COLUMBIA REGION ASSOCIATION OF GOVERNMENTS

Memorandum

July 25, 1974

To: Project Management Board

From: John Krawczyk

Subject: Ferry Service

A possible short-range, low-capital intensive means of increasing corridor capacity would be the provision of limited ferry service from a point in Clark County to a point in east Multnomah County.

To minimize costs, this ferry service should utilize landing sites which may already be in existence on one or both sides of the river. The ferry itself could be a barge, modified to carry autos and other non-auto traffic (i.e. bicycles and pedestrians). The barge would be powered by a small tugboat.

Service could be provided:

1. from eastern Vancouver to a landing point in the vicinity of Portland Airport

2. from Camas-Washougal to Troutdale

At either of these sites, the ferry would be in a satisfactory position to:

1. Improve transportation to the Portland Airport from eastern Clark County

2. Reduce travel time and distance to persons commuting to and from points in eastern Clark and Multnomah Counties.

3. Provide an alternate river crossing to the I-5 Bridge.

If the Project Management Board feels this might be a viable alternative, project staff will examine possible landing sites, determine what equipment would be necessary to implement such a project, determine the implementing and operating agencies, estimate costs and provide a time frame for the creation of a demonstration project.

LIST OF POTENTIAL SOCIAL, ECONOMIC AND LEGAL TRANSPORTATION IMPROVEMENTS

The following is a list of potential improvements which could be implemented to reduce highway congestion in the Interstate Bridge Corridor. Advantages and disadvantages of the respective improvements are not considered rather, your feedback concering which of the improvements are feasible and should be considered for further study is requested. The improvements are broken down into three catagories which include: (1) those social or economic adjustments which would lead to a reduction in the demand for travel (2) those improvements which would serve to provide disincentives to auto use and (3) those which would provide incentives to transit use.

A. Reduce demand for travel

X 1. The Four Day Work Week - this concept, as envisioned provides for a workday of 10 hours in length, four days a week. This concept has already been tried in some smaller American firms and has proven somewhat sucessful. By reducing the number of days a person is required to be at work, the four day work week could reduce weekly work trips by as much as 20%. However, a significant increase could be expected in non-work trips, due to the expanded leasure opportunities afforded by this arrangement.

X 2. Staggerd Work Hours - this involves modifying report and release times so that a wider dispersion of report and release times is achieved. Presently, some Portland firms are utilizing a staggered work hour arrangement. Staggered work hours might be made more effective by utilizing 15 minute rather than 1/2 hour intervals in report and release times.

3. Development of Surburban Work Centers - this could be utilized to accomplished one of two purposes. First, the workplace could become the center of the various suburban communities with housing located within easy walking distance of the workplace.

Second, workplaces could be located in areas outside the central city to induce traffic to flow away from the central city. To some extent, this movement of workplaces to the suburbs is already taking place.

X 4. Restrict development in specified corridors through zoning and land use planning - could be accomplished by requiring strict standards for development in traffic corridors which are overloaded. Actually limiting population in areas has been suggested but such a plan was recently ruled illegal in California on constitutional grounds.

B) Disincentives to Auto Use

X 1. Peak Hour Highway pricing - major urban highway facilities must be constructed to satisfy the very high level of demand for travel which occurs only during a 3 or 4 hour period on weekdays. Thus, peak hour travel demands require the consturction of "extra-capacity" highway facilities necessary to meet this demand. To reduce the demand during the peak hour, users may be charged an additional highway use fee. This could take the form of tolls, or user charges assessed to recover the cost of the extra-capacity facilities.

X 2. Municipal Income Tax - the city might impose a municipal income tax on all persons working in the city and living outside of it's boundaries. Tax exemptions or credits could be provided for persons using carpools or transit to commute to work.

X 3. Modify Auto License Tax - revise the system of assessing the auto license tax to assess the tax on the basis of weight, horsepower or engine size. This tax would serve as an incentive to use smaller cars.

4. Institute a personal property tax on motor vehicles - provide for a property tax on motor vehicles, using the reciepts for homestead property tax relief, to discourage multiple auto ownership.

5. Increase state motor fuel tax - increase this tax to make gasoline more expensive, thereby reducing it's consumption.

6. Permit gasoline prices to rise due to market influences - this could be accomplished by one of several means including:

   1. Reducing or eliminating the oil depletion allowance
   2. Restricting domestic drilling or exploration
   3. Reducing production

X 7. Require vehicle registration for out of state commuters - disincentives could be provided in the interstate corridor by requiring that Washington residents, working in Oregon and using their cars to commute to work, purchase Oregon license plates.

X 8. Parking Lot Tax - Under ORS 267.360 Transit Districts in Oregon are empowered to levy a business license fee. Tri-Met could impose this fee on pay parking lot operations in the Tri- County area, to raise revenue and discourage auto use.

Incentives to use Transit

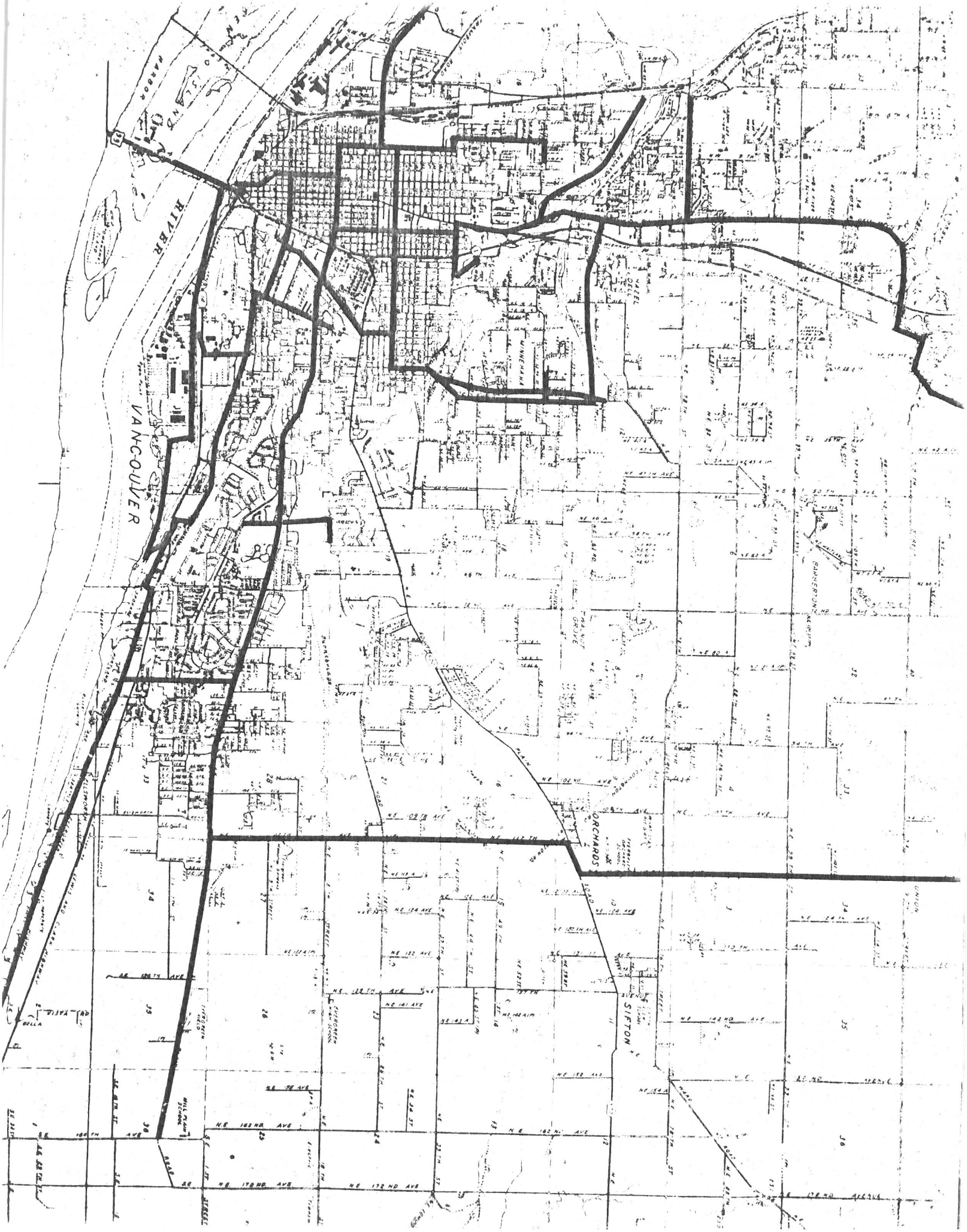
X 1. Tax incentives - permit taxpayers to claim, as a deduction on their income tax, the costs of using transit or carpools to commute to work. Deductions could also be provided for the costs of transit service used in the course of employment.

X 2. Require transt and carpool facilities - land use regulations could be modified to include provisions which would require developers to supply transit stations, park and ride facilities, bikeways, and preferential treatment for carpools where applicable.

X 3. Corporate Tax Incentives - business firms, engaged in programs to encourage employees and customers to use high occupancy vehicles could be granted special tax incentives and considertions.

4. Reduction in Auto Insurance Premiumns - state insurance regulations could be modified to require insurance companies to give special discounts to persons exclusively using transit to commute to work.

5. Free transit for the disadvantaged - special passes could be issued to provide free transit service to the poor, handicapped, students and the elderly.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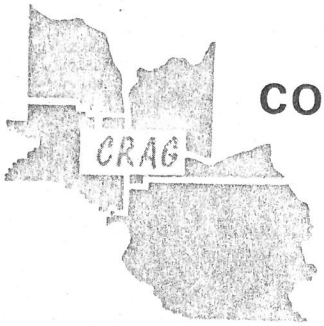


COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S. W. CANYON COURT
PORTLAND, OREGON 97221
(503) 297-3726

I-5 PROJECT MANAGEMENT BOARD MEETING

A G E N D A

FRIDAY - JULY 19, 1974
9 a.m.
COMMISSIONER GRANGER'S
CONFERENCE ROOM
CLARK COUNTY COURTHOUSE

I. APPROVAL OF MINUTES

II. STATUS OF PROJECT

III. REVIEW OF PMB AND CITIZEN COMMENTS ON DRAFT PHASE I REPORT

1. PMB Comments
2. Citizen Comments
3. Direction for Staff

IV. DISCUSSION OF INTERSTATE BICYCLE PATH PROPOSAL

V. NEW BUSINESS

VI. NEXT MEETING DATE

MEMORANDUM

TO: Hurvie Davis

BY: J. Garth Anderson, Public Works Director

DATE: July 10, 1974

SUBJECT: Interstate Bridge Corridor Project - Preliminary Phase I Report

My staff and I have reviewed the preliminary Phase I report. Quite frankly, we were disappointed. In short, we found the report to be too long, too generalized, lacking in supporting data and not directed at low cost, short-term solutions to the problem.

However, lest I sound overly critical, I should report that we do support the concepts of the project and will assist, as we can, to implement the recommendations. Specifically, Jerry Peck and I have already begun to identify the ways by which transit incentives and inter-system transfers can be offered.

As to my criticisms, the following outlines my concerns:

1) For whom is the report intended? The general public, implementing agencies or elected officials. In my opinion, the report should be cut to 10 and no more than 20 pages of text.

2) The project, its three phases and 18 month time frame are generally described in page 2. However, the physical limits of the corridor are not defined.

3) As stated on page 2, the project is to "optimise the capacity of existing and planned reconstructed I-5." However, much of the report is not devoted to short-term, low cost actions to that end.

4) Much of the report reads as if it were drawn from texts and other reference material on transportation. Since these discussions are not supported by data from the Portland-Vancouver area, phrases such as, "might be possible, appears feasible, merits consideration and may have impact" are frequently found. In short, the conclusions drawn throughout lack supporting data and thus, appear tentative.

5) The report notes that heavy freight demand precludes the use of Amtrack for significant commuter service. It then notes, it would be advantageous for the Vancouver Transit system to serve the train depot. Why?

6) The fourth paragraph on page 46 concerns the difficulties of urban commuting dispute the construction of several freeways. Which freeways other than I-5 have been constructed in the corridor?

7) The report recommendations are not significant when compared to the size of the problem. Some 100,000 upd use the I-5 bridge. The recommendations primarily address some portion of the 12,000+ Clark County residents that work in the Portland area. The recommendations do not include expected results. What portion of the 100,000 upd problem will be solved by implementation of the recommendations in Chapter IX?

8) Recommendation #1 reads as if all that remains is implementation of the recommended routes and schedules. I believe much work remains to be done and the recommendation should recognize that.

9) Recommendation #7 should recognize the April 74 action by the Washington State Legislature (HB 670) rather than footnote it.

I hope the above conveys my concerns over the report. If you wish to discuss them further, please contact either myself or Eric Oien.

J. Garth Anderson

J. GARTH ANDERSON, P.E.

JGA:bm

cc: Commissioner Richard Granger
Alan N. Harvey

WASHINGTON STATE
HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS

Office of District Engineer
4200 Main St.
P.O. Box 1717
Vancouver, Washington 98663

9 July 1974

Columbia Region Association of Governments
6400 S. W. Canyon Court
Portland, Oregon 97221

Attn: Mr. Hurvie Davis

Interstate Bridge Corridor Project
Report - Phase I

Gentlemen:

Attached please find our comments on the Phase I Interstate Bridge Corridor Project Report.

We regret being somewhat late in submitting these comments, but due to a heavy workload, we were unable to put them together until now. We hope that you can still use them and should you have any questions, please feel free to contact us at any time.

Yours very truly,

R. L. CARROLL, P.E.
District Engineer

By: P. C. HENRICHSEN, P.E.
District Location Engineer

RLC:m
PCH
Attch.
c.c. - Mr. Eric Oien, Asst. Dir. of Public Works, w/attch.
City of Vancouver, 210 E. 13th St., Vancouver, Wa. 98660
Mr. Mark Bovee, Oregon State Highway Division, w/attch.
State Highway Bldg., Salem, Oregon 97310
Mr. Phil Brown, HQ, Olympia w/attch.
Records Control

WASHINGTON DEPARTMENT OF HIGHWAYS
DISTRICT NO. 4

REVIEW OF PRELIMINARY INTERSTATE BRIDGE CORRIDOR PROJECT
PHASE 1

We have reviewed the report and find that in general, it is much too long with many unnecessary words and phrases and too many generalities which are difficult to grasp and from which it becomes rather hard for a reviewer to follow through to any conclusions.

Within Chapter II, Introduction, we question the reference made to carpools as being public transportation. Although carpools may be considered a form of mass transportation, assuming that each car can be filled to capacity, they still remain in private ownership and presumably are not public to the point that anyone who desires can ride in another's car without consent of the owner.

On page 2, we feel that it may now be necessary to temper the assumption that the I-205 structure is a committed facility in view of the very recent action of Multnomah County. Although it is assumed that the construction of the bridge will proceed, it would appear that the report should now be brought up to date and include the action taken by the County.

On page 3, looking at the rather large number of studies that are going on and which are affecting the corridor, it would appear that coordination of the studies is needed and the question arises as to who, if anybody, is to do it? Is it CRAG?

We also believe,on the same page, that the Committee structure for the Management Board as outlined is what was originally intended but not what was finally adopted and that it should be changed to reflect what the Board finally went with.

On page 15 of the report, the possibility of local type air service as a means of mass transportation is discussed and we are curious as to what type of air service is presently available,as noted in the second paragraph on this sheet, on a regional basis at this time. We also question the existence of a regional commuter service by rail inasmuch as we believe the only passenger service available by that mode is the Amtrak service which is not really a commuter service such as is needed between Vancouver and Portland.

On page 16, reference is made to gradients on the Vancouver Freeway, stating that "The profile alignment is considered level except on the Interstate Bridge and in the vicinity of Mill Plain Boulevard in Vancouver". There is an adverse grade for truck traffic from a point just south of Evergreen Boulevard to approximately 35th or 36th Street on the northbound lanes, and also a short stretch on the southbound lanes from approximately 42nd Street up to 35th or 36th Street again. Both of these sections significantly affect the speed that can be maintained by loaded trucks and therefore influences the operational speed of the entire traffic stream when there are trucks operating in these areas especially during the peak hours.

On the same page, reference is made to the Interstate Bridges and they are noted as being a major block in the traffic stream because of their openings and because of potential accidents which may close them to through traffic. Through agreements with the tugboat operators, which agreements were carried out between the two states and the operators, the bridge openings have been reduced, during peak hours, to practically none.

We also note that the two accidents which caused the "worst" traffic jams in the recent history of the interstate, did not occur on the bridges, but occurred on the four-lane section of Interstate 5, just south of Hayden Island or the Union Avenue- Expo Interchange exit. It was in this location that both the 47,000+ bottles were dumped, blocking all lanes, and later a load of pipe was flipped over and scattered, again blocking all lanes, causing a major backup of traffic in all directions. The bridges in both cases were not raised or were not blocked by any type of accident, and were fully operational on all six lanes.

It should also be noted that the warning system on the Vancouver Freeway is not exclusively for the bridges, but is also intended to warn motorists of any stops ahead of the signs, and to slow down. The Washington State Highway Department presently has a project on the books for the expansion of the warning system with new signs or additional signs to be posted as far north as 39th Street.

In noting these specific problem areas in the southbound direction, it would appear that both the Jantzen Shopping Center on-ramp for the southbound traffic, the Swift Avenue off-ramp with its 90° turn, and the Union Avenue off-ramp with its drop lane feature would be major problem areas. The first two create severe weaving problems; the third one causes problems because a lane is lost without the equivalent loss of traffic volume.

On page 17, it is indicated that the couplet transitions on Union and Grand Avenues in Portland are poor and it would appear to us that this is only half-way true. The southbound transition from the two-way traffic section of Union to the one-way traffic section seems to be quite straight forward and causes no problems. Admittedly, the northbound transition could stand some improvements to eliminate the two sharp curves from Grand back into Union.

On page 19, it is indicated that the movement of goods within the I-5 corridor, between Vancouver and Portland, is primarily by truck as opposed to the outlying areas where the movement to a much larger extent is by rail or by ship. We are not aware that the truck percentage on the Washington portions of the interstate, north of Vancouver, or on SR-14 up the Gorge, decrease appreciably as compared to the percentage in the corridor,and we are wondering if there is any appreciable decrease in Oregon south and east of Portland on the interstate facilities.

On Figure V-2, the following corrections should be made:

Mill Plain Rd. should be Mill Plain Blvd.
Lewis & Clark Hwy, add "SR-14" designation
Add "Union Ave." designation

It is also noted that some of the exhibits, for example Table V-1, reproduced very poorly and are extremely difficult to read which makes a review rather frustrating.

On pages 24 and 25, under the section "Washington Existing Enabling Legislation", this section should be rewritten to include the latest bills passed by the Washington Legislative mini-session in April of this year.

On page 26, we found that the bottom paragraph is almost verbatim repetition as to what is stated at the top of the same page. It would appear that one or the other could be cut out and shorten the report somewhat.

On page 28, we understand that the negotiations are now going on between Portland-Vancouver Bus Company and Tri-met to accomplish exactly what is proposed in Item 1.

Again on the same page, we believe that the discussions and recommendations in Item 3 have already been accomplished by the action of the Washington Legislature in April.

With regard to the discussion of the "Contra-flow Lane" roadways contained in the lower half of Page 31, we would again express our misgivings with such a proposal. Although it is admittedly an alternative that should be looked into, it would appear that there are a number of items that not only need to be reconsidered, but need to be resolved before such a proposal could be implemented. (1) The first item would be the justification for such a lane. Would it be able to decrease the traffic in the remaining two lanes (which in some cases may be only remaining <u>one</u> lane) to the extent that the traffic flow in those remaining lanes would actually be improved? (2) How would the vehicles utilizing the special lane, which we assume would be adjacent to the median, get onto the freeway and off of it? Would this be by special ramp or would they be "competing" for the space on the regular ramps with the rest of the traffic as well as having to weave their way through one or two lanes of traffic in order to get to the "express" lane. (3) Another item that has not been established to date would be the length of the "express" lane and its points of termination on either side of the river.

On page 38, in connection with the ramp metering proposal, a suggestion is made to utilize Main Street in Vancouver as a local thoroughfare for the traffic that cannot readily get onto the freeway at the metered ramps. Main Street is presently one-way southbound, but because of its parking setup and the limited number of lanes, it is totally useless for any continuous traffic flow. Any such scheme as proposed in the report would have to utilize Washington Street in order to have any efficiency at all.

On page 42, we would like to advise the writer of this section that the term "knots" means "nautical miles per hour".

Within that same section, it appears that the discussion of superferries, which presumably would move at speeds approximating twenty knots, is not very realistic. We are certain that a check with the local captain of the Port or U. S. Coast Guard would reveal that no ship is allowed to travel on either the Columbia or the Willamette Rivers at speeds exceeding four to five knots. Consequently, the capability of the ship to travel at major speeds would have no bearing on the actual travel time that would be involved in such a mode of travel. We also feel that even if ferries were possible, to provide the ferries is only the beginning, and on a system such as this, a discussion is needed as to where the docking and loading facilities would be on either side of the river and of how

the passengers would get to the ferry, and from the boat to their place of work.

On page 44, there is again a discussion of providing additional capacity across the Columbia River. First of all, we do not believe that the capacity problem lies on that section of the corridor, inasmuch as it is the only section that presently has six lanes, since both the Vancouver Freeway as well as the Minnesota Freeway are four-lane facilities, from the ends of the Interstate Bridges and for several miles in the northerly and southerly directions. Both Highway Departments have, over the last few years, looked at the possibility of modifying the existing structures. These reviews have come in response to such proposals as the construction of a monorail or a horizontal elevator on one side of the structure, or adding other mass transportation changes to the structures. In all cases, we find that it is not feasible or practical to do so.

On page 46, next to the last paragraph deals with "separate carpooling programs in Oregon and Washington". We wish to advise that the two carpool programs now have been combined under the direction of ODOT and are being handled out of the regional carpool office in Portland.

On page 48, we were somewhat confused as to whether we were dealing with six recommendations as noted in the first paragraph on this page, or seven recommendations as noted in the second paragraph on the same page. Continuing to page 53, we found that seven won out inasmuch as that appears to be the actual number of recommendations made.

On page 49, in the discussion of Route No. 1, it would appear to us that rather than for the buses to enter the freeway at Mill Plain and then exiting at 4th Street, it would be better if the buses just continued westerly under the freeway to Washington Street, came south on to 4th Street and then back to the depot, thereby staying off the freeway which presumably will already be loaded to capacity during the hours the buses are traveling.

On page 50, under item 2--last paragraph, it would appear to us that the fact that private carriers must break even or make a profit pretty well kills the transit proposal as a competitor to the automobile. Until transit is made more attractive by combination of scheduling, equipment, or better traveling time and pickup and delivery in close proximity to the user's home and place of work, it will not receive much use.

On page 51, as noted before, the Washington State Highway Department's carpool program has been combined with that of ODOT and it is now being conducted from the carpool office in Portland.

On page 52, item 6, it appears that as a part of the discussion contained herein with regards to ramp control, it should include the project now being developed for ramp controls at the southbound ramps on 39th Street and 24th Street in Vancouver.

On the same page, it would appear to us that in order to be effective, the high occupancy lane must be justified as an improvement, meaning that it will help to reduce the traffic volume in the remaining lanes. If all that it can be is a restraint incentive to force people out of their cars, it will not be effective and should not be implemented.

As a special comment, we note that the study data for the origin/destination

study,as shown on page 8 of the report, were not correct; the proper figures are:

1. 9500 questionnaires (rather than 14,000) were distributed to motorists.
2. 3400 rather than 3500 responses were received.
3. The percentage of sample return was 36% rather than 25%.

In conclusion, we wish to reiterate that we feel this report is much too long and that it deals too much in generalities. We thought that Phase I would do two things - (1) identify the problem, which has been done, and (2) specifically recommend interim solutions which could be implemented anywhere from soon to immediately; this we don't believe has been done.

As of this moment, we think that such solutions as ramp controls, combination of the transit systems, and expansion of the carpools are the only reliefs available to us. Any other solution by which implementation of rail transit, special use lane, or other mode of transportation or facility is used to increase capacity would take years to accomplish and therefore would not address itself to the goals and objectives of the Corridor Study as we understand it.

Multnomah County Oregon

BOARD OF COUNTY COMMISSIONERS
OFFICE OF PLANNING, EVALUATION AND PROGRAM DEVELOPMENT
(503) 248-3300 ▪ ROOM 203 TRAILWAYS BLDG., 1008 S.W. 6 AVENUE ▪ PORTLAND, OREGON 97204

July 8, 1974

Mr. Hurvie Davis
CRAG
6400 S.W. Canyon Ct.
Portland, Oregon 97221

Dear ~~Mr. Davis:~~ Hurvie,

Subject: Interstate Bridge Corridor Project
Phase I Report

In many ways the report provides a good basis for discussion and subsequent work, and in most places the report makes clear that the emphasis is on transit. I will concentrate my remarks on two issues which concern me a lot: incentives and implementation.

Incentives

I feel that if transit is to be given any reasonable chances of success through public action, the issue of transit incentives must be addressed thoroughly. The report does a good job in discussing the disincentives inherent in the current confusion of several carriers, but very light treatment is given to the more controversial matter of automobile disincentives. In addition, in several places, the report discusses automobile capacity in such a way as to lead one to believe that auto capacity has nothing to do with incentives. I feel that more work is required here, and I would like to discuss the matter at the next PMB meeting. I will list some examples:

1. p.37: On this page are listed six possibilities as potential incentive measures. Nowhere in the report are they evaluated, yet the title of the report is "A Transportation Evaluation".

2. p.29: Here there should be discussion of the legal aspects of incentives, and the possibility of new legislation, yet there is none whatever. I have brought this matter up at PMB meetings many times.

3. There are no conclusions or recommendations regarding auto disincentives.

4. In several places, the automobile capacity of the corridor is discussed. I think the report should point out that expansion of auto capacity is generally a transit disincentive in a corridor with growing demand for movement, given the other trends of sprawl, transit service difficulties, etc.

5. p.41: The report discusses narrower highway lanes as a potential transit improvement. I think it is unlikely that transit will benefit from this in this corridor. This increases auto capacity and, with the auto advantages, will be a transit disincentive. In addition, it provides a greater opportunity for mixing cars, trucks, and busses. The only way to add an additional lane to transit benefit is to make it preferential or exclusive.

6. p.46: The "Basic Conclusions and Findings" refer, again, only to the disincentives of multiple carriers, not at all to the historical disincentives created by revolutionary expansion of auto capacity in the last two decades.

7. The report refers to auto disincentive as an "indirect" action. I suggest that auto disincentives are very direct. They function, basically, by altering the pricing relationships, so that a user pays more to use one mode relative to another (including the costs of time). This is a very direct action, although it may show only gradually through time. I had hoped that this project would give thorough consideration to this issue, because the opportunity is nearly ideal.

In short, I would recommend further work and expansion of this issue, in the spirit of a very good statement found on page 38: "The public interest can best be served by providing a transit system which eliminates all possible barriers which deter the use of the system."

Implementation

I think further work is needed on implementation in several areas, although I think the report is good, as far as it went.

1. The report should give recommendations for implementation by laying out what is to be done, who should do it, how it should be done, and when. This should be the heart of the report.

2. I would like to see more emphasis in CRAG on staggered work hours. CRAG is in a good position to push this issue throughout the region. Perhaps the Corridor Project can provide some spark for it.

3. In line with the above, I would like to see the report make a full range of recommendations on incentives and disincentives. The responsible agencies are still free to act according to their own policies, but if they are to do so, they should be fully aware of the possibilities. The Corridor Project has a contribution to make here.

Other Comments

1. Except for issues concerning flexibility in capital improvements, I think no further work should be done on new modes at this time, unless current developments break to give a definite short-run opportunity. By the way, I don't consider light rail a "new mode" in the same sense that others are "new mode." I think further work on light rail is appropriate, in spite of the difficulties in this corridor.

2. Table V-1 is misleading, and so are any references to it. It should be pointed out that "capacity" is related to speed and assumed acceptable level of service. The table should indicate how the capacity data are developed. For example, I am unable to relate the 100,000 vpd capacity figure for I-5 at Fremont to the AASHO standards, which usually are expressed in hourly flow figures. Please indicate the assumptions used regarding level of service, design speed, and hours per day (i.e. relating vph to vpd). Slightly different assumptions can give significantly different results.

3. Table VII-3 I have several concerns about:

   a. I question some of the numbers in the "energy efficiency" column. There are several secondary sources which speak to this issue and they come up with different numbers. Perhaps CRAG did its own figuring, an effort which would be commendable. I think the automobile number is too high, however. Energy efficiency calculation should include all costs, including construction as well as operation. One fairly careful study done by Hirst indicates that the energy consumption for the auto mode is 7 as opposed to 25 in table VII-3. Of course, the same comprehensive calculation should be done with other modes and, to my knowledge, hasn't yet been done. However, when "indirect" energy consumption factors are accounted for, the automobile is far and away the biggest consumer in nearly every category. My recommendation is that this column should show how the data were derived, so that people can better draw their own conclusions about comparative energy efficiency.

   b. The "Noise Quality" column shows light rail as "fair" and busses as "fair/good". This is exactly contrary to my knowledge, and I would like to know how this conclusion is reached.

   c. The "Technology Status" column shows light rail as "demo" and monorail as "operational". I think this is misleading. Light rail is and has been operational throughout the world for decades in a technological sense. By contrast, technologically, heavy rail (i.e. BART) and monorail are infants.

   d. There should be some columns added, including air impact and land use impact.

4. I think the report should outline very clearly and emphatically the local agency roles and opportunities for traffic control improvements which can favor transit. Again, each jurisdiction has its policies, but I think the choices need to be laid out to aid in the formulation of policies. I would cite an example from the City of Portland. The City has established a traffic control policy which definitely favors trucks in a certain area of northwest Portland, thereby setting at least one precedent for this sort of thing. I cite this example only because I am very familiar with it. All jurisdictions have, I am sure, written or unwritten policies and the PMB ought to solicit appropriate policies and action from each jurisdiction.

5. I would suggest updating those parts of the report which don't take account of the new Washington enabling legislation of April 1974.

6. p.26: Mention is made of the ICC Commercial Zone Ruling as a constraint on service by private carriers. I believe the report should outline a procedure for appeal to the ICC for variance.

Sincerely,

Dave Hupp
Environmental Planner

DH:jo

cc: Dick Granger, Clark County Commissioner
Loren Kramer

The Inter-State Bikeway was planned because one of the main goals of the Clark County Bikeway Plan, as determined from a question-air, (see firure 1) was to get safely to Oregon. The Inter- State Bikeway will connect the Vancouver Central Bussiness District, with the Portland Central Bus iness District. The section of the route that is between the Broadway Bridge, and Ainsworth St., is an element of the C.R.A.G. Regional Bikeway Demonstration Project, the Bicentennial Bikeway. The cost for construction of the Inter-State Bikeway should be born by the States of Oregon and Washington. The cost of maintenance should be assigned to the jurisdiction owning the right-of-way in which the route is located.

The purpose of this proposed bikeway is to, 1. provide access to recreation opportunities on the Oregon side of the Columbia River, and to the giant park proposed for Vancouver. 2, Provide access to jobs on Hayden Island for people of Vancouver and North Portland. 3, Provide a safe route to bicycle from North and Northeast Portland to the downtown. We anticipate little demand to bicycle from downtown Vancouver to downtown Portland. We do anticipate some demand to bike to work in the industrial areas of Vancouver and North Portland.

In order for the Oregon State Highway Division to commit funds to this project, it must receive a written request from the Portland City Council, and the Multnomah County Commissioners. In order for the Washington State Highway Department to make provisions for bicycles , it must receive a written request from the Vancouver City Council. It is most important that the highway departments of both states fully understand the function, and type of facility which are being requseted of them.

A location description, as well as, traffic engineering analysis for safety provisions should be appendixed to the formal request

Interstate Bikeway

for action. The States can then, react to the requests with some conception of what is being asked of them.

It is important that everyone freely communicate with one another concerned with this project. Therefore, we recommend that every staff person working on this project find out who his counterpart is in the other jurisdictions, as well as, in the State Highway Departments.

LOCATION OF THE INTER-STATE BIKEWAY

The Inter-State Bikeway runs from the intersection of Washington St. with the I-5 Bridge approach, in Vancouver, to the sidewalk approach to the Broadway Bridge, in Portland. The following text of this route description is divided into five sections. Each section describes the manner in which provisions can be made for the cyclist by each jurisdiction primarily involved in providing input to the State Highway Agencies of Washington and Oregon.

APPROACH TO THE I-5 BRIDGE IN VANCOUVER

The cycling traffic would be routed South on Columbia St. and East on Third St. to Washington and South on Washington to a point under the railroad overcrossing. At this point the roadway viers to the right, and a sidewalk runs adjacent to this section of street. There is parking on the left side of the street, beginning from the end of the sidewalk. One parking space must be removed to allow access, via a curb cut, to the sidewalk which approaches the bridge sidewalk. Once this has been implemented the parking space restriction must be strictly enforced by the Vancouver Police Department. From the curb the cyclist merely proceeds on the sidewalk accross the bridge. There should be sign protection at the narrow portion of Washington St., where it passes under the railroad overcrossing, as well as, " Bike Route " signs to direct the cyclists to the gateway point.

The Northbound cycling traffic coming from Oregon will use the East

sidewalk of the I-5 Bridge. They will exit the bridge sidewalk, and turn right onto the street that deadends at the freeway. Proceeding East on the street, for a hundred feet, or so, there is an intersection with Columbia Way. A short sidewalk is provided, which should have a curb cut, to get the cyclist out of the intersection. From the sidewalk, following the roadway under the bridge, the shoulder should be paved at least six feet wide. The paved shoulder under the bridge should be paved six feet over from the wall. This will leave a gap of one to two feet between the edge of the bikeway and the edge of the roadway. This gap should trap most of the road debris that would otherwise be strewn all over the bikeway surface. From the section under the bridge the shoulder should be paved six feet over from the retaining wall, and an extruded curb constructed to prevent cars from parking on the bikeway. From this point the cyclist can proceed into Vancouver on the existing streets.

I-5 BRIDGE TO MARINE DRIVE

The I-5 Bridge sidewalks will function as North-South couplets between the Oregon and Washington sides of the Columbia River. It is unwise to have two-way traffic on one side of the bridge sidewalk from the standpoint of safety. The public paid for both sidewalks, they should be able to use them. The cyclists and pedestrians should not be forced to compromise their safety.

The existing sidewalk approach to the west side of the bridge on Hayden Island going from Oregon to Washington presently accomodates bicycles and pedestrians. At the point where the sidewalk from the bridge tunnel intersects with the sidewalk along the parking lot, the cyclist is forced to make a 90° turn on a narrow sidewalk. A triangular section should be added to the sidewalk, at the location of the " Police Vehicles" sign, that would accomodate a bicycle turning movement of 90°. The sidewalk along the State Police parking lot, should be

extended to a point where a bicycle pedestrian crossing can be provided to the other side of the intersection. At this point an eight to ten foot wide path, to allow safe two way traffic, should be constructed to the Portland Harbor bridge sidewalk. The bridge sidewalk extends to a point where it ends on the exit ramp to Marine Drive. This point is called a " bicycle crunch point". What happens at this point is that the cyclist is forced to dismount and ride on the narrow roadway used by many fast moving cars and trucks. There should be a provision to get down to Marine Drive from the exit ramp as soon as possible. Even a temporary structure would be welcome.

The bicycle traffic approaching the Portland Harbor Bridge from Union Ave., or Marine Drive, can use a ramp up to the bridge sidewalk. Proceeding on the bridge sidewalk, the cyclist continues on a sidewalk along the shopping center parking lot perimeter, which has already been designated a bikeway, to it's end at a curb cut. Crossing the roadway, the cyclist comes to a sidewalk that connects to the tunnel under the freeway. There is a traffic island that extends into the path of the cyclist, crossing the road, forcing him to manuever out of a straight line path. This hazzard should be removed.

In order for the cyclist, going to Vancouver, to get up on the I-5 Bridge sidewalk, on the East side, a six foot one way path should be constructed. This path would start at the sidewalk going to the tunnel and proceed along the edge of the planting strip. The path should go on the planting strip up to the bridge sidewalk. This would necessitate the removal of the second row of bushes from the fence. At the point where the path joins the sidewalk, there is a large triangular hole that should be filled and paved over, or have something planted in it.

DELTA PARK SECTION

The cyclist coming off of the Portland Harbor Bridge, would ride on Marine Drive a short distance, to a point where a bicycle-

pedestrian crossing should be provided. From the crossing of Marine Drive to the Delta Park entrance road, an eight foot class II bikeway should be constructed around the outer perimeter of the Exposition Center parking lot. The extruded curb of the class II bikeway will prevent cars from driving, or parking, on the bikeway when the parking lot is in use, and to keep it clean.

The road connecting the parking lot with the Delta Park interchange can be used by cyclists as is. The cyclist would then be routed on to Denver Ave. at the interchange. The interchange should be sign protected, and " Bike Route " signs provided as well. The cyclist would then proceed on Denver Ave, over the Columbia Slough on the existing bridge surface.

DENVER AVE. SECTION

The Denver Ave. section extends from the Columbia Slough to Interstate Ave. There are several malor intersections that will have to be sign protected. The sections of the route where the street is very wide should have a class III bikeway established on it as shown on page of the design chapter of this report. The rest of the bikeway will have to be class III primitive in design. The route will continue on Denver Ave. to North Prescott, then East on Prescott to Concord, and South on Concord To Skidmore. At Skidmore the route goes to Colonial and South on Colonial to Overlook Park. At Overlook Park the bikeway should be Class I through the park to Interstate Ave. " Bike Route " signs will have to be provided to get the cyclist through the maze of streets in the Denver Ave. section of the route.

INTERSTATE AVE. SECTION

The bikeway section along Interstate Ave. extends from Revere St. at overlook Park, to the sidewalk approaching the Broadway Bridge. It should be class II in design. This may require the change from three to two lanes of traffic on portions of Interstate Ave., or construction

of sidewalks for the bikeway. Where Interstate Ave. goes on to an elevated ramp over the railroad tracks, in the vicinity of the Broadway Bridge, a timber and guard rail barrier should be replaced with a GM curb barrier to provide room for the bicycles. The Interstate Ave. section of the Inter-State Bikeway will be the most expensive element of the total bikeway milage. This is because of the construction cost of the class II bikeway section.

If it proves unfeasible to go class II, or too unsafe to use a class III design, an alternative exists. This would be to cross under the Fremont Bridge ramps to Russel St., and proceed North on Russel to Albina Park, and through the park to Flint St., then South on Flint to Broadway and West on Broadway's sidewalks to the Broadway Bridge.

M E M O R A N D U M

To: Hurvie Davis, Project Manager
Interstate Bridge Corridor Project

From: Edgar Waehrer, Tri-Met EW

Date: July 5, 1974

Subject: Response to Draft Phase I report

1. By and large, I think the report is well organized, well researched and well written. As described in the Introduction the intent of the study is to "optimize the capacity of the existing and planned reconstructed Interstate 5 facility." The range of actions available to accomplish this intent are well described in the report.

2. In meeting the Project Objectives described in Part III (page 4) the report is particularly strong in the description of the O.D. Survey and potential solutions mentioned in paragraph three and implied in paragraph four. The treatment of "causes of congestion" (para. 3), "criteria to evaluate and measure the effectiveness of the ...improvements" (para. 5) and "evaluate the desirability of potential improvements" (para. 6) appear to be weak by comparison.

3. The following items refer to specific pages:

   a. p.15-17 - Would be desirable to have more detail on the nature of the delays encountered with a more precise effort to detail the causes and the time delays. A strip map of I-5 between Going Street (Portland) and NE 39th (Vancouver) pinpointing the key bottlenecks and including the volume/capacity information would be helpful.

   b. p.18 - References to transfer provisions between Vancouver-Ptld.
      p.23 Bus Co. and Tri-Met. A more complete discription
      p.30 of the present transfer provision is in order. A rider
      p.50 transferring from the V-P Bus Co. would pay only the $.60 V-P fare and show a transfer to the driver when boarding a Tri-Met bus. When moving in the other direction, the rider uses a Tri-Met transfer plus $.25 in transferring from Tri-Met to the V-P Bus Co - or the same $.60 fare for using both systems. A comparable arrangement between Vancouver Transit and the V-P Bus Co. would seem to develop the service suggested by the Report.

c. Table V-1 - State when volume figures were taken. Do they represent average daily peak hour traffic? How is the capacity calculated?

d. p.32 - Would be good to compare bus trip time and cost vs. p.46 auto trip time and cost. Has the free parking at p.48 Lloyd Center been taken into account in the predicted Table VII-1 new transit usage?

e. P.53 - Discussions have begun between Tri-Met, the Vancouver-Portland Bus Co. and the City of Vancouver regarding the future operation of the private bus line.

4. Non-comment on the Report's other suggested actions for Tri-Met should not be construed as acceptance by Tri-Met. The Board and the General Manager will make decisions regarding modifications to fare schedule, transfers and telephone service when a formal presentation is made to them.

EW:sjs

Citizen Advisory Committee
Recommendations on Phase I
Staff Report-July 3, 1974

The Citizen Advisory Committee, meeting as a whole and working as separate subcommittees (Public Awareness, Operational Improvem't-New Systems, and Environmental Impact) wish the Project Management Board to consider these recommendations along with those of the CRAG staff members in making these transportation decisions. Since being called into existence June 3, 1974, we have had limited time to establish policy or formulate reviewing procedures but forward this rather rough draft to itemize our immediate priorities. It is the considered opinion of the committee that no SINGLE solution to our regional transportation problems exists, rather a simultaneous application of a variety of solutions of which the integration is most important.

It is our special concern that there appeared a lack of coordination or integrated relationship between the I-5 Corridor and other CRAG activities (i.e. Transportation, Land-Use Planning, Area Development and Public Utilities). Consequently, the Citizens Advisory Committee recommends that if such an absense exists, a maximum priority effort be undertaken immediately to integrate these various planning efforts, before unforeseen consequences result from present decision-making processes. It is also our concern that as transportation transcends boundaries of urban and non-urban areas, cities, counties, and even states, that we have as an overview our particularly regional problems and possible solutions. The Columbia River which I-5 corridor crosses should not sever our planning but serve transportation modes unique and consistent with our regional élan.

Our specific recommendations fall into four distinct areas:

1. Present operational improvements
2. Systems analysis and directional critique
3. Environmental Directives
4. Public Awareness Concerns

PRESENT OPERATIONAL IMPROVEMENTS:

--- As we feel that congestion on the I-5 bridge is fed by supplementary corridor congestion, we ask for consideration of broadening the corridors beyond the bridge and I-5; particular supplementary routes to look at are Union and Interstate.

--- We ask a reviewof the consideration of High Occupancy Vehicle preference with respect to increasing the rate of traffic flow and reducing the total vehicle count. It was our concern that this be implemented only in coordination with actual successful bus routing to be successful.

--- The committee as a whole asked that as Swan Island employs approximately 20% of Vancouver commuters that it be employed as a demonstration project for staggered work hours program. The subcommittee chairmen felt subsequently that Swan Island should be the innitial area for affirmative action regarding staggered work hours/staggered work week, carpooling, coordinated express bus service, and traffic reducing programs.

--- In coordination with innitiating staggered work hour programs we ask that express bus time schedules accomodate this possible trend, possibly with an addition of an earlier and later run.

SYSTEMS ANALYSIS AND DIRECTIONAL CRITIQUE :

New Systems:

After reviewing the CRAG staff report and appendix A, the systems committee gives these following evaluations and suggested priorities (all reviewed by transportation experts and practically and realistically considered):

1. Gravity Vacuum Transit System -- appears to be limited as to routes and probably too expensive at this time. There is no manufacturer and there is no practical application upon which to make decisions.
2. Heavy Rail Train System -- The present route between Vanc.

and Portland has the depots located at points that would require other transportation in most instances. The system is not flexible, it is expensive, and the high potential speed is not necessary for the relatively short distances of travel required of most passengers.

3. Light Rail Train System -- The lighter, smaller, self-powered cars of this system is reasonably flexible--far less expensive and can normally be accelerated and decelerated in such a way that is likely that the overall time would be less even though the top speed is less.

4. Monorail Train System -- It may be that for a few selected areas that this system may be able to compete with less expensive systems but the committee is concerned with it being an asthetic monstrosity.

5. Palleted Automatic Transportation System -- The committee feels that this system may create as much congestion as it cures and does not alleviate parking problems.

6. Personal Rapid Transit System -- This certainly again offends the asthetic views of many people. It can be dangerous and certainly would be expensive as well as very limited routing. We feel the region's money should not be spent in experimentation towards the development of this system.

7. Levitating Vehicle Transportation System --

   a. A vehicle which rides on a cushion of air overland is bound to be offensive in that it will be noisy and will blow up a windstorm. If it is elevated, it would still be offensive to some extent but would be another clutter on the skyline.

   b. A magnetically suspended carrier would reduce the

windstorm but would still offend people's sensitivity.

c. A partially air suspended hydrofoil of air cushioned type of vehicle in water would not be expected to be successful in the Columbia or Willamette Rivers due to the considerable debris floating in and on the water.

8. The Automobile System -- Walking, bicycling, and automobiling permits a person to be reasonably "the master of his own destiny." A revolution in going to smaller autos with lower powered engines could provide a great deal more transportation for the amount of fuel used. For some who like to bicycle or motorcycle, a compromise----the motoped which is used in Europe holds some interesting possibilities. For distance in the range of CRAG, the small automobile can handle 4 passengers for car pooling.

9. Bus Transit System --The bus system, as we now know it, has many of the advantages of the private automobile in that it is flexible as to routing and fits reasonably well into traffic patterns. Considerable study should be made before exotic control systems are determined to be worthy of recommendation. We must not discredit the bus system to experiment with other methods until they are developed.

10. Hydro-Transportation System -- Super ferries are probably beyond the needs of this area. Smaller water craft, such as catamaran supported hull design has very interesting possibilities. First, no bridge or highway needs to be built and a failure of this type of passenger carrier does not cause traffic problems. Secondly, a ride on the water has an appeal to many people. Thirdly, the system is very flexible to meet change in routes. Fourthly, the original investment is relatively low compared to the cost of some of the other systems that we are considering. Fifthly, the system has the greatest salvage value after service, if it would

later be determined that the service should be discontinued.

11. Bicycle Ways--are being developed and could be extended and also serve the needs of motopeds.

12. Heli-Bus/Taxi System--The expense of providing heli-busses staggers our imagination. Weather conditions in this area would be a handicap. If they are to be used, there would need to be landing pads in areas where the windstorm would not be offensive to people.

13. Airships -- are even more sensitive to weather conditions than helicopters. We could fill the air with balloons and still not get the job done.

CONCLUSION: Our committee arrived at priorities as follows:

1. (a.) We should make efforts to increase the efficiency of the bus system which is presently available.
   (b.) We should try to promote a one-ownership bus system or a coordination of the bus systems--which is not likely under present ownership.
   (c.) To create routings through the suburban areas to augment the present spoke system which runs a high proportion of the routes into the downtown area.
   (d.) Consider some smaller, more flexible vehicles for light loading between areas of activity not enroute "downtown."
   (e.) Provide information to the public as to routings at bus stops. This can be expanded so that the bus system maps for the public will be available and that major bus stops have large maps showing schedules and routes.

2. Some water transportation can be provided within a short period of time at a cost probably no greater than the equivalent capacity in buses and would relieve the present bridges and roads

of some congestion.

3. Light rail may be going back to the old streetcar days but this system seems third in priority. Europe is using a great deal of light rail and it appears to be successful.

The committee as a whole felt that investigation of the use of waterways was understressed and its importance over-looked. It was even suggested at one point that the possibility of an east-county barge river crossing be investigated (and related Washington Waterways Legislation be looked at) with an interest in a Vancouver-to-airport run. The Committee as a whole also urges maximum utilization of a carpooling program in those geographical areas where mass transit solutions are inappropriate. We emphatically disagree with CRAG staff stand that carpooling is not viable.

ENVIRONMENTAL DIRECTIVES:

The Environmental Impact Committee suggests these preferences for interaction with the CRAG staff:

1. No research be done by subcommittee
2. Based on subcommittee concerns, the staff will prepare a scope of work for the preparation of a full environmental impact statement, and submit that work program for subcommittee review as soon as possible.
3. The committee will work verbally in the actual preparation of report and will critically review the conduct of the environmental impact statement preparation.
4. All Citizen Advisory Committee comments on the environmental impact statement are to be included in the draft and final statements.

Other considerations of the Environmental Impact Subcommittee:

1. Environmental impact analysis must be comprehensive and including social environment and economical environment.

2. Environmental impact of I-5 Corridor solutions on local and CRAG region land use planning must be evaluated in the selection process.

3. Total impact on activities adjoining the corridor must be investigated in detail (i.e. Vancouver city center, Columbia River recreation, etc.)

4. Alternatives to a 'structural' solution (i.e., bridges, wider freeways, interchanges, railroad systems, permanent physical structures) must be considered in equal detail.

5. Disincentives to vehicles must be fully addressed in an environmental sense as well as social and economic sense.

6.Importance of environment in decision-making process to be given equal weight to weighting used in social and economic analysis, especially in the content of net energy consumption.

PUBLIC AWARENESS CONCERNS:

The Public Awareness Subcommittee compiled a list of groups that should be reached with transportation information, including senior citizens, unions, major employers, students, housewives, club activities, organized activity and recreation, persons going to and from hospitals and clinics, and the handicapped.

Areas of information we felt need dispersion are the concept of staggered work hours/staggered work weeks, availibility of express bus service, location of park and ride centers, shelter locations, schedules (including more graphic form for non-literates) fares - with emphasis on reduced fares, the concept of contra-flow lanes, carpool-to-organizational meetings, carpool phone number (grid sent free of charge), cost of different modes of transportation, carpooling info such as courtesy rules for and advantages of 5-person carpool, and the eventual means of financing a public transportation system.

Discussion of vehicles for information dissemination included a fall planned Transportation Fair, school bulletins, billboards, letters and speakers bureau for clubs, mini-courses, hand-outs or flyers at libraries, redeemable coupons for carpooling at local stores, and personal contact.

We feel that the key to acceptance of mass transit in this region is in making people aware of its need, of their personal travel patterns, of a cognizance of previous priority of convenience habits, and a desire to utilize less of our lives in transit. We do not feel this will be possible without a great use of personal energies and monies; we also do not believe any program in this area (or combination of programs) will succeed without a commitment to extensive public relations programs. Therefore, we ask the Project Management Board to direct the staff to itemize their cost and work schedules (with inclusion of personel and materials available for resource) for public relations work as we feel this area is most important to the implementation of any transportation plan.

Respectfully submitted,

Patricia D. Blackwell, Chrperson

COLUMBIA REGION ASSOCIATION OF GOVERNMENTS

Memorandum

To: Members of the Project Management Board

From: Hurvie Davis Hurvie E Davis

Subject: Reminder of Deadlines

The Project Management Board is continuing its review of the preliminary Phase I Report. To complete this review at the earliest possible date, the Project Management Board has requested that all comments and criticisms of the report be submitted to the project staff in writing no later than Friday, July 5th.

Please see that your comments are submitted by this date.

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

TO: Interstate Bridge Project Management Board

FROM: Hurvie E. Davis

SUBJECT: Minutes of June 20, 1974, Project Management Board (PMB) Meeting

NAME	REPRESENTING
Reed Gibby	CRAG Staff
Chuck Neumayer	Washington Highway Department
Bill Dirker	Portland
John Krawczyk	CRAG Staff
R.O. Cunningham	Oregon Highway Division
Hurvie Davis	CRAG
Dick Granger	Clark County
Kip Howlett	Citizens Advisory Committee
Pat Blackwell	Citizens Advisory Committee
Bob Ziemer	The Columbian
Donna Dunbar	Tri-Met
Edgar Waehrer	Tri-Met

The meeting was called to order and the minutes of the previous meeting were approved.

The Chairwoman, Pat Blackwell, and Vice-Chairman, Kip Howlett, were introduced and reported on the Citizen Advisory Committee (CAC) meetings and organization. The report resulted in PMB action to permit the CAC to add Mr. J. Gaussoin to the committee as chairman of the Operations and New Systems Sub-committee, to add members to the committee until membership becomes 20 with names to be cleared by Commissioner Granger and that the committee appoint someone to take minutes which CRAG staff will have typed and distributed.

CRAG is investigating the installation of a toll-free Vancouver telephone line and committee members are encouraged to make calls at offices of Clark County and other participating agencies which have toll-free lines between Oregon and Washington.

After a brief project status report was given the P.M.B. discussed the preliminary draft report of Phase I. Most of the participating agencies had not completed their review but

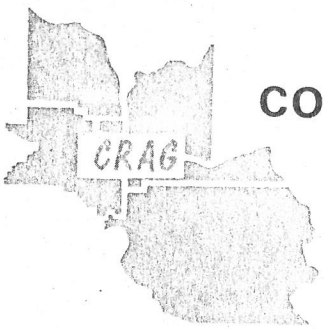
committed to submit their review to CRAG staff by July 5.

Discussion pertaining to improvements recommended for detailing in Phase II concluded the staff will send out descriptions of the "new" systems and the P.M.B. is to respond to staff with recommendations by July 5. The suggestions are to include social-economic, as well as other types of improvements.

The relationship of Phase II and III with the Governor's Task Force and Tri-Met's Suburban Transit Station Work. The unified work program is intergrating the G.T.F. and S.T.S. into other transportation planning efforts.

The next meeting date was set for July 19, at 9 AM in Commissioner Granger's conference room in Vancouver.

The meeting was adjourned.



COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT
PORTLAND, OREGON 97221

(503) 297-3726

TO: Interstate Bridge

FROM: Hurvie E. Davis

SUBJECT: Review of Preliminary Phase I Report

Enclosed for your use and information are the minutes of the last P.M.B. meeting and descriptions of the various "new" system which may apply to this corridor. In order to respond to the P.M.B. instructions, to expedite improvements, it is vital that your comments on Phase I Report and improvements recommended for Phase II evaluation be received by staff no later than July 5, 1974.

Your cooperation is appreciated.

APPENDIX A

This section contains illustrations and brief description of many transportation systems and modes which may have application in the Interstate Bridge Corridor.

NEW SYSTEMS

New systems may be an innovative development or simply the construction of existing technological capabilities not previously used at the location in question. Transportation systems are usually found in one of five states or levels of technical development with associate approximated "time lags" - the time required for intiating the operation. These levels may be referred to as technical status and include:

Status	Time Lag (years)
1. Concept	3 - 5
2. Research & Development	
3. Demonstration & Evaluation	3 - 5
4. Implementation & Construction	4 - 8
5. Operation	

The attached flow chart illustrates the development process in more detail. One should also realize that the time lag is usually determined by politics rather than technology.

DIAGRAM A-1 FLOW CHART OF THE SYSTEM DEVELOPMENT PROCESS

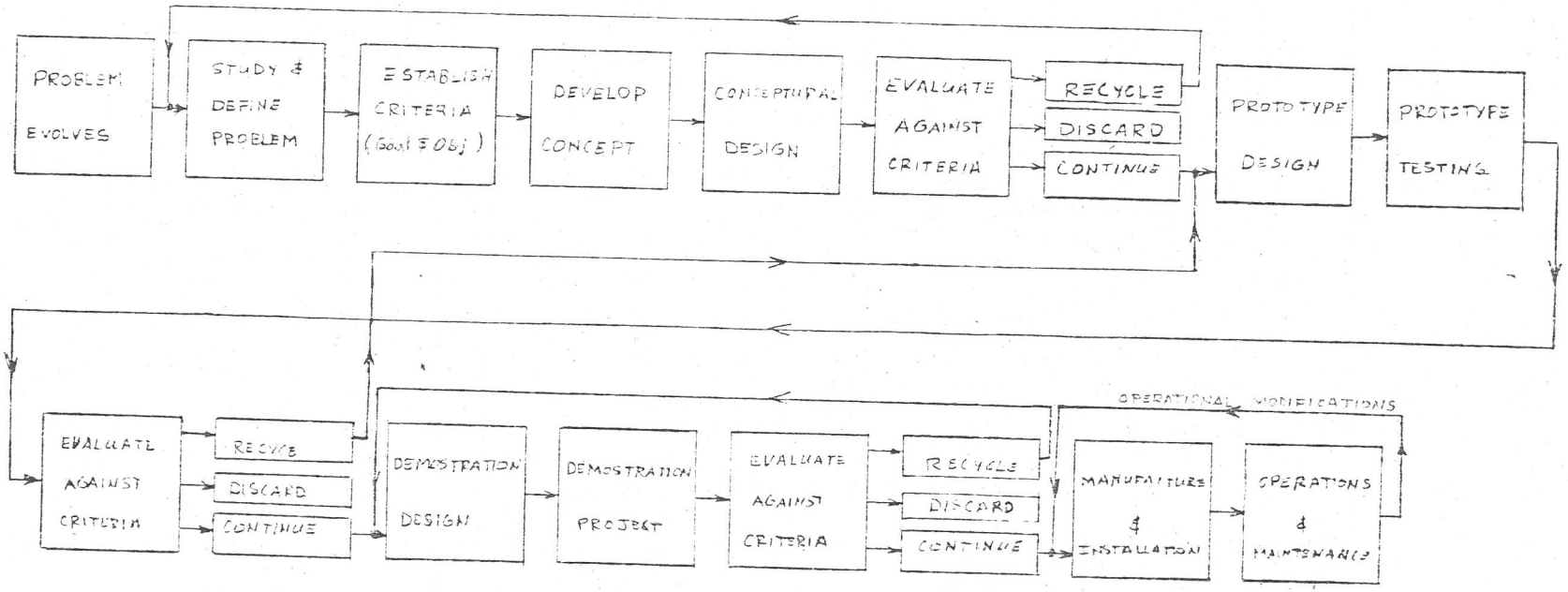


TABLE VII-3 A COMPARISON OF THE CHARACTERISTICS OF VARIOUS TRANSPORTATION SYSTEMS CONSIDERED FOR THE INTERSTATE BRIDGE CORRIDOR.

TYPE	NATURE OF SERVICE	ROADWAY	ACCESS CONTROL REQUIRED	PROPULSION	ENERGY EFFICIENCY Pass-mi/gal	APPROX. OPERATION MAX SPEED mph	CAPACITY	FUTURE AVAILABILITY OF ENERGY	ROUTE FLEXIBILITY	NOISE QUALITY	FEEDER SYS. REQ'D	Technical Status	Capital Cost	Construct. Impact
Gravity-Vacuum Tube	Inter intra-Urban	Rail in Tube	Full	Electricity 1/3 Gravity 2/3	30	150	High	Fair	Poor	Good	Yes	R & D	Very High	Light
Rapid Heavy Rail	Inter/intra-Urban	Rail	Full	Electric/ Fossil Fuel	40	100	High	Fair/ Poor	Poor	Fair	Yes	OPER	High	Moderate
Light Rail	Intra Urban	Rail	Partial	Electric	50	50	Medium	Fair	Fair	Fair	Yes	DEMO	Moderate Medium	Light to Moderate
Monorail	Intra Urban/ Local	Rail	Full	Electric/ Fossil Fuel	30	45	Medium	Fair/ Poor	Poor	Fair	Yes	OPER	High	Moderate
Palleted Automated Transportation (PAT) (Dual Mode)	Intra Urban	Rail	Full	Electric	NOT AVAIL.	50	Lower Medium	Fair	Good	Good	YO	R&D	High	Moderate
Personal Rapid Transit (P.R.T.)	Intra Urban/ Local	Rail (Pavement w/ guide rail)	Full	Electric	NOT AVAIL	50	Lower Medium	Fair	Good	Good	Yes	R&D	High	Moderate
Aero-Train	Inter Urban	Levitating Air cushion/ Pavement	Full	Fossil Fuel	30	200	Very Low	Poor	Poor	Poor	Yes	DEMO	Very High	Moderate
Fair 2-3 High Speed Tube Transit	Inter Urban	Levitating Magnetic Flux & Tube	Full	Electric/ Fossil Fuel	55	300+	High	Fair/ Poor	Poor	Good	Yes	CNPT	Very High	Light
Auto	Local	Pavement	None	Fossil Fuel/ Electric	25	70/ 60	Low	Poor/ Fair	Good	Poor/ Good	No	OPER/ DEMO	Low to Very High	Light to Major
Cycleways / Bikeways	Local	Pavement	Full/ None	Organic (human)	1,000 (EST)	10	Very Low	Good	Good	Good	No	CNPT/ OPER	Medium/ Low	Moderate
Express Bus	Local	Pavement	None	Fossil Fuel/ Electric	30	35	Low	Poor Fair	Good	Fair/ Good	No	DEMO	Low	Light
Automatic Guideway (Dual Mode)	Intra Urban/ Local	Pavement	Full- None	Electric / Fossil Fuel	110	60- 35	Medium	Good/ Poor	Good	Good Fair	Partial	CNPT	Medium	Moderate
EXPRESS BUS	"	"	"	"	"	"	Medium	"	"	"	"	OPER	Medium	Moderate
Pedalle Cars	Local	Pavement	None	Organic (Human)	1,000 (EST)	25	Very Low	Good	Good	Good	No	DEMO	Low	Light
Pedestrian	Local	Pavement	None	Organic (Human)	1,000 (EST.)	4	Very Low	Good	Good	Good	No	OPER	Low	Light
Hydrofoil (Dual Mode)	Inter/Intra Urban	Water	~~Full~~ None	Fossil Fuel	30	40-60	Very Low	Poor	Poor	Fair	Yes	OPER	Low	Light
Air Cushion Vehicle	Inter/Intra Urban	Levitating Water & Air Cushion	~~Full~~ None	Fossil Fuel	35	40-60	Very Low	Poor	Poor	Poor	Yes	OPER	Low	Light
Super Ferry (Dual Mode)	Inter Intra Urban	Water	~~Full~~ None	Fossil Fuel	150	20	Low	Poor	Poor	Good	Yes	OPER	Medium	Light
Heli-Taxi	Intra Urban	Atmosphere	~~Full~~ None	Fossil Fuel	20	200	VERY LOW	Poor	Poor	Poor	Yes	OPER	Low	Light
Airship	Interurban	Atmosp.	None	"	25	100	Very Low	Poor	Good	Fair	Yes	R&D	Medium	Light

CNPT - Conceptual R&D - Research and Developement OPER - Operations

DEMO - Demostration

GRAVITY-VACUUM TRANSIT (GVT) SYSTEM

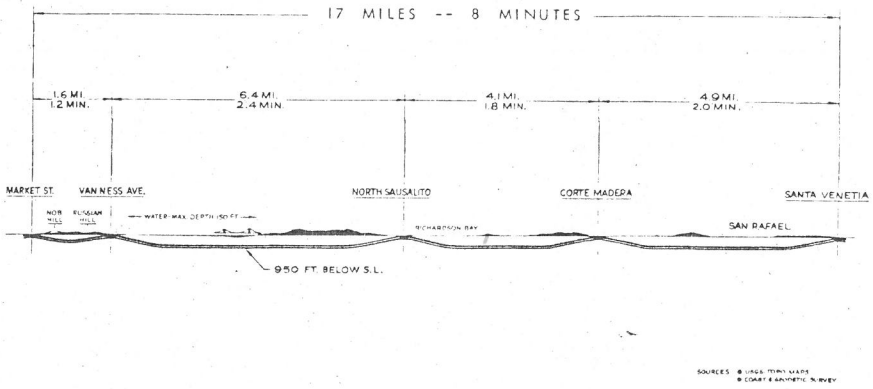


FIG. 8.—PROFILE OF THE SAN FRANCISCO TO MARIN SYSTEM

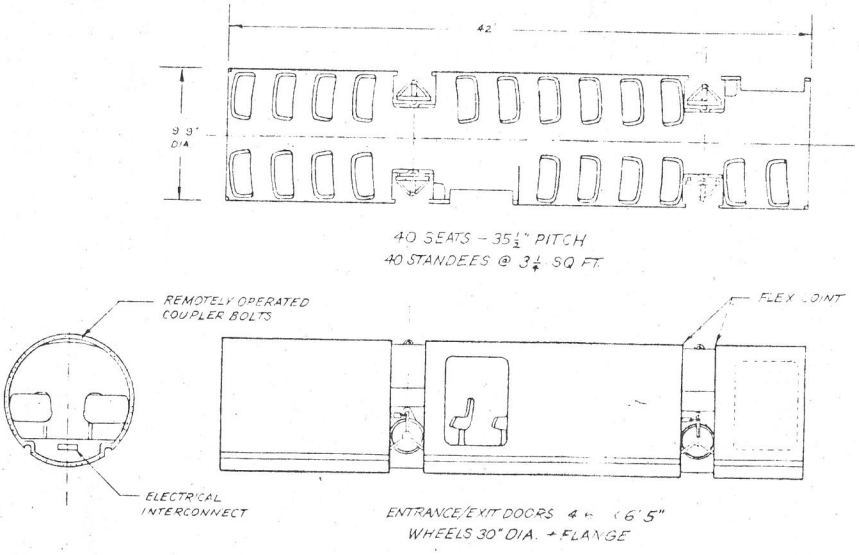


FIG. 15.—PASSENGER CAR

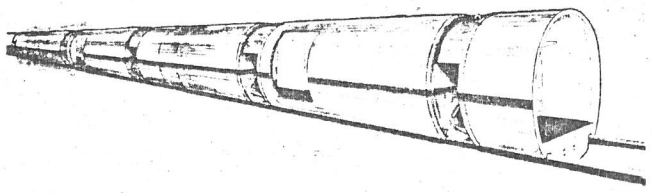


FIG. 14.—TRAIN PERSPECTIVES

General System Features

1. It employs gravity for roughly 2/3 of the total energy requirement and atmospheric ai for the remaining 1/3. This appears to permit unprecedented reliability, safety, and economy

2. By accelerating pass engers in a fashion they cannot feel, it permits average speeds roughly twice the limit for any existing or presently proposed conventional transportation system. At any arbitrary acceleration comfort level, GVT permits effective speeds substantially higher than the theoretical limit for any horizontal transportatio system. Speeds in excess of 150 mph are possible for urban systems.

3. GVT satisfies the ideals of low air pollution or above-ground eyesores, and virtually no environmental noise, no land severance or condemnation of land along the right-of-way.

4. By placing its stations at depths typical for London's deep-tube subway system, GVT avoids the urban disruption that accompanies cut-and-cover construction and still permits an economical tunnel cross section-slightly over half that of present transit tunnels.

5. This system is in the R & D stage; therefore, a practical system is probably a decade away <u>if</u> the R & D and demonstration results are favorable.

HEAVY RAIL TRAIN SYSTEM

General System Features

1. May operate with fossil fuel engines or electric motots supplied by a third rail at maximum speeds near 100 mph.

2. Requires an extensive feeder system at the stations to supplement the rail lines which usually requires dense development for feasibility considerations.

3. Lines and stations may be at grade, elevated or underground as required by the various tangible and intangible constraints.

4 New systems, ie. BART, make use of many new technical advances; namely, automatic vehicle guidence, automatic gates, and fare collection, information systems, air conditioning, etc.

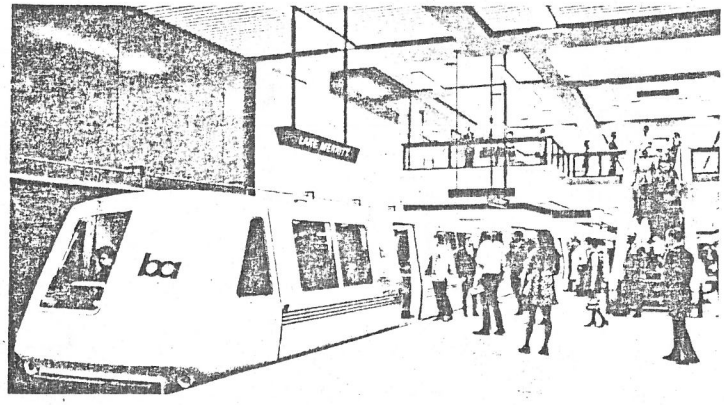


FIG. 3.—BART Train in Oakland Subway Station

FIG. 6.—Interior Vehicle Design

FIG. 4.—Typical Aerial Station

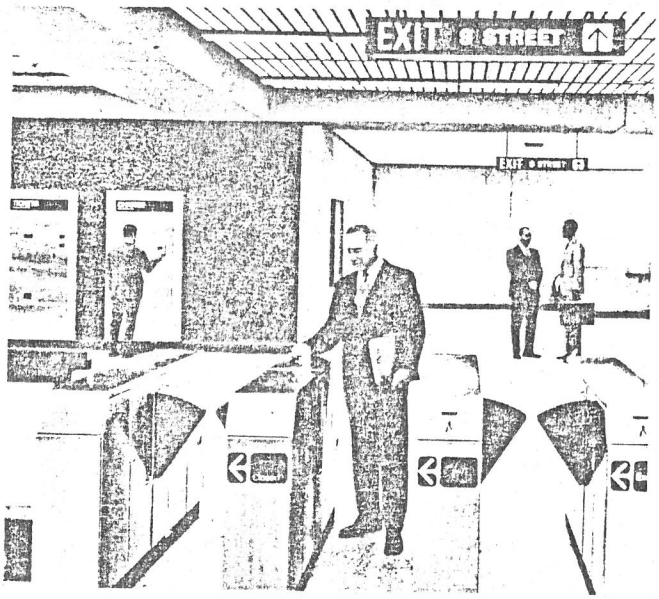


FIG. 7.—Self-Service Ticket-Vending Machines and Electronic Gates

LIGHT RAIL TRAIN SYSTEM

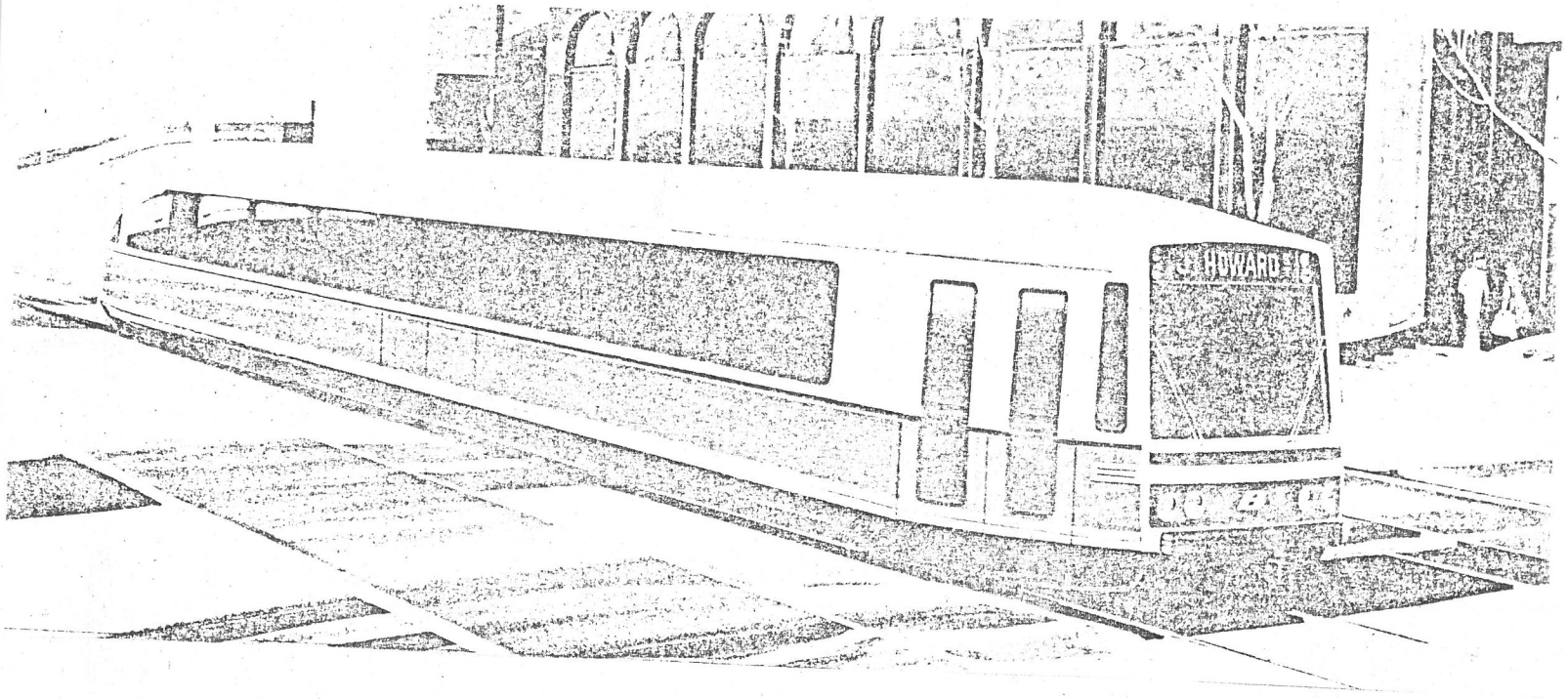
General System Features

1. Trains operate at a maximum of 60 mph using electric motors s supplied by overhead cables.

2. Trains (normally 3 vehicles) may operate on rails in mixed traffic of on a separate railway and may use lines in common with trolley buses.

3. Light rail systems require feeder service at stations to collect and distribute passengers.

4. Light rail vehicles may be articulated to better manuver on narrow city streets.



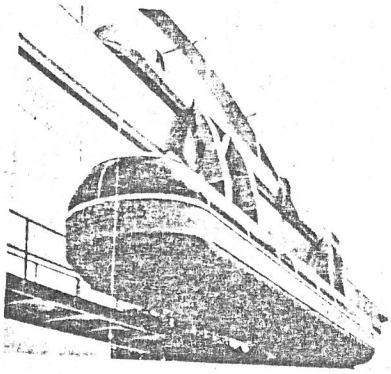


FIG. 14.—RUBBER TIRED SUSPENDED MONORAIL, DALLAS, TEXAS, 1956 (PHOTO COURTESY OF MAGUIRE, REF. 8.)

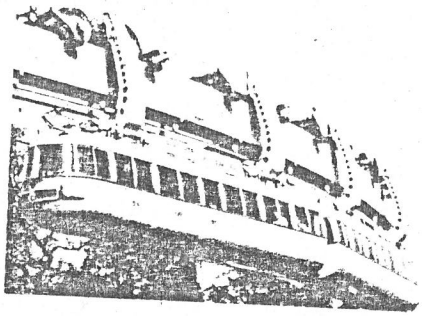


FIG. 15.—RUBBER TIRED SUSPENDED MONORAIL, TOKYO, JAPAN, 1957 (PHOTO COURTESY OF BOTZOW, REF. 2.)

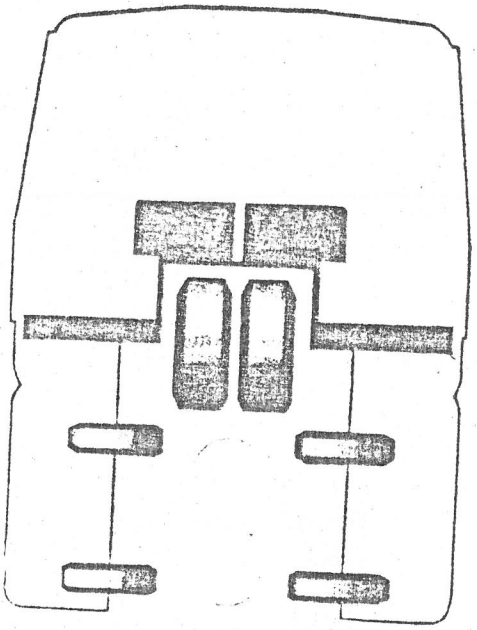


FIG. 21.—CROSS SECTION OF SUPPORTED MONORAIL SHOWING VERTICAL AND HORIZONTAL TIRES AND HOLLOW CONCRETE BEAM

General System Features

1. Trains operate on or below a large elevated rail (beam) and maybe either propelled by fossil fuel or electrical energy or speeds to about 50 mph.

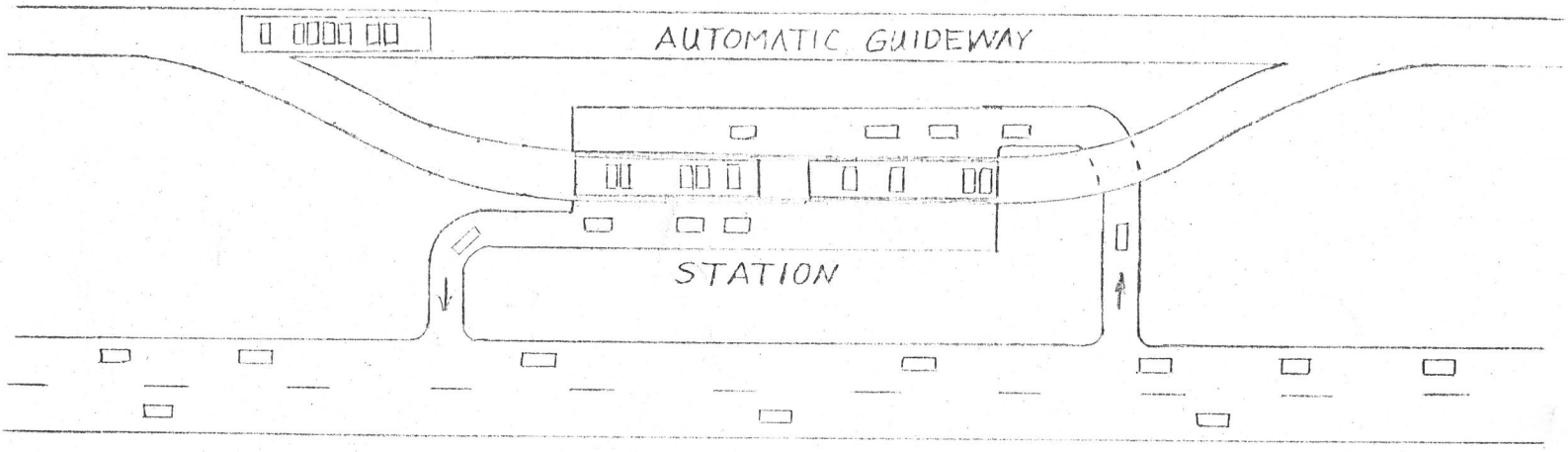
2. The system requires a feeder system to supplement the linear line service.

3. The massive "rail" structure imposes considerable limitation on the switching capability of the monorail and, therefore, it's usually constructed in special cases.

PALLETED AUTOMATIC TRANSPORTATION (PAT) SYSTEM

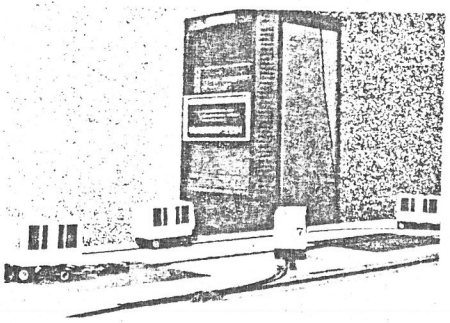
General System Features

1. P.A.T. is a dual-mode system in that small feeder type vehicles are placed in large line haul vehicles for an express trip on a fixed quideway or a rail to a distribution station at which point the feeder vehicles desembark for final destination.
2. The system vehicle may be either fossil fuel or electrical type of propulsion source and, in terms of passenger units, low polluting.
3. The technology status of the PAT is only conceptural, although it is not new because a ferry system which transports autos, is a waterway version of PAT.

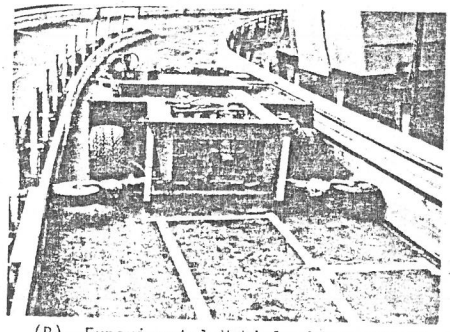


PERSONAL RAPID TRANSIT (PRT) SYSTEM

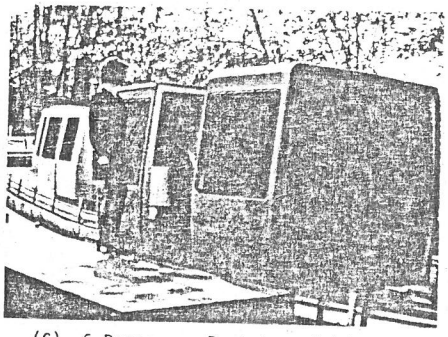
FIGURE 1 STARRCAR DEVELOPMENT & TESTING



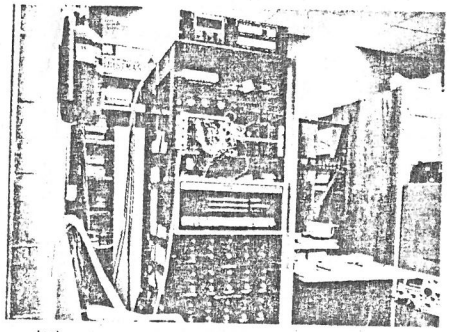
(A) Scale Model Transit System Under Computer Control



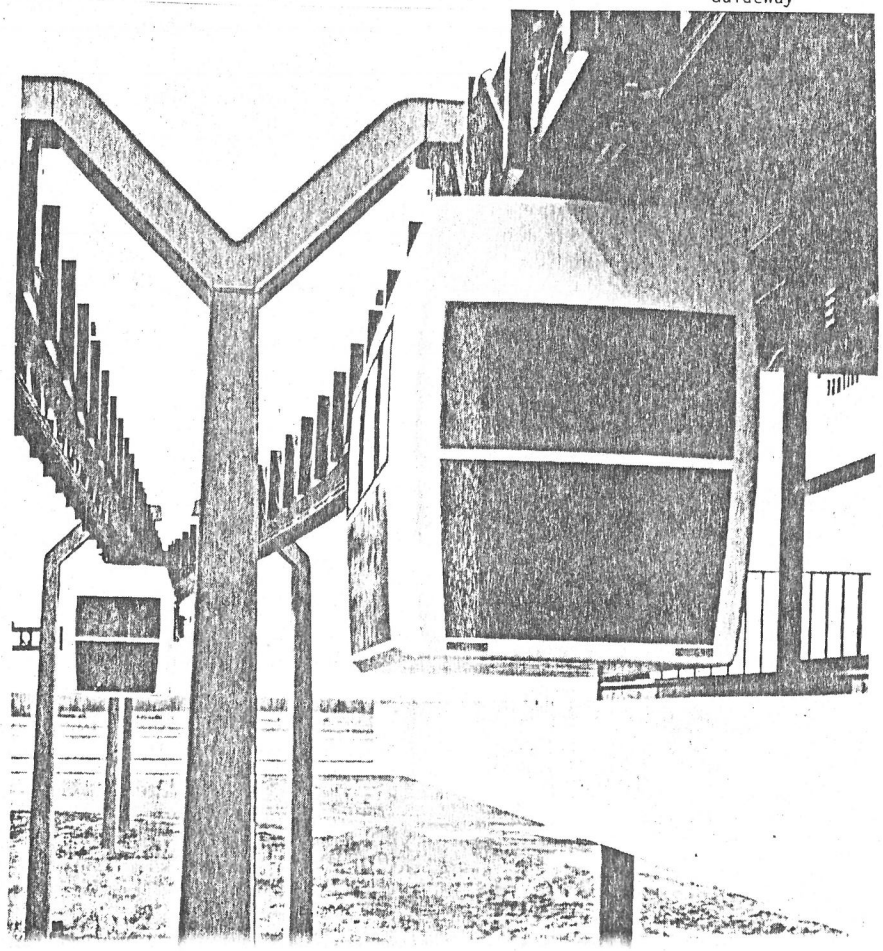
(B) Experimental Vehicle Automatically Guided on Test Guideway



(C) 6-Passenger Prototype Vehicles on Test Guideway



(D) Central Computer Control of Test Guideway



General System Features

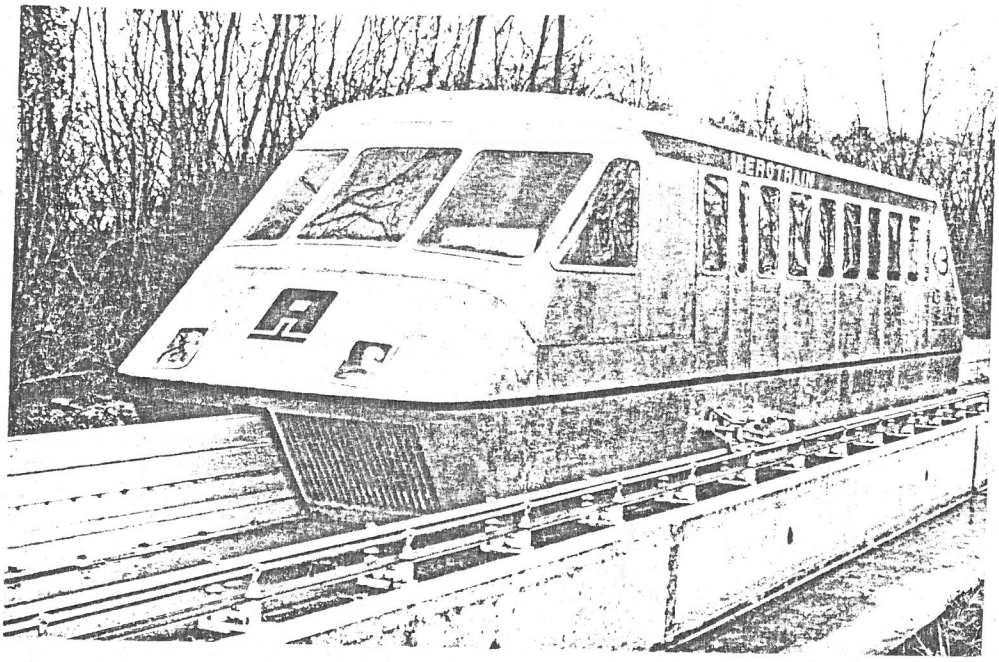
1. Vehicle containing 4 to 8 passengers operate on a fixed but relatively small quideway or suspensed from an overhead beam like one of the types of monorails.

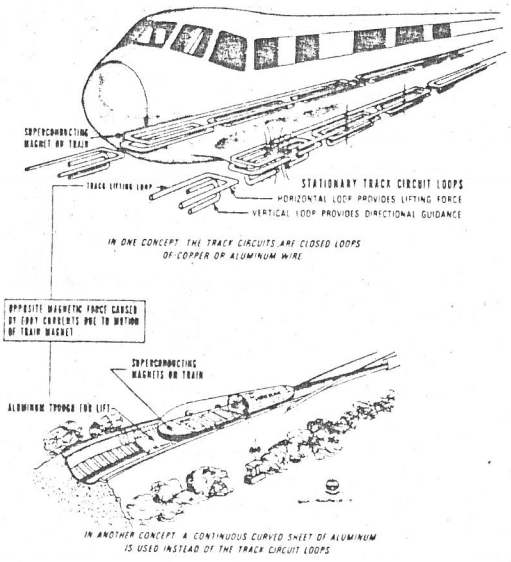
2. The system provides point service, eliminating transfers, through automatic control.

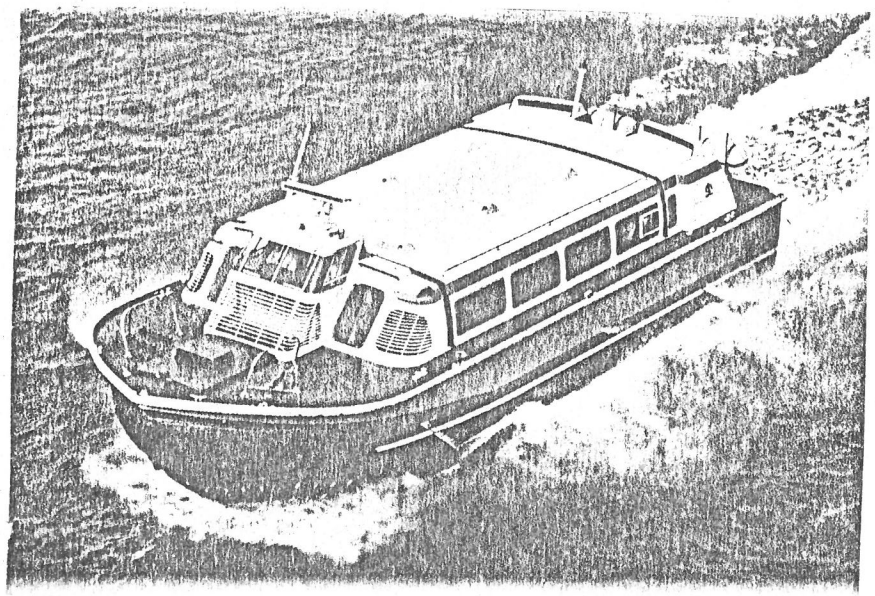
3. The vehicles are powered by electicity and generally do not exceed 50 mph when operating. Since a electric propulsion system is used, the resulting pollution is low.

4. The present level of technology for the P.R.T is the developmental and demonstration stage; therefore, additional work is need before the systems is applied to general use.

LEVITATING VEHICLE TRANSPORTATION (LVT) SYSTEM





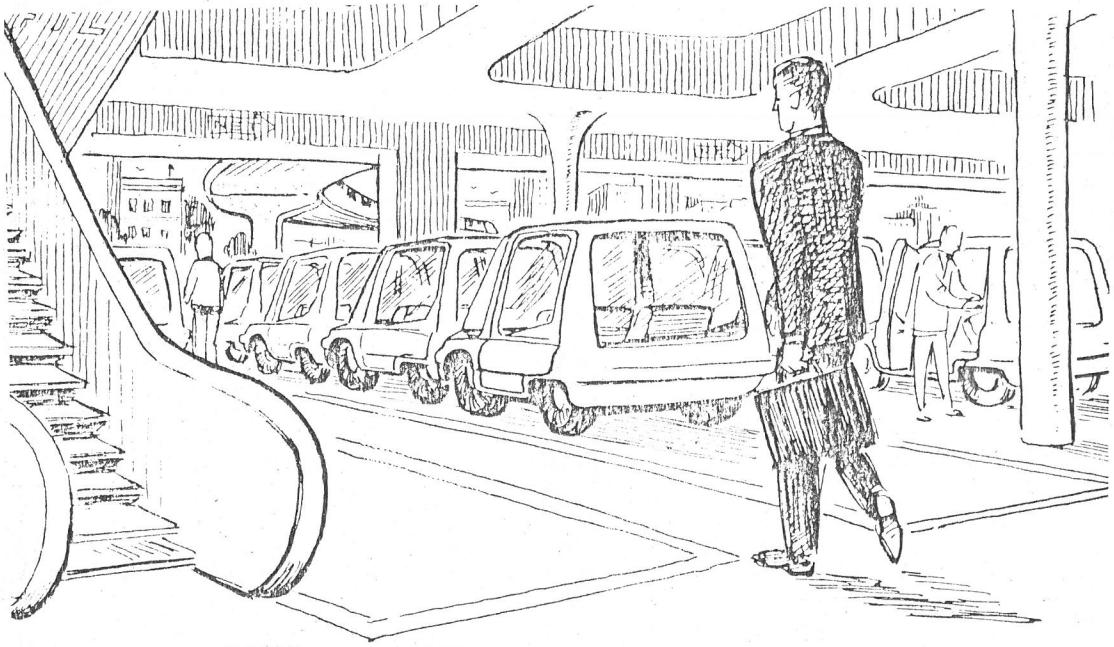


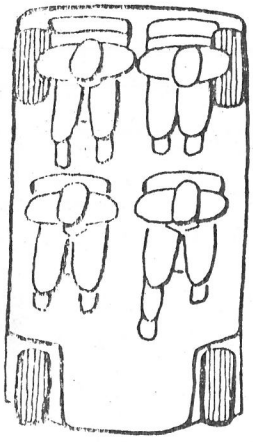
Levitating vehicles "ride" on a cushion of air or magnetic flux above a roadway which may be pavement, a metal tube or water. There are basically three types of levitating vehicles air cushion tracked (Aero-Train), High Speed Tube Transit (Magnetically Levitating) and Air Cushion Waterway Craft (Hovercraft). This concept enables the vehicle to lift off its roadway and overcome surface friction and, thereby, obtain much higher speeds at a specified energy consumption level. In the case the Aero-Train operating in France, 200 mph and more have been obtained and the magnetic levitating concept can easily obtain hypersonic speeds in a vacuumed roadway tube is used. These systems obviously are suited for inter-urban travel rather than intra-urban because these speeds are not attainable with urban station spacing requirements. The marine air cushion vehicles which operate at approximately 50 mph are applicable to intra-urban passenger service.

AUTOMOBILE SYSTEM

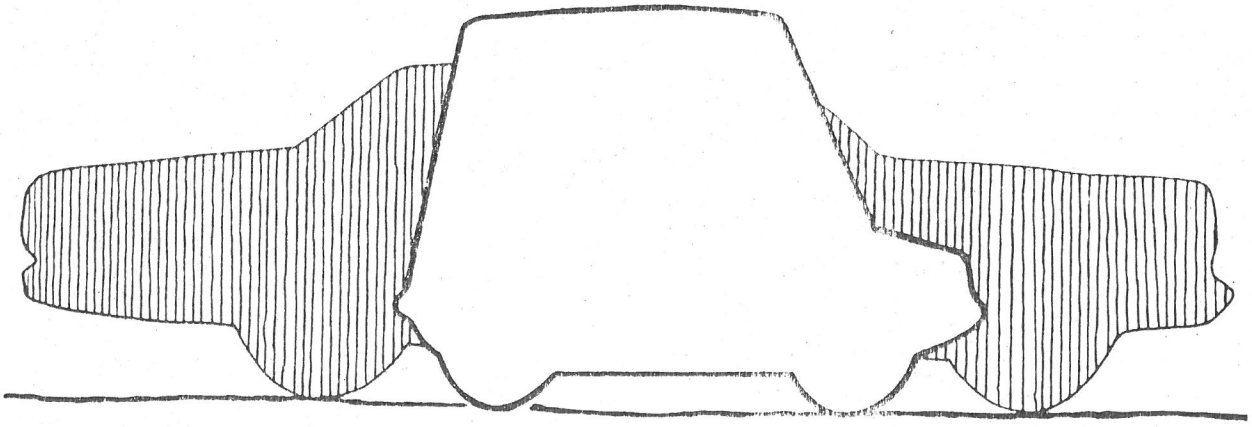
The automobile may be used in one of several ways or combination thereof, which may include the convertional use of auto on streets and freeways, Public Automobile Service (P.A.S.), internal combusion/electric hybrid propulsion, and electrically powered vehicles. Auto systems are low in capacity, produce considerable pollution (internal combustion), but provide considerable flexibility at reasonable out-or-pocket costs at relatively high speeds (except in congestion). The PAS concept makes use of existing streets and utilizes small publicly owned, electricly powered auto distributed to numerous local stations. A person in transit may walk or cycle to a local station, rent a vehicle, make the trip and leave it at the nearest station. With the probable fossil fuel supply shortage within a few decades the potential use of electrical motor propulsion appears to be a certainty.

PUBLIC AUTOMOBILE SERVICE (PAS)



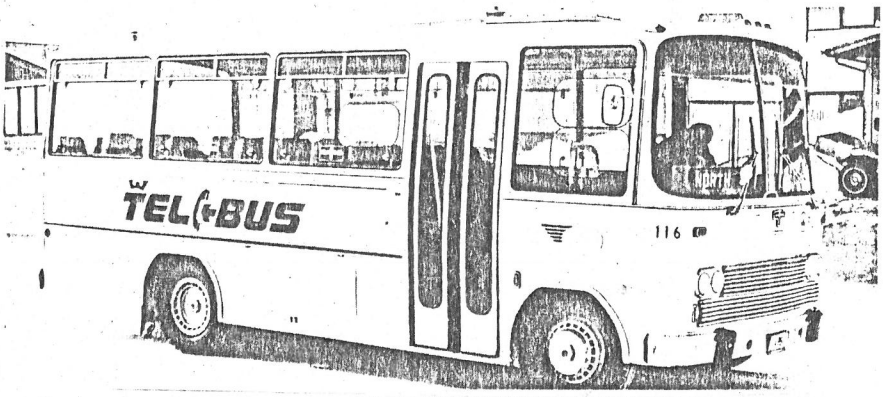


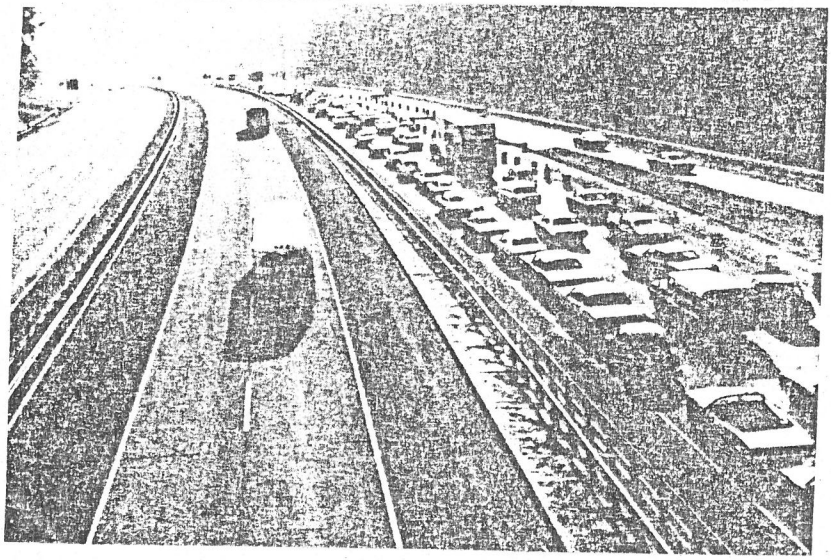
FOUR ADULTS
(Dual - Mode Vehicle)

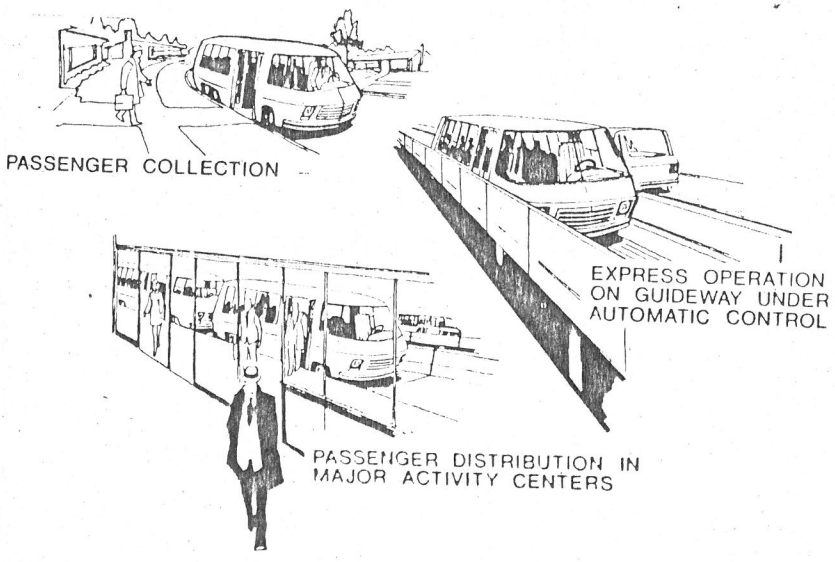


BUS TRANSIT SYSTEM

There are three typed ob bus transit systems considered; namely, Demand Responsive Bus (DRB), Express Bus System (EBS) and Automatic Busway System (ABS). The DRB operates locally on a pre-programed route and diverts from the route in response to requests for transit service. The type of service, using vehicles which are nornally designed to carry about 20 passengers, has been initiated and is providing valuable service to the public it serves. The EBS provides higher volume service at higher speeds with considerable flexibility for local service off the express line. EBS on exclusive facilities have been extremely sucessful carrying as much as 21,000 passengers per hour per lane and providing sufficient revenues for operating costs. The ABS is more concep that a reality but there has been demonstrations and operations involving medium sized bus the vehicles about 20-30 passengers, which operate with automatic control on fixed quideqays. This concept uses a similiar type, but dual mode, vehicle operating with a driver on local feeder service and changes to automatic control on an exclusive facility. Vehicles may also be coupled into trains.

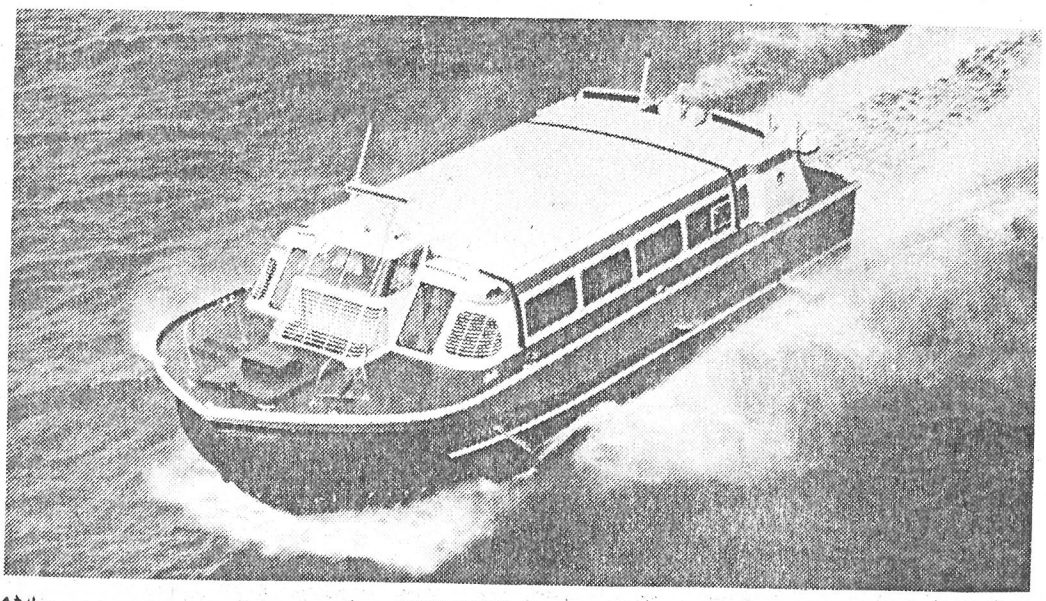


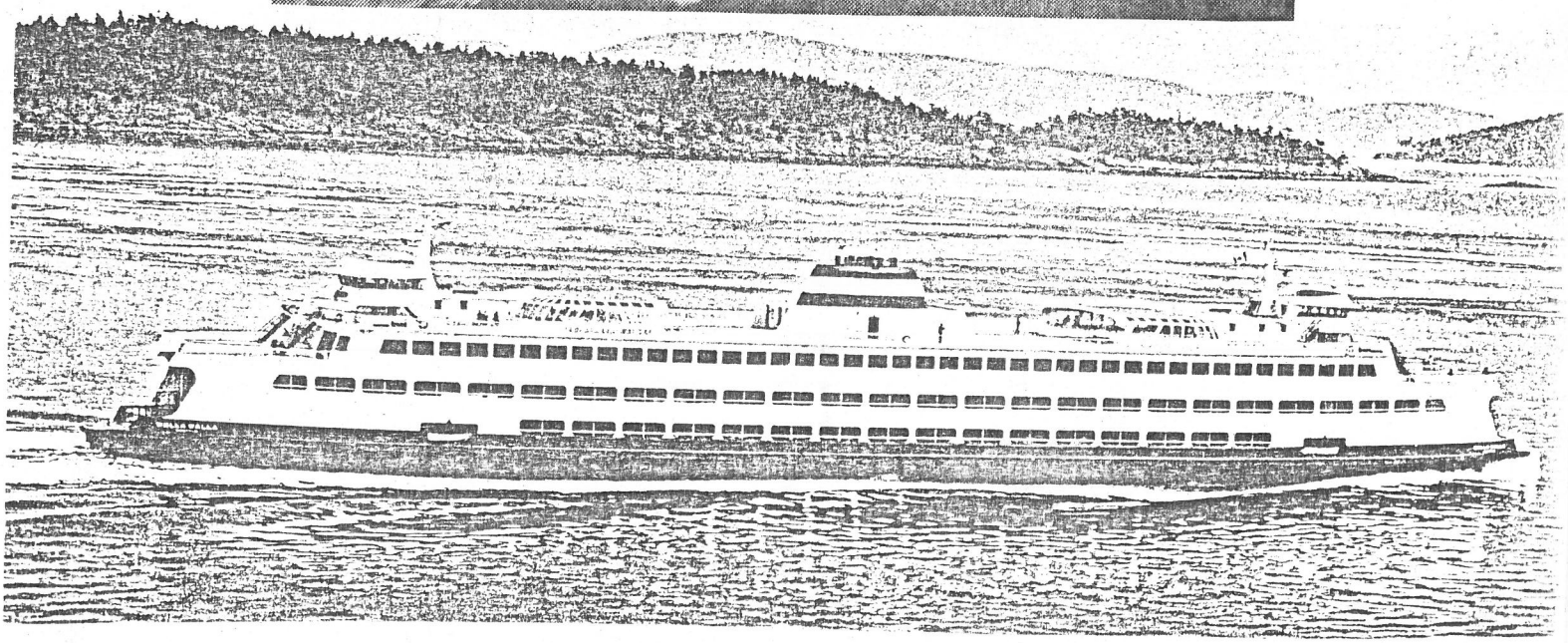


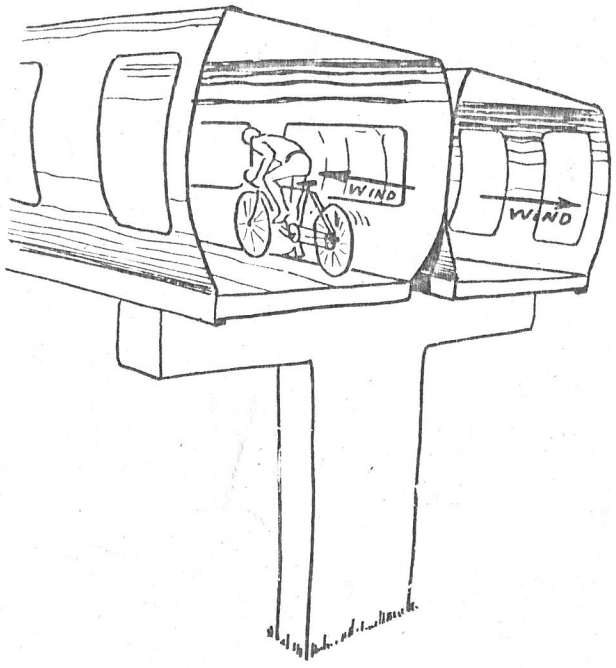


HYDRO-TRANSPORTATION SYSTEM

The major possibilities range from small (70 passengers) high speed craft, about 50 mph, to large (2000 passengers) super-ferries operating at approximately 20 mph. Waterway systems make use of natural transportation roadways-water in the form of rivers, lakes, etc. These systems require feeder systems and more elaborate terminals than other types of systems. The large craft tend to be relatively high in energy efficiency and in the case auto carrying ferries these systems are dual-mode.






WIND
WIND

HELI-BUS/TAXI SYSTEM

General Features

1. Large helicopters with seating capacity up to about 20 passengers with speeds in excess of a 100 mph.
2. Landing facilities may consist of shopping centers, airports, tops of large buildings or parking lots.
3. These systems have some disadvantages: low capacity, high noise levels and expensive operations.

AIRSHIPS (DIRIGIBLES)

General Features

1. Existing aircragt has low capacity but large craft capable of 400 passengers or cargo in excess of 200 tons appear feasible.
2. The aircraft propulsion is very efficient because it supplies energy for speed only and not for the "lifting" force.
3. Airships require "docking" time and facilities. This reduces the capability to serve the shorter trips and is, therefore, more suited for inter-urban travel.
4. Although dirigibles have been operating for decades their use was never widespread. There has been practically no reaearch and development effort for 30 years; therefore, a major effort will be need to "catch-up".
5. Operating speeds vary from 30 mph to about 100 mph but, of course, can travel a straight path from origin to destination.

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

TO: PROJECT MANAGEMENT BOARD

FROM: HEB HURVIE E. DAVIS, PROJECT COORDINATOR

SUBJECT: INTERSTATE BRIDGE CORRIDOR PROJECT MANAGEMENT BOARD MEETING

DATE: JUNE 13, 1974

The next PMB meeting will be held at 9 a.m., Friday, June 21, 1974 in Commissioner Granger's conference room, Clark County Courthouse, Vancouver.

The objectives of the meeting are implied from the enclosed agenda but of particular interest is the Citizen Advisory Committee and a discussion of recommendations for improvements (item V) which are to be detailed in Phase II. The major agenda item is, of course, the Phase I report and it would be appreciated if your comments could be submitted in writing at the meeting. The report is expected to be submitted to the supporting agencies on June 28 for official review of text material.

Minutes of the May 24, 1974 meeting are enclosed for your information and review.

All members are urged to attend.

6/20

Copy returned to Reed Gibbs with marginal notes. HEB

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

I-5 PROJECT MANAGEMENT BOARD

A G E N D A

I. APPROVAL OF MINUTES

II. INTRODUCTION OF CITIZEN ADVISORY COMMITTEE REPRESENTATIVES

III. STATUS OF PROJECT

IV. REVIEW OF PRELIMINARY DRAFT OF PHASE I
1. Staff Comments
2. PMB Comments
3. Citizen Committee Comments
4. Direction for Staff

V. DISCUSSION OF IMPROVEMENTS RECOMMENDED FOR DETAILING IN PHASE II

VI. RELATIONSHIP OF PHASE II & III WITH GOVERNOR'S TASK FORCE AND TRI-MET SUBURBAN TRANSIT STATIONS

VII. NEW BUSINESS

VIII. NEXT MEETING DATE

Improvements Recommended for Additional Detailing in Phase II

Exclusive Transit Lane for High Occupancy Vehicles-NTECAP Application

Staggering Work Days and Hours

Reducing Travel Need with Suburban Employment Facilities

Incentives for Using High Occupancy Vehicles

Traffic Control - Metering & Control
Dynamic Warning
Bus pre-emption

Emergency Service

Reversible Lane Operation

Narrow Lanes

New Systems

- Marine
- Air
- Light Rail
- Heavy Rail
- Gravity-Vacuum
- P.A.T.
- P.R.T.
- Busway

Structural Evaluation of Exiting Interstate Bridge

Analysis of River Traffic at the Interstate Bridge

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

TO: I-5 Project Management Board

FROM: Hurvie E. Davis HED

SUBJECT: Minutes of May 24, 1974 Project Meeting

DATE: June 3, 1974

The meeting was called to order and CRAG's new assistant Communications Director Betty Merten was introduced.

After a project status report, several other items were discussed.

1. Citizen Advisory Committees. The Board decided to merge the proposed four citizen committees into one large committee and utilize subcommittees to deal with four special topics.

The Board approved the following persons as members of the committee: Ethel Lehman, Pat Blackwell, T.R. Swennes, Jim Lafferty, F.S. Barlow, Howard Martin, Jim Shull, Jim Howell and Vern Rifer. The Board also authorized the staff to continue making contact with citizens to complete the committee organization; also, staff was directed to obtain citizen input from area Chambers of Commerce with the first citizen committee meeting expected in two weeks.

2. Martin Palmer, Citizens for Better Government. Representing Citizens for Better Government, Mr. Palmer requested that staff consider a "new" system type--the Horizontal Elevator--for application in the Interstate Bridge Corridor. Staff indicated that new systems would be explored in Phase II of the Project and all concepts would be explored wherever feasible. Mr. Palmer also stressed that public transit is to serve among others, the captive rider.

3. Phase I Draft Report. Draft copies of the Phase I report on the project were distributed. Some of the recommendations were discussed, in particular, the express bus service in the Hazel Dell and Mill Plain Corridors. The PMB was asked to review the report and make appropriate comments as to format, analysis, etc., and especially the recommendations.

4. Governor's Task Force. The preliminary recommendation of the GTF that busways and light rail be the two alternatives for further study within the I-5 Corridor was discussed. Staff was instructed to

continue the project work program as previously approved and explore other system possibilities in addition to those recommended by the GTF.

5. Next meeting. June 21, 1974, was tentatively scheduled for the next meeting.

Meeting Adjourned.

Members Present

Dick Granger, Clark County Commissioner
Dick Barnum, RPC of Clark County
R.O. Cunningham, Oregon Highway Div.
Bill Dirker, City of Portland
Pierre Henrichsen, WSHD
Edgar Waehrer, Tri-Met
Glenn Davis, City of Vancouver
Gerald Peck, Vancouver-Portland Bus Co.

Guests

Jim Guenther, Clark County
Vernon Trigg, Evergreen State Line
George Sheldon, Colburn, Sheldon
Martin Palmer, Citizens for Better Government
Grace Palmer, Citizens for Better Government
Lynette Curtis, CRAG Transportation Committee
Larry Lange, Columbian
Bill Allen, Carpool-ODOT

Staff

Hurvie Davis
Bob Blensly
Reed Gibby
John Krawczyk
Betty Merten

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT
PORTLAND, OREGON 97221

(503) 297-3726

CLACKAMAS COUNTY
Canby
Gladstone
Happy Valley
Lake Oswego
Milwaukie
Oregon City
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CLARK COUNTY
Camas
Vancouver
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COLUMBIA COUNTY
Clatskanie
Columbia City
Prescott
Rainier
Scappoose
St. Helens
Vernonia

MULTNOMAH COUNTY
Fairview
Gresham
Portland
Troutdale
Wood Village

WASHINGTON COUNTY
Beaverton
Cornelius
Durham
Forest Grove
Hillsboro
North Plains
Sherwood
Tigard
Tualatin

I-5 PROJECT MANAGEMENT BOARD

A G E N D A

May 24, 1974

I. Brief Status of Project

II. Citizen Advisory Committees

III. "Citizens for Better Government" - Mr. Martin Palmer

IV. Discussion of Draft Report and Recommendations

V. Discussion of Work Program & Governor's Task Force

VI. New Business

VII. Next Meeting Date

I 5 Corridor 5/24

1. Demonstration application —
   a. period of need until I-205 Bridge
   b. alternate of preferential ramps & routes to Bridge

Car Pool - introducing - on corridor ino grid - Gibby

UMTA # - No Decision - 1 to 2 wks ?

Citizens Comm - Interest Group Representatives

Subcommittee by Field

Phase I Report - Review

get Tri-Met's Comment.

get Gov. T F Comments

get Union Av. Project Comments

get Ports & Engineers Comment.

Wash. jurisdiction

Citizens Advisory Committee

[check P. 45 - ~~2nd~~ Table VII-3 - Comment.]

WED AM

Mr. Dirker

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT
PORTLAND, OREGON 97221
(503) 297-3726

TO: I-5 Project Management Board

FROM: Hurvie E. Davis HED

SUBJECT: I-5 Board Meeting - Friday, May 24, 1974

DATE: May 16, 1974

There will be a meeting of the Project Management Board for the Interstate Bridge Corridor Project at 9 a.m., Friday, May 24, 1974 in Commissioner Granger's conference room, County Courthouse, Vancouver.

Staff is in the process of preparing a draft report on Phase I of the project which we anticipate having ready for the meeting. Included in the report will be recommendations for a transit demonstration project. We are requesting the Board to give the necessary input so that staff can proceed with finalizing plans. Included in the recommendations will be the I-5 priority lane for high occupancy vehicles, and the non-capital intensive recommendations made earlier relating to intersystem transfers and expanded information service.

Mr. Martin Palmer of "Citizens for Better Government" is being invited to address the Board and present some ideas on transportation which his group may have.

All members are urged to attend.

NATIONAL TRANSPORTATION ENERGY CONSERVATION ACTION PLAN

DEMONSTRATION GRANT APPLICATION

FOR A

PRIORITY LANE FOR HIGH OCCUPANCY VEHICLES

FAI-5

INTERSTATE BRIDGE TO KILLINGSWORTH STREET

May 1, 1974

Columbia Region Association of Governments

In Cooperation With

Oregon State Department of Transportation
Washington State Department of Highways
Other Local, State and Federal Public and Private Organizations

T A B L E O F C O N T E N T S

INTRODUCTION

In January of 1974, Congress enacted legislation which was set up in order to address the existing fuel shortage. Because the world supply of petroleum is limited and is expected to be exhausted by the year 2050 and the cost of obtaining the remaining petroleum will increase substantially, it is imperative that this fuel be conserved. Also, since fuel is being consumed at an increasing rate, time is of the essence. This federal legislation provides a procedure whereby fuel saving transportation improvements may be implemented in a very short time. In particular, this legislative action plan encourages immediate and short range improvements. Oregon and Washington have for years been concerned with conservation of natural resources and likewise are concerned with the fuel shortage and conservation of this fuel supply.

This demonstration proposal is only one element of a system solution being developed for the Interstate Bridge Corridor Project. This Project was established to move people in this corridor more efficiently with minimal environmental damage and this demonstration project is intended to meet this criteria as well as to conserve fuel. There will be basically two parts in this demonstration project. The first is preliminary engineering which will consider the feasibility of at least three types of priority lanes for high occupancy vehicles and determine which type will "best" fit the needs in this corridor. The second part consists of the implementation of

the alternative selected from part one.

Any improvements in this corridor will also consider the impending reconstruction of Interstate 5 in Vancouver and North Portland. It is anticipated that the Washington State Highway Department will complete their work in about 1977, while work in Oregon will be completed in 1978 or 1979. Subsequently, one could assume that the project will have a life span of about five years.

THE SCOPE OF THE PROBLEM

Urban freeways generally have a problem of excessive traffic demands during the peak periods. These excessive demands result in travel time losses, air pollution and accidents. The problem on Interstate 5 is compounded or intensified when, occasionally, the Interstate Bridge draw span opens during or near the peak commute periods. This bridge is the only transportation link from Vancouver to Portland in the region.

A substantial portion of the Clark County work force, more than 12,000, are employed in the State of Oregon and must cross the Interstate Bridge each working day. It should be further noted that Clark County is one of the fastest growing counties in the Northwest; therefore, one may expect an increase in the work force, at least during the near future, that will commute to Oregon.

To address these points a minimum of three types of priority lanes for use by high occupancy vehicles will be evaluated for feasibility:

1. Contra-flow lane
2. Concurrent-flow in an exclusive lane
3. Concurrent-flow on the shoulder

OBJECTIVES

The major objective of this project is to provide immediate conservation of energy. Along with this major objective, other objectives consist of providing incentives to increase the use of buses and car pools and increase the person movement capacity of Interstate 5 at a reduced level of fuel consumption. It is expected that congestion and associated problems will be reduced by improving the traffic flow on this facility through the installation of a priority lane.

PROJECT DESCRIPTION

The project area includes that part of the Interstate 5 highway facility between Vancouver and Portland, bounded generally by Killingsworth Street on the south, located at Oregon Highway Division mile post designation 304.5 and the Interstate Bridge on the north located at Washington Highway Department mile post designation 0.3. The actual limits may depend on the results of preliminary engineering.

The priority lane designating one lane for the use of high occupancy vehicles during the one commute period and perhaps the P.M. commute period if determined feasible. This lane will be used exclusively for high occupancy vehicles identified as buses and car pools with 3 or more persons. A contra-flow priority lane concept consists of reversing one northbound lane to operate in the

southbound direction during the A.M. commute period. The concurrent-flow priority lane could consist of restriping the facility in the project area so as to accommodate one additional lane for the exclusive use of buses and car pools during the peak periods and the third possibility consists of operating buses only on the shoulder during the peak period.

Basic traffic control devices will be necessary for each alternate and will include such items as changeable message signs, lane use signals, manual installation of traffic cones, entrance and exit gates at the termini of the priority lane, towing service and additional policing. The extent and type will depend on the alternative.

The project also includes public and/or private parking lots which may be located near 78th Street, Mill Plain Blvd. or Fourth Plain Blvd. interchanges and corridors. The private parking lots may consist of shopping centers or individual businesses which have large parking areas and at which owners agree to such use. These parking lots will be properly signed so that perspective riders of transit or car pools may readily locate them. In addition, on public property it may be necessary to provide minor surfacing improvements to accommodate the vehicles. The size of these lots are expected to be sufficient for 20 to 100 vehicles.

WORK PROGRAM

The work program for this demonstration project consists of two parts with four elements in the second part.

The first part is preliminary engineering which is to be conducted by the staffs of the state highway departments. The reason for using the state highway departments is because time is of the essence and these agencies already have the needed expertise. The administrative requirements to retain and hire a consultant would take a considerable amount of time. The preliminary engineering consists of feasibility determination and design for the operation of the various alternatives. The balance of the elements are contained within Part II of the demonstration.

The first element of Part II consists of the preparation of contracts and installation of the traffic control devices, parking lots and provision of proper inspection and contract administration to effectively and thoroughly provide for the installation of those devices.

Marketing programs, the second section, will develop and provide incentives for people to car pool and use transit. This program will interface with the regional car pooling effort to provide special attraction and add emphasis to car pooling in the Interstate 5 corridor.

The third element, the operation of the priority lane is to be directed by the state highway departments. The law enforcement agencies will provide the policing and a franchise for the towing service will be required. This element will be monitored very closely in terms of safety, volumes, speeds, etc. Monitoring records will provide a good data base for the final elements of the work program.

The fourth element, project evaluation, will determine the performance of the project and its usefulness in terms of other corridors in this or other regions. The evaluation will also recommend whether the project should be continued or terminated. If the project is successful, it could be continued until the rebuilding of Interstate 5 is completed, at which time the new facility may have been designed and constructed to accommodate the need for this high occupancy priority lane.

FINANCING

As with any improvements there are two aspects to financing; namely 1) the expected costs, and 2) the anticipated revenue. The estimated costs of this project by parts and elements are as follows:

Part I	Preliminary Engineering		$ 40,000
Part II	Implementation		510,000
	1. Installation	$390,000	
	2. Marketing	30,000	
	3. Demonstration Operation	70,000	
	4. Demonstration Evaluation	20,000	

These costs make no provision for additional transit service. It is assumed that any costs for additional transit service will be met from the fares obtained from expanded operations and from local subsidies which may be required. The revenue or source of funds for the demonstration project consists of three sources:

1. Federal Aid to Interstate - 90% or $495,000.
2. The local matching money by the Oregon State Highway Division - 9.3% or $51,000.
3. Washington State Highway Department - .7% or $3,900.*

The distribution of the local match was based upon the length of the project and the percentage of that length which comes under the respective jurisdiction of Oregon and Washington highway agencies.

* Part I will have the same proportional financial distribution of the $40,000:
1. Federal Aid to Interstate - 90% or $36,000.
2. Oregon State Highway Division - 9.3% or $3,700.
3. Washington State Highway Department - 0.7% or $300.

JUSTIFICATION

The emergency transportation energy conservation is a major factor for justification as outlined in an act of Congress. This project is estimated to provide an annual fuel savings of approximately 115,000 gallons or $70,000 depending somewhat on the alternatives. In addition to this amount, another $80,000 is estimated to be saved by the reduction of travel time resulting from this demonstration project also depending upon the alternatives. This project is a "relatively" low cost improvement which would be categorized as a short range improvement. Such improvement could be based upon a five year program. Assuming this improvement on a five year basis, the direct economic benefit is approximately equal to the cost.

Considering unquantified benefits it would seem that this project is justified. Some of these unquantified benefits include better utilization of the freeway capacity because the proposal will make use of available capacity in the roadway which is now underutilized. This proposal will reduce noise and air pollution per passenger mile of service provided to the public. On the southbound mainline, it is expected that the level of safety will be improved; however, in the case of the contra-flow lane there is some question. It is acknowledged that there is no history of safety with buses and car pools in contra-flow lanes. Part I of the demonstration project

will address this issue along with many others. This demonstration is intended to increase transit ridership and car pool utilization by providing a definite incentive toward usage of these modes.

ENVIRONMENTAL CONSIDERATIONS

The considerations are divided into three major dimensions: 1) Economic; 2) Ecological; and 3) Community Service and Values.

The economic impact consists of employment, housing and commercial development. This proposal is not expected to have any substantial effect on these characteristics because it will be done within existing rights of way and will only produce a marginal increase in traffic volumes. These aspects also reflect the same impact in the property land use character and tax base associated with the property in the corridor which likewise will not change significantly, if at all. It is recognized that this proposal will provide an incentive, though marginal, for continued development of Clark County, and in particular, the commuters utilizing the Interstate facility between Clark County and areas in Oregon.

The ecological impact includes such things as pollution, wildlife, geological, aesthetics and conservation of natural resources. This proposal is not expected to provide any adverse

impacts in terms of noise, air, water and land; rather the opposite is expected at a marginal level; that is, by reducing the number of automobiles on the freeway, one could expect a reduction of air and noise pollution. Since existing highway facilities are used for this project, there will be no impact in respect to wildlife refuges and migration patterns, similarly with water, erosion, slope protection and aesthetic considerations. There will not be any significant adverse ecological impact as a result of this project. In fact, there will be a positive impact because of the fuel which is to be conserved by this demonstration.

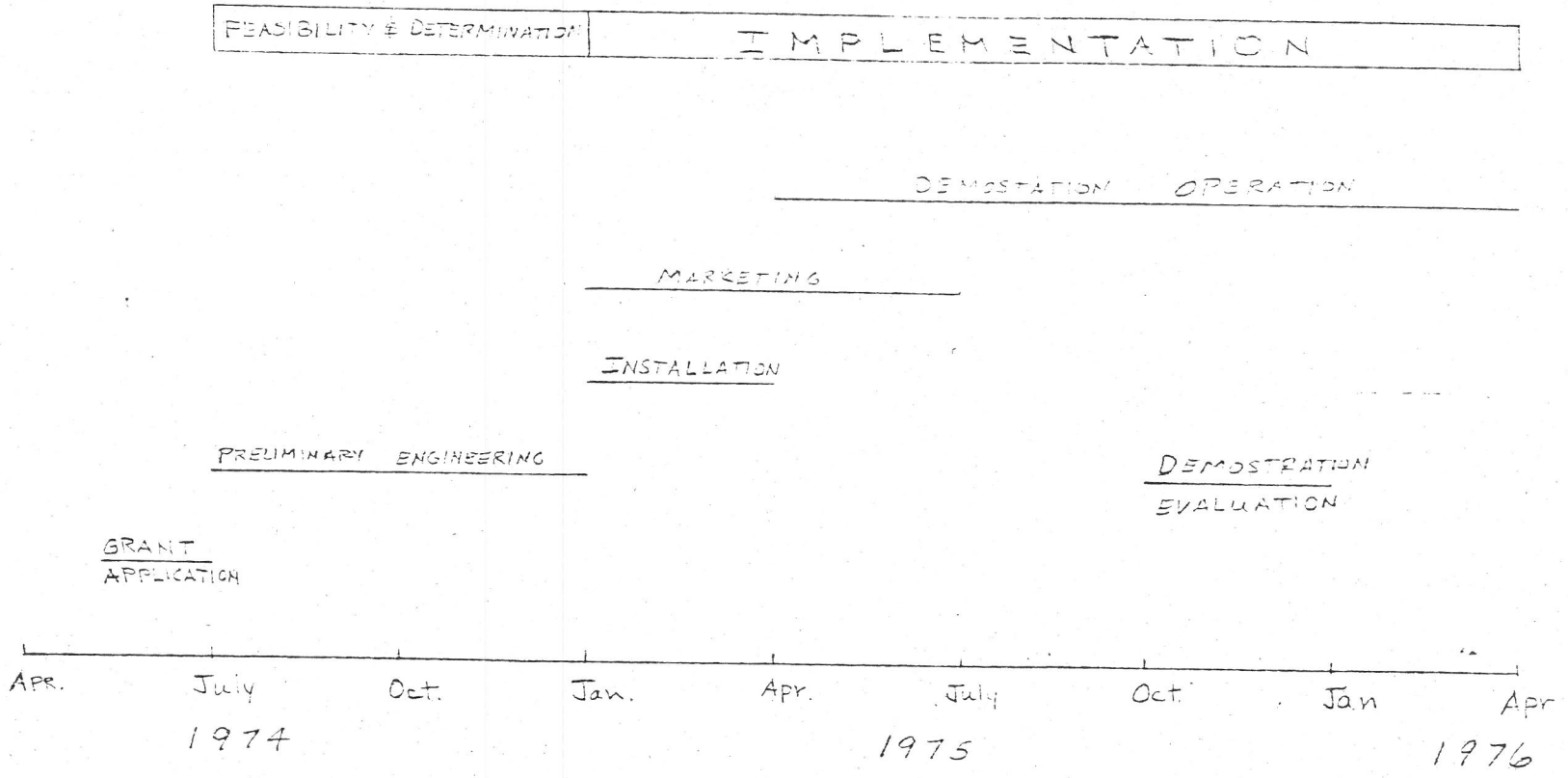
Community services and values will have very little impact if any. The utilities, emergency service, religious institutions, parks, recreation and entertainment, education, landmarks, health and safety are all well established and will not be changed. The project will not require the acquisition of landmarks, park, recreation and entertainment facilities or religious institutions. It will provide an improvement in the traffic flow in the A.M. peak period which will be an advantage to emergency vehicles which may be using the facility during that time. So again, with this portion of the environmental considerations it is expected that this project will have a marginal improvement in this consideration. It can also be noted that this improvement will require use of some resources such as steel and other materials for the sign and signal structures, rubber or synthetic materials for traffic cones, lights and lenses for the signal and other miscellaneous materials. Some of these will be irretrievable to the resource system.

APPENDIX

N.T.E.C.A.P. DEMOSTRATION PROJECT

INTERSTATE BRIDGE CORRIDOR

PRIORITY LANE FOR HIGH OCCUPANCY VEHICLE



WORK PROGRAM ACTIVITIES DIAGRAM

CBG

Citizens For Better Government

P.O. BOX 1482 VANCOUVER, WASH. 98663

May 3rd, 1974

Mr. Richard Grainger, Chairman
I-5 Bridge Study Management Board
Clark County Court House
Vancouver, Washington, 98660.

Dear Mr. Grainger:

This letter, based upon studies of our mass transit committee, is to call your attention to a mass transit means ignored by your planners todate. The Interstate Bridge is a bottleneck location suited for improvement to mass transit by horizontal elevators.

Horizontal elevators, like the vertical elevators we all use in modern office buildings, have only one cab on the tracks moving back and forth as a suttle and thus avoid both railroad type of complex operation and the cost of driver-attendants. A fast 45 seconds will delivery you from one end to the other.

A special advantage also exists, for while present sidewalks of the bridge are at the same elevation as the auto roadbed, they need not be if the northern end were moved further back to the City Transit depot. Then the horizontal elevator could be operated on an elevated sidewalk which never needs to be interrupted because a draw span is open to allow boats to pass. No other mass transit suggestion provides this essential.

This innovative approach will extend Tri-Met and Vancouver City Transit services to a common point--and at no cost to either. Since it's the first Interstate Hwy. application of horizontal elevators across a state boundary, it appears to be an "experimental" project wherein costs are paid solely by Federal Funds.

Sea-Tac International Airports more complex use uses the larger cabs of one of the three American manufacturers, catalog sheets and descriptions are attached.

We request that you urge an immediate application for grant to make an engineering feasibility study of the horizontal elevator concept on the Interstate Bridge.

Yours very truly,

CITIZENS for BETTER GOVERNMENT

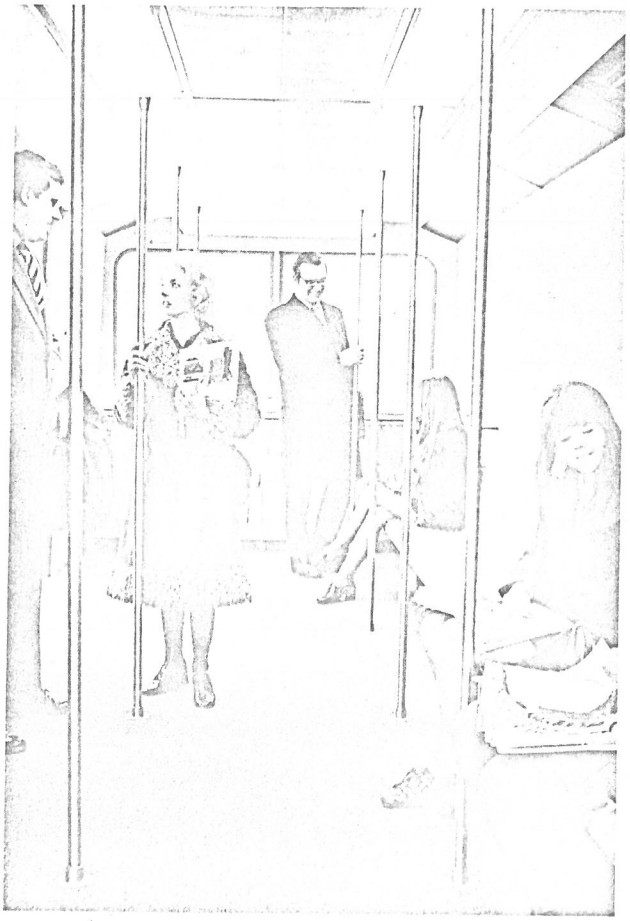
Martin Palmer

Martin Palmer, President

MP:lm

Vehicle

The 102-passenger vehicle has been designed for the convenience and comfort of the passengers. Two eight-foot wide doorways are provided on the lobby side of the vehicle for rapid movement of passengers in and out of the trains. Windows in the ends and vinyl-covered seats along the wall opposite the doors attract passengers in and away from the doors. Windows are provided in the vehicle doors to add to the passengers' sense of motion and to provide them with visual indication of station stopping.

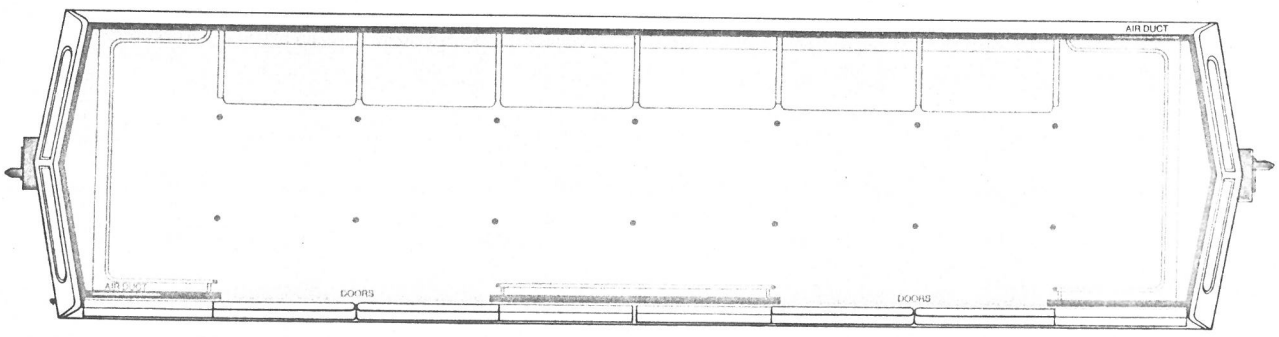


The vehicle interior is aesthetically and comfortably pleasing to provide an atmosphere in keeping with the terminal and airplane interiors. It features carpeted floors and walls, high-level fluorescent lighting and climate-controlled air.

Electric power fed to each vehicle is converted by a transformer and a full-wave thyristor control on the vehicle. The control delivers infinitely adjustable DC voltage to a single 100 hp series-wound traction motor. It is applied through a jerk-limited automatic control for smooth acceleration and fast response to propulsion commands. As the vehicles reach desired speeds, or if it is required to slow down for civil restrictions, the automatic control adjusts and maintains the motor torque and speed at the required operating level.

The braking system is also automatically controlled under jerk-limited conditions. The brakes are truck-type drum friction brakes, air operated, and equipped with fail-safe, spring-loaded emergency actuators. Each axle has a separate braking system to provide redundancy and to improve braking performance.

The suspension, guidance, propulsion, auxiliary and braking systems are located beneath the floor. The suspension is an air-bag and leaf-spring-type that provide a smooth ride. The air bag also serves as a leveling device, maintaining the vehicle floor to the level of the station floor with variable load. The vehicle rides on pneumatic drive tires arranged in two dual sets on each of the two automotive axles which are steered by four guidewheels on each bogey.



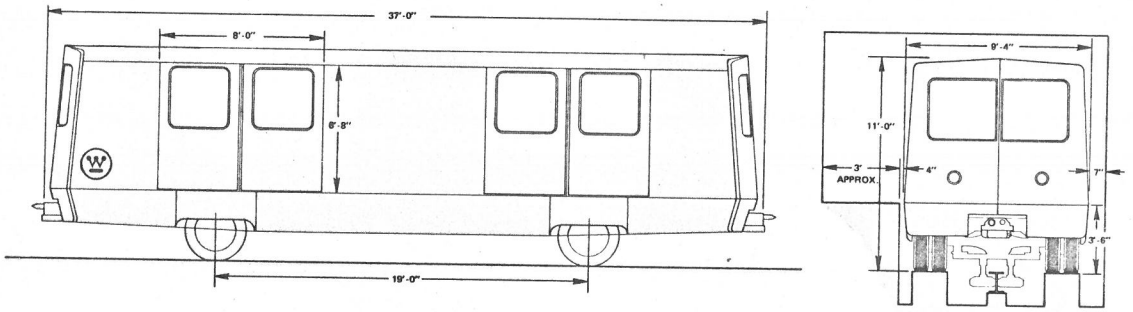
Horizontal Elevator operation on the Interstate Bridge Eastside sidewalk area would provide automatic 24-hr. unattended operation with a 35 second travel time from one end to the other end. Windows would be provided only on the river side of cab.

Federal Law has determined that the entire bridge operation shall be without toll-charge or franchise limitations.

The example below is similar to the units now being installed for public use at Sea-Tac International Airport.

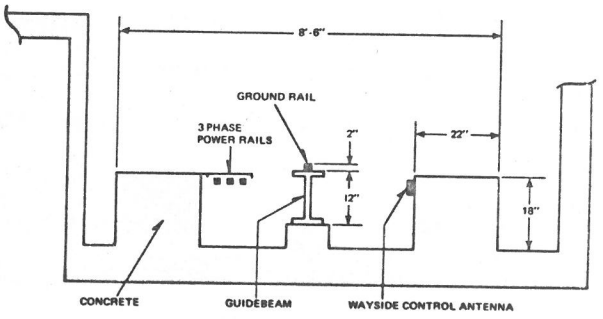
One Manufacturer's Horizontal Elevator Cab

OVERALL DIMENSIONS AND WEIGHTS



Vehicle Weight

Empty	– 25,500 lbs.
Full	– 42,800 lbs.
Maximum	– 46,700 lbs.



THE CITY OF
PORTLAND
OREGON

OFFICE OF
PLANNING AND DEVELOPMENT
GARY E. STOUT
ADMINISTRATOR

1220 S.W. FIFTH AVE.
PORTLAND, OR. 97204

M E M O R A N D U M

To: Hurvie Davis Date: April 29, 1974

From: Bill Dirker

Subject: I-5 Corridor Contra-Flow Lanes

Your memo of 4/24 raised some good points re. trucks in the contra-flow lane. If the carpool use of the lane is rejected, as I expect, I note you intend to re-examine the truck proposal. Here are some thoughts you may be able to use:

I doubt if the unfamiliar truck driver is really much of a problem. The "grapevine", reinforced by extensive citizen band radio net, of the long haul truckers is notorious for its effectiveness. Very few will not "get the word".

The signing approaching the entrance of the lane might carry a message such as "Reserved Lane, Trucks and Buses, no exit for 3 miles".

I really question if 80% of the trucks have an origin or destination within the length of the lane. I just can't imagine it.

Merging could be a problem but the design should prefer the special lane at the expense of the regular traffic.

WSD:dyml

Mass-transit study funds available

By PHIL COGSWELL
of The Oregonian staff

WASHINGTON — Federal funds are available to study feasibility of monorail between Portland and Vancouver, Wash., Sen. Mark Hatfield, R-Ore., learned Tuesday.

Hatfield received a letter from Secretary of Transportation Claude S. Brinegar stating that "the Urban Mass Transportation Administration has funds available under the technical studies grant program for feasibility studies of the type you refer to."

The Oregon senator had requested the information after articles in The Oregonian had indicated that a space between the spans of the Interstate Bridge over the Columbia River might be wide enough for a monorail system.

Brinegar said in his letter that "the federal share of the project under existing legislation would be two-thirds of the cost, with the remaining one-third to be funded by state and or local public bodies."

Such a body would have to make the application for the funds, Brinegar said.

Hatfield said he was encouraged by the response and would ask Oregon Gov. Tom McCall and Portland Mayor Neil Goldschmidt to review the proposal and assess its merits.

Hatfield also has received some suggestions that the nearby railroad bridge across the Columbia be used for a commuter system, but he has been informed that the bridge is too heavily used by regular trains.

OREGONIAN
4/25/73

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

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Portland
Troutdale
Wood Village

WASHINGTON COUNTY
Beaverton
Cornelius
Durham
Forest Grove
Hillsboro
North Plains
Sherwood
Tigard
Tualatin

TO: Bill Dirker
FROM: Hurvie Davis HED
SUBJECT: Interstate Bridge Corridor Project - Trucks in Contra-Flow Lane
DATE: April 24, 1974

Reference is made to your memorandum of April 10, 1974, in which a recommendation was made to operate trucks in the proposed Contra-flow lane on Interstate 5. Before responding to the recommendation an analysis was conducted which is briefly discussed here.

You indicated that approximately 350 trucks could possibly use the exclusive lane. It should be noted that a substantial portion of the traffic cannot use the priority lane because it either enters or exits (or both) within the limits of the lane. Actually, only about 70 or 80 trucks could use the lane. Since many truck drivers are not local there would be a problem of educating these drivers as to the merits of using the priority lane. This would also be an issue pertinent to auto drivers but to a lessor extent. The effect on the mainline would be about the same as 150 passenger cars being removed from the traffic stream. While this diversion will increase the capacity of the facility, the incentive for car pooling will essentially remain the same as today - i.e. car pools in mixed traffic without any special priority. However, permitting car pools in the priority lane will be a definite incentive over the existing conditions and would tend to increase the person carrying capacity of the facility.

The economic benefit would probably decrease because the benefits were based on a higher passenger use of the priority lane than this proposal. Consequently, the passenger travel time savings would be reduced by this idea in comparision to car pools assigned to the priority lane.

While it is acknowledged that truck drivers are professional and as such would most likely produce a better safety record in the priority lane, there are also some operational problems. The first problem associated with trucks is maneuvering into the exclusive lane at the north end. Secondly, trucks may require a larger gap than buses and cars when re-entering the southbound roadway at the terminus of the priority lane. Both proposals assume buses in the priority lane which also require a merging gap similar to trucks; but, the truck proposal will necessitate many more "large" gaps in the traffic stream than the car pool plan. The last point is that trucks normally operate in the right lane and this idea would require a weaving maneuver upstream of the north end and downstream of the south end of the special lane.

These characteristics together with a reduction in economic benefits tend to offset the safety advantage of the professional truck drivers. It appears that this recommendation has limited merits and other possibilities should be considered. If the proposal for buses and car pools in the lane does not receive approval, perhaps the truck proposal can be examined in greater detail.

403.09

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT
PORTLAND, OREGON 97221
(503) 297-3726

TO: Project Management Board
FROM: Hurvie E. Davis
SUBJECT: Minutes of April 10, 1974, meeting
DATE: April 17, 1974

The meeting was called to order and staff reported on the status of several aspects of the Project:

1. Problems of expanding the Regional Car Pool Program to include Clark County were discussed. The major obstruction is the grid map which includes only a portion of the urbanized area in Clark County. Staff was instructed to work with the regional car pool effort to include Clark County.

2. The analysis of the O-D data had developed five possible corridors for express bus service: 1) Mill Plain Blvd., 2) Fourth Plain Blvd., 3) 78th Street, 4) Hazel Dell, and 5) Lewis & Clark Highway. Staff is to further refine the data and develop a demonstration project for one or more of the corridors.

3. The NTECAP Demonstration grant application format was discussed. The state highway agencies expressed considerable reservation with respect to safety when permitting passenger cars in the contra-flow lane. Experience of this type of exclusive lane has been with buses only and adding non-professional drivers with two way traffic was the basis for concern. Staff was instructed to process the application with the understanding that the state highway agencies be given the opportunity to veto the project if the safety issue can not be sufficiently resolved.

4. The status of the citizen advisory committees was reviewed. The organization of the committees need special emphasis and staff was instructed to expedite the establishment of these committees. It was suggested that Ms. Betty Barker of Tri-Met's suburban transit station staff be contacted about citizens in this corridor.

5. Staff reported that Tri-Met had responded favorably to the Low-Capital Intensive Demonstration Project (Immediate Low Cost Improvements) which was presented last meeting. Responses have not yet been received from the City of Vancouver or Vancouver-Portland Bus Co. Additional detailed response from Tri-Met is forthcoming.

6. It was reported that staff had provided assistance to the Regional Planning Council of Clark County and Governor's Task Force on Transportation in developing transportation alternatives in the Portland-Vancouver Corridor.

Notices of date, time, and place of the next PMB meeting will be mailed.

ATTENDANCE

Board Members

Dick Granger, Clark County
Gerald Peck, Vancouver-Portland Bus
Dick Barnum, RPC of Clark County
Bob Cunningham, Oregon Highway Div.
Bill Dirker, Portland
Pierre Henricksen, WSHD
Glen Davis, City of Vancouver
Edgar Waehrer, Tri-Met

Visitors

Leonard Bacon, The Oregonian
Dick Carroll, WSHD Dist. Engineer
Edi Woll, League of Women Voters, Clark County
Pat Blackwell
Chuck Neumayer, WSHD, Dist. Traffic Engineer
Larry Lange, Columbian

Staff

Hurvie Davis
John Krawczyk
Reed Gibby
Bob Blensly

IST Corridor 4/10

1. Carpool → a. get Toll Free number
   b. add in WSHD listings
   c. CAC report on S/R
   d. Motorcycle - incl Clark Co. !

2. Centre-flow Lane - Bus > Carpool
   a. OSHD > WSHD seriously question safety from Car Pools
   b. OK to submit w/ NTCAP SUBJECT TO REVIEW
   c. Common Bus > Trucks (7% only Peak Hr.)
      (1) enforceable
      (2) Safer w/ qualified drivers
      (3) improves other lanes flow > safety > fuel saving.

Bus ±10/hr.
Truck 50 w/hr @ 7% = 350 trucks.

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S. W. CANYON COURT

PORTLAND, OREGON 97221

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I-5 Project Management Board

AGENDA

April 10, 1974

I. STATUS REPORT

a. Regional Car Pool Program
b. O - D Survey Data and Analysis - Potential areas for direct Public Transportation Service
c. NTECAP Demonstration Project
d. Citizen Advisory Committees

II. LOW-CAPITAL INTENSIVE DEMONSTRATION PROJECT RESPONSES

a. Tri-Met
b. Vancouver Transit System
c. Vancouver - Portland Bus Company

III. ASSISTANCE TO GOVERNOR'S TASK FORCE ON TRANSPORTATION

IV. NEW BUSINESS

V. NEXT MEETING DATE

NATIONAL TRANSPORTATION ENERGY CONSERVATION ACTION PLAN

DEMONSTRATION PROJECT GRANT APPLICATION

TITLE: INTERSTATE 5 CONTRA-FLOW PRIORITY LANE FOR HIGH OCCUPANCY VEHICLES

I. Introduction:

A. Because of the fuel shortage, time is of the essence.
B. NTECAP encourages short and long range improvements.
C. Oregon has been a leader in conservation.
D. Other areas have successfully used this concept.
E. This was a part of the I-5 Bridge Corridor.
   a. General Work Program Outline.
F. This is only one element of a system solution.

II. Scope of the Problem:

A. Excessive Traffic Demand during Peak Periods.
B. Peak Period Traffic Directionally Oriented.
C. Traveltime losses, Air Pollution and Accidents result from congestion.
D. Draw Bridge openings compound the intensity of the problem.
E. Interstate Bridge is the only ground transportation link in the region.
F. Considerable portion of work force in Clark County work in Oregon.
G. Expected growth in Clark County.

III. Objectives:

A. Increase the passenger capacity of I-5 at reduced fuel consumption.
B. Increase the vehicle occupancy rate.
C. Provide incentive to use buses and car pool.
D. Immediate conservation of energy.
E. Reduce the congestion and associated problems by improving traffic flow.

IV. Project Description:

A. During a.m. peak operate one N.B. lane in southbound direction.
B. Limits - Killingsworth St. (Oregon M.P.) on the south and Interstate Bridge on the north (Wash. M.P.)
C. Time period 6:45 to 8:30 a.m.
D. Traffic Control -
   Changeable message signing, lane use signals, manual installation of traffic cones, entrance and exit gates, towing service, additional police.
E. Exclusive lane users - high occupancy vehicles - buses and car pools with three or more.
F. Parking lots - 78th St. IC, mill Plain IC, & 4th Plain IC.

V. Work Program:

A. Preliminary Engineering
   1. Design
   2. Contract Plans
   3. Advertising Contract
   4. Award Contract

B. Installation
   1. Control devices
   2. Parking lots
   3. Inspection
   4. Contract Administration

C. Marketing Program
   1. Advertising
   2. Incentives

D. Operations
   1. State Highway Departments
   2. Policing
   3. Tow Trucks

E. Evaluation
   1. Determine Usefulness of Project
   2. Recommend disposal of Project
   3. Evaluate performance of Project

VI. Financing:

A.	Cost Estimate		$530,000
	1. Installation Cost	$380,000	
	2. Preliminary Engineering	40,000	
	3. Marketing Program	30,000	
	4. Demonstration Evaluation	20,000	
	5. Operations	60,000	
B.	Financing		$530,000
	1. Federal Air to Interstate (90%)	$477,000	
	2. Local Matching - Oregon (9.3%)	49,200	
	Washington (0.7%)	3,800	

VII. Justification:

A. Emergency Transportation Energy Conservation
   1. Estimated annual fuel savings about $70,000 (115,000 gallons)

B. Travel time - savings about $80,000 for the project duration.
C. Low Cost improvement
D. Better utilization of freeway capacity.
E. Reduced air & noise pollution.
F. Improved level of safety.

VIII. Environmental Considerations

A. Economic
B. Ecological
C. Public Services
D. Private Services

MTECAP DEMONSTRATION PROJECT

CONTRA FLOW LANE FOR HIGH OCCUPANCY VEHICLES

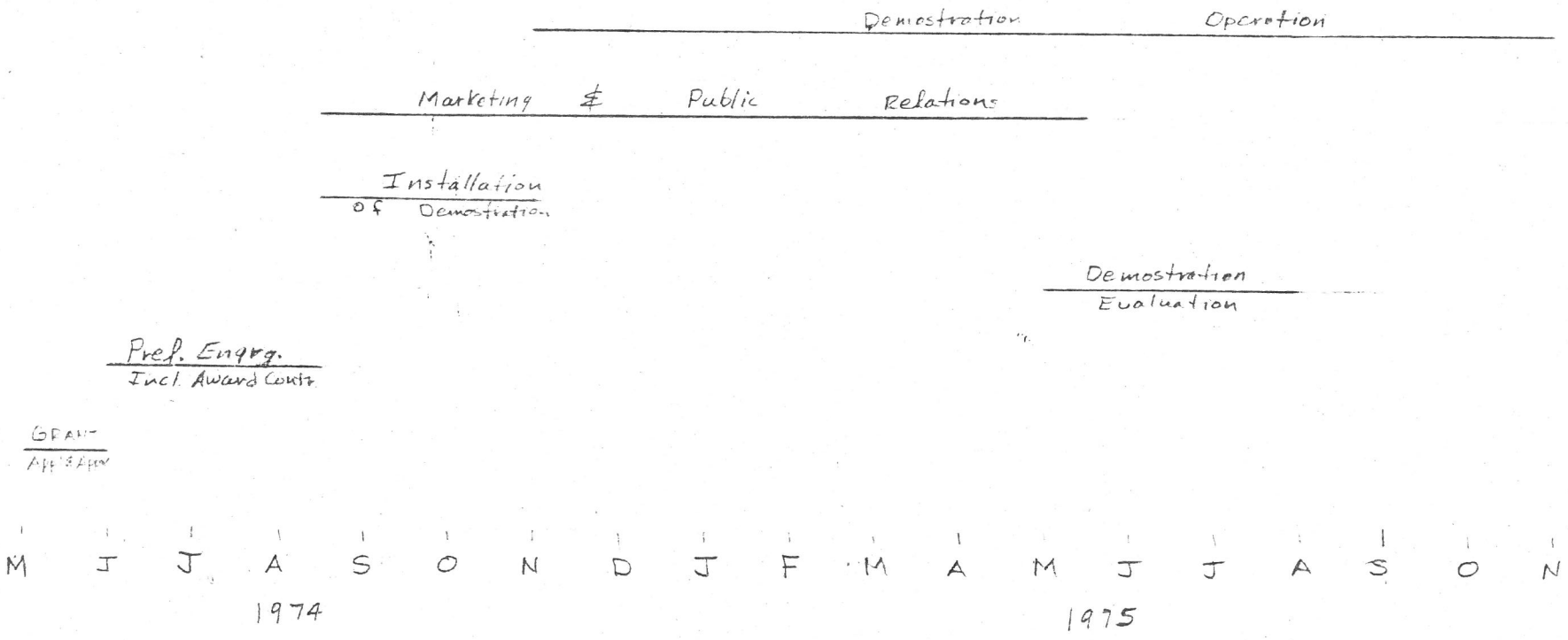
COST ESTIMATE

INTALLATION COSTS		₦380,000
CHANGEABLE SIGNS		
10 @ ₦8000		₦80000
LANE USE SIGNALS		₦132000
Pole, Arms, Head, Post, Mast	₦4,000	
12 @ ₦2,000 each		
Controller	₦4,000	
Detection	₦2,000	
Interconnection	₦72,000	
MOVEABLE GATES (PORTABLE)		₦30000
2 @ ₦15000.		
TRAFFIC CONES @ ₦1/=		₦8000
PARKING FACILITIES		₦50000
EMERGENCY VEHICLES & CARGO		₦80000
MARKETING PROGRAM		₦30000
PRELIMINARY ENGINEERING		₦10000
DEMONSTRATION EVALUATION		₦20000
FIRST YEAR OPERATING		
Equipment Rental		₦60,000
Personnel		
Fuel		
TOTAL PROJECT		₦550000

NTECAP DEMOSTRATION PROJECT

INTERSTATE BRIDGE CORRIDOR

CONTRA-FLOW LANE FOR HIGH OCCUPANCY VEHICLES



WORK ACTIVITIES DIAGRAM

COLUMBIA REGION ASSOCIATION OF GOVERNMENTS

C-9 Am

Memorandum April 9, 1974

15000 Total ~~A.D.T.~~ P/Hr

To: I-5 Project Management Board

From: John Krawczyk

Subject: Potential Service Areas for Transit

From the origin-destination survey data, staff has designated several potential service areas from which frequent, express bus service can be provided during the morning and afternoon peak period to selected employment center(s) in Portland.

Origins

Five major "corridors" consisting of neighborhoods adjacent to five main Vancouver arterials or collector streets have been considered as potential service areas. These include:

1. The Lewis and Clark Highway Corridor - this Corridor anticipates service to neighborhoods in Southeast Vancouver and Camas. Beginning east of Interstate 5, the route would follow the Lewis and Clark Highway east to Camas. An alternate route, following Evergreen Blvd. east and intersecting with the Lewis and Clark Highway at Ellesworth Road might also be considered.
2. Mill Plain Road Corridor - this route anticipates bus service along Mill Plain Road. The western boundary of the route is I-5, the eastern boundary is S.E. Ellsworth Avenue.
3. Fourth Plain Road Corridor - service is provided along Fourth Plain Road between I-5 on the west and the Sifton Community on the east.
4. 78th Avenue Corridor - anticipates service along 78th Avenue from N.W. 31st on the west to Sifton on the east.
5. I-5 Hazel Dell Corridor - a north-south route following I-5 or Main Street from the Interstate Bridge to the Hazel Dell Community on the north.
6. St. Johns route - A combination of parts of the 78th Avenue and Fourth Plain routes connected by St. Johns Avenue. The route runs from I-5 along 78th Avenue to St. Johns, proceeds south along St. Johns to Fourth Plain and west on Fourth Plain returning to I-5.

All routes become express routes upon entering the I-5 Freeway. Consideration could be given to allowing express service to make a convenient stop in downtown Vancouver, however.

Destinations

Origin and Destination survey data were analyzed to determine which areas of Portland were receiving the greatest number of inbound trips from the corridor areas. Five destination areas were singled out as

having a significant number of inbound trips. These include: Lloyd Center Area, Swan Island Industrial District, Downtown Portland, the Northwest Industrial District and North Portland (above Columbia Blvd). A summary table of trip origins and destinations is shown below:

Trip Origins* By Corridor	Lloyd Center	Swan Island	N. Ptld	Dwntn Ptld	NW Ind. Dist.	Total
Lewis & Clark	148	32	70	260	27	537
Mill Plain	285	205	144	418	200	1,252
Fourth Plain	263	267	116	322	199	1,167
78th Avenue	238	112	135	333	103	921
I-5 Hazel Dell	256	65	209	295	130	955
St. Johns	231	113	135	288	145	912
Totals	1,421	794	809	1,916	804	5,744

In all cases, the greatest number of destinations from any corridor is to Downtown Portland followed by Lloyd Center, Swan Island, North Portland and the Northwest Industrial District, respectively.

Service Possibilities

The most promising destination centers appear to be Downtown Portland and the Lloyd Center. While Swan Island appears to have a substantial number of trip destinations from some of the corridors, the individual places of employment on Swan Island are somewhat dispersed leading to some service difficulties. In addition, the industries on the island are served by three roads, two of which do not interconnect. Thus, without some sort of shuttle bus or feeder system, long delays in passenger delivery would be experienced to some points.

Service to North Portland is not feasible due to the distances between employment concentrations in the area. Service possibilities are complicated by the substantial amount of open space in this area.

Two factors complicate service to the N.W. Industrial District. These include difficulty of access to the area and wide dispersion of employment concentrations.

Service to Downtown Portland and the Lloyd Center area is facilitated by several factors including (1) Concentration of employment centers, (2) easy access from I-5 and (3) the possibility of serving both downtown and the Lloyd Center from the same route.

*Note: Some corridors overlap.

4128 Persons by Auto = 4743 Auto
329 Persons by Transit
4457 Persons.

From Clark County to

Downtown Portland

Auto Trips	1500	
Person Trips by Auto	2020	
Persons per Car	(1.34)	
Person Trip by Transit	293	
Total Person Trips		2,313

Lloyd Center

Auto Trips	997	
Person Trips by Auto	1,362	
Persons per Car	(1.36)	
Person Trips by Transit	22	
Total Person Trips		1,384 (903)

Swan Island

Auto Trips	596	
Person Trips by Auto	816	
Persons Per Car	(1.36)	
Person Trips by Transit	2	
Total Person Trips		818

N.W. Industrial Dist

Auto Trips	988	
Person Trips	1,211	
Persons Per Car	(1.22)	
Person Trips by Transit	2	
Total Person Trips		1,213

North Portland (N. of Colombia Blvd)

Auto Trips	712	
Person Trips	719	
Persons Per Car	(1.11)	
Person Trips by Transit	5	
Total Person Trips		717

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

rec'd 4-5-74

TO: I-5 Project
FROM: Hurvie Davis HDD
SUBJECT: I-5 Board Meeting - Wednesday, April 10, 1974
DATE: April 4, 1974

There will be a meeting of the Project Management Board for the Interstate Bridge Corridor Project at 10:30 a.m. on Wednesday, April 10, 1974, in Commissioner Granger's conference room, County Courthouse Building, Vancouver.

The origin-destination survey data has been received from the Department of Highways and is currently being analyzed. It is expected that the analysis will be completed to the point where meaningful discussions can be held during the meeting relative to areas with potential for transit service improvements. Work is progressing on the application for a demonstration project of a priority lane for high-occupancy vehicles. Efforts on the Citizen Advisory Committees are progressing and we will be requesting additional direction from the Board on this matter.

All members are urged to attend.

Attached are the minutes from the March 20 Board Meeting.

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

TO: Project Management Board

FROM: Hurvie E. Davis

SUBJECT: Minutes of the Interstate Bridge Corridor Project March 20, 1974

DATE: April 1, 1974

Chairman Granger called the meeting to order shortly after 9 a.m. and called upon staff to give a status report on the project.

The staff distributed information pertaining to summaries of the orgin-destination survey (see attachement) which had been received from the Washington State Highway Dept. This information was then reviewed and discussed by the members. The O & D information which will show the number of trips between traffic zones has not yet been received. This information is expected on March 28th. Staff reported on transit service improvements and in particular, special service provided for large employers. It was reported that the Vancouver Portland Bus Co. had provided service to the Freightliner Corp. on Swan Island similar to the service provided by Tri-Met. However, this service from Vancouver was discontinued after three days apparently because of insufficient patronage and lack of enough fare-box revenue to continue the service. It is expected that special transit service will be proposed to various employment centers pending analysis of the of the O & D trip interchanges.

The citizen advisory committees have not yet been fully established but with the arrival of the new employee (John Krawczyk) to work on the project, considerable thrust in the establishment of these committees is expected in the near future. The regional car-pooling program was discussed briefly as to how it would relate to this project. The Management Board also inquired as to the status of the request for UMTA funding. It was reported that the Interstate Bridge Corridor project funding apparently has no problem. However, with respect to the suburban transit stations there appears to be some question as to which UMTA source of funds would be most appropriate. The application for UMTA funds is expected to be approved.

The staff presented a recommended low-cost demonstration project which resulted in considerable discussion (see attachment 2). Of particular concern on the proposal was item 1 which would cost the City of Vancouver approximately $6,000 and Tri-Met slightly more than $1,000. With respect to the NTECAP, (see attachment 3) the management board requested that parking lots for car pools and bus pools be included along with a priority lane for high occupancy vehicles for the May 1 action plan, recommendation which is being completed by CRAG and transmitted to the FHWA. It was also reported that legislation is pending in the Washington State Legislature which would permit counties in Washington to contract with organizations outside the state to provide special services such as mass transit. Legislation of this nature was passed in Oregon last year and it was felt that comparable legislation should be passed in Washington in case it should be needed.

Edgar Waehrer of Tri-Met reported the progress of Vancouver transit station portion of the Tri-Met Suburban Transit Station. Requests have now been made for proposals from consultants to perform various work activities and the proposals are expected within a week. The second point was the necessity to define and overcome any legal restraints of Tri-Met consultants working in the State of Washington.

Dennis Wilde, of the Portland Model Cities Program, gave a brief status report on the status of Preliminary Engineering on Union Avenue. A discussion followed on the relationship of that project with the IBC project. The Oregon State Highway Division and the City of Portland Traffic Bureau have done some preliminary work relating to transportation on the Union Ave facility.

The management board requested staff to investigate the possibility of UMTA Demonstration Funds for DART service between Vancouver and Portland International Airport. Staff was also instructed to transmit the recommendations for a low-cost demonstration project on the IBC project to the affected agencies requesting their comments.

ATTENDANCE

BOARD MEMBERS

Dick Granger, Clark County
Edgar Waehrer, Tri-Met
Pierre Hendrickson, WSHD
Glen Davis, City of Vancouver
Bill Dirker, City of Portland
Dick Barnum, Clark County

GUESTS

Larry Lange, Columbian
Leonard Baker, Oregonian
Jim Guenther, Clark County
Dennis Wilde, Portland Model Cities

STAFF

R. C. Blensly
Hurvie E. Davis
Reed Gibby

ATTACHMENT 1

ORIGIN - DESTINATION SURVEY

DATA SUMMARY 6 - 9 a.m.

INTERSTATE 5 FACILITY

1. TOTAL TRIPS: VEHICLE - 11828, PERSON - 14,804

2. OCCUPANCY: RATE - 1.25 ppv

1 PERSON / VEH.	- 82%	(72% PASS.)
2 " "	- 14%	} (28% PASS.)
≥3 " "	- 4%	

3. VEHICLE CLASS: AUTO - 93.3%, TRUCK - 5.9%

4. TRIP PURPOSE: WORK 92.7%

5. WOULD YOU USE TRANSIT? YES - 36.5%, NO - 35.4%

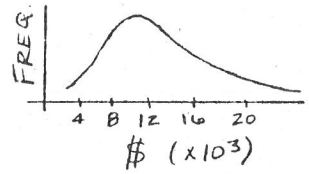
6. WHAT IS REASONABLE COST FOR TRANSIT? >$1.00 (O.W.) - 10%

> 60¢	- 25%
50 to 59¢	- 28%
< 50¢	- 50%
< 60¢	~80%

7. CAR POOLING: MEMBER? 12% yes, INTERESTED? 49% No, 31% YES

8. PARKING COSTS: TYPICAL - $10 to $25 MONTHLY; 87.5% FREE.

9. INCOME



10. MISCELANEOUS: SEX - MALE (66%) FEM (32%); 80% HAVE ≥2 AUTOS

ATTACHMENT 2

RECOMMENDATION FOR A DEMONSTRATION PROJECT IN THE INTERSTATE BRIDGE CORRIDOR

The demonstration project for Phase I of the Interstate Bridge Corridor Project has been separated into three elements in order to implement some immediate improvements and to respond to the National Transportation Energy Conservation Action Plan (NTECAP). The first element concerns low cost items which are to be funded locally and should be implemented before the other elements to provide maximum benefit to the total system. The second element is an application for Federal Funds under the NTECAP while the third element consists of the most promising express bus service routes. This last grouping is to be funded locally.

PHASE I - RECOMMENDED DEMONSTRATION PROJECT

Element A. Immediate Low Cost Improvements

1. Expand the intersystem transfers between Tri-Met and Vancouver-Portland Bus Co. and Vancouver Transit. Consideration should be given to the private carrier so that it will not receive any reduction in passenger revenue as a result of this procedure. The private carrier, unlike the public carriers, receives no subsidy to assure a continuation of service.

   At present, riders using the Vancouver Transit system and the private carrier, Vancouver-Portland Bus Co must pay 35¢ plus 45¢ to 60¢ or a total cost

of 80¢ to $1.05. For riders who must transfer to Tri-Met (35¢ zone only) the cost increases to $1.15 to $1.40. For a commuter using the three carriers the fare cost would range between $580 and $700 per year for a round trip each working day. These costs are high and it would seem that only captive riders would use this service. This proposal calls for riders on the Vancouver Transit system transferring to the private carrier by paying an additional 10¢ to 25¢ and to transfer to Tri-Met free (subject to zone fees). This would result in a trip of 45¢ to 60¢ which is consistent with other Tri-County fare zones. The cost of this improvement is estimated at $6,000/year for Vancouver Transit system and less than $1,000/year for Tri-Met. A similar method may also be used for the private carrier serving Camas-Washougal.

2. Tri-Met install toll free tlelphone service from Vancouver to its information office. This can be done for a nominal cost of approximately $6 per month plus 30¢ per call, and would provide Clark County residents with free information relating to Tri-Met lines when planning trips into the Portland area.

3. A route map be placed in the Vancouver telephone directory illustrating Tri-Met, V-P Bus Co. , and

Vancouver Transit System routes and points of transfer. Similarly, the same map be placed in the Portland directory. The map will also contain the information telephone numbers of all three carriers.

4. Tri-Met review the location of the bus shelters planned at Interstate and (1) Killingsworth St. and (2) Portland Blvd. and place the shelters such that passengers waiting in shelters for buses on both lines may see buses approaching so that they can move to the proper bus stop to complete transfer.

5. Expand the regional car pool program to include Clark County urban area.

Element B. Proposed NTECAP Demonstration Project - "High Occupancy Vehicle Exclusive Lane".

There are three possible strategies which are being considered:

1. Contra-flow Lane - This method exploits the fact that one direction is reasonably light during the peak period. One lane on the lightly traveled roadway is used for buses and car pools traveling in the inside lane but opposing the direction of the lighter flow.

2. Concurrent-flow on shoulder - This method makes use of the shoulders, during peak periods, but buses and car pools traveling in the same direction as adjacent lanes.

3. Concurrent-flow on exclusive lanes - This idea simply utilizes one lane, usually the inside for the sole purpose of moving buses and car pools.

Traffic and ridership data is being evaluated to discover the advantages and disadvantages of these strategies.

Element C. Express Bus Service Routes

The orgin-destination trip table has not yet been recieved, but upon its arrival it will be evaluated to determine possible locations and ridership for point to point express bus service.

ATTACHMENT 3

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

TO: I-5 Project Management Board

FROM: Hurvie E. Davis HED

SUBJECT: National Transportation Energy Conservation Action Plan

DATE: March 19, 1974

The National Transportation Energy Conservation Action Plan was established by the U S Department of Transportation in response to the Emergency Highway Conservation Act of 1973. The Action Plan requests urbanized areas to develop emergency transportation energy conservation programs aimed at reducing transportation fuel consumption. Action Plans are to be broken down into two areas. These are:

1. Immediate methods to increase the attractiveness of high-occupancy vehicles in relation to low-occupancy vehicles.
2. Preparation of an annual short-range (5yr) capital improvement program which includes noncapital, low and high capital projects as well as traffic improvements project and bus pruchases under the TOPICS program.

FHWA and UMTA are requesting local governments to quickly develop energy conservation proposals and the planning agencies to assemble these into an emergency program. These programs are to optimize usage of existing transportation systems. FHWA and UMTA funds are available for financing the development of these projects, however, no new funds are available to states and urban areas.

The planning for carpool/buspool projects and related parking facilities and preferential lanes can be funded on a 90-10 ratio (Federal-local) using urban extension and urban system apportionments. The regional carpool program in the Portland area was funded under the Emergency Highway Conservation Act of 1973 using urban system funds at a 90-10 ratio with Tri-Met providing 10% local match. Other planning funds are available under the

Highway Planning and Research Funds, Metropolitan Planning Agency Funds and UMTA Technical Study Grant funds.

Implementation of carpool/buspool improvements can be accomplished under the normal highway funding program at the normal matching ratio on which the route is located. Demonstration of energy conservation projects can be funded under the urban extension and urban system apportionments at a 90-10 ratio. The project cannot exceed $1 million per project. Eligible projects include TOPICS (traffic improvement) projects.

Many of the Federal requirements have been relaxed to expedite projects which will help save transportation fuel and help achieve air quality standards. In summary, this Action Plan does not provide any additional money to a region but enables it to move more rapidly in planning and implementing various energy conservation strategies.

3/19/74
kt

March 7, 1974

Dave Hupp
Room 203
1008 S.W. Sixth Avenue
Portland, Oregon 97204

Dear Hupp;

Dick Barnum asked me to send you this copy of our Bridge Opening Study. It was written with the marine operators in mind and was used to persuade them to not call for bridge openings during peak vehicular flows. Since that time, they have voluntarily complied with our request.

The traffic projections shown in Figure I were based on past growth rates and do not of course reflect any of the decreases which we are experiencing now because of the gasoline shortage. The assumption was also made that the I-205 bridge across the Columbia would be open in 1978. These factors certainly change the shape of the curve on the graph beyond 1974. New projections have not been made and most likely will not until the energy situation has reached a more stable state.

Recent comparisons between January 1973 and January 1974 will give you some idea of the change.

	Jan. 1973	Jan. 1974	% Change
Average Daily Traffic (ADT)	71,330	65,425	- 8.3%
Average Week Day (AWD)	73,177	70,958	- 3.0%
Average Saturday	72,079	55,964	- 22.4%
Average Sunday	61,344	47,225	- 23.0%

The commuter traffic, which gives us the most trouble, has the lowest reduction.

Hope this covers what you needed to know.

Sincerely,

R. L. CARROLL, P. E.
DISTRICT ENGINEER

By: David K. Peach, P. E.
District Traffic Engineer

RLC:lb
DKP
Attachment
cc: Dick Barnum

Columbian
3/21/74

Gary - FYI - Neil

To Bill Dirkes -

Vancouver-Portland bus transfers proposed

By LARRY LANGE
Columbian Staff Writer

A system of transfers between Vancouver city buses and those run by Tri-Met in Portland might boost bus ridership as the energy crisis continues, the staff of the Columbia Regional Association of Governments (CRAG) has suggested.

But that kind of system, as proposed Wednesday by CRAG, could get snared in legal complications, according to Vancouver city officials.

The staff got approval from its Interstate 5 Corridor Project Board to forward a transfer proposal to the seven local governments involved in the project.

The system, presented by project chief Hurvie Davis, proposes allowing transfers from Vancouver city buses to Vancouver-Portland buses for a small additional sum. Davis proposed the extra fee run from 12 to 25 cents.

He suggested free transfers for persons switching from the private Vancouver-Portland buses to Tri-Met stages when they reach Portland. Transfers already are allowed on Tri-Met buses within Portland.

Davis suggested billing the Vancouver system for the difference between the transfer fee and the regular Vancouver-Portland fare to Portland, which would be 45 cents at minimum. The difference with a 10-cent transfer fee would be 35 cents.

Davis estimated that would cost the city transit system about $6,000 annually.

The proposal, researched by former Vancouver city traffic engineer Reed Gibby, will be presented to Vancouver and Portland's city governments and those of Clark and Multnomah counties, the two states' highway departments and Tri-Met for comment.

Davis suggested the transfer arrangement as a way to reduce mass transit cost to individuals. He said Vancouver residents pay between 80 cents and $1.05 to ride one way to Portland using both municipal and Vancouver-Portland buses — and from $1.15 to $1.40 on Tri-Met buses (variances depending on charges for time of day).

Yearly cost, Davis estimated, would range from $580 to $700 for round trips each working day. He called this "excessive" and said continuing these costs would lure only "captive riders" into using buses.

The idea, said to be "very initial" stages by Davis, may have a legal catch on it.

Vancouver city attorney Jerry King said the proposal sounds like it would amount to a subsidy of the private Portland-Vancouver bus line, which, he said, is not legal for the city to do.

King said the system might be justified if it would result in a proven benefit to the city transit system through increased ridership.

Royce Lawrence, city budget director, said the council would probably want to weigh the political implications of paying city funds to send people out of Vancouver — not only to their jobs but probably to shop in Portland.

Also to be considered is the impact on the city's budget.

Davis said CRAG staffers have not considered all the legal implications of the proposal. Results of a recent origin-destination study, also presented to the subcommittee Wednesday, showed only 36 per cent of motorists surveyed in December willing to use mass transit. Davis said cheap transfers are nevertheless a "viable alternative" if coupled to a high-priority lane setup for mass transit across the Interstate Bridge.

Davis said the proposal was given to the board for consideration and for public discussion, which, he said, is the "only way to get people thinking about improvements" in the corridor.

★ ★ ★

Motorists spurn buses

Motorists driving from Vancouver to Portland during the morning rush hour are cool to using mass transit to get to jobs and stores, and they want a fare of 60 cents or less for the trip before they start taking buses.

Those were two of the more notable results of an origin - destination survey taken last December among motorists on freeway ramps in Vancouver.

Results of the study, conducted by the Columbia Region Association of Governments (CRAG), were released at a meeting of CRAG's I-5 Project Management Board Wednesday.

CRAG staffers said they received just under 4,000 responses to the questionnaires, which were handed out to motorists in December. Returns totaled 36.5 per cent which staffers said is high.

Results announced did not include motorists' destinations. That data will be released in the next few days, accor-

Thirty-six per cent of the respondents said they would use a transit system to Portland, while 35.4 per cent said they would not. The other 29 per cent didn't respond.

To questions about fares, 80 per cent said they prefer a fare of 60 cents or less. Half said they prefer a fare of 50 cents or less.

That prompted the board to propose a reduced-fare setup with a maximum of 60 cents. The proposal will be presented to government agencies for comment. Current fare costs to Portland run as high as $1.40, depending on points of origin and of destination.

Staffers regard high fare costs as one deterrent to use of buses or other mass transit facilities.

The survey also confirmed earlier indications that motorists aren't ready to yield to car pools yet. Forty-nine per cent of those in the survey said they weren't interested, while 31 per cent

Staffers noted the survey was taken at a time when fuel shortages were more severe than they are now.

The study results also showed 87.5 per cent of responding motorists have free parking available to them, another deterrent to use of mass transit.

There were few other surprises reflected in the study results, which showed that:

—Almost all vehicles in the survey (93.3 per cent) are cars, and very few (5.9 per cent) are trucks.

—Almost all trips in the 6 to 9 a.m. hours surveyed are to work, and most income levels are between $10,000 and $12,000.

—Average vehicle occupancy rate is 1.25 persons per vehicle, 82 per cent of vehicles had one person in them, while 14 per cent had two and 4 per cent had three persons in them.

—That two-thirds of the drivers sur-

Officials divided

New bus systems debated

By LEE ROZEN
Columbian Staff Writer

Moving ahead with any plans to change Vancouver's bus system requires a decision from the Vancouver City Council on whether the system will serve the general public or a special, limited clientele, says City Manager Alan Harvey.

The choice should determine the kind of bus the city buys next, he said.

He, city staff and some members of the city council appear to favor a system that would be designed to serve large numbers of the general public.

However, Mayor Jim Gallagher says he doesn't think Vancouver is oriented enough to the bus to justify that sort of system.

Harvey is pushing for a council decision.

The city now has assurances from the federal government that it will pay 80 per cent of the $400,000 cost of 10 new 43 passenger buses for the city, to replace the six two-year-old Twin Coach buses that are now self-destructing daily on city streets.

Jerry Peck, city transit manager, says that commitment may fade as time goes by.

Peck said a decision must be made on some sort of new bus or different bus system because the present buses simply will not work on the present routes.

Harvey said at a late Wednesday afternoon meeting with the council that the 10 big buses would form the basis for any future transit system in the city — if the council is committed to providing a real alternative to the private car.

Garth Anderson, city public works director, told the council that a system of small buses, advocated by Gallagher, would provide service only for the aged, the handicapped and the occasional shopper. He said it could not move large numbers of commuters.

Gallagher contends that large numbers of commuters wouldn't use the buses if they were there.

City staff disagrees, citing recent upturns in bus ridership with the gasoline crunch. The city hauled 24,394 passengers in February, a 27 per cent increase over 1973.

Harvey laid out for the council the sort of bus system that could be provided with the 10 large buses as its base.

The large buses would run on all the city's major arterial streets on at least half hour schedules. There would be several transfer points along the way. The arterial lines would connect with small neighborhood buses routed according to telephone calls from homes.

Harvey said that if the council gave the go ahead for the 10 big new buses, the staff would be able to run pilot programs on the neighborhood service next summer. He suggested programs in the Hough, Rosemere and Heights areas.

He said the city staff also wanted to conduct city-wide opinion surveys on the city bus system and some trip origin and destination studies in the three pilot neighborhoods.

In addition, the city would run buses to the industrial areas in the morning and evening. During the day a bus would shuttle between St. Joseph's Hospital on the east and Vancouver Memorial on the west, hitting most of the clinics and shopping areas in between.

Peck said that the present Twin Coach buses, which do not hold up under the strains of the present city bus routes, could be tuned down and run slower on the neighborhood routes with much less chance of breaking down.

For emergency vehicles

County gets extra gasoline

By GARY PLAUTZ
Columbian Special Writer

Clark County has been able to obtain 10,495 gallons of gasoline from the Northwest Federal Energy Office to supply county emergency vehicles with gasoline until the end of March.

Jim Guenther, administrative assistant to the county commissioners, said the county received a telegram from the Seattle FEO office Wednesday notifying the county of the emergency allocation.

The emergency allocation was made necessary when Shell Oil Co., Clark County's supplier of gasoline for public vehicles, cut shipments of gasoline to the county to 60 per cent of what was made available in March 1972.

Jim Troxel, acting purchasing manager for the Clark County Purchasing Department, said the additional gasoline would be used to supply city police, fire department, sheriff's department, and public works vehicles.

Troxel added that a small amount of the allocation would be used to aid the La Center School District.

Other county agencies not in line for extra gasoline are asked to conserve their existing fuel as best as they can, said Troxel.

Troxel was pleased with the FEO's response to Clark County's emergency request and said the 10,495 gallons allocated to the county was only five gallons short of the county's total request.

The FEO has the power to order oil companies nearest a crisis area and that have the greatest supplies of gasoline on hand to supply the emergency gasoline.

In Clark County's case, the extra gasoline w
come from a Standard Oil Co. distributor
Portland and Troxel said he expected the gas
to arrive at county distribution points on Thurs

"It was a real hassle getting this gas the
way through," Troxel said, and added that he
the same situation wouldn't occur in April.

John Jarstad, public information officer
FEO in Seattle, said that Clark County's
and approval for emergency allocations
FEO was among the first in the
Washington. To his knowledge, he said,
school districts in King and Pierce count
tained extra gasoline from the FEO.

Meanwhile in Clark County, school
had predicted dire shortages of gasol
buses by the end of March, now say, b
week's spring vacation, that they wi
gasoline to last them until new alloc
April 1.

"We'll be okay for this month,
tion coming," Irv Lund, assistant
for the Vancouver School Di
received a little extra gasoline,
January and February allocati
us through March."

Al Koons, shop foreman of t
District bus garage, said t
faced shortages, will have
the buses, too. He said sp
trict's saving factor.

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

I-5 Project Management Board

AGENDA

March 20, 1974

I. STATUS REPORT
   a. O-D Survey
   b. Transit Service Improvements
   c. Employer's special service
   d. Citizen Advisory Committees
   e. Regional Carpool Program

II. Possible Low-Capital Intensive Demonstration Projects

III. National Transportation Energy Conservation Action Plan

IV. Vancouver Park-and-Ride (Transit Station) Program

V. New Business

VI. Next Meeting Date

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT
PORTLAND, OREGON 97221

(503) 297-3726

TO: I-5 Project Management Board

FROM: Hurvie E. Davis HED

SUBJECT: National Transportation Energy Conservation Action Plan

DATE: March 19, 1974

The National Transportation Energy Conservation Action Plan was established by the U S Department of Transportation in response to the Emergency Highway Conservation Act of 1973. The Action Plan requests urbanized areas to develop emergency transportation energy conservation programs aimed at reducing transportation fuel consumption. Action Plans are to be broken down into two areas. These are:

1. Immediate methods to increase the attractiveness of high-occupancy vehicles in relation to low-occupancy vehicles.
2. Preparation of an annual short-range (5yr) capital improvement program which includes noncapital, low and high capital projects as well as traffic improvements project and bus pruchases under the TOPICS program.

FHWA and UMTA are requesting local governments to quickly develop energy conservation proposals and the planning agencies to assemble these into an emergency program. These programs are to optimize usage of existing transportation systems. FHWA and UMTA funds are available for financing the development of these projects, however, no new funds are available to states and urban areas.

The planning for carpool/buspool projects and related parking facilities and preferential lanes can be funded on a 90-10 ratio (Federal-local) using urban extension and urban system apportionments. The regional carpool program in the Portland area was funded under the Emergency Highway Conservation Act of 1973 using urban system funds at a 90-10 ratio with Tri-Met providing 10% local match. Other planning funds are available under the

Highway Planning and Research Funds, Metropolitan Planning Agency Funds and UMTA Technical Study Grant funds.

Implementation of carpool/buspool improvements can be accomplished under the normal highway funding program at the normal matching ratio on which the route is located. Demonstration of energy conservation projects can be funded under the urban extension and urban system apportionments at a 90-10 ratio. The project cannot exceed $1 million per project. Eligible projects include TOPICS (traffic improvement) projects.

Many of the Federal requirements have been relaxed to expedite projects which will help save transportation fuel and help achieve air quality standards. In summary, this Action Plan does not provide any additional money to a region but enables it to move more rapidly in planning and implementing various energy conservation strategies.

3/19/74
kt

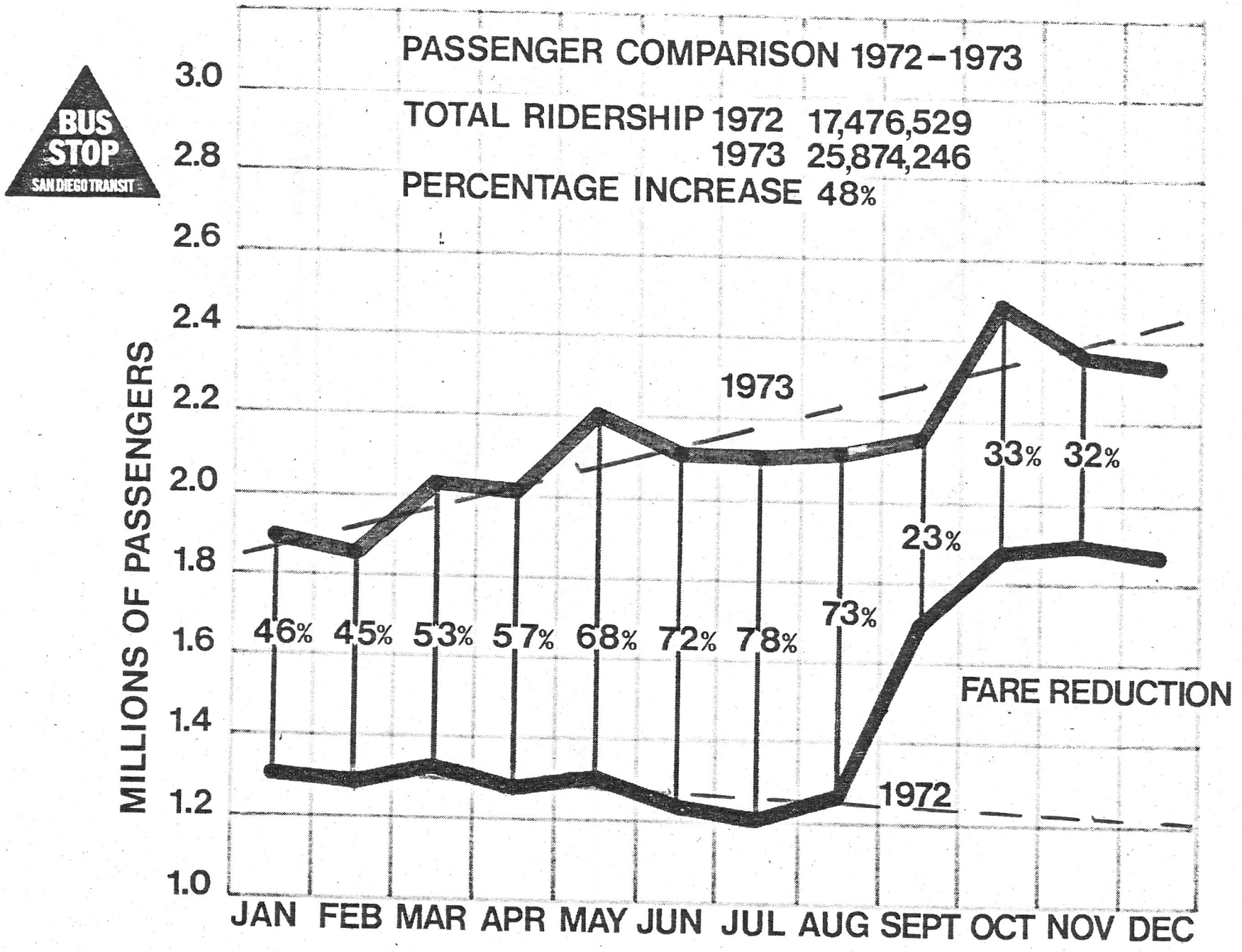

BUS STOP
SAN DIEGO TRANSIT
PASSENGER COMPARISON 1972-1973
TOTAL RIDERSHIP 1972 17,476,529
1973 25,874,246
PERCENTAGE INCREASE 48%
MILLIONS OF PASSENGERS
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
1973
1972
46%
45%
53%
57%
68%
72%
78%
73%
23%
33%
32%
FARE REDUCTION
JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC

FIGURE 2

RECOMMENDATION FOR A DEMONSTRATION PROJECT IN THE INTERSTATE BRIDGE CORRIDOR

The demonstration project for Phase I of the Interstate Bridge Corridor Project has been separated into three elements in order to implement some immediate improvements and to respond to the National Transportation Energy Conservation Action Plan (NTECAP). The first element concerns low cost items which are to be funded locally and should be implemented before the other elements to provide maximum benefit to the total system. The second element is an application for Federal Funds under the NTECAP while the third element consists of the most promising express bus service routes. This last grouping is to be funded locally.

PHASE I - RECOMMENDED DEMONSTRATION PROJECT

Element A. Immediate Low Cost Improvements

1. Expand the intersystem transfers between Tri-Met and Vancouver-Portland Bus Co. and Vancouver Transit. Consideration should be given to the private carrier so that it will not receive any reduction in passenger revenue as a result of this procedure. The private carrier, unlike the public carriers, receives no subsidy to assure a continuation of service.

   At present, riders using the Vancouver Transit system and the private carrier, Vancouver-Portland Bus Co must pay 35¢ plus 45¢ to 60¢ or a total cost

of 80¢ to $1.05. For riders who must transfer to Tri-Met (35¢ zone only) the cost increases to $1.15 to $1.40. For a commuter using the three carriers the fare cost would range between $580 and $700 per year for a round trip each working day. These costs are high and it would seem that only captive riders would use this service. This proposal calls for riders on the Vancouver Transit system transferring to the private carrier by paying an additional 10¢ to 25¢ and to transfer to Tri-Met free (subject to zone fees). This would result in a trip of 45¢ to 60¢ which is consistent with other Tri-County fare zones. The cost of this improvement is estimated at $6,000/year for Vancouver Transit system and less than $1,000/year for Tri-Met. A similar method may also be used for the private carrier serving Camas-Washougal.

2. Tri-Met install toll free tlelphone service from Vancouver to its information office. This can be done for a nominal cost of approximately $6 per month plus 30¢ per call, and would provide Clark County residents with free information relating to Tri-Met lines when planning trips into the Portland area.

3. A route map be placed in the Vancouver telephone directory illustrating Tri-Met, V-P Bus Co. , and

Vancouver Transit System routes and points of transfer. Similarly, the same map be placed in the Portland directory. The map will also contain the information telephone numbers of all three carriers.

4. Tri-Met review the location of the bus shelters planned at Interstate and (1) Killingsworth St. and (2) Portland Blvd. and place the shelters such that passengers waiting in shelters for buses on both lines may see buses approaching so that they can move to the proper bus stop to complete transfer.

5. Expand the regional car pool program to include Clark County urban area.

Element B. Proposed NTECAP Demonstration Project - "High Occupancy Vehicle Exclusive Lane".

There are three possible strategies which are being considered:

1. Contra-flow Lane - This method exploits the fact that one direction is reasonably light during the peak period. One lane on the lightly traveled roadway is used for buses and car pools traveling in the inside lane but opposing the direction of the lighter flow.

2. Concurrent-flow on shoulder - This method makes use of the shoulders, during peak periods, but buses and car pools traveling in the same direction as adjacent lanes.

3. Concurrent-flow on exclusive lanes - This idea simply utilizes one lane, usually the inside for the sole purpose of moving buses and car pools.

Traffic and ridership data is being evaluated to discover the advantages and disadvantages of these strategies.

Element C. Express Bus Service Routes

The orgin-destination trip table has not yet been recieved, but upon its arrival it will be evaluated to determine possible locations and ridership for point to point express bus service.

CAPACITY 80000 ADT = Level "C".

PEAK HR JAN '74 = 96% of JAN '73
BUS-HWY - 1400 ADT (+400 3 months)

ORIGIN - DESTINATION SURVEY

DATA SUMMARY

DEC '73

= ±75000 ADT TO PEAK OF 110000 AVG. HR

COVERAGE 1. TOTAL TRIPS: VEHICLE - 11828, PERSON - 14,804

±4000 SURVEY RESPONSES - EXPANDED

2. OCCUPANCY: RATE - 1.25 ppv

1 PERSON / VEH.	- 82%	(72% PASS.)
2 " "	- 14%	} (28% PASS.)
≥3 " "	- 4%	

3. VEHICLE CLASS: AUTO - 93.3%, TRUCK - 5.9%

4. TRIP PURPOSE: WORK 92.7%

5. WOULD YOU USE TRANSIT? YES - 36.5%, NO - 35.4%

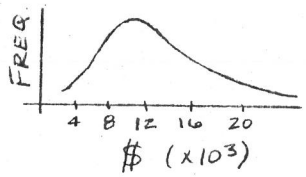
6. WHAT IS REASONABLE COST FOR TRANSIT? >$1.00 (O.W.) - 10%

> 60¢	- 25%
50 to 59¢	- 28%
< 50¢	- 50%
< 60¢	~80%

7. CAR POOLING: MEMBER? 12% yes, INTERESTED? 31% YES 49% NO

8. PARKING COSTS: TYPICAL - $10 to $25 MONTHLY; 87.5% FREE.

9. INCOME



10. MISCELANEOUS: SEX - MALE (66%) FEM (32%); 80% HAVE ≥2 AUTOS

COLUMBIA REGION ASSOCIATION OF GOVERNMENTS

403.09

Memorandum

March 15, 1974

To: Project Management Board

From: Hurvie E. Davis HED

Subject: I-5 Board Meeting - Wednesday, March 20, 1974

A meeting of the Project Management Board for the Interstate Bridge Corridor Project will be held at 9 a.m., Wednesday, March 20, 1974, in Commissioner Granger's conference room, County Courthouse Building in Vancouver.

Project staff will give a status report on such items as the orgin-destination survey, transit service improvements, expansion of the regional car pool program to include Clark County and the designation of a priority traffic lane for high occupancy vehicles. We have been working with several members of the Board relative to submitting a demonstration project on the Corridor for funding under the National Transportation Energy Conservation Action Plan. We will discuss the Action Plan as it relates to possible projects in the Corridor and the various types of funding.

Mr. Edgar Waehrer, Project Coordinator for the Tri-Met Park-and-Ride (Transit Station) Program has been invited to attend and discuss the relationship of the proposed Vancouver Station with the Corridor Project.

THE CITY OF
PORTLAND
OREGON

OFFICE OF
PLANNING AND DEVELOPMENT
GARY E. STOUT
ADMINISTRATOR

1220 S.W. FIFTH AVE.
PORTLAND, OR. 97204

12 March 1975

Richard Etherington
Transportation Director, CRAG
527 SW Hall Street
Portland, Oregon 97201

RE: Interstate Bridge Corridor Revised Work Program

Dear Mr. Etherington:

Mayor Goldschmidt has asked me to reply to your letter of February 27, regarding the subject work program. I make the following recommendations.

I recommend that Element C, Medium Range Corridor Plan, not be initiated without specific instructions from the Project Task Force. Other transportation planning and project activities may alter or eliminate the need for this element. Furthermore, it is my understanding that the purpose of this project is to increase capacity by 1980 and therefore I feel our efforts and resources should be focused on immediate action elements.

The last paragraph of Element B, on Page 9, indicates the output of this effort will be a report on high occupancy vehicle lanes. The output of this element should not be a report or recommendations but should be agreements, contracts, official actions, and results on the ground. It is understood that other agencies must actually take these actions but the intent of this project is to stimulate and facilitate negotiations and activities that will produce the necessary results, not just make recommendations.

Very truly yours,

William S. Dirker
Transportation Coordinator

WSD:bn

3/10/75
WSDOT

I-5 Corridor Work Program

1. Description of present transit service seems inadequate.
   e.g. Is there any service in the county outside of Vancouver except Evergreen to Camas / Washougal? - what about Battleground, Orchards, etc.? - (p. 2) (see p. 7)

2. p. 6 Tri-met agency & C-TRAN bus transportation!?

3. p. 7 Transit Program - I thought we had most of this now.

4. p. 8 Ramp Metering? - State Policies for I-5.

5. p. 8 2nd task - All seems excessively technical > "study" orientation. How about "Train + Retrain"?

   p. 9. Output is a report on HOV lanes - Output should be agreements, contracts, official actions - results on the ground. - Not "Recommendations ... made available ... ".

6. p. 6 Element C - Medium Range Corridor Plan - only 2½ man months. So maybe OK - But initiation should be an option, not a commitment. - & Four reimbursement by case to UMTA for analysis of Interstate System questionable - Limit this project to increased capacity by 1980.

INTERSTATE BRIDGE CORRIDOR PROJECT

Revised Work Program

Columbia Region Association of Governments

January 30, 1975

OBJECTIVE

The objective of the revised work program is to

1) Bring about the creation of a unified, publicly owned and operated mass transit system in the Interstate Bridge Corridor and Clark County,

2) Provide some means of priority movement on I-5 for transit service and other high occupancy vehicles (HOV) and

3) Initiate medium range planning for and evaluation of corridor transportation alternatives.

PREVIOUS WORK

The Interstate Bridge Corridor Project was initiated in late 1973 as a three-phase project designed to address the existing transportation problems in the Interstate 5 corridor between Vancouver and Portland. The objective of the project was to develop solutions which would move people through the corridor more efficiently with primary emphasis on public transportation including consideration of park and ride facilities.

Phase I of the project recommended a number of improvements that would provide relief in the corridor. The analysis indicated that in order to move people through the corridor more efficiently on existing facilities, a unified transit system would have to be established thereby eliminating the necessity for potential transit riders to use as many as three existing transit systems. Specifically, the purchase of the privately owned Vancouver-Portland Bus Company by the Tri-County Metropolitan Transportation District of Oregon (Tri-Met)

was recommended. This, together with recent legislation in the State of Washington (HB-670) to enable the establishment of a county transit system in Clark County, would provide for publicly operated and financed transit service throughout the corridor. It was further found that some method or providing priority movement in the corridor for high-occupancy vehicles (buses and carpools) would be necessary to move people more efficiently and serve as an incentive to increase vehicle occupancy.

From the Phase I analysis, five primary corridors in Clark County were identified as having potential for commuter transit service to five primary employment areas in Portland. Therefore, an extensive level of service would be required between these areas if public transit is to provide any significant improvement in traffic flow in the corridor. Presently, the city-owned Vancouver Transit System operates only within the city while the Vancouver-Portland Bus Company provides service between Vancouver/Hazel Dell and Portland. The Evergreen Stage Line provides limited service from Camas/Washougal and several other locations in Clark County to Portland. With the exception of Vancouver-Portland Bus Company's operation, only a limited amount of transit service is provided between downtown Vancouver and Portland. It is, therefore, apparent that an extensive unified transit system should be provided in the corridor.

From an assessment of the immediate transit needs in the

corridor and the recommendations of Phase I, it seems that if the Phase I recommendations are implemented, the initial objective of the project will be fulfilled. It has also been determined during Phase I that there are insufficient staff resources within the local agencies/jurisdictions to implement the recommendations pertaining to transit planning in Clark County. This revised work program has, therefore, been prepared to enable the CRAG staff to assist the local agencies/jurisidictions in implementing the Phase I recommendations, conduct a feasibility analysis of priority treatment for high occupany vehicles (HOV) on I-5, and initiate an evaluation of longer range improvements for a yet to be determined future year.

The work activities have been directed by a project management board. With the reorganization of the CRAG committee structure a task force will now direct the work activities. To illustrate the relationship of the task force with CRAG and agencies participating in the work task a table of organization has been prepared (table A, page 11 of the appendix).

METHODOLOGY

A joint effort of affected agency personnel and CRAG staff will be provided to carry out the implementation activities of the Phase I recommendations. CRAG staff will conduct the feasibility analysis of priority treatment in the corridor and provide assistance in determining the level and scope of transit service which will utilize the I-5 corridor. The staffs of the local agencies with the assistance of the CRAG staff will develop the necessary information, determine appropriate procedures and initiate proper applications and agreements which will result in the establishment of a county-wide transit entity and a unified transit system. Upon completion of these activities and determination of a forecast year, CRAG staff will work with the ODOT planning staff in determining longer range alternatives between Oregon and Washington including the imapct of opening I-205 on the I-5 Corridor.

Work Activities

The work activities have been segregated into three principal elements; namely, (A) Unified Transit System, (B) I-5 Priority Analysis for HOV and (C) Initiation of Medium Range Corridor Planning. The costs and funding of these activities may be found on ps. 12 &13 in the appendix of this material.

(a) Unified Transit System

The creation of a unified mass transit system in the Corridor and Clark County will be accomplished under the direction of the Consolidated Transportation Staff * (CTS) in three major work tasks. The acquisition of the private transit operations by Tri-Met is the first part and the formulation of a transit plan and creation of a transit district in Clark County consist of the other parts. The subsequent narrative provides some details of the work tasks.

A program for providing publicly-owned and operated transit service in the corridor as recommended in Phase I will be developed through a combined effort of CRAG, CTS, Tri-Met, and other affected jurisdictions. Additional detail pertaining to the unified transit system is contained in the appendix.

* The Consolidated Transportation Staff consists of two budget responsible staff members each from Washington State Department of Highways, Clark County, City of Vancouver and Regional Planning Council of Clark County.

This will include determining the type and extent of transit service needed in the corridor, the mechanism for providing the service including preparation of operating and financial agreements, federal applications for purchase of privately owned transit systems operating in the corridor, and a method for financing. The primary effort of CRAG staff activities will be to determine the level of service needed in the corridor and to assist in the preparation of an application(s) for federal funds for purchase of the privately-owned transit systems.

Possible approaches to addressing the transit service element would be for Tri-Met to acquire the Portland-Vancouver Bus Company either through purchase or condemnation. Tri-Met could then contract with the City of Vancouver to provide service between Portland and downtown Vancouver where Vancouver's system would connect. Another alternative would be for Clark County and the cities in the county to form a transit district, acquire the Vancouver system and expand it throughout the county and contract with Tri-Met to provide service to downtown Vancouver. Another possibility would be for Tri-Met to extend service into the county as well as to the city. If it is determined that a transit district should be created, service to such areas as

Camas, Washougal, Battle Ground, etc. will have to be addressed which may require acquisition of the rights of the Evergreen Stage Line which presently serves these areas. Each of these alternatives will be explored as required to ascertain the best mechanism for providing the desired level of service. The final mechanism for providing the service will, of course, be a function of the type and scope of service proposed. In addition to developing service levels, an operating mechanism and financing, it will also be necessary to address such items as equipment, staffing, maintenance and storage facilities, revenue collections and voter approval of the transit program. This will be done through a coordinated effort of CRAG and local agency staff with local agencies taking the lead on such items as voter approval and development of a revenue collection procedure.

B) I-5 Priority Analysis

The priority study on I-5 will include feasibility analyses of both a system of ramp control for traffic with priority being given to HOV (buses and car pools) and the feasibility of establishing special use lanes for HOV on I-5, parallel to the flow of traffic. The appendix contains further detail of this aspect of the work program.

The first task of the priority treatment feasibility analysis is to determine a strategy for providing an additional lane in each direction on I-5 between the Portland Blvd. and Union Ave. Interchanges. This might be accomplished by

utilizing the shoulder and/or some of the median clearance or possibly some minor structural widening. These improvements will be tested during the peak periods when one lane (southbound in the morning & northbound in the evening) will be reserved for HOV. In addition, a ramp metering system, with bypass provisions for HOV will be devised for testing against the priority lane alternative. This work activity will produce sufficient detail on the alternatives for effective testing.

The second task will consist of compiling data (traffic counts, roadway characteristics, speed, etc.) already available and determining any additional data which may be needed. The additional information may include such data as aerial photography, ramp origin-destination survey during the peak periods, spot speed studies and transit schedules and routes. Also, base maps will be made for all diagrams which will be produced in the work activities. The data will be analyzed to determine the "before" condition by fifteen minute time slices. Diagrams, tables, and graphs will be prepared to illustrate the location and intensity of the operational problems as they build and dissipate.

The next work item consists of testing the two alternatives so that observations may be made about their respective performances. A computer model (PRIFRE) developed at the Institute of Traffic and Transportation Engineering

in Berkeley, precisely for this type of analysis, will be utilized for this work item. The program will be loaded onto the State of Oregon IBM 370 in Salem with the assistance of ODOT personnel perhaps with a remote terminal available to CRAG staff so that the computer may be accessed directly. After completion of this study the computer program will be available for utilization on other corridors.

After testing the alternatives, the output will be reduced and organized into the same type of diagrams, tables and graphs to illustrate the system differences between the alternatives. In addition, operational and capital costs will be determined, funding sources identified, and other information obtained as required to conduct a feasibility evaluation on the two alternatives.

Finally, a report will be prepared identifying and discussing the procedures, findings and recommendations of the priority treatment analysis. Recommendations will be made available to the implementing agencies through appropriate procedures for early action.

C) Initiation of Medium Range Corridor Planning

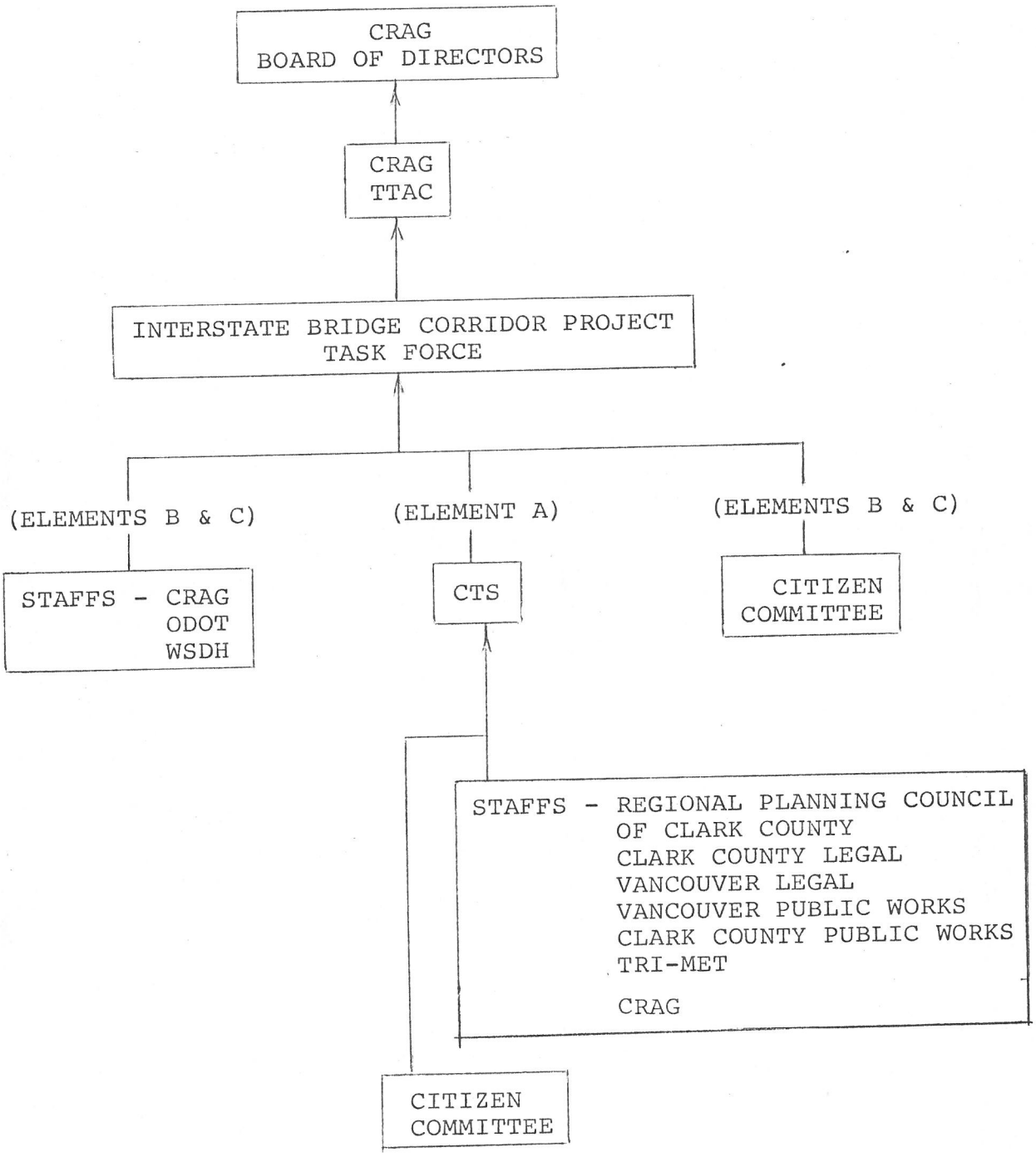
A final element in this work program will be to initiate an evaluation of major transportation alternatives for the I-5 corridor. This will include an assessment of the I-205 opening on the level of service provided by I-5. This assessment will be based on travel projections for a yet to be determined forecast year, perhaps somewhere between 1980-1985. The assessment will also consider the improvement in travel on

I-5 resulting from increased public transportation use and the establishment of priority treatment on I-5 for high-occupancy vehicles to be developed under this project's earlier effort. Using future year forecasts, an evaluation of a number of alternatives will be tested for the I-5 Corridor. This will include but not be limited to busway facilities on I-5 and Union Avenue, and widening of I-5 to six lanes in the present four lane section. It is anticipated that this will be a joint effort of CRAG and the ODOT planning staff and will involve network evaluation by computer analysis. Additional information may be found in the appendix on page 20.

Because of the scope of this final activity, it is not expected to be completed by the end of the current project period (June, 1975). Completion of this element of the revised work program can be completed under CRAG's continuing planning program and interfaced with other corridor planning activities.

A P P E N D I X

TABLE OF ORGANIZATION



CTS - Consolidated Transportation Staff of Clark County
TTAC - Transportation Technical Advisory Committee to the CRAG Board of Directors

TABLE A: ORGANIZATION OF THE INTERSTATE BRIDGE CORRIDOR PROJECT

INTERSTATE BRIDGE CORRIDOR PROJECT

REVISED WORK PROGRAM

WORK ACTIVITIES MANPOWER DISTRIBUTION

Elements	CRAG Manpower Manmonths	Estimated Cost
A. Unified Transit System		
Tri-Met Acquisition of V-P Bus Co. & Evergreen State Line	½	1,000
Transit District Plan	5½	11,000
Citizen Input & Activities	½	1,000
Element Total	6½*	13,000*
B. I-5 Priority Analysis		
In House Activities	8	16,000
Other Activities - CRAG	1	2,000
Others	-	16,000
Element Total	9	34,000
C. Initiation of Medium Range Corridor Planning - CRAG	2½	5,000
ODOT/WSDH	-	8,000
Element Total	2½	13,000
PROJECT TOTAL	18	$ 60,000

* This manpower and cost allocation will be supplemented by 8½ manmonths by the Consolidated Transportation Staffs of agencies in Clark County and Tri-Met. Tri-Met has already developed much useful information.

INTERSTATE BRIDGE CORRIDOR PROJECT

I-5 PRIORITY ANALYSIS

OTHER WORK ACTIVITIES

Activity	Source	Estimated Man Months	Cost Estimate
Traffic Counts	SHD's	.6	$1,000
Spot Speed Data & Reduction (Am & PM)	SHD's	.5	750
Ramp O-D Survey (Evening)	SHD's	.6	1,000
Computer	ODOT		4,500
Computer Programming	ODOT/CRAG	1.3 (1.0)*	2,000
Computer Terminal Access			1,000
Adm., Mgmt & Technical Assistance	ITTE		750
Photogrammetry	CONST.		2,500
Ramp O-D Data Processing	PSU/ODOT	1.0	1,500
Computer Key Punch / Terminal Typing	CRAG/ PSU/ODOT	.6	1,000
Total Estimate			$16,000

* CRAG manpower costs include this amount.

INTERSTATE BRIDGE CORRIDOR PROJECT

REVISED WORK PROGRAM

REVENUE FROM PARTICIPATING AGENCIES

AGENCY		AMOUNT
Washington State Department of Highway	$	16,300
Oregon State Highway Division		10,900
U.S. Urban Mass Transit Administration		26,200
City of Vancouver		1,100
Clark County		1,100
City of Portland		550
Multnomah County		550
Tri-Met		3,300
Total Revenue	$	60,000

Note: These funds are the balance of the original commitments to the project and, therefore, do not represent additional financial commitments.

ELEMENT A: UNIFIED TRANSIT SYSTEM

ACTIVITY	RESPONSIBLE AGENCY
1. Formulate transportation goals, objectives & policies	Vanc*/ Ck Co.*
2. Acquisition of the private operations	
a. Explore legal issues	Van L Ck. Co. L
b. V-P Bus appraisal	Tri-Met
c. Negotiations Acquisition of VP Bus	Tri-Met
d. UMTA Application for Acquisition of VP Bus	Tri-Met CRAG
e. Determine need to acquire ESL	Vanc L */ Ck. Co. L*/ Tri-Met L

(If positive determination results proceed with acquisition in a similar manner as VP Bus Co.)

3. Formulate Transit Plan	
a. Identify potential routes	CTS/CRAG/Tri-Met
b. Develop Organizational Structure & Costs	CTS/ Tri-Met
c. Develop Marketing Program & Cost	CTS/Tri-Met
d. Identify and resolve legal restraints & options for a Unified Transit System	CK Co. L/ Vanc. L/ Tri-Met L
e. Determine possible levels of of service & cost	CTS/ Tri-Met/ CRAG/ CAC
f. Estimate patronage and revenues	Tri-Met/ CRAG
g. Identify funding levels for various service possibilities	CTS/ Tri-Met
h. Select most feasible level of service	Vanc */ Ck Co.*/ CAC
1. Analyze effects of service on Corridor	CRAG

m.	Select revenue sources	Vanc */ Ck. Co. */ CAC
n.	Report Finding	CRAG

4. Formation of a Unified Transit Agency

a.	Form Citizens' Advisory Committee	PTF Vanc */ Ck Co *
b.	Refine transportation objectives and policies	Vanc. */ Ck. Co. */ CTS / CAC
c.	Research experiences of other jurisdictions on transit districts	Ck. Co.
d.	Input to transit plan	CAC
e.	Publicize Planning efforts	Vanc */ Ck Co. */ CAC
f.	Obtain public support	Vanc/ Ck. Co. / CAC

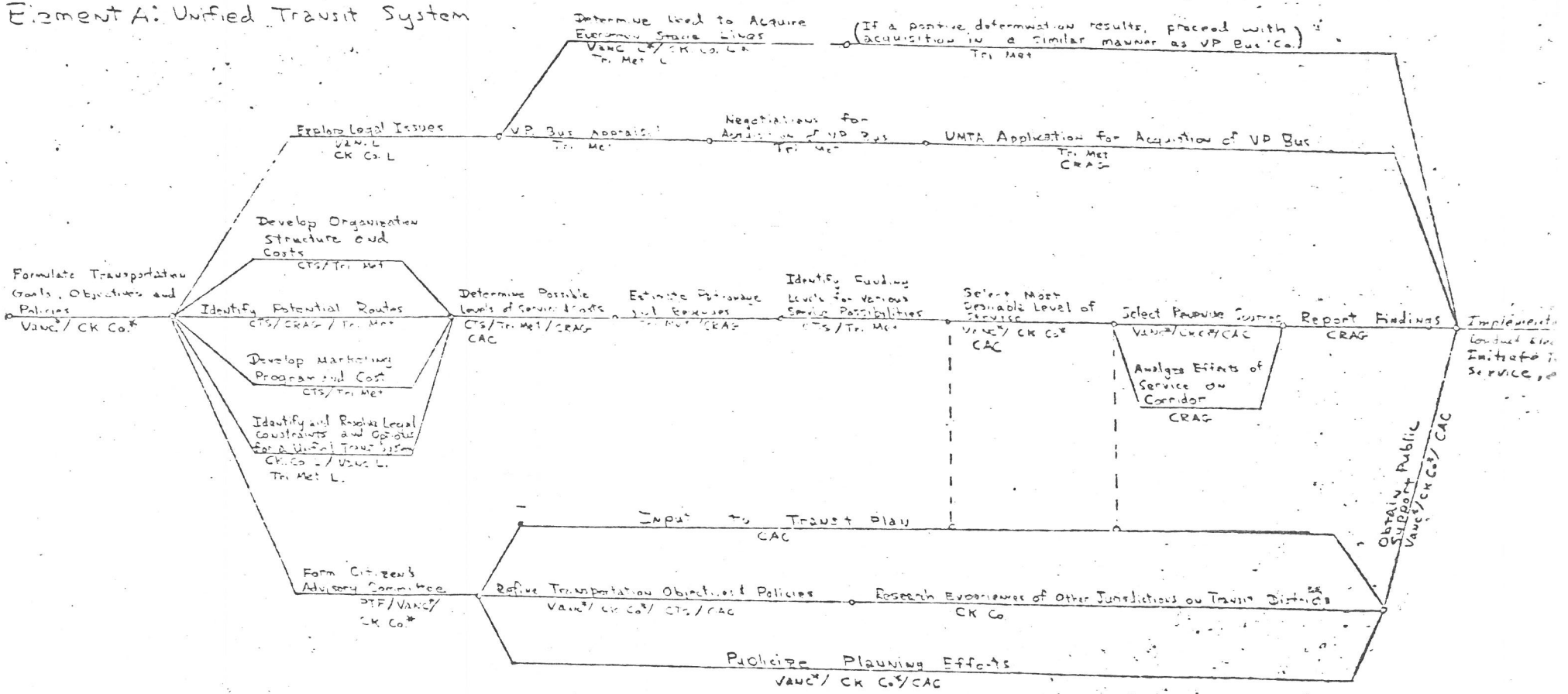
Legend

CTS	Consolidated Transportation Staffs of Clark County
CK Co	Clark County
Vanc	Vancouver
*	Elected officials
Vanc L	Vancouver Legal Staff
Ck. Co. L	Clark County legal staff
Tri-Met L	Tri-Met Legal Staff
CRAG	CRAG Project Staff
CAC	Citizens' Advisory Committee
PTF	Interstate Bridge Corridor Project Task Force
VP BUS	Vancouver-Portland Bus Company
ESL	Evergreen Stage Line

Interstate Bridge Corridor Project

Revised Work Program

Element A: Unified Transit System



Legend

CAC	Citizens Advisory Committee
PTF	Interstate Bridge Corridor Project Task Force
VP Bus	Vancouver Portland Bus Company
CTS	Consolidated Transportation Staff of Clark Cou
CK. Co.	Clark County Public Works
Vanc	Vancouver Public Works
*	Elected Officials
Vanc L.	Vancouver Legal Staff
CK Co L.	Clark County Legal Staff
Tri Met L	Tri Met Legal staff
CRAG	CRAG Project Staff

Figure 1

ELEMENT B: I-5 PRIORITY ANALYSIS

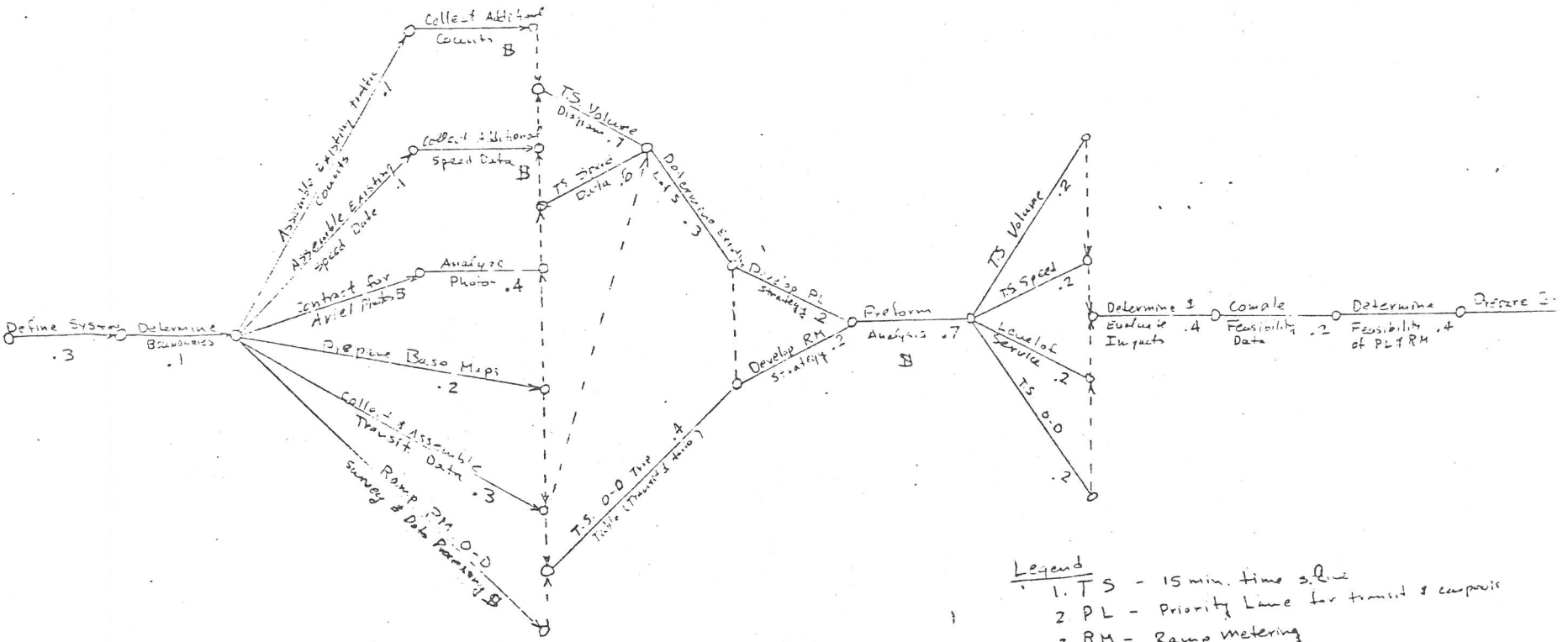
	ACTIVITY	RESPONSIBLE AGENCY	ESTIMATED MANMONTHS
1.	Defining & determining system alternatives	CRAG	.4
2.	Data Collection Speed & Counts	ODOT/WSDH	1.1
	Ramp O-D Survey	ODOT/WSDH	.6
	Transit Data	CRAG	.3
	Aerial Photo	ODOT (CONSUL)	--
3.	Data Analysis	CRAG	2.8
	Ramp O-D Data Processing	ODOT/PSU	1.6
4.	Computer Modeling	CRAG	2.1
	Preparation of Data & Testing Systems	ODOT	1.0
5.	Analysis of Output	CRAG	.8
		ODOT	.3
6.	Feasibility Determination	CRAG	1.0
7.	Preparation of Report	CRAG	.7

INTERSTATE BRIDGE CORRIDOR PROJECT

I-5 PRIORITY ANALYSIS

PRIORITY LANE
&
RAMP METERING

"PERT DIAGRAM"



Legend

1. TS - 15 min. time slice
2. PL - Priority Lane for transit & carpools
3. RM - Ramp metering
4. B - Work to be done by others

Figure 2

ELEMENT C: INITIATION OF MEDIUM RANGE CORRIDOR PLANNING

ACTIVITY	RESPONSIBLE AGENCY	ESTIMATED MANMONTHS*
1. Determination of forecast year	PTF	
2. Modify 1980 projection from Phase II work activities to the forecast year	CRAG/ODOT	1
3. Assess the impact of I-205 on the I-5 Corridor during the forecast year	CRAG/ODOT/WSDH	1/2
4. Evaluate possible improvements on I-5 (from Element B) with resp ct to I-205	CRAG/ODOT/WSDH	1/2
5. Prepare basic data to test alternatives in the I-5 Corridor: I-5, Union Avenue, etc.	CRAG/ODOT/WSDH	1/2

* CRAG Staff time only ($8,000 will be used to reinburse the State Highway agencies for staff time to participate in these activities.)

CRAG

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

527 S. W. HALL STREET
PORTLAND, OREGON 97201

(503) 221-1646

February 27, 1975

The Hon. Neil Goldschmidt
City of Portland
City Hall
1220 SW 5th
Portland, OR 97201

Dear Mayor Goldschmidt:

Re: Interstate Bridge Corridor
Revised Work Program

As you know, the Interstate Bridge crossing the Columbia River is the only automobile facility connecting Portland and Vancouver. Currently, traffic on the bridge is exceeding its designed capacity during peak travel periods and it is approaching or exceeding capacity during heavy weekend and summer months' travel periods. The degree and duration of automobile, truck, and bus traffic congestion is currently causing serious traffic disruption and delay. Traffic on the Interstate Bridge has increased from about 36,000 Average Daily Traffic (ADT) in 1962 to 74,000 ADT in 1971.

By 1978 (a previous target date for I-205) ADT's are expected to exceed 95,000. Recent daily vehicle counts have exceeded 110,000. Also a potential problem exists if bridge traffic is blocked for emergency transportation. The bridge has no shoulders nor are there any alternative river crossings for emergency vehicles in the metropolitan area.

In view of this condition, and the possibility that I-205 may not be completed until approximately 1980 or perhaps after that time, the Interstate Bridge Corridor Project was established with the goal to move people through the corridor more efficiently with minimal environmental damage. The Work Program was divided into three six month phases. The first phase assessed the present conditions, surveyed potential improvements, identified the more promising improvements and initiated appropriate low cost improvements.

The first phase (Phase I) identified three issues for consideration in order to improve the passenger capacity and level of service in the corridor. These three issues are the following:

1. An analysis for priority treatment of high occupancy vehicles (buses and car pools).

2. A unified transit system in the corridor and Clark County and Vancouver.

3. Initiation of medium range (5 to 10 years) planning activities in the corridor.

In order to address these areas a revised work program has been developed with the assistance of your staff. It focuses on specific issues and, therefore, resources may be used more productively.

The financial commitment for the total eighteen month project probably will not exceed 80% of the original commitment of your organization. You will soon receive an accounting report giving a precise financial status and amount of reimbursement estimate for your agency will be identified.

This revised work program has been approved by the CRAG Transportation Technical Advisory Committee and the Project Management Board. It is transmitted herewith (two copies) for your review and concurrence so that it may be attached to your contract documents. In the event that no response is made to me from your office by March 10, 1975, your concurrence will be assumed.

If you have any questions, please contact this office.

Sincerely,

Larry Rice
Executive Director

Richard Etherington

By: Richard Etherington
Transportation Director

LR:RE/mrp
enclosure
cc: Ernie Bonner
Bill Dirker ✓

COLUMBIA REGION ASSOCIATION OF GOVERNMENTS

Memorandum

February 26, 1974

To: Project Management Board

From: Hurvie E. Davis, Project Coordinator

Subject: Minutes of February 22, 1974 Board Meeting: Interstate Bridge Corridor Project

Acting Chairman Dick Barnum presided and conducted the meeting held in Commissioner Granger's office.

The following items were discussed:

1. The Tri-Met letter dated February 13, 1974 to Commissioner Granger (copy attached) was discussed and after the intent was clarified, staff was instructed to prepare a response for Commissioner Granger's signature indicating how system integration should be effected.

2. The status of the project was presented and a desire was expressed that if possible a demonstration project be implemented within 30 to 60 days. Staff has been analyzing traffic volumes and capacity on Interstate 5 to ascertain how preferential treatment can be given to public transportation and carpools.

3. Progress on the advisory committees was discussed and it was the PMB concensus that citizen organizations, various interest groups, etc., should be represented rather than individual citizens. Staff is to work towards recruiting various groups to be represented on the committees. Dick Barnum and Ed Wagner are to assist in the recruitment of these groups in lieu of individual citizens as previously agreed.

4. The summary O-D data has been requested from W.S.H.D. and is expected to arrive soon. Major areas of trip attraction will be identified from survey data and alternatives will be developed and their impact estimated.

5. The transit O-D survey on the Vancouver-Portland Bus Company has been scheduled for February 28, 1974.

Board members will be notified as to the time and place of the next PMB meeting.

ATTENDANCE	STAFF	VISITORS
Dick Barnum	Hurvie Davis	Edi Woll
Ed Wagner	Reed Gibby	Jan Truttman
Bob Cunningham		
Dave Peach		
Bill Dirker		

TRI COUNTY
METROPOLITAN
TRANSPORTATION
DISTRICT
OF OREGON

TRI-MET

4314 SE 17TH AVENUE
PORTLAND, OREGON 97202
(503) 233-8373

February 13, 1974

Mr. Dick Granger, Chairman
Interstate Corridor Study
Clark County Courthouse
1200 Franklin
Vancouver, Washington 98660

Dear Mr. Granger:

It is my understanding that the Project Management Board to the Interstate Corridor Study has some concern regarding successful systems integration of the findings of the Interstate Corridor Study with the overall Suburban Transit Station and Governor's Task Force efforts for the Greater Portland Metropolitan Area.

Tri-Met concurs with the concern of the Project Management Board and recommends the following procedure be adopted.

1. The Governor's Task Force take as a minimum the seven corridors or routes serving the seven Suburban Transit Stations to be developed by Tri-Met and ODOT as the first corridors for study in the "Design for Transportation Planning for the Portland Metropolitan Area".

2. The I-5 Corridor Study will supplement and complement Tri-Met's corridor analysis for the exclusive transit way serving the Suburban Transit Station in Vancouver.

3. The Project Coordinator for the Suburban Transit Station Project should be given responsibility for all system integration of all work tasks of the I-5 Corridor Project as it interfaces with the remainder of the Suburban Transit Station Development. Tri-Met's Director of Planning and Research will in turn be responsible for the integration of the systems and phasing of the corridor itself into the overall transit network designed by the Governor's Task Force effort.

This will ensure that the Project Coordinator for the Suburban Transit Stations integrates the tasks of the various consultants and staffs in conducting the detailed analyses of the express transit corridor between downtown Portland and the Vancouver Park-and-Ride Station.

Sincerely,

Thomas S. King
General Manager

TSK/dh
cc: Hurvie Davis, Project Coordinator

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

February 14, 1974

TO: Project Management Board

FROM: HED Hurvie Davis, Project Coordinator

SUBJECT: Field Data for Interstate Transportation Corridor Project

In order to quantify and evaluate some of the impacts caused by transportation improvements being considered for this corridor (see attachment) it is necessary to obtain field data to supplement the data already provided by the state highway department/division. It is estimated that 128 man hours will be required to gather the needed additional data.

There are three ways to obtain these data; namely:

1. Crag could hire a traffic engineering consultant.
2. Crag could hire and train temporary employees for a few days and borrow equipment.
3. Oregon Highway Division could perform the work.

The project staff recommends the third option and that possibly this data collection could be obtained as part of Oregon's regular traffic counting program.

Refer to Vrin dev.

To Trimet - see letter from them

Required Field Data

Interstate Bridge Corridor Project

Objectives of Field Study

. To complement the available traffic data; specifically, to provide additional occupancy and peaking data.

. To obtain a measure of the fuel shortage impact as it may affect the project.

Data Collection Program

I. On I-5 at the Interstate Bridge and also at the Ainsworth count stations, the following data are needed.

A. Occupancy Sample: 7-8 a.m., 12-2 p.m. & 4-6 p.m. (May be obtained alternately by direction.)
B. Peak hour count with 5 minute breakdown: 6-9 a.m., & 3-6 p.m.
C. Concurrent 24 hour count by hour. (Permanent counts okay.)

II. At major ramps - Hayden Island, Union Avenue, Delta Park, Columbia Blvd., Portland Blvd., Going Street

A. Peak hour count with 5 minute breakdown: 6-9 a.m., & 3-6 p.m.
B. Concurrent 24 hour count by hour. (On all ramps.)

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

TO: Project Management Board
FROM: Hurvie E. Davis, Project Coordinator
SUBJECT: Minutes of February 1, 1974 Board Meeting
DATE: February 5, 1974

Chairman Granger called the meeting to order and called upon staff to present the report relating to citizen participation in the project. The staff proposal was circulated and discussed. It was explained that the committees would become involved primarily in phases II & III, but that Public Awareness and Operational Improvements Committees should be established early to aid in phase I work. A motion was made, seconded and passed instructing staff to proceed establishing the committee structure as was recommended. Ed Wagner and Dick Barnum accepted the responsibility to aid in recruiting citizens from each side of the river to participate on the committees.

Since local newspaper reporters were present, staff presented a brief description and status report of the project.

There was a discussion pertaining to the use of a "systems consultant" to aid in integrating the elements of this project with other transportation planning activities affecting the region. Ed Wagner, Dick Barnum, and Hurvie Davis were assigned to meet with such a consultant to consider the feasibility of providing this type of assistance.

The meeting was adjourned until February 22, at 9 a.m. at the Clark County Court House.

ATTENDANCE

Dick Granger, Chairman
Dick Barnum
Eric Oien
Ed Wagner
Bob Cunningham
Pierre Henricksen

STAFF

Hurvie Davis
Reed Gibby

VISITORS

Miles Green, Oregonian Reporter
Ed Mosey, Columbian Reporter

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

To: Project Management Board
From: Hurvie E. Davis, Project Coordinator
Subject: Committee Organization for Citizen Participation on the I-5 Corridor Project
Date: January 31, 1974

During the last Project Management Board (PMB) meeting, staff was instructed to provide a recommendation pertaining to committee organization which would permit considerable technical and non-technical citizen involvement. This memo is in response to that instruction.

Staff proposes that four (4) committees be organized along the lines suggested by Pat Blackwell, namely: 1) Public Awareness, 2) Operational Improvements, 3) New Systems, and 4) Environmental Impact. These committees, in general, are to evaluate and research assigned tasks and report their findings and recommendations in writing to the PMB. Committee responsibilities and organizational relationships are described in attachments. The committee membership should consist of nominally five (5) volunteer citizens - three (3) non-technical and two (2) technical.

The committee chairmen will be selected by either the PMB or the committee members themselves. The chairmen will also serve as advisory members of the PMB.

This organization will require approximately 5 hours per week of staff assistance consisting of typing (findings and recommendations, etc.), orientation of citizens to committee procedures and responsibilities, general guidance in formulating ideas, provide input data, direction in analysis procedures, suggestions for report preparation, etc. Additional staff time will be needed during the formation of the committees, initially.

It is recommended that all committee activities be on a voluntary basis and should the committees become so involved that they need more staff time than the project staff can provide, local people (citizens, etc.) can be obtained on a part-time basis to assist the committees.

This proposed committee structure is expected to provide substantial citizen involvement at a reasonable cost to the project.

COMMITTEE RESPONSIBILITIES

PUBLIC AWARENESS

Develop a citizen oriented type of informational and promotional program-group, community, and individual level.
Identify public and impact areas.
Promote the Project (improvements) and obtain public input.
Work closely with Project Management Board and staff.
Interface with all other committees.
Prepare reports with recommendations to Project Management Board.

OPERATIONAL IMPROVEMENTS

Develop and evaluate low cost improvements such as transit operations, traffic operations, carpooling, system continuity (Regional operation), user costs, etc.
Provide continuous monitoring of improvements for modification.
Recommend bi-state legislation needed.
Work closely with Project Management Board and staff.
Prepare reports with findings and recommendations to Project Management Board.

NEW SYSTEMS

Evaluate capital intensive/permanent type of improvements - transit, highway, and water.
Identify and define supporting elements needed (e.g., parking, feeder system).
Evaluate Corridor system interface with regional system (5).
Aid in the development of the forecast data.
Work closely with Project Management Board and staff.
Prepare reports with findings and recommendations to Project Management Board.

ENVIRONMENTAL IMPACT

Evaluate environmental effects of each proposed alternative - two levels (cursory, detailed).
Explore ways to reduce environmental impact of recommended improvements.
Develop a balance between environmental and transportation systems.
Prepare report with findings and conclusions to Project Management Board.
Interface with all other committees.

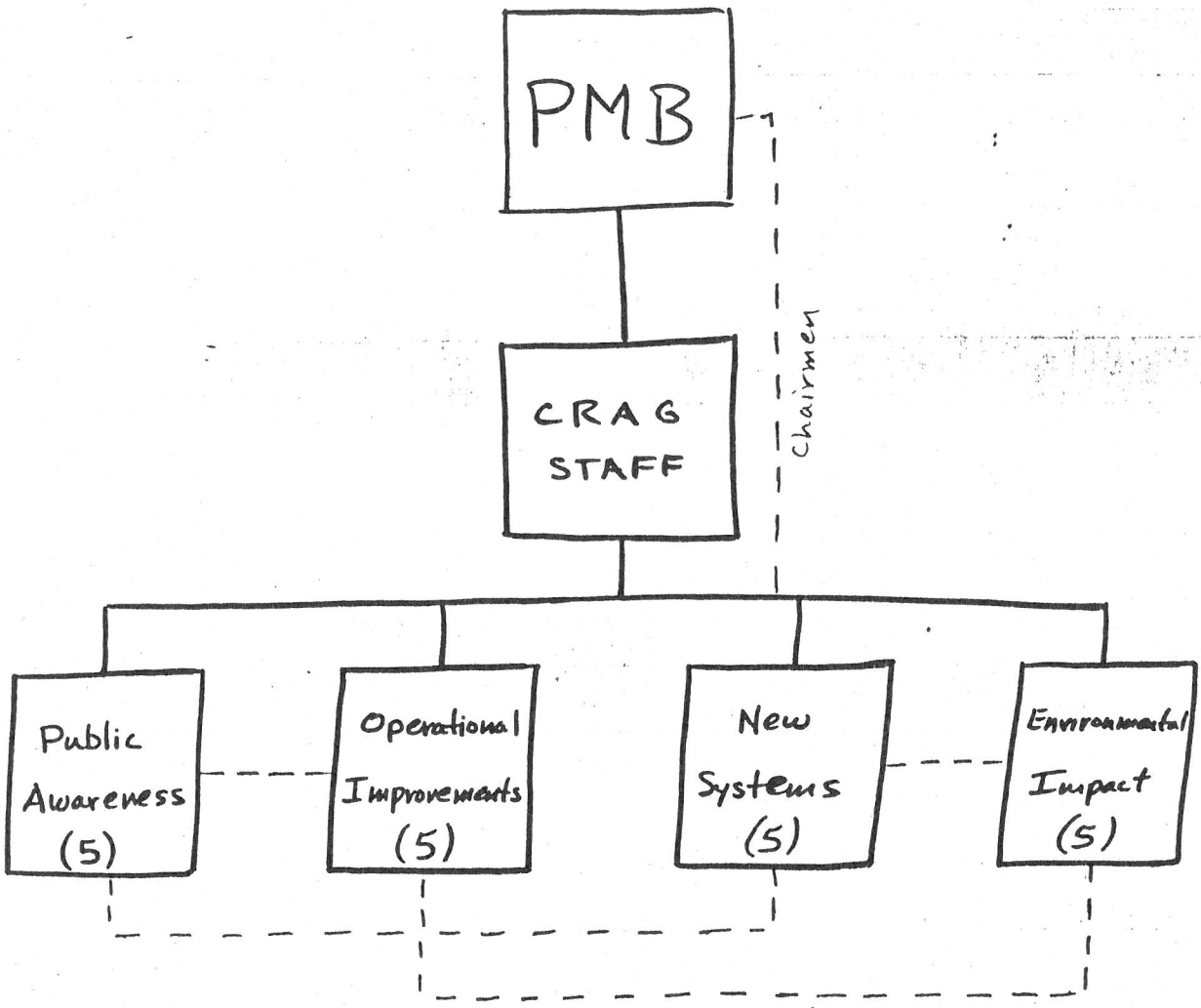


TABLE OF ORGANIZATION FOR CITIZEN INVOLUEMENT COMMITTEES.

I-5 Corridor Project

Public Awareness Committee Selection

First Choice	Second Choice
1. Eugene Laughlin	1. Howard Martin
2. Clark Co L.O.W.V.	2.
3.	3.
4.	4.
5.	5.

I-5 Corridor Project

Operational Improvements Committee Selection

First Choice	Second Choice
1. T. R. Swennes	1. Jim Shull
2. Joe L. Walker, Jr.	2. Jim Lafferty
3.	3. F. S. Barlow, Jr.
4.	4. Robert Walling
5.	5.

I-5 Corridor Project

New Systems Committee Selection

First Choice	Second Choice
1. Jim Lafferty	1. T. R. Swennes
2. F. S. Barlow, JR.	2. Eugene Laughlin
3. Howard Martin	3.
4. Jim Shull	4.
5.	5.

I-5 Corridor Project

Environmental Impact Committee Selection

First Choice	Second Choice
1. Robert Walling	1. Joe L. Walker, Jr.
2.	2.
3.	3.
4.	4.
5.	5.

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT

PORTLAND, OREGON 97221

(503) 297-3726

January 28, 1974

M E M O R A N D U M

TO: I-5 Project Management Board
FROM: Hurvie Davis HED
SUBJECT: Minutes of the Board meeting of 1/23/74
Interstate Corridor Project

Chairman Dick Granger presided at the meeting, and called upon the staff to review the purpose, procedure, and work program of the project for the benefit of those who were there for the first time.

The purpose of the meeting was to establish how to provide a meaningful organization, whereby citizens and private transportation interests may be incorporated into the project. The Chairman entertained comments from the group in general and several points were discussed as follows:

1. Traffic congestion which occurs on the freeways impairs the transit vehicles if they are in the congestion, suggesting that having buses in mixed traffic may not be the best solution. Exclusive facilities for buses would have to be provided.

2. A point was made that considerable education of the public at large is needed in providing information pertaining to transit availability, that is lines, schedules, etc., so that the public will be informed.

3. A suggestion was offered to consider the use of hydrosystems, that is water taxis or water buses, and two of the guests illustrated considerable background in this area.

4. A suggestion was offered for committees to be organized to consider various issues, such as: transportation systems, marketing & public relations, highway utilization and environmental impact.

5. Another committee structure was suggested which centered around the modes of transportation, that is, rail, marine, transit, highways, etc., which committees would report to a steering committee. The chairmen of these committees would be

a technical person who would solicit other technical persons or citizens to participate in the committee work. The Chairman requested the staff to review the suggestions on committee structure, and to develop a proposal for the next Management Board meeting which was set for February 1, at 9 a.m. Staff was also requested to determine an estimate on the amount of time which would be required by the CRAG staff to work with the committees.

The final item of the meeting consisted of a discussion pertaining to the status of the project. The reports included comments relating to the orgin-destination survey which was conducted in December and which is now being processed by the Washington State Highway Department and soon to be transmitted to staff. Status of the funding agreements with the participating agencies and the UMTA application was discussed. A number of low capital intensive improvements which staff has been exploring was discussed. These included coordination of lines between Tri-Met and Vancouver-Portland Bus Company, simplified transfers between the three systems, single fares between systems and toll-free Tri-Met telephone information number from Vancouver, among others.

The Chairman adjourned the meeting until February 1, at 9 a.m. Members of the committee were to be advised by the staff as to the location of the meeting.

Members Present

Dick Granger, Chairman
Bill Dirker
Bob Cunningham
Dick Barnum
Dave Hupp

Guests

Jim Lafferty
Jerry Peck
Jim Shea
Jim Shull
Lynette Curtis
Jan Truttman
Edi Woll
Patricia Blackwell
Frank Barlow
Charles Green

Staff

Hurvie Davis
Reed Gibby

1/28/74 kt

403.09 12548

THE CITY OF
PORTLAND
OREGON

OFFICE OF
PLANNING AND DEVELOPMENT
GARY E. STOUT
ADMINISTRATOR

1220 S.W. FIFTH AVE.
PORTLAND, OR. 97204

LEGAL DEPT.
REC'D JAN 21 1974
REFERRED
RETURNED

MEMORANDUM

~~To:~~ ~~Mayor Goldschmidt~~
~~Commissioner Anderson~~
TO

Date: January 18, 1974

~~From:~~ William S. Dirker WSD

131-114

Re: Interstate Bridge Corridor Agreement

Attached for signature is an agreement between CRAG and the City authorizing participation and funding of the Interstate Bridge Corridor Project. This is authorized by Ordinance No. 137021, August 3, 1973 in an amount not to exceed $5,000.

The project was subsequently revised to a total of $150.000 and to provide for partial funding by UMTA, in which event our share will be $2,500. If the UMTA grant is not received, our share will be $5,000, as already authorized, of a total of $130,000.

The funding share of others are also attached.

WSD/gr

For Approval as to form

RECEIVED
JAN 2[illegible]
MAYOR'S OFFICE

PUBLIC WORKS
JAN 22 1974
Commissioner's Office

THE CITY OF
PORTLAND
OREGON

OFFICE OF
PLANNING AND DEVELOPMENT
GARY E. STOUT
ADMINISTRATOR

1220 S.W. FIFTH AVE.
PORTLAND, OR. 97204

January 30, 1974

A. McKay Rich
Acting Executive Director
Columbia Region Association of Governments
6400 S.W. Canyon Court
Portland, Oregon 97221

Dear Mr. Rich:

Enclosed is the signed original of the agreement on the Interstate Bridge Corridor Project. The City of Portland will be represented on the Project Management Board by William S. Dirker, Transportation Coordinator. The alternate will be Douglas Wright, Transportation Planner.

Very truly yours,

Gary E. Stout

Gary E. Stout
Administrator

GES/WSD/gr

cc: Neil Goldschmidt
Lloyd Anderson

A G R E E M E N T

THIS AGREEMENT made and entered into this 27 day of December, 197 4, by and between the COLUMBIA REGION ASSOCIATION OF GOVERNMENTS, hereinafter referred to as "CRAG," and the CITY OF PORTLAND, OREGON, hereinafter referred to as "Public Body."

RECITALS:

1. The Interstate Bridge Corridor Project is a cooperative effort of a number of public jurisdictions and agencies (hereinafter specified) to undertake the study and development of alternative methods of providing improved methods of transportation between Vancouver-Portland metropolitan area.

2. The Interstate Bridge crossing the Columbia River is the only motor vehicular facility connecting the Vancouver-Portland metropolitan area, which is currently exceeding its designed traffic capacity during peak hours and approaching or exceeding its capacity during heavy weekend and summer months' travel periods.

3. The degree and duration of automobile, truck and bus traffic congestion is currently causing serious traffic disruption.

4. The Regional Transportation Plan (PVMATS) for 1990 plans for the construction of two additional bridges across the Columbia River within the Vancouver-Portland metropolitan area, but the completion date of the first of the bridges will not be before 1978.

5. In addition to the congested conditions now existing, and the forecast of increased congestion, there exists an interim problem of handling traffic during reconstruction of I-5 north and south of the Interstate Bridge, and the potential problem of emergency vehicles if Interstate Bridge traffic is blocked.

6. The Interstate Bridge is the only facility that presently can be reasonably used by 12,000 Clark County and 4,000 Multnomah, Clackamas and Washington County workers to reach their employment and restriction or temporary stoppage of Interstate Bridge traffic could have serious economic impacts.

7. CRAG will be responsible for the overall project and the following local, state and federal agencies will participate and provide the project costs: Washington State Department of Highways; Oregon State Highway Division; City of Vancouver, Washington; Clark County, Washington; City of Portland, Oregon; Multnomah County, Oregon; Tri-County Metropolitan Transportation District of Oregon; Federal Urban Mass Transportation Administration.

8. The goal of the Interstate Bridge Corridor Project shall be to move people through the corridor more efficiently with minimal environmental damage with the end result of the project to be physical action.

9. The objective of the Interstate Bridge Corridor Project shall be to develop an implementation program for a Vancouver-Portland mass transit system by July 1, 1975, with a live demonstration project under way by July 1, 1974. Primary emphasis will be on park-and-ride, with special focus on peak hour traffic to move Vancouver residents to their places of employment in Oregon.

NOW, THEREFORE, in consideration of the agreements of the parties hereafter stated, the parties agree as follows:

CRAG agrees:

1. To undertake and perform, or cause to be performed, the Interstate Bridge Corridor Project at a cost of $150,000. (It is expected that some of the work of the project will be performed by some of the participating agencies who will be reimbursed from project funds.)

2. To attempt with all reasonable diligence to complete the project by June 30, 1975.

3. To undertake and perform or cause to be performed, the project in three phases as follows:

Phase I - Phase I objectives are to develop preliminary findings about the problem, its causes and possible solutions in order to develop maximum increase in corridor efficiency without physical alterations, and to initiate non-capital intensive demonstration projects, this phase shall consist of the following elements:

(1) Analyze 1970 census data to develop commuter origin and destination information.

(2) Conduct an Origin and Destination study on the Interstate Bridge.

(3) Prepare initial overview findings on fiscal, legal and institutional problems and possibilities.

(4) Prepare initial status and feasibility findings on alternative ways of regulating movement:

(a) Park-and-ride sites;

(b) Other modes, especially rail, bus car-pools;

(c) New devices such as tolls, ramp metering, exclusive bus lanes, contra-flow bus lanes;

(d) Old devices such as transit operations co-ordination and rider attractive improvements in the existing bus systems (routing, scheduling, fares, etc.).

(5) Initiate a line demonstration project.

(6) Articulate citizen concerns.

(7) Prepare findings on land use factors.

Phase II - Phase II objectives are to proceed to detail the further information needed to proceed to program phase on the basis of the most promising findings in Phase I, and to develop recommendations, this phase shall consist of the following elements:

(1) Complete findings delayed from Phase I.

(2) Study I-5 reconstruction and the problems it creates.

(3) Analyze Origin and Destination data and develop forecasts, requiring at least the following:

(a) Alternative forecasts;

(b) Estimated error of forecast;

(c) Articulation of the various implications of the forecasts, i.e., (how high does a

particular forecast have to be to force a change in the projected system, and what political, fiscal, land use, etc. elements support the different forecasts.)

(4) Detail Park-and-Ride system. Focus on existing resource findings from Phase I, and interface with other modes.

(5) Detail other promising modes, including bridges.

(6) Detail promising regulatory devices.

(7) Detail new legal, fiscal and institutional potentials.

(8) Expand citizen involvement.

(9) Detail any land use questions.

(10) Make recommendations on any of above elements in this Phase II.

Phase III - The objective of Phase III is to produce an implementation program based upon Phase II recommendations, this phase shall consist of the following elements:

(1) Program Park-and-Ride;

(2) Program all other recommendations;

(3) Produce the Environmental Impact Statement.

PUBLIC BODY agrees:

1. To compensate CRAG for its services as hereinabove outlined a total compensation for the entire project of Two Thousand Five Hundred Dollars ($2,500). All such compensation shall be in cash, it being understood that if any part of the work of the project is performed by the Public Body at the request of CRAG, that the Public Body will be reimbursed by CRAG from project funds. Payments shall be payable to CRAG at the beginning of the project in the full amount of compensation as above stated.

2. To compensate CRAG for its services as hereinabove outlined a total compensation for the entire project of Five Thousand Dollars ($5,000) in the event that funds of the Federal Urban

Mass Transportation Administration are not approved for participation in the project. It being further understood that total project costs will be reduced from $150,000 to $130,000 and that the scope of work will be modified as agreed upon by the Project Management Board.

3. To provide information and data and otherwise fully cooperate with CRAG in the performance of the project.

4. To appoint a representative to the Project Management Board.

Both Parties agree:

1. To cooperate fully with each other in the performance of the project.

2. That certain of the initial work of the project has already been undertaken and shall be considered part of the project and subject to payment as herein specified both to CRAG and to the Public Body by way of reimbursement from project funds.

3. That the project will be directed by a Project Management Board which shall consist of a representative from each of the agencies or jurisdictions participating in this project.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed on the day and year first hereinabove written, CRAG acting by the Chairman of the Executive Board, and the CITY OF PORTLAND, OREGON acting by its Mayor and Commissioner of Public Works.

COLUMBIA REGION ASSOCIATION
OF GOVERNMENTS

By _____
Chairman - Executive Board

CITY OF PORTLAND, OREGON

By _____
Mayor

By _____
Commissioner of Public Works

Approved as to form:

_____
City Attorney

UD

COLUMBIA REGION ASSOCIATION of GOVERNMENTS

6400 S.W. CANYON COURT
PORTLAND, OREGON 97221
(503) 297-3726

January 14, 1974

M E M O R A N D U M

TO: Project Management Board

FROM: Hurvie Davis, Project Coordinator

SUBJECT: Minutes of Board Meeting of January 9, 1974
Interstate Corridor Project

Chairman Dick Granger presided at the meeting and called upon staff to review the status of the project. Considerable time during the last month has been devoted to administrative activities; such as preparing grant application to UMTA to help fund the project, and the recruitment of personnel to work on the studies. To date, one person (Reed Gibby) has been added to the CRAG staff and interviews are continuing for another person.

There was some discussion pertaining to the date for a demonstration project. It was agreed that June was the date by which a demonstration project should be implemented. However, a demonstration can commence prior to that time if everything is ready.

There was considerable discussion on legislation -- particularly relating to the capability of operating Tri-Met buses in Clark County. It was suggested that Oregon State legislation which may permit Tri-Met to operate in Washington be reviewed. This Oregon legislation could possibly be used as a guide to develop Washington State legislation. The Board concluded that a preliminary review of the legislation should be conducted and prospective legislation, which would permit implementation of certain transportation concepts, should these become a reality, should be submitted.

Formal agreements for funding the project have been submitted by CRAG to the participating agencies. To date, Clark County is the only one which has returned the signed agreement. The other agencies were encouraged to reply at an early date.

The proposed amendment to the CRAG work program (UMTA Grant) and the budget were discussed briefly. The estimated mapower requirement for the project is 65 man-months, which was reduced from 95 man-months. A list showing the estimated man-months by work item was to be forwarded to each Board member and is attached hereto. It was stated that the UMTA amendment is being delayed waiting for finalization of the Tri-Met portion. The CRAG staff is working with the regional office of UMTA attempting to expedite this grant application.

The Board discussed in considerable detail, the possibility of appointing an advisory committee, which would include private interests in transportation (such as private bus carriers, etc.) and citizens, to participate in providing advice to the Board and staff throughout the duration of the project. It was concluded that no advisory committee would be formed; but rather, there would be a special board meeting on January 23, at 9:00 a.m., in which an invitiation will be made to the private interests, as well as several citizens, to provide this kind of input. During this meeting the Management Board will receive input and determine how to restructure itself to accommodate some private interests and citizen participation. Board members are to submit suggestions to the Project Coordinator by January 15 so that invitations can be mailed on January 16.

The final topic for discussion was the potential improvements list. This included five basic types of improvements: 1) transit, 2) innovative, 3) socio-economic, 4) river crossing, 5) highway operations. It was agreed that the improvements list be distributed to each of the Board members at an early date to provide them an opportunity to review it in detail and to make comments and additions to this list.

attachments: Potential Improvements List
Estimated Man-Months of Project Effort

lw

CAC

Interstate Bridge Corridor Project

Estimated Man Months of Effort

(for budget purposes)

Work Item #		Description	Man Months Staff	Other
Phase I-A		Analyze 1970 Census Work O-D Data	0.2	
7/1/74	B	Conduct O-D Surveys	0.3	5.0
	C	Process & Summarize O-D Data	0.4	5.0
	D	Inventory Existing Facilities & Service	2.3	
	E	Preliminary Legal & Legislative Review	1.0	
	F	Itemize Potential Improvements	1.8	
	G	Development of Alternatives	3.3	
	H	Status & Findings on Alternatives	1.7	
	I	Selection of Short & Long-Range Alternatives	0.5	
	J	Implement Short Range Improvements	1.6	
		PHASE I TOTAL	13.1	10.0
Phase II-A		Structural Analysis of Bridges		5.0
12/31/74	B	Detailed Legal & Legislative Analysis	2.5	
	C	Review I-5 Reconstruction Plans	5.5	
	D	1980 Forecasts of Population, Employment, & Travel	7.0	
	E	Preliminary Engineering for Alternatives	12.0	
	F	Selection of Best Alternative	2.5	
		PHASE II TOTAL	29.5	5.0
Phase III-A		Develop Implementation Program	9.0	
7/1/75	B	Prepare Environmental Impact Statements	13.0	7.0
		PHASE III TOTAL	22.0	7.0
		PROJECT TOTAL	64.6	22.0

NOTE: Staff effort includes time for project administration and secretarial help. Other effort includes work by other than project staff such as State Highway effort on O-D survey, etc.

Original estimate of staff effort totalled 95 man months.

POTENTIAL IMPROVEMENTS

I-5 TRANSPORTATION CORRIDOR PROJECT

SUMMARY

I. TRANSIT

II. INNOVATIVE

III. SOCIO-ECONOMIC

IV. RIVER CROSSING

V. HIGHWAY OPERATIONS

OUTLINE

I. TRANSIT

A. SERVICE

1. Regional Coordination of Lines and Schedules
2. Common Regional Line Designations
3. Common Transfer Between Systems
4. Reduce One-Way Loop Operation
5. Regional Fare Management

    a. Single Fare Between Systems

B. ROADWAY

1. Exclusive Transit Lanes and Ramps
2. Priority for Transit Vehicles and Car Pools

C. PARK AND RIDE STATIONS (w/feeder service & bike racks)

1. Interim Use
2. Long Range Use
3. Possible Locations

a. Vancouver: Kiggins Bowl, Mill Plain I.C., CBD
b. Clark County: 78th St. I.C., Orchards
c. Camas-Washougal

D. INCREASE AMTRAK PASSENGER SERVICE

E. TRANSIT PASSENGER SHELTERS

F. EXPAND EXPRESS BUS SERVICE

1. Origins

a. Vancouver
b. Clark County
c. Camas-Washougal

2. Destinations

a. Portland CBD
b. N.W. Industrial Area
c. Lloyd Center Office Complexes
d. North Portland

II. INNOVATIVE

A. LIGHT RAIL

B. HEAVY RAIL

C. OTHER GUIDEWAY SYSTEMS

D. HELI-TAXI (AIR BUS)

E. ERGS (ELECTRONIC ROADWAY GUIDANCE SYSTEM)

F. HYDRO SYSTEMS

1. Ferries
2. Hydrofoil
3. Hovercraft (ACV)

G. AUTO-RAIL/BUS-RAIL DUAL MODE

H. FLOW SYSTEM (OFF-LINE STATIONS)

1. P.A.T. (Palleted Automatic Transit)
2. PRT Type-Curbside Service Subway

I. DEMAND RESPONSIVE SYSTEMS

1. DART (Demand Activated Rapid Transit)
2. DSB (Demand Service Bus)
3. DAB (Dial-A-Bus)

J. PEDESTRIAN SYSTEMS

K. BICYCLES

III. SOCIO-ECONOMIC

A. WORK SCHEDULES

1. Staggered Hours
2. Staggered Days
3. 4/40 Work Week

B. MARKETING & PR PROGRAMS - Benefits with charts & schedules

C. TOLL FEES

D. FAVOR GOODS/SERVICES IN CONTRACT TO PASSENGER MOVEMENT

E. SUBURBAN EMPLOYMENT FACILITIES

F. CAR POOLING

G. AUTO EXCLUSION AREAS

H. PRIVATE INCENTIVES - Prizes, Contests

IV. RIVER CROSSING

A. EXISTING STRUCTURES

1. Widen Bridges
2. "Outrigging"
3. Double Decking
4. Pave R.R. Bridge

B. CONSTRUCT NEW STRUCTURES

1. New Bridges
2. Floating Bridge
3. Underwater Tube
4. Temporary Bridge
5. I-205 Interim Bridge

V. HIGHWAY OPERATIONS

A. FREEWAY & RAMP CONTROL & METERING

B. REVERSIBLE LANES

C. CONSTRUCTION DETOURS

D. NARROW LANES

E. TRAFFIC SEGREGATION

1. Trucks
2. Car Pools
3. Transit