5 May 1980

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OREGON

CONNIE McCREADY MAYOR

> OFFICE OF PLANNING AND DEVELOPMENT

BUREAU OF PLANNING 621 S.W. ALDER ST. PORTLAND, OR 97205

FRANK FROST ACTING DIRECTOR 248-4253

CODE ADMINISTRATION 248-4250

> LONG RANGE PLANNING 248-4260

SPECIAL PROJECTS 248-4509

TRANSPORTATION PLANNING 248-4254

HOUSING AND POPULATION 248-5525

MEMORANDUM

TO:

Northwest Transportation Study CAC and TAC

FROM:

Rob Bernstein, Project Manager /

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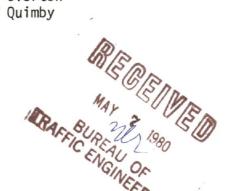
SUBJECT: Meeting Minutes and Schedule

The next two meetings of the NW Transportation Study CAC are scheduled for 4:45 p.m. on May 14 and 4:45 p.m. on May 28. Both meetings are to be held at the Metro Learning Center (Couch School), 2033 NW Glisan, in the library. Preliminary designs for the NW 21st/22nd (Front - Vaughn) and Front Avenue (26th - Broadway) Projects will be discussed May 14, and transit improvements will be the subject of the May 28 meeting.

April 16 CAC attendees: Bill Cook, NINA Mel Kroker, Architect Rick Michaelson, NWDA Bill Parish, NW Resident April 30 CAC attendees: Mel Kroker, Architect Bill Parish, NW Resident Susan Sturgis, NW Resident Edgar Waerher, NW Resident

In the two most recent CAC meetings the problems and needs to be dealt with in the course of the study were prioritized and organized. The following outline contains the most important problems and suggests a structure for dealing with them in a clear, coordinated fashion (see attached map):

- 1. Uptown Shopping Center and vicinity. *Traffic congestion and circulation problems *Excess demand for available parking *Pedestrian hazards and inconveniences *Transit accessibility and operations difficulties
- 2. Traffic congestion, pedestrian hazards and neighborhood impacts associated with east-west traffic. *Burnside, east of 23rd *Everett/Glisan *Lovejoy
- 3. Traffic congestion, pedestrian hazards and business impacts of local and non-local traffic in commercial areas. *21st, south of Overton *23rd, south of Ouimby



- 4. Contributions to east-west and commercial area traffic problems and neighborhood impacts of industrial area traffic.
 *21st north of Overton and 23rd north of Pettygrove
 *through traffic infiltration in the residential area west of 23rd and south of Vaughn
- 5. Contribution to east-west, commercial area, and industrial area traffic problems; neighborhood impacts; and traffic congestion associated with West Hills and Washington County traffic. *Burnside, west of 23rd *Cornell

Structuring and coordinating the various efforts in this study is extremely important, because the identified problems are closely interrelated. A proposed project on Burnside, Everett/Glisan, or Lovejoy, for example, will impact traffic flow on each of the other streets.

Due to delays in obtaining the federal funding for this study, collection of some data needed to address the problems outlined above has been put off for 1 - 3 months. One of the data collection efforts postponed is a traffic origin - destination survey, the purpose of which will be to determine where the traffic in Northwest is coming from and where it is going. This is crucial information in the development of projects that are both necessary and effective in solving the identified problems; i.e., projects that do not simply move problems from one place to another. The survey will be discussed in more detail at future CAC meetings. In addition to the survey, traffic volume counts will be taken at various locations throughout Northwest, and turning movement counts will be taken at selected intersections.

Until these data can be collected, the study will focus on the development of previously identified projects (namely, the NW 21st/22nd and Front Avenue Projects), and the definition of transit improvements needed to support efforts to solve the previously outlined problems.

The NW 21st/22nd (Front - Vaughn) Project is intended to provide the street improvement and design changes necessary to return 21st and 22nd to local use once the I-505 Freeway extension is complete and the streets are no longer carrying heavy traffic volumes to and from the freeway ramps. The purpose of the Front Avenue (26th - Broadway) Project is to reconstruct the deteriorating roadway in order to eliminate traffic safety hazards and continuing maintenance problems. Local access, pedestrian safety and traffic control aspects of each project will be addressed.

RB:db





BUREAU OF PLANNING CITY OF PORTLAND 621 S. W. ALDER ST. PORTLAND, OR 97205

> Mike Bauer Bureau of Traffic Engineering Bldg. 133/301

OFFICE OF Connie McCready MAYOR



1220 S.W. FIFTH AVE. 3-14. PORTLAND, ORE 97204 503 248-4120

THE CITY OF PORTLAND, OREGON

March 25, 1980

Rick Michaelson, Co-President NWDA Board of Directors 817 N.W. 23rd Ave.

Dear Mr. Michaelson,

This office is in receipt of your letter supporting the N.W. 14th-16th project. I want to thank the neighborhood representatives for the support and effort they have given the City staff to develop a project that can be supported by both the business people and residents.

I have asked the Traffic Engineer to report on the NWDA's concern that the pedestrian crossings along N.W. 18th and 19th were not properly addressed by the proposed project. The Traffic Engineer reports that the improvement of pedestrian safety along the streets in the project area was considered throughout the study period. He feels the anticipated reduction of vehicle traffic along 18th and 19th Avenues, along with the proposal to reduce progression speed through the signals to 25 mph will substantially improve conditions for pedestrians.

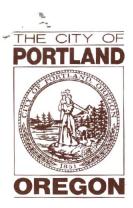
It is the Traffic Bureau's recommendation that after the 14th/16th Ave. project is operational the pedestrian crossings along N.W. 18th and 19th be re-evaluated to see if anything further needs to be done.

Again I thank the NWDA for its help during the 14th-16th project study. If you have any further questions concerning this project, please don't hesitate to contact this office or the Traffic Engineer.

Sincerely,

Connie McCready Mayor

as



BEVERLY GEIGER

Assistant to Mayor McCready 303 City Hall Portland, Oregon 97204

March 18, 1980

Don Bergstrom
Traffic Engineering
B133/301

Don, would it be possible to have a draft response prepared for Connie's signature to the concerns expressed in the attached letter from the NW District Association.

Thank you.

Bev Geiger



URB 3-14.1 1249

Northwest District Association

March 14, 1980

Mayor Connie Mc Cready Room 303 City Hall 1220 SW 5th Portland, OR 97204 MAR 1 7 1980

MAYOR'S OFFICE

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Dear Mayor Mc Cready:

The Board of the NWDA met to consider the proposed 14th-16th project on February 21. We strongly support this project and feel that it will have a significant impact on the traffic problems in the eastern edge. While we still believe that a return to two way traffic on 18th and 19th would be better for the residents of that area, we feel that on balance this is a good compromise proposal that can be supported by both business people and residents.

We feel that the diverters at Lovejoy and Marshall street are at the core of this proposal. They must be put into effect as an integral part of the 14th-16th street improvements and not be forgotten as the project proceeds. Without their construction this project would result in more traffic through our neighborhood and not the intended transfer of traffic from 18th and 19th.

One concern that we feel was not properly addressed in this proposal was the difficulty pedestrians have in crossing 18th and 19th. As families with young children move into this area, the danger becomes more apparent. We need pedestrian crossing signals or some other solution in this area. We request that more study be given to this problem while the improvements are begun on 14th and 16th and that action be taken before the project is completed.

Sincerely yours,

Rick Michaelson

The Make

Co-president NWDA Board of Directors

RM/lak

cc: Commissioners Lindberg, Ivancie, Jordon, Schwab



OREGON

CONNIE McCREADY MAYOR

OFFICE OF PLANNING AND DEVELOPMENT

BUREAU OF PLANNING 424 S.W. MAIN ST. PORTLAND, OR 97204

FRANK FROST ACTING DIRECTOR 248-4253

CODE ADMINISTRATION 248-4250

LONG RANGE PLANNING 248-4260

> SPECIAL PROJECTS 248-4509

TRANSPORTATION PLANNING 248-4254 March 177 1980

MEMORANDUM

T0:

Northwest Transportation Study CAC and TAC

FROM:

Rob Bernstein, Project Manager

SUBJECT: CAC Meeting Minutes

Transit and pedestrian problems in the Northwest neighborhood and in the Northwest industrial area were discussed at the March 13 meeting of the CAC. Problems and needs identified included:

- * Bus commuting for industrial employees, many of whom have early starting times, requires excessive travel time due to circuitous routes to Northwest and due to the lower frequency of bus service in the hours before the main peak period.
- * Frequency of service on the #20 NW 21st Ave. route should be increased.
- * Direct service to North Portland (e.g., to Kaiser Hospital) should be provided.
- * Enforcement of the law requiring motorists to yield the right-of-way to pedestrians in crosswalks would make pedestrian activity and access to transit much safer and more convenient.

The discussion of transit evolved into a discussion of study priorities and focus, which is the subject of the next CAC meeting (scheduled for March 20, 4:15 p.m. at the Northwest Service Center). The general feeling was that the study should focus on the development of projects to be funded with the \$13 million transferred from I-505. Transit improvements, consisting mainly of increased service frequency and route coverage, rely more on expanded operations than on the implementation of capital projects. Since the transfer money can be spent on capital improvements, but not on transit operation costs, the Committee wondered whether it was worthwhile to spend City staff and Committee time and energy on transit problems in general, when there will be more than enough work required to develop capital projects. This subject will be discussed further at the next CAC meeting.

REGENTED lease find attached the preliminary goals and objectives used in getting the study underway. These goals and objectives are for discussion purposes.

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NORTHWEST TRANSPORTATION STUDY

GOALS

Identify and analyze transportation-related projects and policies that:

- 1. Improve and maintain neighborhood liveability in terms of both mobility and environment;
- 2. Promote industrial revitalization and, where appropriate, industrial development and expansion;
- Maintain and enhance the viability of commercial activity as a provider of services to Northwest residents and employees, and as a source of jobs for neighborhood residents; and
- 4. Encourage the conservation of energy (especially energy derived from non-renewable sources).

OBJECTIVES

Projects and policies developed by this study should help to improve access to, from, and within the Northwest neighborhoods and industrial areas while eliminating and preventing transportation - land use conflicts (e.g., through traffic on residential streets). This overall objective supports all four goals:

- * Neighborhood liveability is improved by making more services, recreational opportunities, and employment opportunities more easily accessible for more Northwest residents, and by improving access via the most environmentally desirable modes (e.g., walking, transit).
- * Industrial revitalization and expansion are promoted by the facilitation of more efficient and convenient movement of goods and people, which in turn improves the environment for doing business in Northwest.
- * Commercial viability is enhanced, because improved access creates a larger potential market for commercial services and makes the delivery of those services more convenient.
- * Energy conservation is encouraged by creating more opportunity for Northwest residents and employees to make shorter trips (e.g., to work and shop closer to home, or to eat lunch closer to the workplace), and to use more energy efficient modes of travel.

A. Transportation Objectives

1. Improve traffic circulation in the industrial areas.

Improved traffic circulation, which results in easier access to area industries, is accomplished i) by improving capacity-deficient roadway segments and/or providing alternative routes, ii) by improving traffic operations at congested intersections, and iii) by encouraging traffic

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patterns, by physical and/or regulatory means, that minimize potential conflict between traffic flows and industrial activity (e.g., truck loading and unloading). Projects promoting improved traffic circulation in the industrial areas must be aimed not only at solving existing problems, but also a preventing future conflicts and congestion.

Some examples of potential traffic circulation improvement projects (identified as part of the Alternative to I-505 Study) include the improvement of St. Helens Road from Kittridge to the west City limits, and the repair and return to two-way local operation of 21st and 22nd Avenues between Vaughn and Front. These and other projects should be coordinated in an industrial circulation study that complements the Alternative to I-505. The circulation study should address issues such as the future role of 21st and 22nd (now a temporary truck route), and the traffic signal locations needed on Yeon Avenue, Vaughn Street, St. Helens Road, and Nicolai Street to support local access needs.

2. Improve internal traffic circulation in the neighborhoods while discouraging the use of neighborhood streets by through traffic.

Improvement of circulation results in better access to and from residences and commercial establishments in Northwest. In addition, reduction of through traffic not only frees more street capacity for internal circulation, but it also reduces the negative environmental impacts associated with excessive auto traffic (e.g., safety hazards, congestion, noise and fumes), thereby halting the erosion of the residential character of Northwest neighborhood streets and making commercial areas more pleasant to use.

Since the capacity of the street system cannot be significantly expanded, circulation improvement must be accomplished i) by improving traffic control and geometrics at problem intersections, and ii) by using physical and regulatory means to divert through traffic from neighborhood streets. For example, through traffic traveling between Northwest industrial areas and Cornell Road or Burnside Street uses 25th Avenue, a residential street. Traffic control devices, which allow local access and bus movement, but which restrict through traffic, might discourage this undesirable traffic flow. In addition, the diversion of through traffic from the Everett-Glisan couplet, and improvement of traffic circulation in the vicinity of the Uptown Shopping Center are examples of the application of this objective to specific problems.

 Eliminate continuing maintenance problems and hazardous driving conditions caused by poor roadway condition.

The most pressing maintenance problem in Northwest is Front Avenue, whose road surface is uneven due to poor subsurface conditions. Front Avenue needs to be reconstructed and resurfaced from 26th to the vicinity of the Broadway Bridge. In addition, 21st and 22nd Avenues should also be improved in order to alleviate continuing maintenance problems.

4. Balance parking supply, parking demand, and street capacity.

Available parking must be balanced against the finite capacity of the street system; i.e., parking should be provided in locations and quantities that will not attract more traffic than can be handled by streets in the area. In much of the study area, there is little or no opportunity for significantly increasing the capacity of the street system, so parking availability must be coordinated with existing street capacity. A parking strategy, that responds to neighborhood, commercial and industrial needs, should be developed. A balanced strategy may constrain access by auto, and therefore must be closely tied to the facilitation of other modes of transportation (e.g., transit, walking).

In addition to the establishment of a general parking strategy for Northwest, the Uptown Shopping Center and Good Samaritan Hospital have unique problems which should be addressed individually.

5. Improve neighborhood transit service.

Good transit service in the Northwest neighborhoods is crucial due to the high proportion of auto-less households (48%). For these transit dependent people, buses are the main mode of access to jobs, shopping and other destinations both within and outside the neighborhood.

In addition, neighborhood bus service provides an alternative mode of transportation for those Northwest residents who do have an automobile available. Provision of this alternative form of transportation is important, because it provides the opportunity for neighborhood residents to reduce their use of, and dependence on, the private auto.

Improved transit service also enhances the viability of commercial establishments in Northwest by making them more easily accessible to more people (including those who are transit dependent and those who will have difficulty finding parking due to the limited number of available spaces).

There are several ways transit service in the Northwest could be improved. First, sufficient capacity on existing routes should be provided (#53 NW 23rd Ave. is overcrowded in the peak periods). Also, the density of development in Northwest makes improved coverage and increased frequency of service both feasible and desirable. Finally, the environmental intrusiveness of buses, in terms of noise, fumes, and vibrations, must be minimized in order to maintain a pleasant pedestrian, residential, and commercial environment.

6. Improve industrial transit service.

Bus service in the industrial areas of Northwest, as in the neighborhoods, provides an alternative to the use of the private automobile. As such, service should be improved both as a means of commuting to industrial jobs and as a means of circulation within the industrial area.

The provision of transit service is a benefit not only to employees, to whom the choice of whether or not to drive to work is made available, but also to employers: increased use of transit allows more industrial land to be used for development and expansion, since less is needed for parking. This is especially important in the industrial areas of Northwest, where developable industrial land is in short supply.

Improving transit service is important also because it is the only available means of commuting to work for many people in Northwest and throughout Portland who do not own a car or who do not have access to one. In addition, the number of people who cannot afford to drive to work is climbing steadily along with the price of gas. Improvement of bus service not only makes more jobs accessible to these transit dependent people, but it also increases the number of potential employees for industrial area employers.

Improved route coverage of the industrial area is needed; for example, no regular bus service is conveniently accessible from businesses along Front Avenue north of 26th. Transit access to the industrial area from certain parts of the region should be significantly upgraded, also. Transit trips from North Portland and Vancouver, for instance, must make a time-consuming, out-of-direction transfer downtown. And finally, better connections between the various bus routes serving the Northwest industrial areas is needed. This will facilitate internal circulation by transit, making it easier for employees to make midday trips (e.g., going out to lunch or to the bank) on the bus.

7. Ensure safe and convenient pedestrian access to transit service everywhere in the study area.

Since all bus riders are pedestrians, improving pedestrian access to transit service is just as important as improving the service itself. Pedestrian and/or auto movement must be controlled at conflict points. Sidewalks should be available on walk routes, and sheltered waiting areas are needed at transit stops. Pedestrians should be protected from traffic, dirt and noise to the maximum extent possible in order to encourage the use of transit. Circuitous or excessively long walk routes, such as from Yeon Avenue and St. Helens Road bus service to Front Avenue industries, should be eliminated.

8. Ensure safe and convenient pedestrian access between all trip generators and trip attractors in Northwest.

The relatively high density of development in Northwest is conducive to walking, since trip destinations are more likely to be within walking distance of the trip origin. There is, therefore, greater opportunity for walking to be an alternative to automobile use, in addition to being a primary means of mobility for auto-less households. For these reasons, walking should be facilitated at the highest possible level of convenience and safety.

9. Encourage the use of carpools, ride sharing, and other forms of paratransit both as primary modes of transportation and as alternatives to travel in single-occupant autos.

Promotion of carpooling, etc., is particularly important in the industrial areas, where employees and employers can derive benefits similar to those associated with transit usage; i.e., to the employee, carpooling, vanpooling and other forms of ridesharing are an alternative to the use of the single-occupant automobile for commuting, and to the employer the concomitant reduction in traffic volume means that less land must be reserved for parking.

In addition, many types of paratransit are well suited for providing primary transportation service for auto-less households or specialized service for the elderly and handicapped (23% of study area residents are over 65 years old, as compared to 14.5% in the City as a whole). The ability of these modes to serve travel flows not otherwise served by public transit (e.g., trips from some parts of the neighborhood to Good Samaritan) should be studied.

B. Procedural Objectives

- 1. Support City land use goals as expressed in the Comprehensive Plan and other adopted plans, including the Northwest District Policy Plan and the Thurman-Vaughn Plan.
- 2. Support and refine City transportation policies; i.e., the Arterial Streets Classification Policy and the transportation element of the Energy Conservation Policy.
- 3. Support the City's Economic Development Policy
- 4. Coordinate study proposals with on-going proposed projects and programs.
 - i) Alternative to I-505
 - ii) I-505 Withdrawal Projects Program: Northwest Portland
 - iii) N.W. 14th/16th Avenue Project
 - iv) Tri-Met Five Year Transit Development Program

- v) Downtown LRT Planning
- vi) CEDS Coliseum LRT Station Study (industrial area transfer station)
- vii) Industrial Access Study

STUDY PRODUCTS

1. Transportation Plan

 Traffic Circulation Plan (for the neighborhood, for the industrial area, and for Uptown Shopping Center).

Each traffic circulation plan will include recommended changes to the Arterial Streets Classification Policy.

b. Transit Plan

The transit plan will comprise proposed service changes (e.g., route and frequency changes), facilities required to support existing and proposed service, and assessment of appropriate transit vehicles (e.g., standard, articulated, trolley buses), and recommended changes to the Arterial Streets Classification Policy.

c. Pedestrian and Bicycle Plan

Included in this element of the transportation plan will be proposed facilities (e.g., sidewalks, shelters, crosswalks, bikeways) and recommended signalization and regulatory changes needed to control pedestrian/bicycle/automobile conflict points.

2. Project Implementation Program

This program will consist of a prioritized list of capital projects, each with a preliminary design and associated cost estimate. A phased implementation plan for these projects will also be developed.

3. Parking Strategy

A parking strategy for the study area will be developed, with special attention being paid to the problems of Good Samaritan Hospital, the Uptown Shopping Center, and other particularly problematic areas that may be identified in the course of the study. Parking policy proposals will also be made for the purposes of discussion.

4. Systems Report

A comprehensive report discussing the system impacts of the projects proposed by this study will be assembled. This systems report provides the MSD Council with a wider perspective for evaluating City transportation projects. Specifically, the Council, as the MPO authority, i) authorizes the spending of funds for preliminary engineering, and ii) incorporates the proposed project in the Transportation Improvement Program (TIP).

Mike Bauer bureau of Traffic Engineering bldg. 133/301



CONNIE McCREADY **MAYOR**

OFFICE OF PLANNING AND DEVELOPMENT

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TRANSPORTATION **PLANNING** 248-4254

3 March 1980

FOR YOUR DAWN URB 3-14.1 MARTINI MA MARTINI

MEMORANDUM

TO:

Northwest Transportation Study CAC and TAC

FROM:

Rob Bernstein, Project Manager

SUBJECT:

CAC and TAC Meeting Minutes, March Schedule, etc.

The next two meetings of the Citizen Advisory Committee (CAC) have been scheduled for

> 4:15 p.m., Thursday, March 13, 1980, Metro Learning Center (Couch School) 2033 NW Glisan St. Library (Room 212)

> > and

4:15 p.m. Thursday, March 20, 1980, Northwest Service Center 1819 NW Everett St. Board Room

The purpose of the March 13 meeting is to discuss the needs and problems related to transit service and pedestrian activity in Northwest Portland (traffic problems were discussed at the first CAC meetings). The purpose of the March 20 meeting is to prioritize the identified problems and needs, and to determine the desired products of the study (e.g., traffic circulation plan, transit plan, parking strategy). The prioritization of study elements is extremely important since it may not be feasible to address all problems adequately in the course of the study, and it may be desirable to focus the study effort on certain problems while overlooking others. (Six person-months are allocated to the study; a schedule is attached.)

The first meetings of the Citizen and Technical Advisory Committees were held on Wednesday and Thursday, February 20 and 21. Discussion at the CAC meetings focused on the study's background and origins, on the availability of funding for projects identified and developed in the course of the study, and on traffic problems in Northwest Portland.

To summarize, the Northwest Transportation Study was initiated for the purpose of identifying and developing transportation-related projects to be funded with the \$13 million of I-505 transfer funds allocated to Northwest Portlands Several projects (e.g., Front Avenue resurfacing and reconstruction) and problems (e.g., congestion in the vicinity of the Uptown Shopping Center) have been identified previously in the Alternative to I-505 Study. The Northwest Transportation Study must coordinate previous proposals with actions and projects identified by the Study and with on-going projects, namely the Extension of I-405 (i.e., the Alternative to I-505), the NW 14th/16th Avenue Project, and planning work for the Westside Transitway and Sunset Freeway improvements.

The City goals guiding the study were discussed briefly. There will be an opportunity for a more in-depth discussion of Study goals and objectives at the March 20 CAC meeting; a preliminary list of goals and objectives will be mailed out for your review prior to that meeting.

The problems associated with auto and truck traffic in Northwest that were discussed at the CAC meetings are listed below:

- *Excessive traffic on residential streets in the area south of Vaughn Street and west of 23rd Avenue.
- *Heavy traffic, congestion, and pedestrian safety hazards along 21st, 23rd, and Lovejoy.
- *Traffic congestion, parking congestion, and pedestrian hazards in the vicinity of Uptown Shopping Center and the 23rd/Burnside/Vista/Westover intersection.
- *Through traffic on Cornell Road and W. Burnside.
- *Truck traffic on residential streets (e.g., 25th Avenue).
- *Incompatibility of traffic flow on the Everett/Glisan couplet with adjacent residential land use and activity.
- *Imbalance of parking demand and supply.

There was also discussion about the necessity that solutions to these problems recognize the need to protect the residential environment and to provide access to the industrial area, to facilitate the delivery of emergency and waste disposal services, and to promote energy conservation.

The TAC emphasized the need to develop reasonable, "doable" projects and to coordinate the proposed projects with the basic design of the I-405 Extension. Also, the improvement of transit service in Northwest Portland was felt to be very important given the high density of development and the high ridership levels on existing routes. The TAC expressed the desire that the Study produce a traffic circulation plan (incorporating a bicycle circulation plan), and a transit plan for the entire Northwest neighborhood and industrial area.

If you have any questions, please do not hesitate to call me at 248-4254.

Northwest Transportation Study Work Program

1. Review of Previous Work

Earlier studies and project reports are to be gleaned for pertinent data, problems and issues identified, conclusions drawn, improvements proposed, etc. Important examples of previous work are the Northwest District Plan, the Industrial Access Study, the Alternative to I-505 Report, the I-505 Withdrawal Projects Program for Northwest Portland, and the NW 14th/16th Avenue Report.

2. Problem Identification and Goal Setting

Study goals and objectives must be set to guide study efforts, and a set of problems and issues to be dealt with in the study must be developed. Some problems have already been identified; e.g., excessive traffic on the Everett/Glisan couplet, the lack of regular transit service to Front Avenue, congestion in the Uptown Shopping Center area, and pedestrian hazards along 23rd Avenue. The TAC and CAC should be able to point out other important problems and will be valuable in gaining understanding of all sides of the issues associated with the various problems.

Data Collection

In order to develop reasonable solutions to identified problems, the cause of each problem must be determined. Certain information is needed to do this, some of which has already been collected as part of previous planning efforts. Previously collected data and information will be assembled and gaps will be identified. Data to fill in the gaps will then be collected. An obvious informational deficiency that must be remedied, for example, is the pattern of origins and destinations of traffic in the Northwest Neighborhood. Solutions to traffic problems on Everett/Glisan, on Cornell, on 25th or at 23rd and Burnside cannot be developed without knowing where the traffic is coming from and going to. A consultant will be hired to obtain this information; conducting some sort of survey (e.g., post card, screen line interview, or license plate) will be required.

4. Data Analysis

Data and information gathered in the previous task will be analyzed in the context of the identified problems in order to determine the underlying causes of those problems. In addition, an effort will be made to predict future problems so that they may be prevented. With the completion of this task, a good overall understanding of transportation in Northwest will have been gained. This understanding will be important in subsequent tasks: in identifying solutions to problems, in developing specific projects and strategies, and especially in coordinating these solutions. Finally, analysis of certain data will indicate the ability of the street and highway system and transit system to serve present and future travel demand.

5. Sketch Planning

The first step of this task will be to define the roles of various transportation system components (e.g., transit, paratransit, auto) in serving present and future transportation needs in the study area, based on information and understanding obtained in the preceding portions of the study. Next, a basic transit network will be developed and general truck and auto circulation patterns will be laid out (closely coordinated with the Alternative to I-505). The traffic volumes that can be accommodated and the level of transit service (frequency, etc.) needed will be defined in general terms. The product of this task, a sketch transportation plan, will be developed with TAC and CAC input on group and individual levels, as appropriate.

6. Project Planning

Project planning will involve preliminary design and layout of specific projects needed to implement the sketch plan. Inasmuch as some projects have already been identified (e.g., the improvement of St. Helens Road) and others will fall out of the sketch planning process in its early stages (e.g., regular bus service to Front Avenue), sketch planning and project planning will occur more or less simultaneously. The product of this task will be a set of potential projects, developed with TAC and CAC input.

7. Evaluation of Project Alternatives

The purpose of this task will be to develop and evaluate the potential projects produced by the project planning effort so that FAU project requests and a systems report for MSD can be prepared. Also, proposed transit improvements will be developed to the point where Tri-Met can include them in their TDP.

8. Program Development

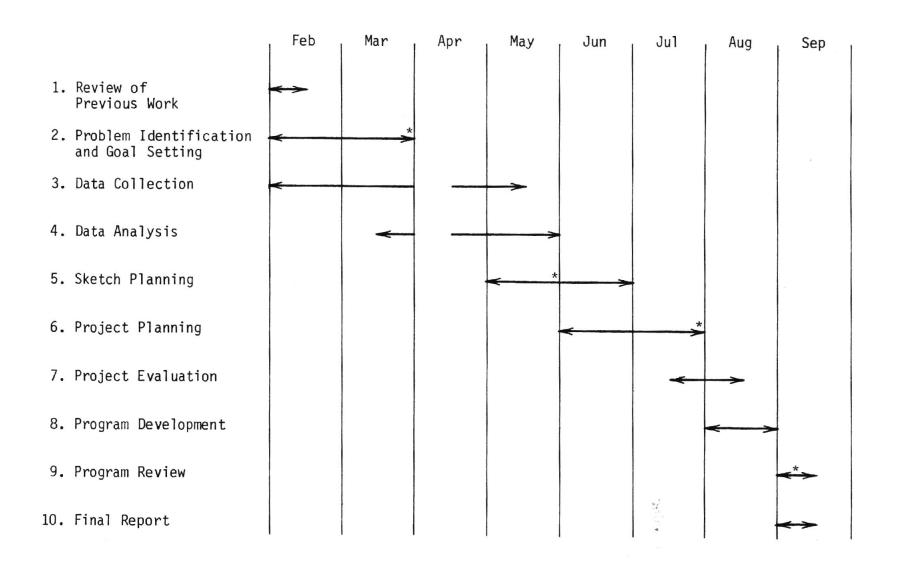
Program development will comprise estimation of project costs and prioritization of projects. A phased implementation plan will be a product of this task.

9. Program Review

The TAC, CAC, and other appropriate groups and individuals will review the program and the individual projects of which it is composed.

10. Final Report

A final report, incorporating the products of the program review process, will be prepared. Draft portions of the report will be prepared and reviewed at appropriate times throughout the study (see time line), so that preparation of the final report (hopefully) will not be a major undertaking.



 $\frac{\text{Note:}}{\text{will}}$ A "*" indicates that the CAC and TAC will meet at that point in the study. Other meetings will be held as appropriate.

Portland City Bureau of Planning 424 S. W. Main Portland, Oregon 97204

> Mike Bauer Bureau of Traffic Engineering Bldg. 106