the axle. Consequently, railroads must frequently check the lubrication levels and inspect the wick conditions, usually at 15 to 30 day cycles. Even with this close monitoring, some bearings still go unlubricated, making seized traction motor suspension bearings a common cause of locked locomotive axles.

The roller bearing eliminates this problem. They can operate the entire life of the wheel without maintenance or scheduled lubrications. They require more work in disassembly during overhauls, but are superior in a daily operation. The railroads converted the journal bearings in their freight car fleets from plain bearings to roller bearings for this exact same reason - reduced maintenance and lubrication with greater reliability.

EMD has improved exhaust emissions.

EMD is conducting extensive research in the area of alternative fuels, in order to improve exhaust emissions. The 12-710G3B-EC 12-cylinder engine is equipped with electronic fuel injection, allowing for, among other performance advantages low smoke starting and reduced fuel consumption. The 710 engine has lower peak pressure and exhaust temperatures and responds more favorably to timing retard than older diesel engines.

In addition, and in conjunction with Southern California Regional Rail Authority (SCRRA) and Southwest Research Institute, EMD is conducting a research program to demonstrate the environmental and economic benefits of using natural gas as an alternative fuel. Reduced exhaust emissions are the primary goal, targeting a 75 percent reduction on NOx emissions from the baseline diesel locomotive. Early testing has shown that the target can be achieved on both a throttle notch-by-notch and weighted duty-cycle basis.

This technology is retrofitable and could be implemented in Sound Transit locomotives, when fully proven and commercially available.

EMD uses wheel creep control.

Wheel creep adhesion control system developed by EMD allows the wheels to spin simultaneously at a slightly faster rate than actual ground speed. When this condition occurs, the software controls the main generator excitation very closely, by allowing it to maintain the creeping wheel speed and therefore maximizing adhesion. This is particularly important with rainy and inclement weather.

EMD uses an electronic fuel injection system.

The electronically controlled fuel injection system provides engine and injection timing and eliminates camshaft wind-up error. Fuel delivery accuracy is also improved by utilizing flywheel timing and eliminating rack linkage.

The system precision contributes to reduce exhaust emission and provides a continuous self-diagnostic activity, as in integral part of it.

EMD uses the latest APTA's Safety Requirements.

EMD has already incorporated some of the key structural requirements to be promulgated by APTA, the new "keeper" of standards for rail vehicles. EMD's locomotive includes new collision posts and crew protection features, not found yet in other locomotives.

EMD has a history of environmental stewardship.

EMD's parent corporation, General Motors (GM), has a strong history of environmental responsiveness, having created a Public Policy Committee that addresses corporate environmental issues. They work with GM units around the world to provide operations, planning, engineering and consulting services for the corporate global environmental requirements of GM. This has resulted in a world-wide effort of systematic activities and focus on environmental issues, including devoting research and development of environmental technology. The benefit to Sound Transit is that we will be the recipients of this attention and focus on environmental issues with design and manufacture features.

Examples of these features include: voluntary toxic emission reductions, cessation of the use of Class I ozone depleting substances in their vehicles, noise reduction in vehicles, life cycle optimization of vehicle design and manufacture.

EMD spare parts and service

With the introduction of Amtrak's 21 F59-PHI locomotive model by early 1999, almost 50 similar units will be operating in the West Coast. This condition will facilitate the availability of spare parts, reduce inventory costs and ensure optimum service support.

Boise Locomotive Unit

The locomotive offered by Boise Locomotive is a remanufactured unit. The technical characteristics and performance data are adequate for providing reliable service. However, life cycle costs are not as competitive as the EMD unit.

M/W/DBE:

National and International equipment suppliers meet goals established through national agreements filed with the Federal Transit Administration (FTA). Such firms must certify that they are in compliance with their plans. Attached is Exhibit A for reference on this subject.

FUNDING:

The *Sound Move* 1995 budget for commuter rail equipment was \$144,000,000.

ALTERNATIVES:

The Board may do one of the following:

1. Award the contract to EMD subject to successful resolution of pending contract terms and conditions. In the event that contract negotiations with EMD are not successful, return to the Board for action to deem EMD non-responsive and give authorization to negotiate and execute a contract with Boise Locomotive.
2. Eliminate EMD now and negotiate and execute with Boise.
3. Re-bid the project.
4. Terminate project.

CONSEQUENCES OF DELAY:

Currently, in direct week-for-week start-time delay if the contract is not signed, nor the Notice to Proceed issued in July 1998.

RELEVANT BOARD POLICIES AND PREVIOUS ACTIONS TAKEN:

- *Sound Move* (Adopted May 31, 1996).
- Board vehicle type-direction of October 1997.
- Executive Committees' release of specifications for bid – February 1998.
- Implementation Guide Adopted, June 12, 1997 (Motion No. 32).
- Commuter Action Plan, presented at Board Meeting July 24, 1997.

KEY FEATURES:

- A "Buy-America" pre-award audit, as required by the FTA, will be conducted the week of July 13, 1998.
- Authorize award of contract for six (6) locomotives for Tacoma-Seattle *Sounder* segment.

- Options for additional five (5) locomotives for Seattle-to-Everett and Tacoma to Lakewood segments, upon future Board action.
- Within Adopted Budget.
- Allows for late 1999 Start-up.
- DBE issues for transit vehicle manufacturers (TVM) are administered directly with the FTA, not with Sound Transit. Each TVM is required to achieve a DBE goal which is determined by the FTA. Typically 5-10% DBE participation is achieved.
- The Contract Documents provides for a Pre-Manufacture Planning Period, where in various products related to the proper planning and management of the project are submitted by the Contractor and reviewed by Sound Transit. These items include: shop drawings, schedules, quality assurance plans, etc. this process helps insure that major issues are resolved before the commencement of the manufacture process, thereby reducing the potential for change orders.
- The Pre-Manufacture Planning process also provides for a discussion of the use of local and small businesses.
- A warranty period of two (2) years will be provided.
- The scope of work includes training, spare parts, operating & maintenance manuals and other appurtenances necessary for the operation and maintenance of the vehicles.
- The contract allows Sound Transit to assign this contract to other jurisdictions that may wish to purchase the same vehicles. This is a process that was encouraged by the FTA, for the purpose of reducing overhead, administration and procurement costs.
- Since the basis of the selection is if the Life Cycle Cost analysis, we will be requiring the Manufacturer to be accountable financially for these costs. To this end, we are developing a formula that will assess damages in the event actual performance does not achieve the performance represented to us in the performance simulation model.

SOUND TRANSIT

RESOLUTION NO. R98-38

A RESOLUTION of the Board of the Central Puget Sound Regional Transit Authority awarding a contract to General Motors Corporation, Electro Motive Division (EMD) for the purchase of passenger rail equipment necessary for the operation of the Tacoma-to-Seattle commuter rail segment, conditioned upon the successful resolution of pending issues relating to contract terms and conditions, specifically to supply six (6) locomotives, training and support manuals, at a cost not to exceed a net base proposal price of \$14,978,329.20, including taxes, and to provide spare parts associated with this purchase for an amount not to exceed \$350,000.00, resulting in a total contract award amount not to exceed \$15,328,329.20, and authorizing an additional \$748,916.46 (5% of the base proposal price of \$14,978,329.20) as a contingency reserve to cover work order changes.

WHEREAS, a Regional Transit Authority ("Sound Transit") has been created for the Pierce, King, and Snohomish County region by action of their respective county councils pursuant to RCW 81.112.030; and

WHEREAS, on November 5, 1996, Central Puget Sound area voters approved local funding for *Sound Move*, the ten-year plan for regional high-capacity transit in the Central Puget Sound Region; and

WHEREAS, *Sound Move* included funding a commuter rail component consisting of designated segments, including the Tacoma-to-Seattle segment; and

WHEREAS, *Sound Move* established an expected operational startup date of December 1999 for commuter rail service on the Seattle-to-Tacoma segment; and

WHEREAS, the Seattle-to-Tacoma commuter rail service is expected to be implemented along existing Burlington Northern & Santa Fe railroad freight lines; and

WHEREAS, the Federal Transit Administration (FTA) has issued a Finding of No Significant Impact (FONSI) under the National Environmental Policy Act on the Tacoma-to-Seattle commuter rail line based on the Environmental Assessment; and

WHEREAS, Sound Transit adopted the Environmental Assessment in compliance with the State Environmental Policy Act; and

WHEREAS, it is necessary to procure locomotives in order for Sound Transit to implement the commuter rail service; and

WHEREAS, Sound Transit has developed design specifications for locomotives; and

WHEREAS, after developing the specifications and prior to soliciting proposals, Sound Transit determined that the Request for Proposal documents were in compliance with FTA requirements; and

WHEREAS, Sound Transit solicited proposals from competing locomotive manufacturers based upon the specifications; and

WHEREAS, Sound Transit evaluated the proposals pursuant to the process identified in the Request for Proposals (RFP) and determined General Motors Corporation, Electro Motive Division (EMD) to be the successful proposer; and

WHEREAS, Sound Transit has negotiated with EMD to resolve issues relating to contract terms and conditions; and

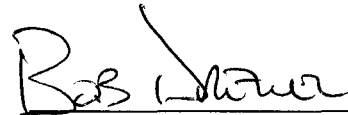
WHEREAS, it is in the best interest of Sound Transit to procure locomotives from EMD utilizing the design specifications and utilizing the base contract terms, conditions, and warranties negotiated therewith:

NOW, THEREFORE, BE IT RESOLVED by the Board of the Central Puget Sound Regional Transit Authority as follows:

A contract is hereby awarded to General Motors Corporation, Electro Motive Division for the purchase of passenger rail equipment necessary for the operation of the Tacoma-to-Seattle commuter rail segment. This Contract will supply six (6) locomotives, training and support


manuals, at a cost not to exceed a net base proposal price of \$14,978,329.20, including taxes, and provides for spare parts associated with this purchase in an amount not to exceed \$350,000.00, resulting in a total contract award amount not to exceed \$15,328,329.20. Furthermore, it provides for an additional \$748,916.46 (5% of the base proposal price of \$14,978,329.20) as a contingency reserve to cover work order changes. The Executive Director of the Central Puget Sound Regional Transit Authority is hereby authorized to execute the necessary contracts with General Motors Corporation, Electro Motive Division.

ADOPTED by the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on the 23rd day of July 1998.



Bob Drewel
Board Chair

ATTEST:



Marcia Walker
Board Administrator