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I RESOLUTION OF FINDINGS AND RECOMMENDATIONS CONCERNING THE SOUTH/NORTH LIGHT RAIL ALIGNMENT IN DOWNTOWN PORTLAND

Introduction

In December 1994, the Metro Council and C-TRAN Board of Directors adopted the *South/North Tier I Final Report*. That report identified a surface alternative on the transit mall as the preferred Downtown Portland Light Rail Alignment that should be developed for further study in the Draft Environmental Impact Statement (DEIS). The report further determined that prior to initiating work on the DEIS, the design of the 5th/6th Avenue alignment should be developed in detail to determine whether that alignment adequately addresses various principles also outlined in the report.

The Downtown Portland Oversight Committee was formed in response to those principles to ensure downtown Portland community involvement in developing the surface light rail Transit Mall alignment options for further study and in selecting the locally preferred alternative. In particular, the charge of the oversight committee was to

- ◆ Identify the most promising surface light rail transit (LRT) designs for a surface alignment through downtown Portland within the 5th/6th Avenue Transit Mall between Union Station in the north and I-405 in the south
- ◆ Accomplish this task in accordance with the principles established in the *South/North Tier I Final Report*, including the need to accommodate bus, light rail, auto and pedestrian travel on the Transit Mall
- ◆ Determine whether those most promising alternatives adequately address the established criteria. If the criteria are adequately addressed, then only the surface LRT alternative for downtown Portland will advance into the Tier II Draft Environmental Impact Statement (DEIS) for further study
- ◆ If the criteria are not adequately addressed, then one or more other alternatives within downtown Portland will be developed along with the surface alternative for further study within the Tier II DEIS

The findings and recommendations of the Oversight Committee were unanimously adopted on June 29, 1995 and are documented in 1) *Resolution of Findings and Recommendations Concerning the South/North Light Rail Alignment in Downtown Portland*, Downtown Portland Oversight Committee, and 2) *Central Business District, Portland, Oregon, South/North Light Rail Alignment Recommendations Report*. Recommendations for the Downtown Portland Alignment were also adopted by the South/North Project Management Group (PMG) on October 19, 1995 and by the South/North Citizens Advisory Committee (CAC) on November 9, 1995. Those findings and recommendations form the basis of the South/North Steering Group's recommendation for downtown Portland.

In summary, the South/North Steering Group finds that the following combination of alternatives meets the principles established by the Metro Council and the C-TRAN Board and that more detailed study of other tunnel and surface street alignments is not warranted. In addition, the Steering Group makes the following findings and recommendations to the Metro Council. These findings and recommendations are documented in greater detail in the following chapters of this report.

Findings

The South/North Steering Group has found that the recommended surface LRT Transit Mall alternative and design options

- 1) Reinforce the goals and objectives of the Central City Plan by supporting existing and future public and private development and investment in a manner that is consistent with commitments dating back to the Downtown Plan which was adopted over 20 years ago,
- 2) Maintain existing traffic and access patterns on 5th and 6th Avenues and within the Central Business District (CBD) which supports existing and future businesses and retailing and adds to the activity and quality of the streets,
- 3) Provide fast and convenient transit service to existing and future downtown office and commercial uses, delivering the most people to where they want to go, maximizing the potential for increased transit ridership to and from the Central City,
- 4) Maintain the current pedestrian character of the Transit Mall by retaining the sidewalk widths, pedestrian amenities and trees currently in place on the Central and North Mall,
- 5) Improve the role of the Portland Transit Mall as the central pedestrian boulevard and transit spine in the Downtown and CBD by extending it southward and changing its emphasis to light rail,
- 6) Ensure the least construction impacts and cost by placing light rail in a location where sidewalk reconstruction, street grade changes, utility relocations and other reconstruction work can be minimized and the benefits of past investments in the North and Central Transit Mall utility relocation, strain pole foundations, sidewalk improvements and surface grade adjustments can be utilized,
- 7) Offer the opportunity to reconfigure the Central City transit circulation plan, utilizing off-mall service (approximately 25-35 buses per hour by 2015) on other streets, most significantly 10th and 11th Avenues, where development can benefit from improved transit connections to the regional system, Central City Streetcar and intra-downtown circulation within Fareless Square,

- 8) Provide good light rail access to the River District, University District and River Place/South Waterfront area,
- 9) Reinforce the multi-modal transportation center concept by providing the best opportunity for a good connection at Union Station between light rail, Amtrak, inter- and intra-city buses and future high speed rail,
- 10) Provide the opportunity to maintain the function of the Portland Transit Mall while improving its aesthetic environment by minimizing the 'sheet metal' affect while simultaneously maximizing its functional passenger capacity,
- 11) Create the opportunity for coordination of construction and funding of improvements to the Central Mall and a funding source to insure that 5th and 6th Avenues can be enhanced to the original demanding Central Mall design standards, and,
- 12) Fulfill an objective of the Central Mall business community to enhance the pedestrian environment by reducing items on the street and increasing visibility of retailing along 5th and 6th Avenues by removing over half of the existing bus stops, shelters and related items

Recommendations

The South/North Steering Group makes the following recommendations to the Metro Council (illustrated in Figure 1)

- 1) That the South/North Light Rail project, between Clackamas and Clark Counties, be funded and constructed and that South/North Light Rail be extended through downtown Portland,
- 2) That the A-2 Central Mall, B-3 North Mall, C-1 South Mall, S-1 South Entry and N-1 and N-2 North Entry options meet the principles established by the Metro Council and should be selected for further study within the DEIS,
- 3) That convenient, readily accessible service be provided to all Central City districts including Riverplace, South Auditorium, Portland State University, Central Business District, Old Town/Chinatown and Union Station. Station stops at these locations should be established even if central city travel time for the LRT is lengthened. (The number and location of stations will be determined following publication of the DEIS and prior to publication of the FEIS)
- 4) That Tri-Met, the City of Portland, Metro and the Downtown Portland business community work to develop a plan for the central city streetcar and a central city transit circulation and facility plan that would spread transit access throughout more of the central city area based upon the results of the DEIS and completed in conjunction with the FEIS

- 5) That a high-level, urban design standard be developed and implemented guiding the design and construction of the light rail alignment throughout the central city area,
- 6) That a detailed construction management and mitigation plan be developed for the central city area that would create a *Downtown Portland Construction District*. In addition, a Downtown Portland LRT Committee should be formed to oversee the design, development of contract documents and construction of all work within the Special Downtown Portland Construction District. Alternative contracting methods should be employed so that a contractor would be selected, based upon their experience and qualifications, to address the unique requirements of this project (including but not limited to the need to avoid disruption to adjacent businesses, to minimize the duration of construction and to avoid displacements), consequently, the low bidder may not be selected. Finally, the project should implement a temporary traffic management plan and a variety of special programs to mitigate the construction impacts on the central city.

These methods should be based on criteria to be established by the Downtown Portland LRT Committee. Criteria to be considered include a) negotiated rather than low-bid contracting, b) incentive and penalty clause, and, c) use of a single prime contractor for LRT and utility construction.

- 7) Construction time should be limited to three months per block in the North Mall, four months per block in the Central Mall, and six months per block in the South Mall and south portals. Major parallel sections of SW 5th and 6th Avenues in the Central Mall should not be under construction at the same time.
- 8) The entire central city construction plan, including major utility reconstruction, should be approved by Portland City Council, such action having been taken after a public hearing.

35473



NE Multnomah St

NE Holladay St

NE Lloyd Blvd

NE Glisan St

E Burnside St

SE Sandy Blvd

SE Stark St

SE Morrison St
SE Belmont St

SE Martin Luther King Jr Blvd
SE Grand Ave

NW Lovejoy St

NW Irving St

NW Glisan St

NW Everett St

W Burnside St

SW Washington St
SW Morrison St

SW Taylor St
SW Main St

SW Columbia St
SW Clay St

SW Mill St
SW Montgomery St

SW Harrison St
SW Lincoln St

NW Broadway Ave

Union Station

North Entry

B-3 North Mall

A-2 Central Mall

C-1 South Mall

S-1 South Entry

SW Front Ave

SW Jefferson St

Riverplace

I 405

SW 6th Ave

SW 4th Ave

I 405

I 5

To Caruthers Bridge
To Ross Island Bridge

Water Ave

OMSI

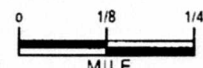
Northbound station location options

Auto access under study

Station Access under Study



Note Alignment, station and park and ride locations are currently under study and may change



Downtown Portland Oversight Committee

Recommended Light Rail Design Options Downtown Portland 5th/6th Avenue Surface Couplet

November 1995

Figure A

- Light Rail Transit (LRT) alignment
- - - LRT alignment options
- MAX
- Westside LRT
- Existing railroad
- - - Mail auto access
- Station with no auto access on mall
- Station with auto access on mall



II. BACKGROUND

This document sets forth the recommendations of the South/North Steering Group for the Downtown Portland alignment alternative and design options to be advanced into the Draft Environmental Impact Study (DEIS) for further study. It also contains a summary of information prepared by members of the Downtown Technical Committee between January and June 1995.

At the conclusion of the South/North Light Rail Project Tier I process in December 1994, the South/North Steering Group, the Portland City Council and Metro Council adopted a policy that the South/North light rail alignment in downtown Portland should be on the Transit Mall, provided that light rail would enhance and maintain the character of the Mall. The agencies wanted to ensure that the introduction of light rail would result in a Mall that facilitates efficient bus and light rail operations, preserves auto access, maintains a pedestrian friendly environment and supports the economic vitality of the city. This policy and the commitment by the project to work closely with the downtown Portland community led to the formation of the Downtown Portland Oversight Committee.

Downtown Alignment Study

The primary objective of the South/North Light Rail Downtown Alignment Study was to identify the most promising surface light rail transit options for a surface alignment through downtown Portland on Fifth and Sixth Avenues between Union Station in the north and Portland State University in the south. The Study also identified the most promising alignment alternatives on the north end from the Steel Bridge to Fifth and Sixth Avenues and on the south end connecting the downtown and Portland State University with RiverPlace.

The study was conducted by the Downtown Technical Committee consisting of representatives of Metro, Tri-Met, the City of Portland Office of Transportation, Association for Portland Progress (APP) and the consulting firms of Shiels Oblatz Johnsen, Zimmer Gunsul Frasca Partnership and Kittelson & Associates. Findings and conclusions of the Downtown Technical Committee were presented to the Downtown Oversight Committee, the S/N Project Management Group, the S/N Citizens Advisory Committee and the S/N Steering Group in order to assist them in developing recommendations and fulfilling their charge. Following is an outline of the Downtown Portland LRT study process illustrated in Figure 1.

Downtown Portland Oversight Committee

The Downtown Portland Oversight Committee was appointed by the South/North Steering Group to assess the feasibility of Fifth and Sixth Avenues as the alignment for light rail through the Portland Central Business District for the proposed South/North Light Rail Project. The Oversight Committee consists of representatives of public agencies, businesses and property owners. Following is an excerpt from the Committee's charge that was distributed at the first meeting of the Committee in February 1995.

The Oversight Committee's purpose is to

- Identify the most promising surface light rail transit (LRT) designs for a surface alignment through downtown Portland within the 5th/6th Avenue Transit Mall between Union Station in the north and I-405 in the south
- Accomplish this task in accordance with the principles established in the *South/North Tier I Final Report*, including the need to accommodate bus, light rail, auto and pedestrian travel on the Transit Mall
- Determine whether those most promising alternatives adequately address the established criteria. If the criteria are adequately addressed, then only the surface LRT alternative for downtown Portland will advance into the Tier II Draft Environmental Impact Statement (DEIS) for further study
- If the criteria are not adequately addressed, then one or more other alternatives within downtown Portland will be developed along with the surface alternative for further study within the Tier II DEIS

The recommendations of the Downtown Portland Oversight Committee were adopted unanimously on June 29, 1995. They are described in the *Resolution of Findings and Recommendations Concerning the South/North Light Rail Alignment in Downtown Portland* (Appendix C) and the *Portland, Oregon Central Business District South North Light Rail Alignment Recommendation Report*.

Project Management Group

The South/North Project Management Group (PMG) adopted its recommendations for Downtown Portland on October 19, 1995 and amended them slightly on November 16, 1995. Those recommendations are documented in a memorandum from the PMG to the Steering Group dated November 16, 1995. (This memorandum can be found in Appendix D.)

Citizens Advisory Committee

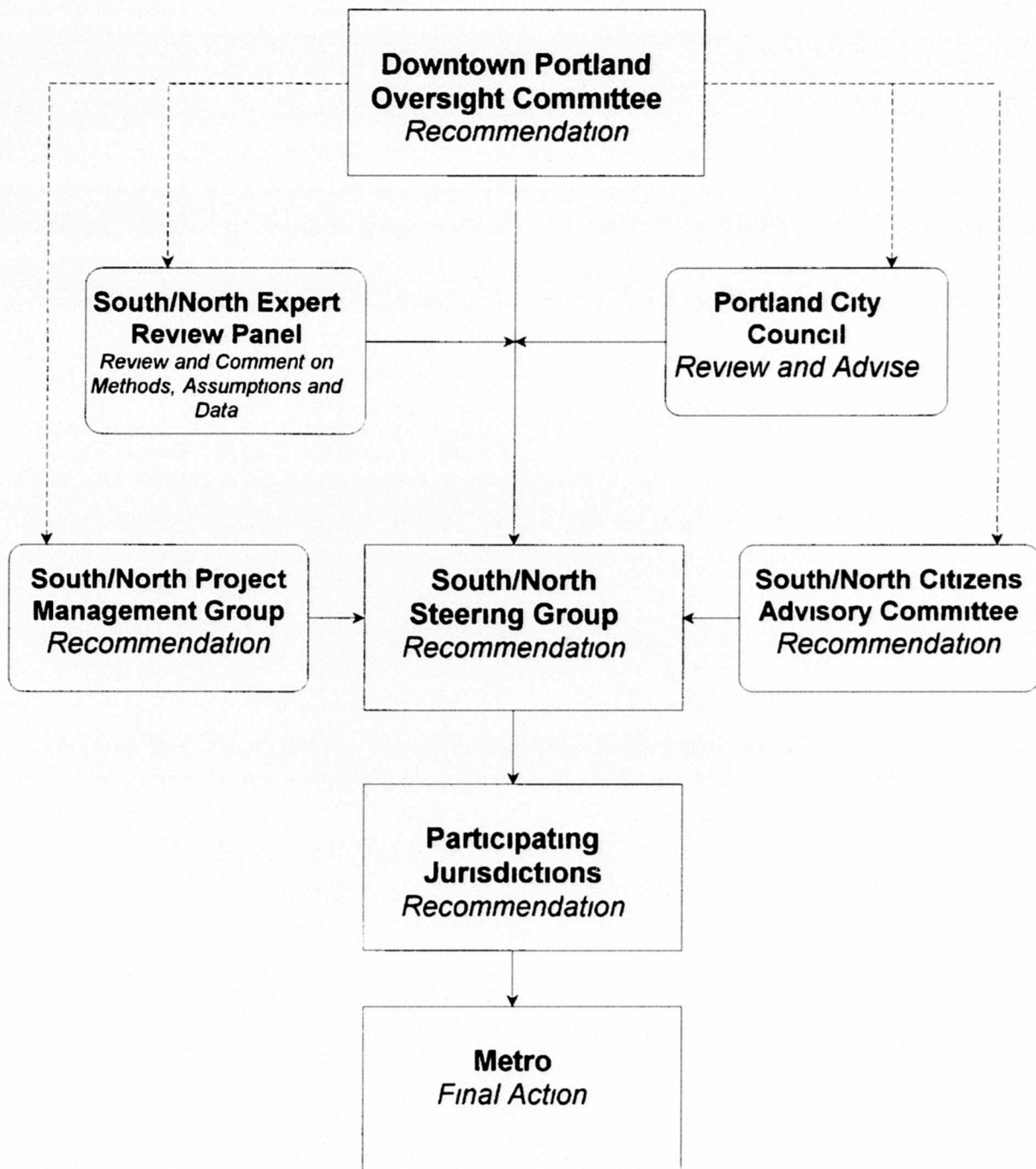
The South/North Citizens Advisory Committee (CAC) adopted its recommendations for Downtown Portland on November 10, 1995. Those recommendations are documented in a memorandum from the CAC to the Steering Group dated November 10, 1995. (This memorandum can be found in Appendix E.)

Public Comment

Several meetings were held in the spring of 1995 within Downtown Portland to present information on the Downtown Portland Alignment Study to interested residents and business owners. A meeting to receive Public Comment on the design options under consideration was held by the Downtown Oversight Committee on June 12, 1995. Documentation of the Public

Comment received at that meeting and throughout the study process can be found in the
South/North Downtown Portland Segment Public Comments Report (Metro November 1995)

Figure 1
Downtown Portland Surface LRT Alignment Study Process



III POLICY FRAMEWORK

Central City Plan

The future viability and livability of Downtown Portland depends on transit for improved access. The Central City Plan and Central City Transportation Management Plan (CCTMP) calls for high growth of housing and jobs in the Central City. Specific goals have been adopted by the City calling for the creation of an additional 15,000 housing units and 75,000 jobs in the Central City.

The projected growth in the Central City is to be achieved with little increase in freeway access and parking. Central City growth is to be supported by increased mass transit and by locating housing in the Central City near the jobs. This strategy depends not only on improved transit connections with the suburbs including principally four light rail lines supplemented by continued bus service, but also by improved transit accessibility within the Central City. Accordingly, it is appropriate that a bus service plan should be developed that provides improved service to areas of the Central City now not well served complementing Fareless Square and the planned Central City Streetcar. The adoption of the A-2 Central Mall alternative supports a revised downtown bus circulation plan that would be developed and implemented over the next two decades.

The Central City Plan was adopted by the Portland City Council in 1988 and establishes the overall framework for development. The zoning and comprehensive plan designations are shown in Figure 2 and the Floor Area Ratios in Figure 3. The Central City Plan incorporated the Downtown Plan, first adopted by the City Council in 1972.

The Transit Mall is centered in the highest density employment corridor established by the Downtown Plan, with Floor Area Ratios (FAR's) ranging from 15.1 to 12.1. The next highest densities with FAR's of 9.1 were established along the North Mall and the Hawthorne and Morrison Bridgeheads. A major goal of the Downtown Plan was to develop a downtown residential neighborhood and established the RX area (the downtown residential zone) west of the Park blocks. The City also has a "No Net Loss Housing Policy" where, if a change of the Comprehensive Plan from residential to nonresidential is approved, it will be necessary to show that the loss of housing potential can be replaced.

Figure 4 illustrates the year 2010 downtown population distribution and Figure 5 illustrates the 2010 employment distribution. Approximately one-third of the employment is situated between Fourth and Broadway, and 88 percent east of the Park Blocks.

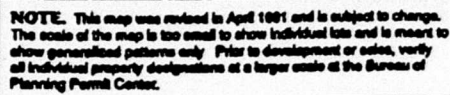
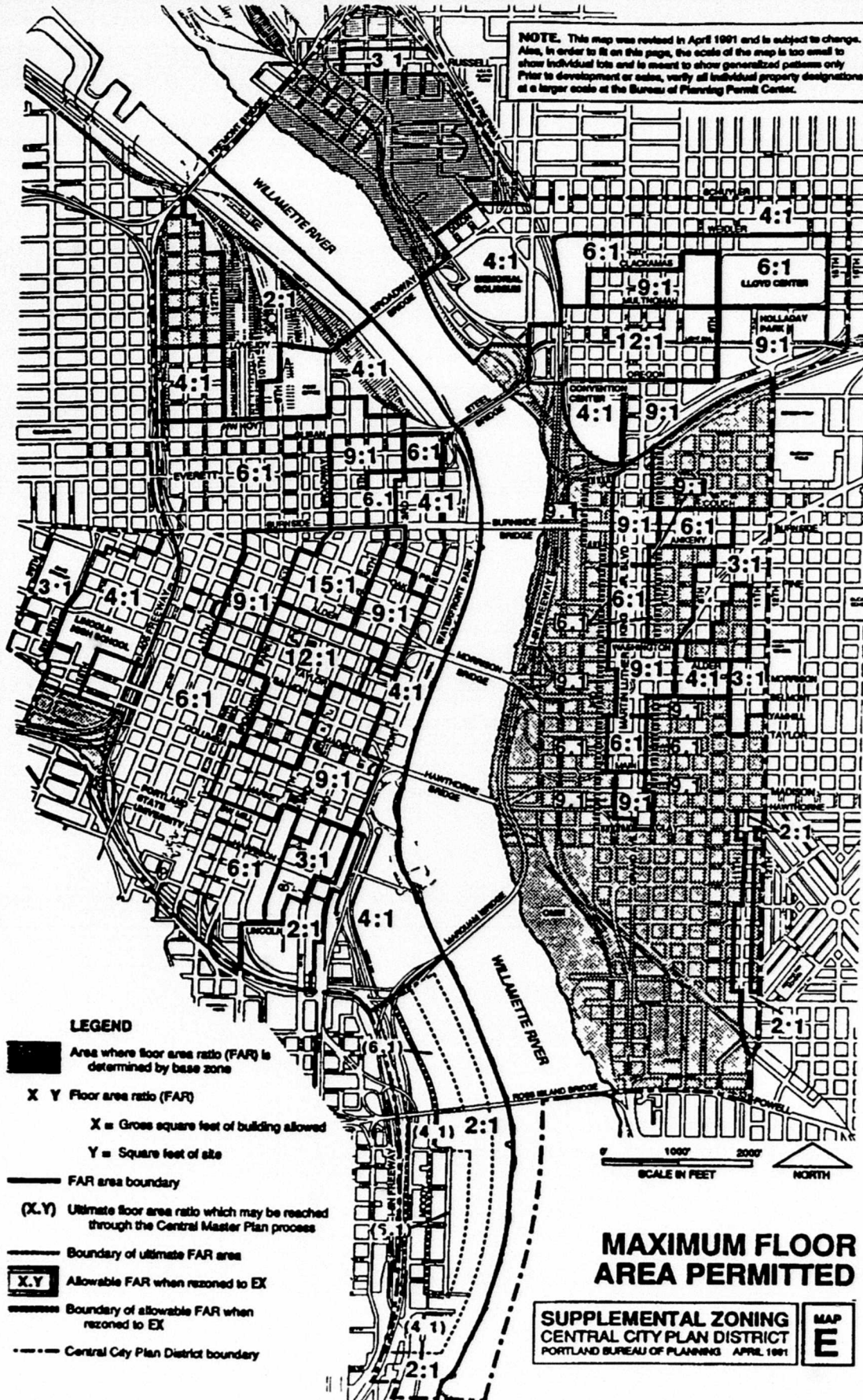


Figure 3

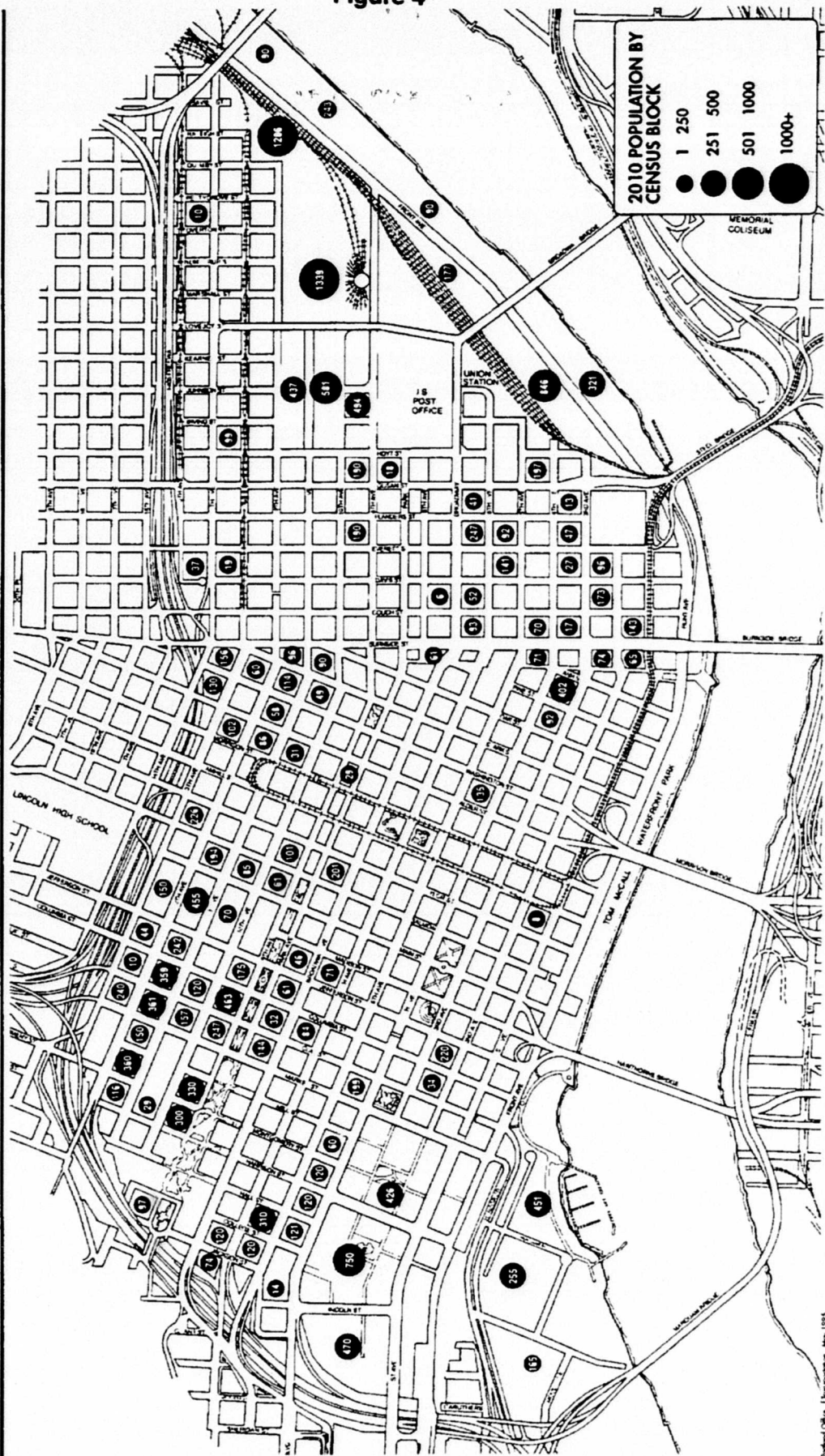
NOTE: This map was revised in April 1991 and is subject to change. Also, in order to fit on this page, the scale of the map is too small to show individual lots and is meant to show generalized patterns only. Prior to development or sales, verify all individual property designations at a larger scale at the Bureau of Planning Permit Center.



2010 DOWNTOWN POPULATION

Figure 4

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Based upon the Downtown Plan and the Central City Plan, the Portland City Council reinforced the importance of light rail on Fifth and Sixth Avenues Mall in three separate resolutions. In 1979 in conjunction with the Banfield Light Rail Project, the City Council supported the Morrison/Yamhill alignment with the condition that light rail will be on the Mall in the future. In 1983, the Westside DEIS and Locally Preferred Alternative, the City Council endorsed the concept of two downtown rail alignments for the Westside, the Morrison/Yamhill alignment and a Mall alignment. In 1989, Westside PE/DEIS supported the need for only the Morrison/Yamhill alignment for the Westside and deferred light rail on the Transit Mall to the next light rail corridor.

Central City Transportation Management Plan

The Portland City Planning Commission has recommended the Central City Transportation Management Plan (CCTMP) for City Council's approval. The CCTMP will serve as the transportation element to the Central City Plan, and will replace the Downtown Parking and Circulation Policy as the adopted City policy to meet federal air quality standards for carbon monoxide.

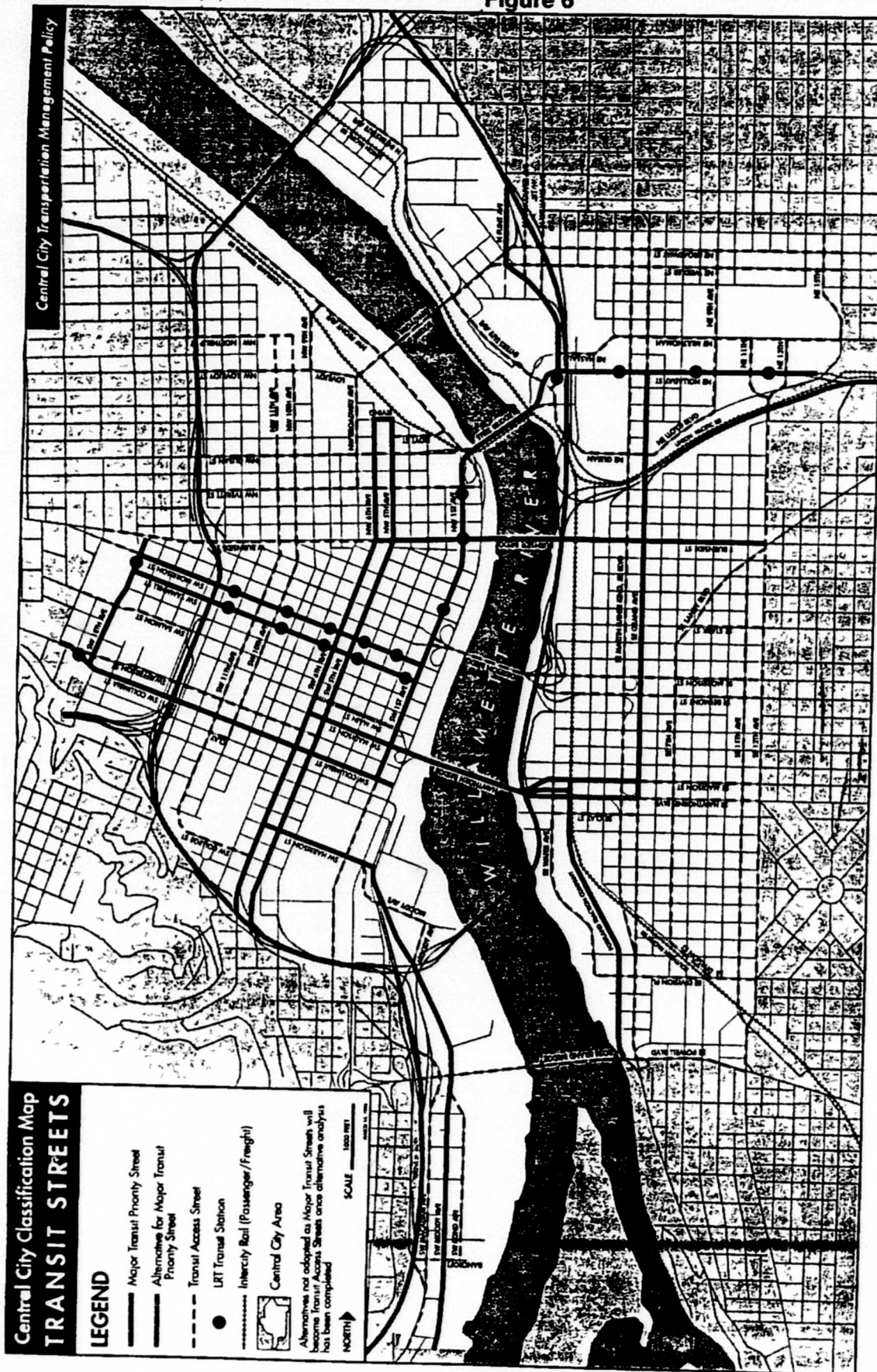
The CCTMP calls for the creation of an additional 15,000 housing units and 75,000 jobs in the Central City. To accommodate this growth and preserve livability, the plan includes a strategy for continued transit improvements and development of housing in the Central City so that people will have greater opportunity to live near their Central City jobs. The Transit modal split goal for 2010 is 60 percent for commuter trips, a 20 percent increase in market share in the next 15 years.

The CCTMP provides policy guidance for increasing the role of bus service to off-mall destinations for improving intra-Central City mobility. The CCTMP will establish street classification designations for the Central City. Potential transit designations are shown in Figure 6.

The Banfield/Cross-Mall Decision

In 1979, several options were considered for the Banfield Light Rail Project's downtown alignment. The options included the Transit Mall, 4th and Broadway and Yamhill/Morrison (or the so-called Cross-Mall alignment). While the Transit Mall and 4th and Broadway alignments were considered to be more supportive of the Downtown Plan, downtown destinations and future expansions of light rail, the Cross-Mall alignment was selected. The Cross-Mall would avoid the impacts of reconstructing the newly completed Transit Mall, the traffic conflicts that light rail would create on 4th and Broadway and the need to revise the principal focus of the Transit Mall from bus transit, at that time still the principal mode for transit access in the downtown. In adopting the Cross-Mall alignment for the Banfield Light Rail, the Council stated its support for modifying the Transit Mall for light rail in the future when constructing a second regional light rail corridor.

Figure 6



Westside Corridor

In 1983, after a re-evaluation of the 1979 Mall and Cross-Mall recommendations, the City Council adopted a resolution directing that the Westside Light Rail should operate through the downtown on an extension of the Yamhill and Morrison Cross-Mall alignment. This decision was based on the conclusion that the Cross-Mall has sufficient capacity to serve both the Westside and Banfield corridors and that the creation of a new downtown light rail corridor was not warranted until development of the South/North light rail corridor in the future. At that time, the City Council also directed that steps should be taken to evaluate a subway option as an alternative to a surface alignment in the north/south corridor.

Regional Transportation Plan

The Regional Transportation Plan adopted by Metro in 1992 and revised in 1995 states "Service for the Banfield LRT will be provided via the cross-mall alignment on Morrison and Yamhill streets. When the South/North project is constructed, or when capacity on the cross mall-alignment is exceeded, a mall alignment using Fifth and Sixth Avenues will be implemented. This north/south corridor would form the backbone of the downtown transit system, serving as the major mode of access to and through downtown. Alternative LRT alignments that connect to the 5th/6th alignment which provide service to the South Waterfront, RX Zone, Historic Districts and other downtown destinations are under consideration and shown in Figure 4.4 (see Figure 7). As the mall reaches its transit capacity, bus routes currently using the mall will be rerouted to other streets consistent with the Downtown Plan and the Downtown Parking Circulation Policy (such as 2nd and 3rd and 10th and 11th Avenues)."

North Transit Mall

Meanwhile, Fifth and Sixth Avenues between W Burnside and N W Irving were reconstructed extending the existing transit mall improvements across Burnside to Union Station and a new Tri-Met bus layover facility at N W Irving. In September 1994, the reconstruction of 18 blocks in Old Town was completed. The \$10 million North Transit Mall project was designed to accommodate light rail south of N W Glisan. Numerous public and private utilities were relocated from the area that would be beneath a future light rail track slab in the left lane. Foundations beneath the street lighting fixtures were designed to accommodate future combination street light and strain poles to support the overhead traction electrification system for future light rail. In addition, the streets were graded to minimize cross-slopes and to limit longitudinal grade changes to ensure that adjustments in street grades would not be needed for light rail in the future.

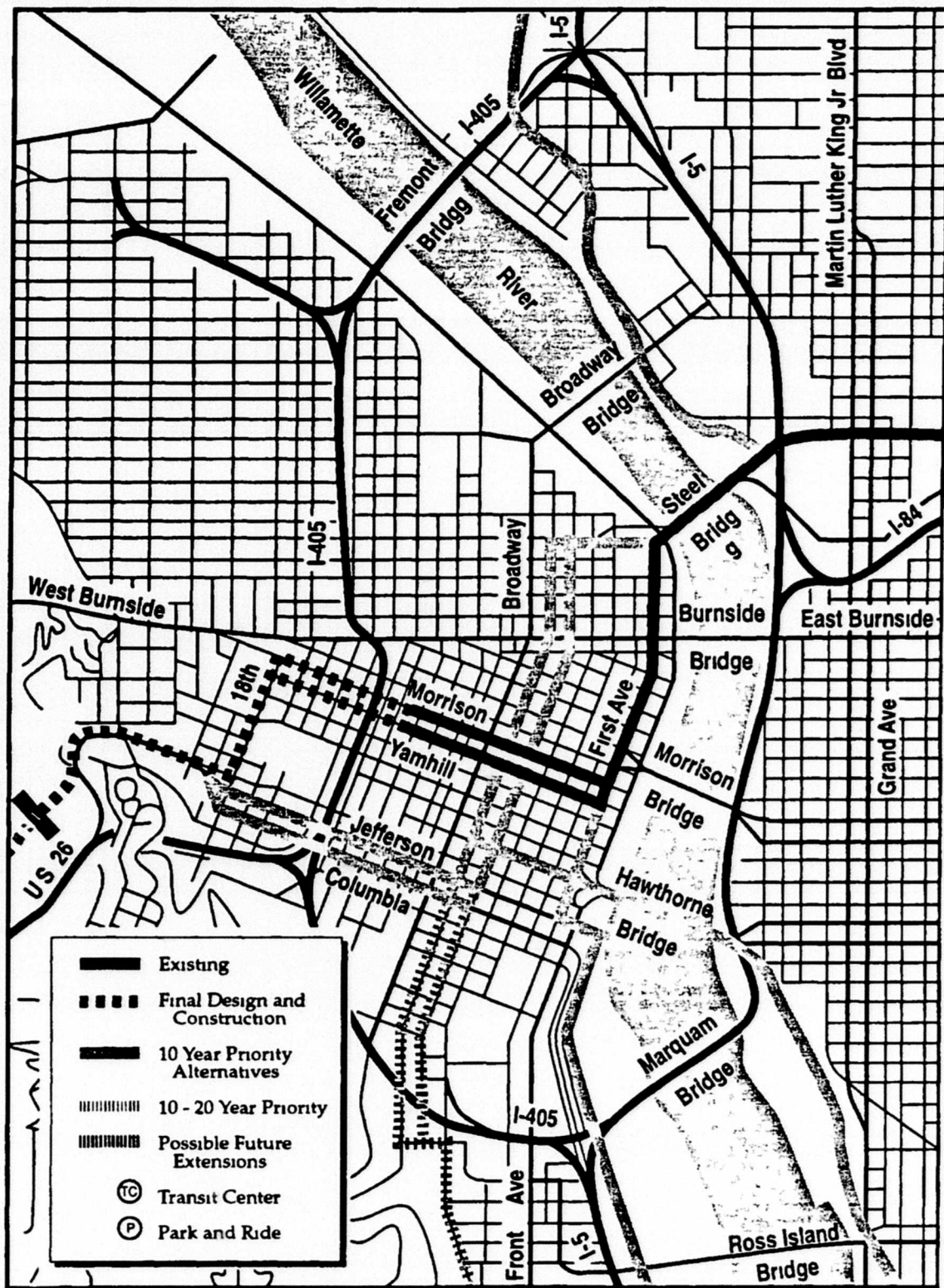


Figure 7

*Long-range LRT alignments
in downtown Portland*

Downtown Rail Advisory Committee

The Downtown Rail Advisory Committee (DRAC), a committee chaired by Jordan Schnitzer, was appointed by the City of Portland in 1989 to advise the City of Portland on the Westside downtown alignment decision. In preparation for the South/North light rail planning process, the DRAC was re-convened twice to consider a South/North downtown alignment including both surface and subway options. During the first step of the South/North Light Rail planning in early 1993, an initial screening of all downtown north/south streets suggested that 5th and 6th should continue to be considered as the best surface alignment. Fourth, 5th, 6th and Broadway would be considered for a subway alignment. The screening criteria included constructability, operations, effectiveness of service and urban impacts.

In Spring 1994, travel forecasting and cost estimates were prepared for a 5th and 6th Avenue Transit Mall surface alignment and a generic tunnel under either Fifth or Broadway. Principally, the results revealed that a tunnel would cost at least \$275 million more than a surface alignment. The estimated cost for a surface alignment on Fifth and Sixth Avenues was estimated to cost between \$288-309 million and a subway was estimated to cost \$551-584 million. During the process, a tunnel alignment under 4th Avenue was proposed. While a number of technical difficulties were identified, a similar alignment was estimated to cost less, but still approximately \$230 million more than the Fifth and Sixth Avenues surface alignment.

While there remained support for the tunnel and other surface alignments, the parties agreed that a six month study would be initiated to identify the best means of constructing light rail on the surface of Fifth and Sixth and that other alternatives would be advanced into the EIS process only if that alignment could not meet established criteria.

IV CRITERIA

The Downtown Light Rail Oversight Committee adopted the following criteria to be used in evaluating the various options for constructing light rail on Fifth and Sixth Avenues

Central City Plan Reinforce the goals and objectives of the Central City Plan Consider

- Existing development patterns
- Roles as office, retail, tourist and education center
- Consistency with designated street classification system
- Transit supportive development
- City housing agenda

Vehicular Access Ensure adequate vehicular user access into and within downtown is maintained Consider

- Established auto circulation patterns on the Transit Mall
- Auto user access to the Transit Mall
- Traffic circulation patterns within Portland CBD, starting with existing patterns
- Service levels on downtown streets
- Service access to businesses on Transit Mall
- On-street and off-street parking

Light Rail Operations Ensure that light rail facilities and operations are inviting, efficient and affordable Consider

- Access to light rail stations
- Light rail ridership
- Light rail travel times
- Capital and operating costs
- Light rail operations

- Future light rail capacity
- Reliability
- Connectivity/transfers
- Integration of light rail with bus and streetcar networks
- Safety

Bus Operations Ensure that efficient bus operations and facilities are maintained in and through downtown Consider

- Access to bus stops
- Bus ridership
- Bus travel times
- Bus capital and operating costs
- Bus volumes, routing and operations
- Future bus capacity
- Connectivity/transfers
- Reliability
- Customer services
- Safety

Aesthetic Integrity Ensure that the aesthetic integrity of the Transit Mall is maintained or improved Consider

- Quality of surfaces and furnishings
- Architectural continuity
- Visual clarity
- Space for amenities and services
- Trees

- Art
- Transit patron waiting space
- Capacity and patterns of pedestrian travel
- Odor, noise and sheet metal

Construction Impacts Ensure that construction impacts are minimized Consider

- Duration of construction
- Quality of construction
- Management and mitigation of construction
- Geographic scope of construction
- Disruption of construction

V ALTERNATIVES

The Oversight Committee developed and considered a series of options for constructing the South/North light rail on Fifth and Sixth Avenues. The options are listed in Table 1. It should be recognized that the descriptions of the alternatives and the drawings are based on a preliminary analysis and that actual dimensions, grades and treatment may vary during preliminary and final design of the project.

Central Mall The Central Mall is defined as the portion of Fifth and Sixth Avenues between W Burnside on the north and Madison Street on the south, the existing Portland Transit Mall. The Fifth and Sixth Avenue rights-of-way are 80 feet wide. The street area has two 12 foot wide continuous exclusive bus lanes with an intermittent 12 foot wide auto lane, generally three blocks in length. Existing sidewalks are typically 26 feet wide on the bus loading side and 18 feet on the opposite side. At four locations, every fourth block, a 30 foot wide sidewalk interrupts the 3 block long auto lane.

A-1 (4-Lane) The street area would be expanded to include two 12 foot wide exclusive bus lanes, a 12 foot wide exclusive lane for light rail and an intermittent 12 foot auto lane in three block segments as exists. Existing sidewalks on the bus loading right side of the street would be reduced to 17 feet. Sidewalks on the left side would be reduced to 15 feet and light rail station platforms would be located every fourth block on a 28 1/2 foot-wide sidewalk (narrowed from 30 feet) which would interrupt the 3-block long auto lane.

A-2 (2 and 3-Lane LRT/Bus Share) The street width would remain unchanged, but with one 12 foot wide exclusive bus lane, one 12 foot wide lane for LRT and an intermittent 12 foot wide auto lane as exists. Buses would be able to use the LRT lane to overtake other buses when light rail vehicles are not present. Existing sidewalk widths would remain unchanged except that the 30 foot wide sidewalk would be expanded to 31 1/2 feet to act as LRT stations on the left side of the street in the two-lane blocks.

A-3 (3-Lane LRT/Auto Share) The street area would include two 12 foot wide exclusive bus lanes as exists. Light rail would be located in the 12 foot wide auto lane on the left side of the street which would be shared by autos. Sidewalks would remain their current widths except at light rail platforms which would be located on every fourth block on 19 1/2 foot wide sidewalks (narrowed from 30 feet), interrupting the 3-block long auto lane.

A-4 (3-Lane Bus/Auto Share) The street and sidewalks would be as described for A-3 above. However, autos would share the two bus lanes rather than the light rail lane.

Table 1

Matrix of Downtown Transit Mall Configurations

1 Jul 95

Segment	Profile	Shared Modes	Between LRT Station*		At LRT Stations*	
			Roadway configuration	Sidewalk widths	Roadway configuration	Sidewalk widths
A) Central Mall (Burnside to Madison) 80 ROW	1 Four Lane Profile	No Shared Lanes	48 curb to curb one lane auto one lane LRT two lane bus	17 and 15'	31 5 curb to curb one lane LRT two lane bus	28 5 and 17
			36' curb to curb one lane auto one lane LRT and some bus one lane bus	18 and 26	22 5 curb to curb one lane LRT one lane bus	31 5 and 26
	3	LRT/Auto Share	36 curb to curb one lane shared LRT/auto two lanes bus	18 and 26	34 5 curb to curb one lane LRT two lanes bus	19 5 and 26
			36 curb to curb one lane LRT one lane shared bus/auto one lane bus	18 and 26	34 5 curb to curb one lane LRT one lane shared bus/auto one lane bus	19 5 and 26'
	5 Existing	no shared	36 or 24 two lane bus one lane auto	18 and 26 w/o auto 30 and 26	NA	NA
B) North Mall (North of Burnside) 60 ROW	1 Two lane Profile	No shared lanes	24 curb to curb one lane LRT one lane bus	16 and 20'	22 5 curb to curb one lane LRT one lane bus	17 5 and 20
	2	LRT/Auto share	24 curb to curb one lane shared LRT/auto one lane bus	16 and 20	22 5' curb to curb one lane LRT one lane bus	17 5' and 20
	3	Bus/Auto share	24 curb to curb one lane LRT one lane shared bus/auto	16 and 20	22 5 curb to curb one lane LRT one lane bus/auto	17 5 and 20'
	4 Existing	Bus/Auto share	24 curb to curb one lane bus one lane shared bus/auto	16 and 20	NA	NA
C) South Mall (South of Madison) 80 ROW	1 Four lane Profile 6th Ave is shown	Bus/Auto share	48-44 curb to curb one lane LRT two lanes shared bus/auto 1 lane parking or 3rd auto/bus	5th Ave 16 and 20 6th Ave 17' and 15	46 5 curb to curb one lane LRT two lanes shared auto/bus 1 lane parking or 3rd auto/bus	19 5 and 14
	2 Existing	Bus/Auto Share	50 curb to curb two lanes parking three lanes shared bus/auto	15 and 15	NA	NA

*looking north

1 5 extension of sidewalk is typical at stations

Table 1 continued

Matrix of Downtown South and North Entry Configurations

28 Jun 95

Segment	Profile	
S) South Entry	1 Harrison Street	Between First and Front Avenues the 80 foot ROW would be expanded to include LRT and provide for traffic capacity
		Between First and Fourth Avenues the current 80 foot ROW would be maintained with sidewalks similar to existing a narrow median LRT adjacent to the median and single lane of traffic in each direction
	2 Lincoln Street	Between Fourth and Fifth Avenues the 60 foot ROW would be expanded north to accommodate both tracks and one lane of westbound or eastbound traffic
		Currently the 80 ROW on Lincoln Street includes two 12 foot sidewalks two lanes of traffic in either direction and a median LRT would be in the median either adjacent to a narrow median or in place of a median
		One lane of traffic would be provided in either direction along with standard sidewalks
		LRT would be on the westside of 4th Ave between Lincoln and Harrison
3 I-405		LRT would be on the north side of I-405 in a separate ROW until 4th Avenue
		LRT would be on the westside of 4th Ave between Lincoln and Harrison
N) North Entry	1 Glisan Street	Cross sections on Glisan would vary block by block The current 60 foot ROW west of Fourth Avenue would be expanded between Fourth and Fifth Avenues to provide for LRT in both directions and two westbound traffic lanes
		West of Fifth Avenue the northbound track and two westbound traffic lanes would be provided
2 Irving/Union Station		Between the intersection of Third and Glisan and the intersection of Fifth and Irving a new right of way would be created

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North Mall The North Mall is defined as the portion of N W Fifth and Sixth Avenues between Glisan (or Irving, depending on the North Entry decision) and W Burnside, the recently completed North Transit Mall extension. The street area currently has two 12 foot-wide lanes, the right lane for exclusive bus use and the left lane for mixed use by buses and autos. The sidewalk on the right bus loading side is 20 feet wide and the sidewalk on the opposite side is 16 feet wide. All of the alternatives would accommodate buses in the existing right lane and light rail in the existing left lane. A station would be located on the left side of Fifth and Sixth in the block between W Burnside and N W Couch. The sidewalk in that block would be widened to 17 1/2 feet. The three alternatives that were considered represent variations in the auto use only.

B-1 (No autos) In this alternative, autos would not be permitted on segments of the North Mall with light rail.

B-2 (LRT/Auto Share) In this alternative, autos would continue to use the left lane, sharing the lane with light rail.

B-3 (Bus/Auto Share) In this alternative, autos would use only the right lane, sharing the lane with buses. Buses would be able to pass autos and buses by using the left light rail lane when light rail vehicles are not present.

South Mall Only one option was considered for the segment south of the existing transit mall between S W Madison and S W Harrison.

C-1 (4-Lane) The 80 foot wide right-of-way of S W Fifth and Sixth between S W Madison and S W Harrison would be rebuilt with one light rail lane on the left side of the street, two 12 foot wide traffic lanes and an 8 foot wide parking lane on the right side of the street. An alternative configuration with three traffic lanes and no on-street parking could also be explored. Sidewalks would typically be 20 feet wide on the left side of the street and 18 feet wide on the right side. Light rail stations could be located between Mill and Montgomery and between Madison and Jefferson on Fifth (in front of City Hall) and between Jefferson and Columbia on Sixth (in front of the Oregonian Building). Sidewalks in these station blocks would generally be 21 1/2 feet wide. Parking would be eliminated for a one-half block length between Mill and Clay to accommodate bus stops on the right side of Fifth and Sixth. The important auto access on Sixth to Taylor would be maintained, controlled by a signal at Sixth and Jefferson insuring that conflicts with light rail vehicles moving from the left lane of Sixth to the center lane of the Central Mall would be avoided.

North Entry From the North, light rail would enter the downtown over the Steel Bridge using the existing trackway in the center span and a new trackway along the south side of the existing or a rebuilt Glisan Street ramp. The ramp would continue to meet grade at the intersection of N W 3rd and Glisan. Westbound traffic on the bridge would be limited to the single lane on the outside span. The single lane would extend down the Glisan ramp with a second left turn lane when approaching the 3rd Avenue intersection. Two alternative alignments for the trackway west of the intersection of 3rd and Glisan to N W Fifth and Sixth were considered.

N-1 (Glisan) In this alternative, the trackway would likely be located on the south side of Glisan. A station could be located between S W 3rd and 4th. Two lanes of traffic on Glisan could be maintained between 4th and 6th by widening the street to the north.

N-2 (Irving/Union Station) In this alternative, the trackway would be aligned diagonally across the intersection of 3rd and Glisan, through the block bounded by Glisan, Hoyt, 3rd and 4th to Irving. Depending on the exact configuration of the alignment, stations could either be located on the left side of Fifth and Sixth between Glisan and Hoyt (in front of the Greyhound terminal) or with the outbound station diagonally through the portion of the Greyhound building and parking lot north of Hoyt and the inbound station on the left side of Fifth roughly between Irving and Hoyt.

South Entry Prior to commencement of the study, two options for the connection to Moody were identified. A Jefferson and Columbia couplet and Harrison. The Jefferson and Columbia couplet was not pursued further because it would not provide direct service to Portland State University and the University District. Harrison and two relatively new alternatives, the Lincoln Street and the I-405 Options, were considered by the Oversight Committee.

S-1 (Harrison) In the Harrison Street Option, the trackway would enter Harrison from Moody Street on an elevated structure over Harbor Drive. The trackway would cross Front and First Avenue at grade from the north side of Harrison. Harrison would be rebuilt for four or possibly five lanes of traffic between Front and First, requiring additional right-of-way on the south side of Harrison. The lanes would align with a future road proposed in the South Waterfront Development Plan connecting Harrison with the Moody Extension. A light rail station could be located on the bridge structure over Harbor Drive with direct pedestrian access from Harrison and to the RiverPlace/South Waterfront area by a ramp, stairway and/or elevator at the east end of the station. The elevation of the intersections of Harrison and Front and First would be raised by approximately 3 to 4 feet in order to reduce the grade of Harrison in that area to about 7 percent. This change would affect grades on Front and First approximately 200 feet each side of Harrison and on Harrison to just west of 2nd Avenue.

Presently, Harrison is an 80 foot wide right-of-way between Front and Fourth Avenues. Between First and Fourth, there are 12 foot sidewalks, two 11-1/2 foot eastbound and two 11-1/2 foot westbound traffic lanes and a 10 foot median. The character of the street is influenced by large street trees in the sidewalks and median. In this section, light rail trackways would be located in the left eastbound and westbound lanes, adjacent to the median, reducing the street to one 11 foot westbound and one 11 foot eastbound lane.

On Harrison between Fourth and Sixth, given the narrower 60 foot right-of-way, light rail would be on the north side of the street with a single east or westbound traffic lane on the south side of the street.

S-2 (Lincoln) Light rail would enter the CBD on a structure over Harbor Drive and Front, from the South Waterfront property either north of the substation or between the

substation and Harbor Drive. A station could be located in the South Waterfront area on the eastern end of the structure. At the west end of the structure, light rail would enter a retained fill and cross S W First Avenue at-grade. West of First, the trackway would be located in the median of Lincoln leaving one lane of traffic in each direction on Lincoln. Light rail would turn onto 4th Avenue with the two-way trackway on the west side of the street between Lincoln and Harrison. The trackway in this section of 4th would parallel three northbound traffic lanes. With standard width sidewalks on 4th, it is likely that the 80 foot right-of-way would have to be increased to as much as 88 feet. The trackway would turn west onto Harrison and, again onto 5th southbound and 6th northbound.

S-3 (I-405) This option would be limited to an entry that is served by the Caruthers/Marquam Crossing only. The configuration east of Front Avenue would preclude a connection to Moody and a possible Ross Island crossing. A station to serve the South Waterfront area would be located on the bridge structure approximately 30 to 35 feet above the ground elevation, approximately 45 feet beneath the lower deck of the Marquam bridge. Access from the station to the South Waterfront area would be by elevator and/or escalator. The bridge would continue over Moody and Harbor Drive entering the existing right-of-way of Caruthers. The two-way trackway would continue west under S W Front and First Avenues parallel to I-405 at the freeway level and enter 4th Avenue on the right, east side of the off-ramp. The trackway would continue north along 4th Avenue to Harrison as described above for the Lincoln Option.

VI ALIGNMENT RECOMMENDATIONS

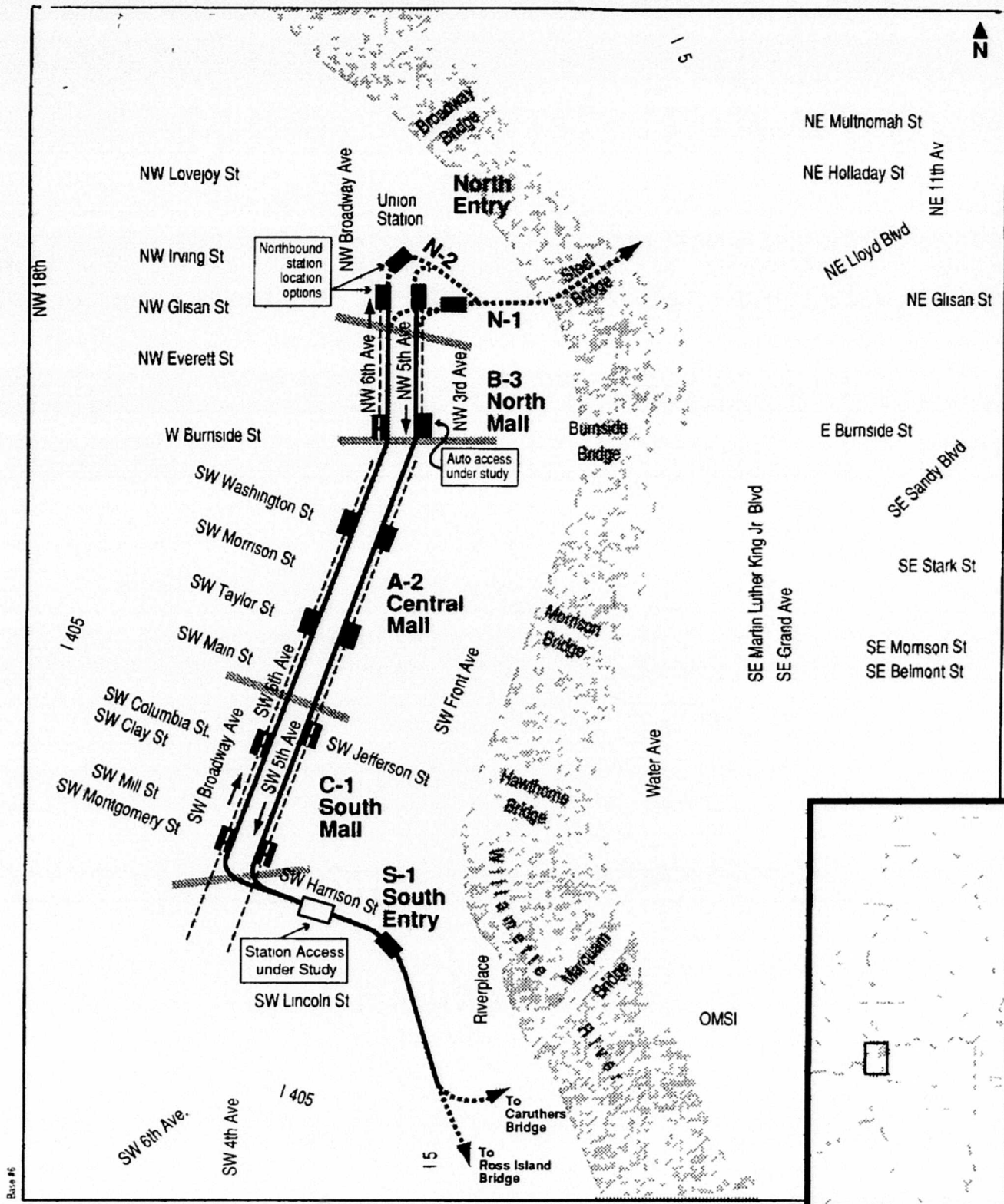
CBD Alignment

The South/North Project spent nearly 12 months evaluating alignment alternatives for the South/North Light Rail through the Portland Central Business District on Fifth and Sixth Avenues. After completing an exhaustive examination of the technical information and after conducting a public meeting at which a wide variety of opinions were expressed, and considering the recommendation from the Downtown Oversight Committee, the PMG and the CAC, the S/N Steering Group finds that the following combination of alternatives meets the principles established by Metro Council and the criteria established by the Oversight Committee (see Figure 8) and that more detailed study of other tunnel and surface street alignments is not warranted.

- A-2 with light rail in the center lane of the Central Mall
- B-3 with light rail in the left lane and autos mixed with buses in the right lane of the North Mall
- C-1 with light rail on the left side of Fifth and Sixth Avenues on the South Mall
- N-1 (Glisan) and N-2 (Irving/Union Station) Options for the North Entry to be studied further during the EIS process, and
- S-1 (Harrison) Option at the South Entry,

The Steering Group has found that if South/North Light Rail is placed on Fifth and Sixth Avenues in accordance with the above recommended alternatives, existing auto routing and capacity can be preserved, pedestrian access and amenities can be enhanced and efficient bus and light rail service can be provided on the mall and to other developing areas of the downtown. Specifically, the Steering Group has found that the recommended alignment

- Reinforces the goals and objectives of the Central City Plan by supporting existing and future public and private development and investment in a manner that is consistent with commitments dating back to the Downtown Plan which was adopted over 20 years ago,
- Maintains existing traffic and access patterns on 5th and 6th Avenues and within the Central Business District which supports existing and future businesses and retailing and adds to the activity and quality of the streets,
- Provides fast and convenient transit service to existing and future downtown office and commercial uses, delivering the most people to where they want to go, maximizing the potential for increased transit ridership to and from the Central City,

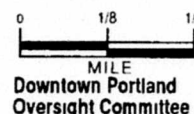


**South
North**
Transit Corridor Study

**Recommended
Light Rail Design Options**
Downtown Portland
5th/6th Avenue Surface Couplet
November 1995

- Light Rail Transit (LRT) alignment
- Mall auto access
- LRT alignment options
- MAX
- Westside LRT
- Existing railroad
- Station with no auto access on mall
- Station with auto access on mall

Note Alignment, station and park and ride locations are currently under study and may change



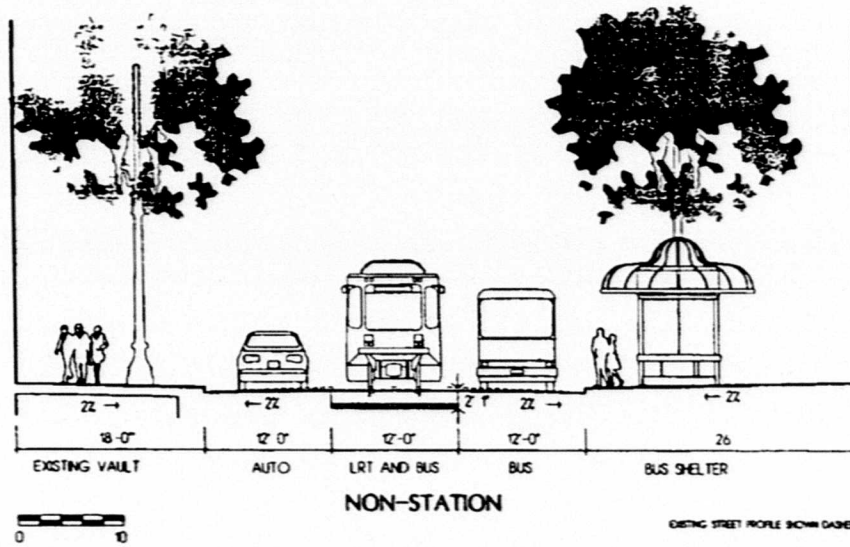
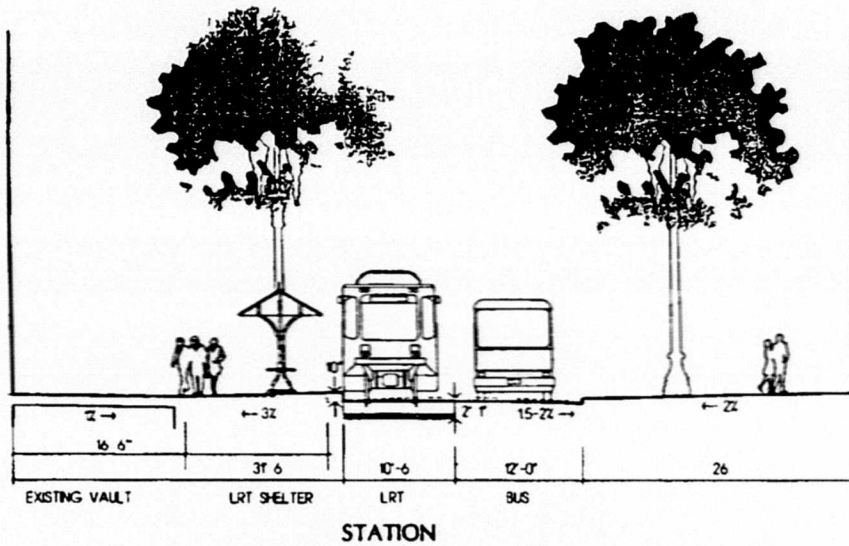
- Maintains the current pedestrian character of the Transit Mall by retaining the sidewalk widths, pedestrian amenities and trees currently in place on the Central and North Mall,
- Improves the role of the Portland Transit Mall as the central pedestrian boulevard and transit spine in the Downtown and CBD by extending it southward and changing its emphasis to light rail,
- Ensures the least construction impacts and cost by placing light rail in a location where sidewalk reconstruction, street grade changes, utility relocations and other reconstruction work can be minimized and the benefits of past investments in North and Central Transit Mall utility relocation, strain pole foundations, sidewalk improvements and surface grade adjustments can be utilized,
- Offers the opportunity to reconfigure the Central City bus circulation plan, utilizing off-mall service (approximately 25-35 buses per hour by 2015) on other streets, most significantly as 10th and 11th Avenues, where development can benefit from improved transit connections to the regional system, Central City Streetcar and intra-downtown circulation within Fareless Square,
- Provides good access to the River District, University District and RiverPlace/South Waterfront area,
- Reinforces the multi-modal transportation center concept by providing the best opportunity for a good connection at Union Station between light rail, Amtrak, inter and intra-City buses and future high speed rail,
- Provides the opportunity to maintain the function of the Portland Transit Mall while improving its aesthetic environment by minimizing the 'sheet metal' affect while simultaneously maximizing its functional passenger capacity,
- Creates the opportunity for coordination of construction and funding of improvements to the Central Mall and a funding source to ensure that 5th and 6th Avenues can be enhanced to the original demanding Central Mall design standards, and
- Fulfills an objective of the Central Mall business community to enhance the pedestrian environment by reducing items on the street and increasing visibility of retailing along 5th and 6th Avenues by removing over half of the existing bus stops, shelters and related items

The Steering Group makes this recommendation regarding the South/North Light Rail Downtown Alignment based on the additional comments, recommendations and findings set out in the balance of this section and under the following three sections titled Transit Operation Recommendations, Urban Design Recommendations and Construction Recommendations

Central Mall Light rail should be located in the center lane of the Central Mall as described under the A-2 Option above (see Figure 9). Of the Central Mall options, the A-2 Option best meets the principles established by Metro Council and the criteria established by the Oversight Committee. A-2 provides the most efficient use for all four modes: buses, light rail, autos and pedestrians, while preserving existing transit ridership capacity, existing auto access, pedestrian circulation, and existing sidewalks, street trees and other amenities. It would entail the least construction impacts and would have the lowest cost because light rail in the center lane can be accommodated with minimum adjustment to existing street and sidewalk alignments and grades, the least amount of utility relocation work and the highest probability of containing most construction work within the street area.

Figure 9

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SURFACE LRT OPTIONS
PORTLAND CENTRAL BUSINESS DISTRICT

A2
CENTRAL MALL

A-1, with its need to widen the street to four lanes and to narrow the sidewalks, would severely impact the mall design and amenities and seriously compromise pedestrian use on the transit mall streets. A-3, with autos sharing the light rail lane, would create serious conflicts with existing auto circulation in auto lanes on the mall and on cross streets and would reduce capacity and degrade operations of light rail. Because bus volumes would eliminate autos over time on the Transit Mall, A-4 would not provide for the long-term 24-hour a day, seven day a week provision of an auto lane on 5th and 6th Avenues and therefore, would not meet the established criteria for retaining existing auto traffic patterns.

North Mall The Steering Group recommends the B-3 North Transit Mall Option, which would allow autos in the right bus lane (see Figure 10). In 2005 bus volumes on the North Mall should be approximately one-half of what they are today and, in combination with the A-2 Option on the Central Mall, may further be reduced as light rail frequencies increase over time and buses on Fifth and Sixth Avenues are routed on other streets. Accordingly, the limited number of autos projected to be using N W Fifth and Sixth should be able to use the right lane. However, auto use of the 5th Avenue bus lane in the light rail station block between W Burnside and N W Couch may not be feasible due to potential conflicts with loading light rail vehicles. The issues of auto use in this block and the stacking of buses on 5th will be studied further during the EIS process. To further minimize conflicts with light rail, buses and auto circulation on Fifth and Sixth, alternative provisions on side streets should be made for any businesses presently using Fifth and Sixth for loading or access. Those improvements to private property should be included in the project scope and budget.

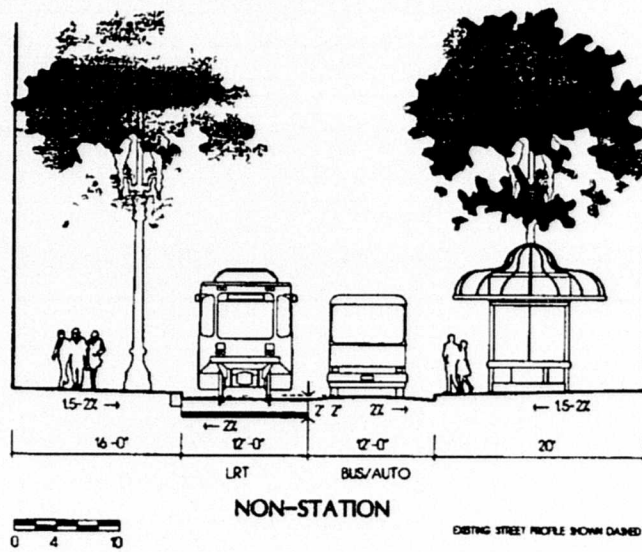
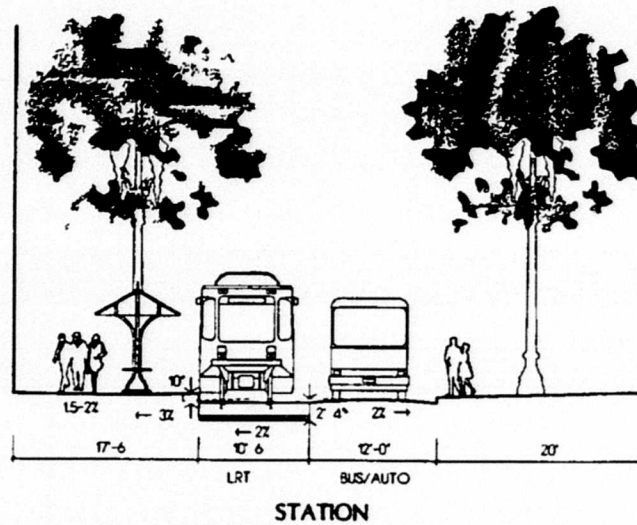
South Mall The Steering Group recommends the C-1 Option described above (see Figure 11). C-1 should entail reconstructing Fifth and Sixth Avenues between Madison and Harrison with improvements similar to those used on the Central Mall, fulfilling a long standing desire to extend the transit mall the full length of the downtown from Union Station at the north end to Portland State University at the south.

North Entry The Steering Group recommends that both of the north entry alternatives, N-1 (Glisan) and N-2 (Irving/Union Station) north entry options for connecting light rail from the Steel Bridge to Fifth and Sixth Avenues should be studied during the subsequent EIS process. In order to make a choice between these options, more information is needed about the Union Station developments, high speed rail, intermodal ridership and transfers, cost, the 3rd Avenue rail crossing, the impacts of each alternative on the neighborhood due to property acquisitions and other factors.

Both North Entry alternatives may involve impacts to private property. In the N-1 (Glisan) Option, widening of Glisan for two light rail tracks and to maintain two lanes of auto traffic west of 4th Avenue could require the acquisition of the Beaver Hotel. The Greyhound depot building may be adequately set back from its south property line to avoid similar impacts. It is possible that the parking lot and Comedy Club building on the southeast corner of the intersection of 5th and Glisan and 6th and Glisan could be impacted to make room for tracks turning from Glisan onto 5th and from 6th onto Glisan.

Figure 10

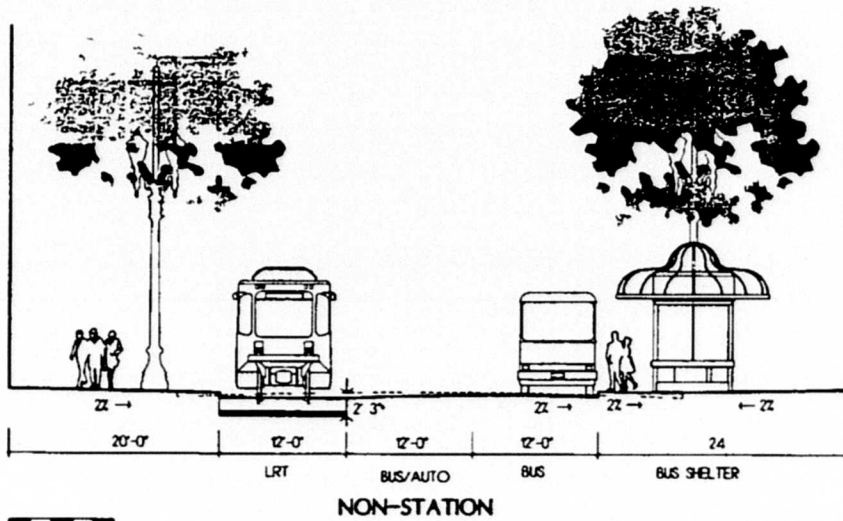
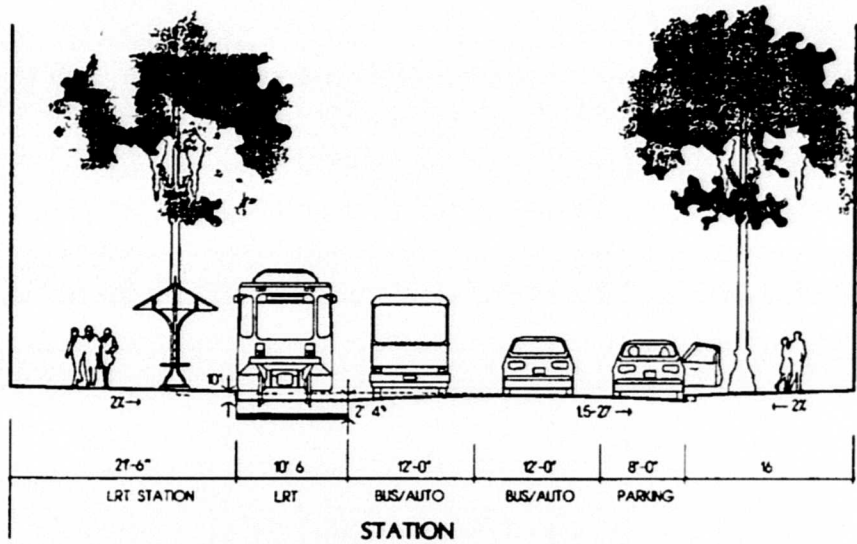
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SURFACE LRT OPTIONS
PORTLAND CENTRAL BUSINESS DISTRICT

B3
NORTH MALL

Figure 11



0 10

DRAFT
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EXISTING STREET PROFILE SHOWN DASHED

SURFACE LRT OPTIONS
PORTLAND CENTRAL BUSINESS DISTRICT

C1
SOUTH MALL

The N-2 (Irving/Union Station) Option would require the acquisition of the block between Glisan, Hoyt, 3rd and 4th and likely require the redevelopment of the existing Tri-Met bus layover facility between Irving, Hoyt, 4th and 5th. It is also likely that Hoyt Street between 4th and 5th Avenues would be vacated, impacting access to the Classic Chauffeur building. Under the N-2 (Irving/Union Station) Option, an outbound station could be located diagonally across the northern half of the Greyhound depot as described above, impacting that property.

If the N-2 (Irving) Option is selected, its configuration should be carefully designed to avoid conflicts with the proposed 3rd Avenue rail crossing connecting 3rd with Front Avenue and McCormick Pier and the Union Station Housing north of the railroad tracks.

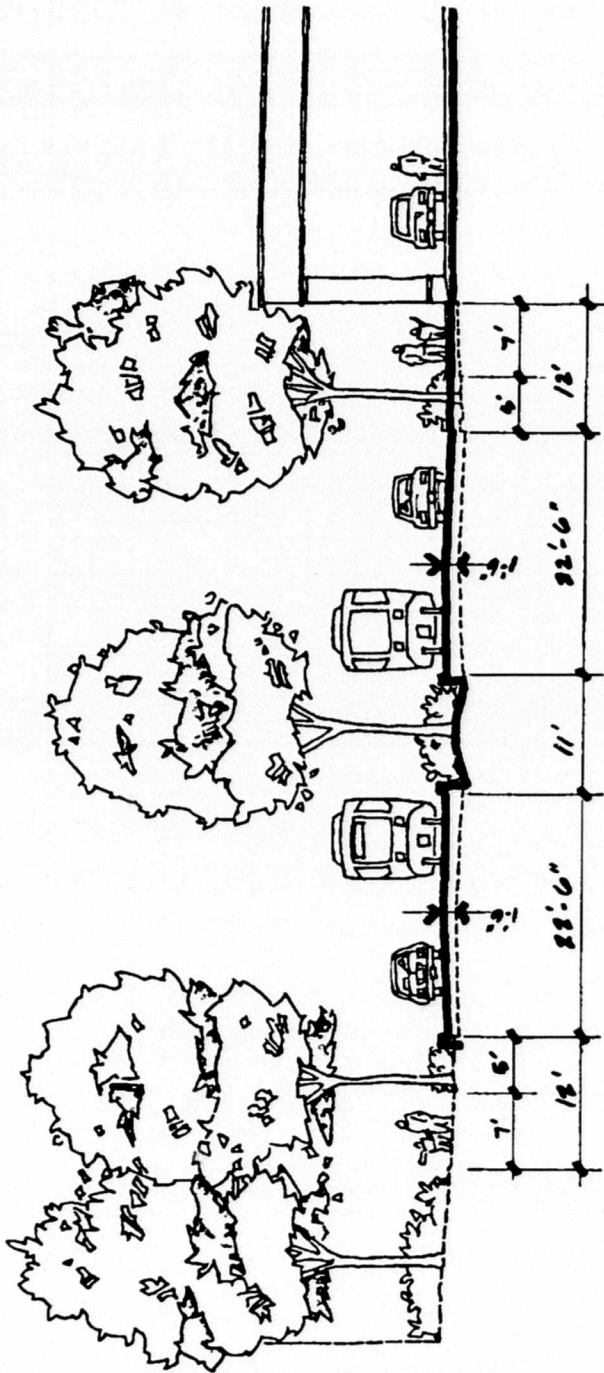
South Entry The Steering Group recommends the S-1 (Harrison) Option for the South Entry (see Figure 12). Of the South Entry Options, the S-1 (Harrison) Option provides the best service to the University District, South Auditorium area and RiverPlace/South Waterfront area at the least cost and operating time. As described above, the S-1 (Harrison) Option was developed with a station located on the bridge structure over Harbor Drive intended to serve both the South Auditorium and RiverPlace/South Waterfront areas. The Steering Group recommends that during the EIS process, access to this station and possible alternative locations for this station and/or other stations for better service for South Auditorium and RiverPlace/South Waterfront area residents and workers be examined.

The operating time and cost of all three South Entry alternatives, assuming a Caruthers/Marquam Crossing from OMSI to the PSU station on 6th Avenue north of S W Montgomery Street were estimated by project staff. The operating times for the S-2 (Lincoln) and the S-3 (I-405) Options were estimated to be 20 seconds and 40 seconds longer than the S-1 (Harrison) Option, respectively. The projected capital cost would be \$30 million and \$14 million more than the S-1 (Harrison) Option, respectively. Unlike the S-3 (I-405) Option, the S-1 (Harrison) Option could be connected to either the Ross Island or the Caruthers/ Marquam Willamette River crossings.

The station location of the S-2 (Lincoln) and S-3 (I-405) Options would be less desirable than in the S-1 (Harrison) Option. In the S-2 (Lincoln) Option, RiverPlace and the north part of the South Waterfront area would not be well served with an elevated station at the eastern end of the bridge structure over Harbor Drive and Moody. The location of this station would be further to the south, and even less accessible to RiverPlace, if the alignment is shifted to the south of the substation as has been suggested by the Portland Development Commission. The station on the S-3 (I-405) Option serving the South Waterfront area would also not be as convenient, located on the bridge structure approximately 30 to 35 feet above grade adjacent to the Marquam Bridge.

The three South Entry Options would have varying impacts on private property. Under all three options, light rail turning from Harrison onto Fifth and from Sixth onto Harrison.

Figure 12



A.
HARRISON ST. LOOKING WEST
PROPOSED, BETWEEN NY & 2ND STREETS

would impact the property on the northeast corner of the intersection at 6th and Harrison, the PSU Center of Advanced Technology and at 5th and Harrison, the apartment building. In the S-1 (Harrison) Option, the property on the south side of Harrison between First and Front Avenues would be impacted by the widening of Harrison to accommodate four (or five) traffic lanes and light rail on the north side of the street. On the S-2 (Lincoln) and S-3 (I-405) Options, properties would be impacted on Harrison between 4th and 5th Avenues and along 4th Avenue, south of Harrison. The right-of-way of 4th Avenue would likely have to be widened, impacting a number of properties on the west side of the street between Harrison and Lincoln. Texaco and Budget Rent-a-Car may be impacted even without a right-of-way expansion due to conflicts with the light rail trackway and their driveway accesses. On the S-2 (Lincoln) Option, the radio station would be impacted by the extension of the Lincoln right-of-way east of First Avenue. On the S-3 (I-405) Option, the beauty supply building on 4th Avenue and an apartment building and two small commercial buildings on Caruthers could be impacted.

VII TRANSIT OPERATION RECOMMENDATIONS

Capacity and Ridership

Transit ridership to, from and through the CBD is expected to dramatically increase over the next two decades. With the Banfield and the completion of the Westside and South/North Light Rail Projects, there will be four major light rail trunk lines serving the CBD. The projected increased ridership should mostly be carried on light rail. Bus service and bus ridership to the downtown will diminish over what exists today. Total ridership to, from and through Downtown is set out in Table 2 below.

Table 2
Portland CBD Transit Ridership
(to, from and through CBD, excludes intras)

Year	PM Peak Hour Riders
1997	16,000
2005	19,100
2015	30,500

Consistent with future transit ridership patterns in the Central City, the recommended A-2 Option in the Central Mall calls for a transition from exclusive bus use to a combined light rail and bus operation on the Transit Mall. Table 3 sets out the capacity and the projected volumes of light rail vehicles and buses over the 20 year period.

The ability of the 5th and 6th transit mall to accommodate both light rail trains and buses is one component of the overall downtown transit capacity. The downtown transit capacity includes the transit mall, Banfield LRT, Westside LRT and buses on off-mall streets. Buses can be accommodated on a number of other streets in the downtown such as 2nd, 3rd, 10th, 11th, Washington, Salmon, Jefferson and Columbia.

The patron capacity of the transit mall is based on the number of buses and trains that can pass through two lanes during the peak hour after taking into account traffic signal progressions and bus delays. For this analysis, the patron capacity of the off-mall transit streets is based on the number of buses that are unable to operate on the transit mall. The total transit capacity of these off mall streets to accommodate more buses per hour has not been estimated but would be more than indicated in Table 3.

For simplicity, the volumes listed below include trips only in the peak hour in one direction. The actual volumes on the mall would include trips leaving town in both directions. For instance, light rail trips on South/North would likely be 20 trains going north and 20 trains going south in the peak hour.

Table 3

Projected Transit Vehicle Volumes/Patron Capacity
(One Direction Only)

Year	Buses/Hour	LRV's/Hour	LRT Headway	Patron Capacity
1997				
Transit Mall	143	0	0	8,580
Off-Mall	<u>29</u>	<u>13</u>	4 5 min	<u>5,640</u>
Total	172	13		14,220
2005				
Transit Mall	105-110	8	7 5 min	9,000
Off-Mall	<u>29</u>	<u>15</u>	4 min	<u>6,240</u>
Total	139	23		15,240
2015				
Transit Mall	95-100	10	6 min	9,000
Off-Mall	<u>59</u>	<u>15</u>	4 min	<u>8,040</u>
Total	159	25		17,040
Beyond 2015				
Transit Mall	75-80	20	3 min	10,800
Off-Mall	<u>79</u>	<u>20</u>	3 min	<u>10,740</u>
Total	159	40		21,540

On the Central Mall there presently are 171-178 buses during the peak hour. This volume is expected to be decreased to 143 buses per hour when the Westside Light Rail begins revenue service in 1997 or 1998. When the South/North Light Rail begins revenue service in 2005, the bus volumes on the Central Mall are expected to be further decreased to 106 buses during the peak hour. Then, as light rail and bus ridership continues to grow, these volumes are projected to be increased to 125-130 buses per hour by 2015.

When the South/North Light Rail begins revenue service in 2005, trains would operate at approximately 15-minute frequencies during off-peak hours. However, during the peak hours, service would be increased to approximately 7-1/2 minute frequencies, a rate of 8 trains per hour. By 2015, the peak hour service is expected to increase to 6 minute frequencies, a rate of 10 trains per hour. The ultimate capacity of the system will be about 3 minute frequencies, a rate of 20 trains per hour, which if fulfilled would occur beyond the current 20 year planning time period.

Under the recommended A-2 Option, buses using the Central Mall would no longer operate in the leap-frog fashion as they do today. They would move in single file in the right lane and utilize the

center light rail lane to pass buses that are delayed. Because of the reduced number of buses and the reduced number of bus routes (approximately half of the 80-82 routes currently) buses on the Central Mall would only need to stop at one location on each block. Accordingly, the mid-block bus stop in each block of the Central Mall would be eliminated. In addition, all bus stops would be eliminated in blocks in which light rail stations are located, which would be every fourth block on the Central Mall. Buses would be organized into two rather than four groups. Each group would stop in every other block or every third block depending on the location of the bus stop relative to the light rail station blocks where all stops are eliminated. The mixed two and three block stopping frequency would result in buses stopping at fewer locations on the transit mall. This should reduce the operating times, and therefore operating cost for buses below what they are today on the mall.

Not only bus demand, but also bus capacity of the mall would be reduced because of inability to freely use the second lane for passing. This capacity would decrease as light rail frequencies increase. It is estimated that the capacity of the mall would be 105-110 buses per hour with light rail trains at 7 1/2 minute frequencies, 95-100 buses per hour with light rail trains at 6 minute frequencies and 75-80 buses per hour with light rail trains at 3 minute frequencies. In 2005, on the day that light rail begins operating on the mall, there would be adequate bus capacity to handle all of the projected mall bus volumes. However, during the following ten years, sometime between 2005 and 2015, light rail and bus volumes are projected to increase above capacity, to a point in 2015 when 25-35 buses per hour (during the peak hour) would have to be displaced to other streets. It is expected that the off-mall bus service may experience some increased operating time and cost caused by operating in mixed traffic rather than in exclusive bus lanes on the mall.

As explained, sometime between 2005 and 2015, Tri-Met would be required to initiate a series of bus system changes to implement off-mall service as the service requirements, demand projections and market conditions change in developing areas of the downtown. Tri-Met may choose to implement some of this service earlier, perhaps in conjunction with bus system changes that will be necessary during construction of South/North Light Rail or even sooner.

The Regional Transportation Plan (RTP, Metro 1992, revised 1995) anticipates a long-term expansion of both the bus network and the light rail system. In addition to extensions of the east, west, south and north light rail lines, the RTP has identified the southwest corridor as a possible future light rail line. The southwest corridor could be served by either a radial line (out Barbur Boulevard to Tigard or out Macadam Avenue to Lake Oswego) or by an extension of the eastside light rail line (south on Highway 217 to Washington Square, Tigard and Tualatin). To date, travel demand forecasts have indicated that either of the radial lines would carry less than half the riders than would be carried by the east, west, south or north radial lines. An additional light rail extension could be an east side connection linking the south and north corridors between the Rose Quarter area and the south Willamette River crossing.

While the timing and configuration of these possible future extensions is uncertain, analysis done to date indicates that the Transit Mall could accommodate South/North Light Rail through to the year 2040. If the radial Barbur Corridor is built connecting to the transit mall, mall capacity

would be available through to the year 2020 (South/North Tier 1 Technical Summary Report, Metro 1994) The eastside connection could provide additional long-term capacity in downtown Portland by reducing the number of South/North trains that would need to enter the Portland CBD Finally, an additional radial corridor into the Portland CBD may not be necessary if the Westside extension down Highway 217 is selected to serve the southwest corridor

Downtown Bus Circulation Concept

Transit service in downtown Portland should be viewed as part of a continuum to implement the Downtown Plan vision for an attractive, active and pedestrian-friendly district. The combination of Portland plans and policies has created an environment supportive of transit throughout the downtown area The creation of the Transit Mall was part of this continuum to focus office development, improve transit ridership and enhance livability In the future, the Transit Mall will continue to be the primary corridor for employment. The major focus for development activities should occur along the high-density spine which parallels the Transit Mall as well as the edges and corners of downtown, such as South Waterfront, University District, River District and the Willamette River Bridgeheads Figure 13 illustrates a conceptual downtown bus circulation plan This circulation plan could complement the South/North Light Rail A-2 downtown alignment recommendation and the downtown land use concepts expressed in the original Downtown Plan, the Central City Plan and the Central City Transportation Management Plan

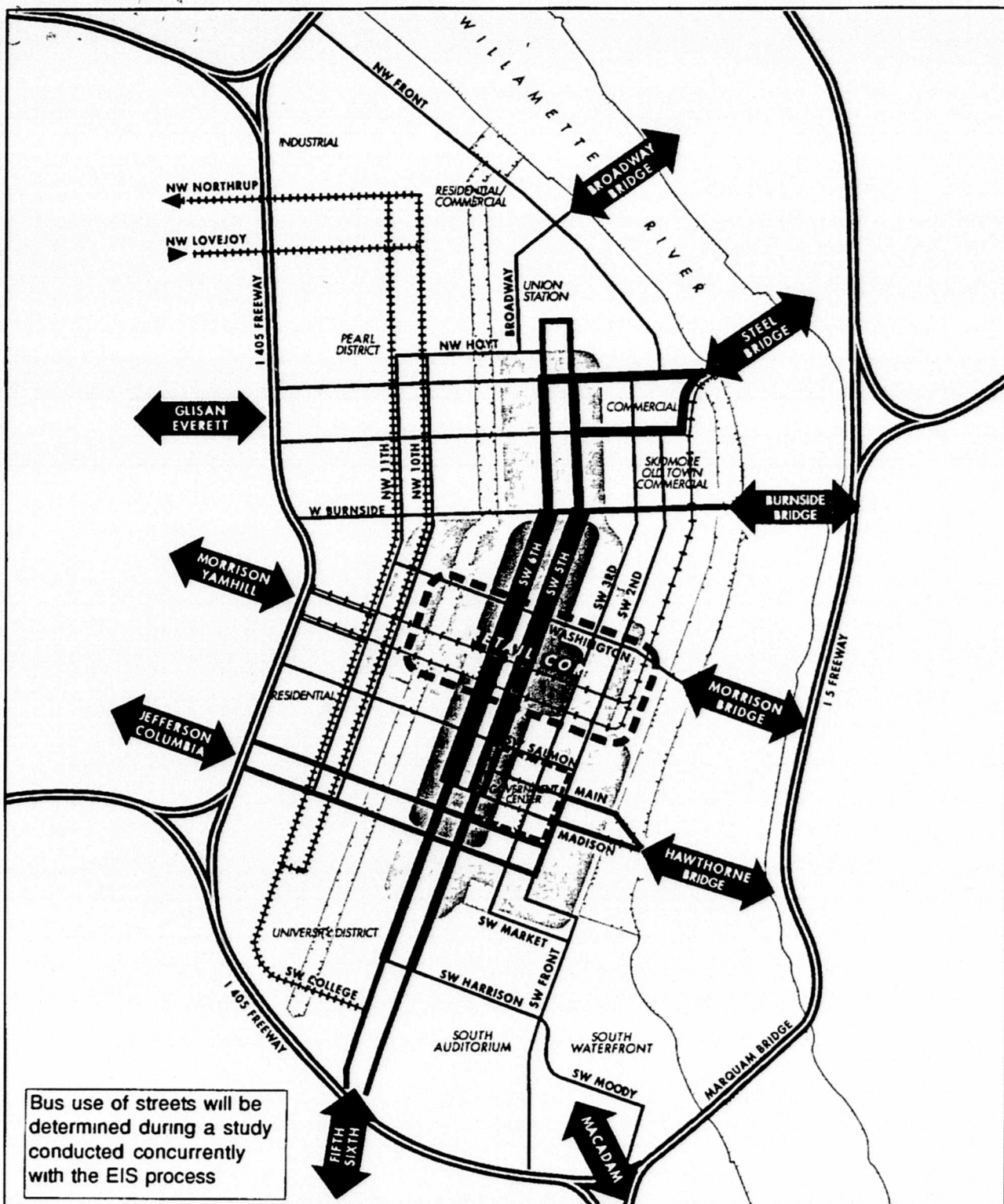
Off-Mall Bus Operational Requirements

The study has focused a considerable effort toward the analysis of the alignment options, particularly the Central Mall options, to ensure that transit operations within the downtown meet acceptable cost, ridership and operation efficiency criteria Tri-Met has determined that implementation of the recommendations for the bus operations set out in this section, the designation of downtown streets for off-mall bus service in the following section and the package of specific infrastructure improvements in the section following that are essential to ensure successful downtown transit operations and their acceptance of the recommended A-2 Central Mall Option

Bus Operation Recommendations

The following bus operation recommendations are made in conjunction with the A-2 Central Mall and other South/North Light Rail alignment recommendations

Concurrently with the EIS process, Tri-Met, the City of Portland, Metro and business community/property owners should work together to continue to refine the conceptual plan shown in Figure 13 This would include the development of transit service plans, the streets in the downtown to be designated for transit, the design and location of improvements associated with off-mall bus service and the schedule for implementing the improvements and service plans



DOWNTOWN BUS CONCEPT

BUS VOLUMES

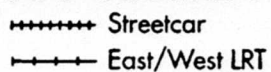
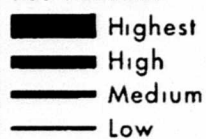
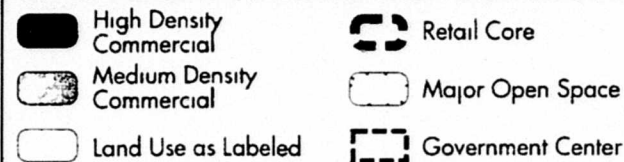


Figure 13

DOWNTOWN LAND USE CONCEPT



In advance of the time that the South/North light rail begins, consideration should be given to operation of some buses on 10th and 11th, Jefferson and Columbia, Burnside, Everett and Glisan, Lovejoy and other east-west streets that are recommended for future bus service. This off-mall service should be designed to improve service in areas of the Central City where service presently is not provided, to facilitate convenient transfers and to provide efficient direct service for users. Minimum service levels should be established to ensure adequate frequency for good intra-downtown circulation during the off-peak hours. On the other hand, volumes of service should also be limited, particularly on busy traffic streets such as 2nd and 3rd, to minimize conflicts between buses and general traffic.

A bus service plan should be coordinated and integrated with the Central City Streetcar on 10th and 11th Avenues with ongoing planning for service to Northwest Portland, the River District and the University District and possible extensions to Oregon Health Sciences University and the North Macadam area.

The objectives should be to preserve existing ridership, identify opportunities for increased circulation in the Downtown, open new markets in Central City centers and meet the capacity requirements of the A-2 Central Mall alternative.

Bus Street Designations

Figure 6 indicates streets having a transit designation in the Central City Transportation Management Plan recently adopted by the Portland Planning Commission and soon to be considered by the City Council. The City, in cooperation with Tri-Met, Metro, the business community and others should review these designations to ensure that they are consistent with the light rail alignment decision and revisions in the bus service plan to accommodate the A-2 Central Mall Option recommendation. As recommended above, this process should take place concurrently with the EIS process. During this process, the following streets should be considered for off-mall bus service to provide improved circulation in other development areas of the downtown.

Jefferson and Columbia Columbia and Jefferson are presently designated in the CCTMP as transit streets. Changes in their present classification may be warranted based on the abandonment of these streets for light rail and the possible future use of these streets for off-mall bus service.

Main and Madison Main and Madison are designated as transit streets and are likely to continue to be used by buses using the Hawthorne Bridge.

Salmon and Washington Concurrently with the EIS process an off-mall bus routing study effort should be undertaken to identify the preferred operating corridor for buses in the major cross-mall retail corridor. Currently two bus lines operate approximately 24 buses during the peak hour on Salmon and Washington Streets acting as a couplet five blocks apart. Consideration should be given to the potential for using alternative or additional streets, reducing the volumes on the existing couplet, reducing the distance between the couplet,

improving bus operations and minimizing existing auto conflicts, taking into account all modes of transportation. Consideration should be given to Salmon and Taylor, Alder and Washington, and Stark and Oak. It is recommended that the City consider amending transit access street designations in conjunction with the FEIS based upon results of the off-mall bus routing study.

Burnside Burnside currently is designated as a transit street, a designation that may remain unchanged by the A-2 alignment recommendation.

Everett and Glisan Everett and Glisan are designated as transit street and likely will continue to carry off-mall bus service.

2nd and 3rd Avenues 2nd and 3rd Avenues are not presently designated as transit streets, but may be desirable as streets for limited bus service to serve as an intra-downtown transit connection between Old Town and the South Auditorium area. Limitations on the volume of service would be appropriate.

10th and 11th Avenues 10th and 11th Avenues are presently designated as transit streets and are excellent candidates for off-mall bus service. This service would complement and be operated in conjunction with Central City Streetcar presently being planned with a 10th and 11th Avenues alignment.

Off-Mall Bus Improvement Recommendations

Following are specific improvements that should be evaluated, some or all of which should be included in the South/North Light Rail Project scope and budget:

- Bus stop improvements including facilities such as shelters, benches, transit information and other improvements.
- Curb extensions to replace some existing curb side bus zones and at bus zones on newly designated off-mall bus streets. These extensions will eliminate some on-street parking, but less parking than curb side bus zones requiring additional space for buses to pull in and out. They also will speed up bus loading and unloading and provide additional space for bus shelters and pedestrians to wait away from adjacent storefronts.
- Design improvements to Fifth Avenue for two blocks south of Burnside if during the EIS process such improvements prove necessary to meet mall capacity expectations, allow buses to proceed down the mall in an orderly manner and to eliminate current bus bottlenecks.
- Signal prioritization at some locations to allow buses to move more easily through congested intersections.
- Improved pedestrian crossings at key transit transfer connections where bus line cross

- Transit and pedestrian improvements on 10th/11th Avenue in coordination with the Central City Streetcar project

VIII URBAN DESIGN RECOMMENDATIONS

Portland Transit Mall

For nearly twenty years, the Portland Transit Mall has served as the centerpiece of Portland's downtown and Central City rejuvenation. It has received national acclaim for its design excellence. The Transit Mall has served as a model for downtown transportation projects that have followed it.

In Portland, light rail has been successful in operating on surface streets within the Central City, both on the Banfield and soon on the Westside project, largely due to the design sensitivity with which it has been incorporated into the streets. The design of the South/North Light Rail Project should be no less demanding. To the contrary, incorporation of light rail onto Fifth and Sixth and the 22 blocks of the original Transit Mall and 14 blocks of its northern extension will represent even a greater challenge, for it involves the reconstruction of street improvements of a quality unequalled anywhere in Portland.

The City of Portland recently completed a planning effort proposing to expend over \$2 million aimed at restoring the aging Central Mall, suffering under two decades of heavy use. Broken and cracked bricks, crumbling granite, worn asphalt, missing street signs, chipped finishes, unused kiosks and patched paving are among the defects that would be repaired to restore the mall to its original form. The South/North Light Rail Project offers the opportunity to undertake this restoration in a coordinated way and with high-quality results that would not be possible if only local funds are available for the restoration.

In restoring the mall and in extending the street improvements to the South Mall and to the North and South Entries the quality of the design, materials and amenities should be similar to those used in the original transit mall project. Unique architectural finishes and treatments such as brick paving, granite curbs, gutters and feature strips, street trees, Portland historic ornamental street lighting fixtures, traffic signals, traffic and transit signs, flower pots, waste receptacles, Simon Benson drinking fountains and other features of the original transit mall should be the theme. Overhead train electrification systems should be designed with the same care afforded those installations on the Banfield Light Rail Project on First, Yamhill and Morrison and planned in the downtown and Goose Hollow segments of the Westside Light Rail project, by incorporating supporting the single wire overhead system from extensions on the Portland historic ornamental street lighting fixtures. Use of Portland historic Belgian block in the trackway should be considered, although it is recognized that other treatments may be more appropriate on the North and Central Mall where the trackway will be shared by buses.

North Entry

The urban design features of the Fifth and Sixth Transit Mall should be considered for Irving or Glisan. The Steel Bridge ramp should be reconstructed to accommodate pedestrian and bicycle access. A comfortable and defensible environment around and under the Steel Bridge ramp

should be designed. In this area, particular attention should be paid to right-of-way design to minimize awkward leftover parcels and to encourage adjacent property redevelopment.

Harrison Street

Harrison Street has a unique quality created by the street trees, planting strips and median. Light rail should be incorporated to retain and enhance that quality. Despite grade changes required between First and Front Avenues, street trees should be retained by use of low retaining walls to preserve the existing ground level adjacent to them. Turnouts should be incorporated into the sidewalk design to accommodate loading where required and access should be retained to existing residential and commercial parking areas.

South Entry/Harbor Drive Structure

The bridge structure should be designed to appear as an extension of Harrison Street, with natural and easy pedestrian access over Harbor Drive, to RiverPlace, a task of some challenge given the likelihood of four or five lanes of traffic and lengthy pedestrian crossing at Front and First and Harrison. The station should have the dual function of serving transit riders and pedestrian and bicyclists crossings from Harrison to RiverPlace, over Harbor Drive. Architectural treatment of the bridge structure should complement the surrounding environment, views of the river and city and be inviting to the desired pedestrian uses. Cost sharing for the facility should be evaluated through the EIS and design process.

IX CONSTRUCTION RECOMMENDATIONS

The Steering Group emphasizes the importance of adopting the recommendations contained in this section including the pursuit of extraordinary means to ensure that impacts of the construction work on businesses in the downtown area are minimized. Every effort should be made by the participating agencies to implement the construction recommendations in this section, recognizing that some of them may require regulatory or policy changes not within the control of the local governments.

While the recommended alternatives represent the least construction impact, the South/North Light Rail project construction through the downtown on Fifth and Sixth Avenues still represents an enormous undertaking. To one extent or another, light rail construction would be occurring in nearly 60 blocks. The project will cost approximately \$300 million and will, if the recommendations given below are adopted, require an overall total of at least 3 years to complete. Following is a general description of the work to be performed.

Utilities

- Relocate manholes, access panels and vents in trackway
- Relocate utilities from beneath the trackway, not always required but generally desired by the utilities and by Tri-Met.
- Replace waterlines within 100 feet of light rail with coated/bonded piping to meet standards of the Bureau of Water Works
- Lower utility vaults and duct banks to match new grades or deeper paving structures
- Install a new electrical duct bank for signals, street lighting, traction electrification and communications
- Install catch basins and pipe storm drainage except on the North and Central Malls where those systems have been installed and the City has determined that most existing storm drainage pipes including those under the trackways may remain

Streets

- Install track slabs to light rail cross and longitudinal grade standards which allow no cross slope and only a very gradual longitudinal slope
- Replace existing street, intersection slabs and paving to meet the new trackway grades
- Replace and upgrade the existing paving on the South Mall and North and South entries to Central Mall standards

Sidewalks

- Reconstruct all sidewalks except on North and Central Malls
- Reconstruct sidewalks on the North and Central Malls for light rail platforms
- Install strain pole foundations in 3 locations in each block face except on the North Mall which was constructed with suitable foundations
- Remove certain shelters on the Central Mall including both shelters on LRT station blocks and rear block bus stop locations on all other blocks

Finishes

- Install shelters, transit information and ticket machines
- Install traffic signals and signs
- Install overhead electrification systems
- Install street trees
- Install kiosks, benches, flower pots, and other miscellaneous street furniture

Scheduling/Phasing Construction

Left to natural forces, construction of the downtown South/North Light Rail alignment could require four or five years. The Steering Group recommends that a goal be established to complete all of the downtown construction work within a three year period. Further, the Steering Group recommends that goals be established for completing work within each block as follows, recognizing that some variation may occur due to variations in the extent of utility work and that light rail station blocks, at least in the North and Central Mall may require longer than other blocks involving minimum sidewalk reconstruction.

North Mall 3-4 months for each block

Central Mall 4-5 months for each block

South Mall, North and South Entries 6-7 months for each block

During the EIS process, scheduling and phasing options for the work should be carefully assessed. Consistent with achieving the goals for completing the overall project in 3 years and for completing work in any one block within the time limits set out above, consideration should be given to meeting some or all of the following with regard to the overall phasing of the work.

- Completing work in one segment of the project before commencing another, by for example completing the North Mall before beginning the Central Mall,
- Completing work on one street before commencing another, and
- Avoiding construction work concurrently on both sides of any single block, particularly buildings such as U S Bancorp Tower, Meier & Frank, Standard Insurance Plaza, Orbanco and a number of others with frontage on both Fifth and Sixth Avenues

Special Downtown Construction District

It is recommended that the entire area of construction of the South/North Light Rail Downtown alignment be designated as a Special Downtown Construction District. This should geographically include all construction areas on light rail streets (Glisan/Irving, Fifth, Sixth and Harrison), adjacent cross streets, staging and storage areas in the downtown and streets where any off-mall bus improvements will be constructed concurrently with light rail

Construction Management

Because of the demanding design requirements and potential for construction impacts, a special organization should be established to oversee light rail work within the Special Downtown Construction District. A Downtown Portland Light Rail Committee of Tri-Met, Metro, City of Portland and business community/property owner leadership representatives should oversee the design, development of contract documents and construction of all work within the Special Downtown Construction District. The project manager for the Downtown light rail work should meet regularly with the Committee. Sufficient funds with contingency should be budgeted to ensure quality of the work and prompt and adequate responses can be made to changed conditions during construction.

Alternative contracting methods for construction within the Portland CBD should be investigated. Because of the growing evidence that, on projects such as this, the lowest initial bid can result in the overall highest cost to the impacted community, it is recommended that consideration be given to selecting contractors by a Request for Proposals (RFP) process. Contractors should not only be selected based on their cost and financial strength, but also based on their experience and qualifications to address the unique requirements of this project. The local public agencies should work with state and federal agencies and the Associated General Contractors to develop an acceptable RFP process for selecting contractors that would assemble the best subcontractor team and carry out the project as a partner with the public and private interests. In addition, the general contractors should be selected early in the final design phase so that they are available to provide input as a part of the design team developing contract documents and requirements for the conduct of construction.

Temporary Traffic Provisions

General traffic in the construction zones would have significant impact on the duration and cost of completing the work. Accordingly, it is essential that large portions of the light rail streets (Glisan/Irving, Fifth, Sixth and Harrison) be closed during construction. In addition, it is desirable to close cross streets whenever possible in order to enable the construction of entire intersections at one time rather than in halves. However, it is recognized that some cross streets cannot be closed and must be built in halves including streets crossing Fifth and Sixth such as Everett and Glisan, Burnside, Alder and Washington, Salmon and Taylor, Jefferson and Columbia and Market and Clay.

Light rail traffic on Yamhill and Morrison would also have to be maintained. Public access to parking garages and hotels such as the Hilton Hotel, Sixth Avenue Garage, U S Bancorp Tower Garage, Broadway Garage on the Central Mall and a number of other properties on other segments of the downtown alignment. On the North and Central Mall, most access conflicts have been removed. On the North and South Entries and on the South Mall, some loading zones, short term parking spaces and other special curbside uses may need to be permanently relocated to side streets. Also, as recommended on the North Mall above, revisions to private property may be needed in a limited number of cases to eliminate loading docks or other access that potentially conflicts with light rail. To the greatest extent possible, these changes should be made before construction begins in the affected area.

During construction, light rail and bus operations would have to be maintained. The buses on Fifth and Sixth Avenues will have to be rerouted as segments of those streets are closed for construction. One solution is to, for example, move buses from Fifth Avenue onto Sixth Avenue with temporary two-way bus operations when segments of Fifth are closed for construction. Temporary two-way bus operations could be improved by delaying reconstruction of the 2-lane blocks in which light rail platforms will be located until one-way operations are restored. This strategy worked successfully during the original mall construction. It also could be supplemented by initiating, either temporary or permanent, bus service on designated off-mall transit streets before construction begins.

Design and Contracting Requirements

The Contract Documents set out the requirements for conducting construction. As recommended above, the general contractor(s) should be a member of the design team as a party to developing these documents insuring practicality of and commitment to the program. Some of the specific elements that should be considered for inclusion in the documents are

- Limiting the scope of the construction work, by for example retaining existing sidewalks in the North and Central Malls to the maximum extent,
- Adopting an innovative track slab design that limits its depth (14" to 16") to minimize potential conflicts with existing utilities,

- Including public and private utility work within the scope of work performed by the general contractor so that the utility work can be more close integrated with other construction activities, eliminating time separations, contingencies and the potential for dead time,
- Providing for double and triple shifting, as well as 7-day work weeks, consistent with requirements of adjacent businesses (hotels vs retailing), manpower availability and critical schedule benefits,
- Re-examining the need to relocate utilities from beneath the light rail track slab and investigating alternative means of accessing the utilities in order to allow them to remain,
- Revising Bureau of Water Works requirements to replace existing lines with new coated and bonded water lines adjacent to and within 100 feet of light rail in addition to cathodic protection built into the light rail track design, using the standard for water line reconstruction used on the downtown Banfield Light Rail project work,
- Providing for contractor incentives and liquidated damages by offering payments to the contractor for early completion and requiring payments by the contractor for late performance,
- Maintaining any required vehicular traffic and all pedestrian access to ground floor entrances and businesses,
- Establishing milestone dates for completing segments in accordance with the phasing and scheduling plan,
- Providing for a Thanksgiving to New Years work moratorium, the Rose Festival and other special events as appropriate, and
- Maintaining site cleanliness and orderliness including separate contractors to perform extraordinary cleaning tasks that may fall outside of the general contractor(s) responsibility

Special Programs

In addition to contract document requirements set out above, the project management organization should consider undertaking a series of special programs during construction aimed at mitigating the impacts of light rail construction on businesses and properties in the downtown. These should include

- Conducting regular weekly community meetings to identify, discuss and resolve current construction problems with the project management staff and property and business owners and residents directly affected by the construction

- Assigning several field personnel to facilitate direct on-site communications between the project management staff and business owners and residents directly affected by the construction,
- Establishing a telephone complaint system staffed with personnel assigned on a 24-hour basis and with adequate authority to direct on-site project management and/or contractor supervisory personnel to initiate immediate corrective action,
- Establishing an on-site field office for project management personnel,
- Maintaining a claims processing program that claims for private property damage caused by construction are promptly processed and settled,
- Monitoring the construction work and diligently administering a schedule to enable accurate advanced notification of future construction work on a block-by-block, business-by-business basis,
- Maintaining Downtown Community Relations and Marketing programs for participation in public programs to promote downtown businesses and provide accurate information, heading off inaccurate new stories about downtown construction problems,
- Considering special mitigation programs such as provisions for new parking to replace parking that is permanently or temporarily displaced by construction, reduced parking cost in the vicinity of construction and reduced transit fares to the downtown

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Appendix A TIER I FINAL REPORT PORTLAND CBD POLICY

South/North Transit Corridor Study

Tier I Final Report

Adopted by the Metro Council and C-TRAN Board December 22, 1994

2.5 Portland CBD Alignment Alternative

- 1 The Surface LRT Alternative on 5th and 6th Avenues within the Portland CBD will be developed in detail for further study within the Tier II DEIS
- 2 Because of the critical function that the Portland CBD segment plays in the South/North Corridor, the study of the 5th/6th Avenue Surface Alignment is based upon the following principles
 - [a] To accommodate bus, light rail, general purpose automobile and pedestrian travel on the 5th/6th Avenue Transit Mall
 - [b] To develop for further evaluation Surface LRT Transit Mall design options that accommodate those modes of travel using both a three-lane and a four-lane configuration. The designs will address sidewalk widths, street trees and other amenities which are critical to a pedestrian friendly environment
 - [c] To retain automobile access on essential blocks that directly serve the Hilton Hotel, parking garages that enter and/or exit onto the Transit Mall and other important locations as determined through a collaborative process with interested downtown parties
 - [d] To establish the light rail station locations that will optimize both light rail access and automobile access on the Transit Mall. In general, those locations will be (1) near the PSU campus, (2) near City Hall, (3) near Pioneer Square, (4) south of Burnside, and (5) one or two stations to serve the Old Town, Union Station and north River District areas
 - [e] To work with the Downtown Portland community in developing the Surface LRT Transit Mall options for further study and in selecting the locally preferred alternative
 - [f] To develop the refined surface alternative(s) that address these principles for inclusion in the adoption of the *Detailed Definition of Alternatives Report*, and that if at that time it is concluded that a 5th/6th Avenue Surface Alignment cannot be developed that addresses those principles, other alternatives would be developed for further study within the Draft Environmental Impact Statement

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**Appendix B DOWNTOWN OVERSIGHT COMMITTEE
MEMBERSHIP AND CHARGE**

DOWNTOWN PORTLAND OVERSIGHT COMMITTEE

W Charles Armstrong, Chairman, Chief Executive Officer, Bank of America, Chair
 Mike Burton, Executive Officer, Metro
 Earl Blumenauer, Commissioner, City of Portland
 John R Post, Deputy General Manager, Tri-Met
 John Eskildsen, President, US Bank of Oregon
 Greg Goodman, Vice President, City Center Parking
 Jim Mark, Executive Vice President, Melvin Mark Properties
 William S Naito, Vice President, Norcrest China
 Patrick Done, Manager, Pioneer Place
 Tammy Hickel, General Manager, Nordstrom - Oregon Region
 Lindsay Desrochers, Vice President, PSU Finance and Administration
 Philip Kalberer, President, Kalberer Hotel Supply
 Vern Rifer, Downtown Community Association
 Jordan Schnitzer, Vice President, Harsch Investment
 Susan Emmons, Executive Director, Northwest Pilot Projects
 E Kay Stepp, Portland Development Commission
 Kerry Kincaid, Downtown Retail Council
 Richard Michaelson, President, Planning Commission, City of Portland

DOWNTOWN PORTLAND TECHNICAL COMMITTEE

Greg Baldwin, Zimmer Gunsul Frasca
 Gina Whitehill-Baziuk, Metro
 Richard Brandman, Metro
 David Calver, Tri-Met
 Steve Dotterer, City of Portland
 Steffen Gray, Association for Portland Progress
 Steve Iwata City of Portland
 Andrew Janssen, Tri-Met
 Chris Kopca, Association for Portland Progress
 Wendy Smith Novick, City of Portland
 Karen Rabiner, City of Portland
 Ross Roberts, Tri-Met
 Roger Shiels, Shiels Oblatz Johnsen
 Leon Skiles, Metro
 Dave Unsworth, Metro
 Rick Williams, Association for Portland Progress

Downtown Mall Surface LRT Alignment Study

Purpose, Oversight Structure and Schedule

Purpose

- To identify the most promising surface light rail transit (LRT) designs for a surface alignment through downtown Portland within the 5th/6th Avenue Transit Mall between Union Station in the north and I-405 in the south
- Accomplish this task in accordance with the principles established in the *South/North Tier I Final Report*, including the need to accommodate bus, light rail, auto and pedestrian travel on the Transit Mall
- Determine whether those most promising alternatives adequately addresses the established criteria. If the criteria are adequately addressed, then only the surface LRT alternative for downtown Portland will advance into the Tier II Draft Environmental Impact Statement (DEIS) for further study
- If the criteria are not adequately addressed, then one or more other alternatives within downtown Portland will be developed along with the surface alternative for further study within the Tier II DEIS

Oversight Structure

Final determination of all alternatives to advance into the Tier II DEIS is made by Metro Council and the C-TRAN Board of Directors. Through their adoption of the *South/North Tier I Final Report* (December 22, 1994), Metro and C-TRAN have directed that a cooperative process be developed between the South/North Study's participating jurisdictions and the downtown Portland community to achieve the purpose described above. As such, Metro Councilor and Chair of the South/North Steering Group, Rod Monroe, has established the Downtown Alignment Oversight Committee and the Downtown Alignment Technical Committee. He has asked that the Oversight Committee be composed of a general cross-section of the downtown community including building owners, retail, business owners, residents from Union Station to Portland State University, Portland State University and the Association for Portland Progress. Their charges is described below.

- **Downtown Alignment Oversight Committee** The purpose of the Downtown Alignment Oversight Committee is to
 - 1) Guide the identification and development of the most promising surface alignments through downtown Portland within the 5th/6th Avenue Transit Mall,

- 2) Refine the criteria and measures to be used to evaluate the performance of the surface alignment alternatives,
 - 3) Forward a recommendation to the South/North Steering Group on whether the alternatives adequately address those criteria or whether alignment alternatives in addition to the surface alignment on the 5th/6th Avenue Transit Mall should be advanced into the Tier II DEIS
- **Downtown Alignment Technical Committee** The purpose of the Downtown Alignment Technical Committee is to manage the preparation of the technical data and documentation that will be prepared to allow the refinement of the downtown surface alignment and that will be used to determine whether the surface alternatives adequately addresses the criteria established by the Oversight Committee. Membership on the Technical Committee includes Metro, Tri-Met and City of Portland staff, Association for Portland Progress Transportation Committee representatives and consultant support.

Schedule

It is anticipated that the majority of technical work required to complete the study will be by the end of April 1995. At that time, the Oversight Committee will determine whether there is adequate information to make an assessment of the surface LRT alternatives' performance. If the technical work appears to be adequate, then the decision-making process will be implemented. If the Oversight Committee determines that additional time and technical work would be beneficial in making the choices, then the schedule could be extended by approximately one month. The Oversight Committee is expected to meet every two to three weeks until the end of April 1995 with a total of about five or six meetings.

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**Appendix C DOWNTOWN PORTLAND OVERSIGHT COMMITTEE
RESOLUTION OF FINDINGS AND RECOMMENDATIONS**

Downtown Portland Oversight Committee**Resolution of Findings and Recommendations Concerning the
South/North Light Rail Alignment in Downtown Portland**

The Downtown Portland Oversight Committee was formed to

- Identify the most promising surface light rail transit (LRT) designs for a surface alignment through downtown Portland within the 5th/6th Avenue Transit Mall between Union Station in the north and I-405 in the south
- Accomplish this task in accordance with the principles established in the *South/North Tier I Final Report*, including the need to accommodate bus, light rail, auto and pedestrian travel on the Transit Mall
- Determine whether those most promising alternatives adequately address the established criteria. If the criteria are adequately addressed, then only the surface LRT alternative for downtown Portland will advance into the Tier II Draft Environmental Impact Statement (DEIS) for further study
- If the criteria are not adequately addressed, then one or more other alternatives within downtown Portland will be developed along with the surface alternative for further study within the Tier II DEIS

First and foremost, because of our commitment to managing growth in the region in a way that preserves and improves our economic health and quality of life, the Downtown Portland Oversight Committee strongly supports the construction of the South/North Light Rail line through downtown Portland to Clackamas and Clark Counties. If funding is limited and the first construction segment cannot be a bi-state project, the Committee endorses the segment from the Blazer Arena, through downtown Portland, to Clackamas Town Center followed by a segment extending north.

Second, after working with the South/North Transit Corridor Study between February and June 1995 to develop and evaluate various options, the Downtown Oversight Committee finds that the following combination of alternatives meets the criteria established by the Committee and that more detailed study of other tunnel and surface street alignments is not warranted.

In addition, the Committee makes the following findings and recommendations to the South/North Steering Group. These findings and recommendations are documented in greater detail in the *Downtown Portland Oversight Committee Central Business District South/North Light Rail Alignment Recommendations* report (June 1995).

Findings

The Downtown Portland Oversight Committee has found that the recommended alternative described below

- 1) Reinforces the goals and objectives of the Central City Plan by supporting existing and future public and private development and investment in a manner that is consistent with commitments dating back to the Downtown Plan which was adopted over 20 years ago,
- 2) Maintains existing traffic and access patterns on 5th and 6th Avenues and within the Central Business District which supports existing and future businesses and retailing and adds to the activity and quality of the streets,
- 3) Provides fast and convenient transit service to existing and future downtown office and commercial uses, delivering the most people to where they want to go, maximizing the potential for increased transit ridership to and from the Central City,
- 4) Maintains the current pedestrian character of the Transit Mall by retaining the sidewalk widths, pedestrian amenities and trees currently in place on the Central and North Mall
- 5) Improves the role of the Portland Transit Mall as the central pedestrian boulevard and transit spine in the Downtown and CBD by extending it southward and changing its emphasis to light rail,
- 6) Ensures the least construction impacts and cost by placing light rail in a location where sidewalk reconstruction, street grade changes, utility relocations and other reconstruction work can be minimized and the benefits of past investments in the North and Central Transit Mall utility relocation, strain pole foundations, sidewalk improvements and surface grade adjustments can be utilized,
- 7) Offers the opportunity to reconfigure the Central City transit circulation plan, utilizing off-mall service (approximately 25-35 buses per hour by 2015) on other streets, most significantly 10th and 11th Avenues, where development can benefit from improved transit connections to the regional system, Central City Streetcar and intra-downtown circulation within Fareless Square,
- 8) Provides good light rail access to the River District, University District and River Place/South Waterfront area,
- 9) Reinforces the multi-modal transportation center concept by providing the best opportunity for a good connection at Union Station between light rail, Amtrak, inter-and intra-City buses and future high speed rail,

- 10) Provides the opportunity to maintain the function of the Portland Transit Mall while improving its aesthetic environment by minimizing the 'sheet metal' affect while simultaneously maximizing its functional passenger capacity
- 11) Creates the opportunity for coordination of construction and funding of improvements to the Central Mall and a funding source to insure that 5th and 6th Avenues can be enhanced to the original demanding Central Mall design standards, and,
- 12) Fulfills an objective of the Central Mall business community to enhance the pedestrian environment by reducing items on the street and increasing visibility of retailing along 5th and 6th Avenues by removing over half of the existing bus stops, shelters and related items

Recommendations

The Downtown Portland Oversight Committee makes the following recommendations to the South/North Steering Group (illustrated in Figure 1)

- 1) That the South/North Light Rail project, between the Clackamas and Clark Counties be funded and constructed and that South/North Light Rail be extended through downtown Portland and if funding is limited and the first construction segment cannot be a bi-state project, the Committee endorses the segment from the Blazer Arena, through downtown Portland, to Clackamas Town Center followed by a segment extending north,
- 2) That the A-2 Central Mall, B-3 North Mall, C-1 South Mall, S-1 South Entry and N-1 and N-2 North Entry (which is the current preference of the Committee) options meets the criteria established by the Oversight Committee and should be selected for further study within the DEIS,
- 3) That convenient, readily accessible service be provided to all Central City districts including Riverplace, South Auditorium, Portland State University, Central Business District, Old Town/Chmatown and Union Station Station stops at these locations should be established even if central city travel time for the LRT is lengthened
- 4) That Tri-Met, the City of Portland, Metro and the Downtown Portland business community work to develop a plan for the central city streetcar and a central city transit circulation and facility plan that would spread transit access throughout more of the central city area based upon the results of the DEIS and completed in conjunction with the FEIS
- 5) That a high level of urban design standard be developed and implemented guiding the design and construction of the light rail alignment throughout the central city area,
- 6) That a detailed construction management and mitigation plan be developed for the central city area that would create a *Downtown Portland Construction District* In addition, a Downtown Portland LRT Committee should be formed to oversee the design, development of contract documents and construction of all work within the Special Downtown Portland

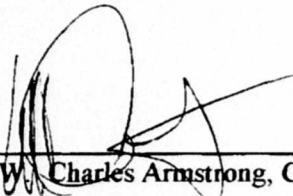
Construction District Alternative contracting methods should be employed so that a contractor would be selected based upon their experience and qualifications to address the unique requirements of this project (including but not limited to the need to avoid disruption to adjacent businesses, minimize the duration of construction and avoiding displacements), which could mean that the low bidder may not be selected. Finally, the project should implement a temporary traffic management plan and a variety of special programs to mitigate the construction impacts on the central city.

These methods should be based on criteria to be established by the Downtown Portland LRT Committee. Criteria to be considered include a) negotiated rather than low bid contracting, b) incentive and penalty clauses, and c) use of a single prime contractor for LRT and utility construction.

- 7) Construction time be limited to three months per block in the North Mall, four months per block in the Central Mall, and six months per block in the South Mall and south portals. Major parallel sections of SW 5th and 6th Avenues in the Central Mall shall not be under construction at the same time.
- 8) The entire central city construction plan, including major utility reconstruction, shall be approved by City Council, such action having been taken after a public hearing.

Adopted

June 29, 1995


W. Charles Armstrong, Chair

June 29, 1995

1: dltresol rev

35473



NW 18th

NW Lovejoy St

NW Irving St

NW Glisan St

NW Everett St

W Burnside St

SW Washington St
SW Morrison St

SW Taylor St
SW Main St

SW Columbia St
SW Clay St

SW Mill St
SW Montgomery St

SW 6th Ave
SW 4th Ave

NW Broadway Ave

Union Station

North Entry

Broadway Bridge

N-2

N-1

B-3 North Mall

Auto access under study

A-2 Central Mall

C-1 South Mall

S-1 South Entry

Station Access under Study

SW Harrison St
SW Lincoln St

SW Front Ave

Hawthorne Bridge

Marquam River

Burnside Bridge

Morrison Bridge

Water Ave

OMSI

To Caruthers Bridge
To Ross Island Bridge

NE Multnomah St

NE Holladay St

NE Lloyd Blvd

NE Glisan St

E Burnside St

SE Sandy Blvd

SE Stark St

SE Morrison St
SE Belmont St

SE Martin Luther King Jr Blvd
SE Grand Ave

NE 11th Av

Base #6



Recommended Light Rail Design Options
Downtown Portland
5th/6th Avenue Surface Couplet
November 1995

- Light Rail Transit (LRT) alignment
- - - Mail auto access
- • LRT alignment options
- Station with no auto access on mail
- Station with auto access on mail
- MAX
- Westside LRT
- Existing railroad

Note Alignment, station and park and ride locations are currently under study and may change



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**Appendix D S/N PROJECT MANAGEMENT GROUP
DOWNTOWN PORTLAND RECOMMENDATION**

35473



METRO

Date October 27, 1995

To South/North Steering Group

From Richard Brandman, Chair
South/North Project Management Group

Re Recommendations for Portland Central Business District

The purpose of this memorandum is to advise you that on October 19, 1995 the South/North Project Management Group (PMG) unanimously endorsed the Downtown Portland Oversight Committee's recommendations concerning light rail alignments in the Portland Central Business District (CBD) to be advanced into the Draft Environmental Impact Statement (CBD) for further study

The Oversight Committee's recommendation, adopted unanimously on June 30, 1995, and its accompanying technical findings report, are enclosed. The Oversight Committee and its technical committee spent six months thoroughly evaluating a wide range of options for providing light rail transit (LRT) on the mall while accommodating buses, automobiles and pedestrians. The Committee adopted a wide range of criteria, identified in the report, and examined each of the options based upon those criteria. The Committee also considered public comment received at community meetings and written comments received during the study period.

Both the Oversight Committee and the PMG found that the recommended options in downtown Portland meet those criteria and would provide for an efficient transit system while preserving and enhancing the economic health and livability of downtown Portland. In addition, the PMG echoed the recommendation of the Oversight Committee that as the project moves toward construction Tri-Met needs to develop and implement a construction management plan that minimizes both the duration and extent of construction impacts within the downtown Portland. The report identifies a wide range of elements that should be considered for inclusion within the construction management plan.

The two Committees also reviewed previous actions taken by the region to narrow the downtown alignment to surface operations on the 5th/6th Avenue Transit Mall and found that no other surface street or subway alignment within downtown Portland provides a promising alternative to the Mall alignment. Therefore, both Committees recommend that only the surface alignment on the Transit Mall be forwarded into the DEIS for further study.

I look forward to discussing with you these recommendations and the technical work that lead to their adoption. If you have any questions concerning downtown Portland prior to the Steering Group Work Session (Thursday, November 2, 1995, 7:30 - 10:00 a.m.) please contact me at 503/797-1749.

Attachments

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35473

**Appendix E S/N CITIZENS ADVISORY COMMITTEE
DOWNTOWN PORTLAND RECOMMENDATION**



35473

South/North
Citizen Advisory
Committee

Rick Williams
Chair

Karen Ciocia
Vice-Chair

Lynn Bonner

Bob Elliott

Jane Floyd

Giles Gibson

Dorothy Hall

Winzel Hamilton

Frank Howatt

Champ Husted

Jim Justice

Stanley Lewis

Gina Maloney

Michael Mulkey

Irene Park

Larry Quilliam

Dellian Redjou

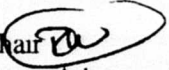
Marc Veneroso

Barbara Yasson

Staff
Gina Whitehill-Baziuk
Metro
503/797-1746

November 10, 1995

To Rod Monroe, Chair
South/North Steering Group

From Rick Williams, Chair 
South/North Citizens Advisory Committee

Re **Downtown Portland Alignment Alternative Recommendation**

Over the past year, the South/North Citizen Advisory Committee (CAC) has been receiving technical information and public testimony concerning a light rail alignment within downtown Portland. On Thursday, November 9, 1995, the CAC adopted its recommendation to the South/North Steering Group for the light rail alignment within downtown Portland that should be studied further within the Draft Environmental Impact Statement (DEIS). The recommendation is the result of the Committee's 1) review of the technical analysis prepared by project staff, 2) review of the recommendations adopted by the Downtown Portland Oversight Committee and the South/North Project Management Group, and, 3) consideration of public comment.

In forming its recommendation, the CAC first discussed the proposed options for the surface alignment on the 5th/6th Avenue Transit Mall. The range of options considered is outlined in the Oversight Committee's *Portland Central Business District South/North Light Rail Alignment Recommendations* report. The CAC agreed with the Oversight Committee's proposal and voted to recommend the same Transit Mall alignment options to the Steering Group for further study within the DEIS. Following is a summary of the alignment(s) recommended by the CAC for each segment of downtown Portland.

- **Central Mall A-2** This segment is between Madison Street and Burnside Street. The recommended option would place light rail in the center lane of 5th and 6th Avenues. The center lane would be shared between light rail vehicles and buses. The left lane would be dedicated to general automobile travel (closed at light rail station locations). The right lane would be available for exclusive bus use.
- **North Mall B-3** This segment is north of Burnside Street to either Glisan or Irving Street near Union Station. The preferred option

South/North
Citizen Advisory
Committee

Rick Williams
Chair

would place light rail in the left lane of 5th and 6th Avenues. The right lane would be shared by buses and automobiles.

- **South Mall C-1** This segment is south of Madison Street to the Portland State University Campus at Harrison Street. The recommended option would place light rail generally on the left side of 5th and 6th Avenues. Buses and automobiles would share two or three lanes (depending upon the block) to the right of the light rail tracks.
- **North Entry N-1 and N-2** This segment would connect the Mall alignment with the Steel Bridge. N-1 would place light rail in the left lane of Glisan Street and would retain two lanes for automobile traffic on the right. N-2 would extend the light rail alignment past Union Station near Irving Street.
- **South Entry S-1** This segment connects the Mall alignment with Riverplace. The preferred option would place light rail in a median within Harrison Street.

Second, the CAC considered whether any other option, in addition to the Surface 5th/6th Avenue Transit Mall alignment alternative, should be studied further within the DEIS. The CAC concluded that the proposed Transit Mall alignment adequately addresses the principles and criteria established by Metro Council in December 1994 and by the Downtown Oversight Committee in March 1995. Further, the CAC discussed other surface street alignment options and other subway options and concluded that there were no other promising alignment alternatives within downtown Portland that should be advanced into the DEIS for further study. Therefore, the CAC recommends to the Steering Group that only the Surface Transit Mall alignment alternative with the design options outlined above be carried forward into the DEIS for further study.

In making its recommendations, the CAC noted the wide breadth and high quality of technical analysis that was conducted by the project staff. The CAC was also impressed by the efforts made by the project to involve the downtown community in the study process. Finally, the CAC found that the high level of public comment and attention to the downtown Portland alignment accurately reflects the level of importance of the segment to the downtown community, to the transit system and to the region.

In conclusion, I would like to thank you for your consideration of these recommendations and I look forward to discussing the recommendations and the rationale behind them at your meeting on November 20, 1995. If you have any questions about CAC recommendations prior to that meeting, please contact me at 503/282-3949.

cc South/North Project Management Group

RESOLUTION NO 35473

Adopt the South/North Steering Group's design option recommendations for further study within the Tier II, Draft Environmental Impact Statement Process (Resolution)

WHEREAS, in April 1993, the Metro Council adopted Resolution No 93-1784 and the C-TRAN Board of Directors adopted Resolution No BR-93-9404 which selected the Milwaukie and I-5 North Corridors as the region's next high-capacity transit priority for study and combined them into the South/North Transit Corridor to be studied within a federal Draft Environmental Impact Statement, and

WHEREAS, in October 1993, the Federal Transit Administration approved the South/North application to initiate Alternatives Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the *Federal Register* to publish a South/North Environmental Impact Statement, and

WHEREAS, the role of the South/North Steering Group in terminus and alignment alternative narrowing process is to forward its recommendations to participating jurisdictions for their consideration, that participating jurisdictions are to forward their commendations to the C-TRAN Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Draft Environmental Impact Statement for further study, and

WHEREAS, the role of the South/North Steering Group in the design option narrowing for the selected terminus and alignment alternatives is to consider recommendations from the South/North Project Management Group and Citizen Advisory Committee and to finalize which design option(s) will advance into the Draft Environmental Impact Statement for further study, and

WHEREAS, in December 1994, the Metro Council adopted Resolution No 94-1989 and the C-TRAN Board of Directors adopted Resolution No BR-94-011 which identified the Phase One terminus alternatives and selected most of the alignment alternatives to advance into the Draft Environmental Impact Statement for further study, and

WHEREAS, in December 1994 within the same resolution the Metro Council and the C-TRAN Board of Directors also determined that within the Portland central business district, a surface light rail transit alternative on 5th and 6th Avenues shall be developed based upon several principles and that if prior to initiation of the Draft Environmental Impact Statement it is concluded that a 5th/6th Avenue alignment cannot be developed that addressed those principles, other alternatives will be developed for further study in the Draft Environmental Impact Statement, and

WHEREAS, in March 1995, the South/North Steering Group determined that both the Caruthers and Ross Island Crossing alternatives and that both the I-5 and Interstate Avenue alignment alternatives would advance into the Draft Environmental Impact Statement for further study, and

WHEREAS, in August 1995, the C-TRAN Board of Directors adopted resolution No 95-048 which amended the Phase One northern terminus from the vicinity of 99th

Avenue in Hazel Dell, Washington to the Veterans Administration Hospital/Clark College in Vancouver, Washington, and

WHEREAS, the alignment design options currently under study have been developed and evaluated based upon the criteria and measures from the *Evaluation Methodology Report* and documented within various technical memoranda, including the *South/North design Option Narrowing Report* and the *Design Option Briefing Document*, and

WHEREAS, a comprehensive public involvement program for the design option narrowing process was developed and implemented by the South/North Study that included, but was not limited to, numerous community meetings, a 45-day public comment period, public meetings for the Steering Group to receive oral comment and an ongoing Citizens Advisory Committee that provided regular public comment opportunities, and

WHEREAS, various options for a 5th/6th Avenue surface light rail alignment were evaluated by the Downtown Portland Oversight Committee which determined that the recommended design option on 5th/6th Avenues adequately addresses the criteria established by Metro Council, the C-TRAN Board of Directors and the Oversight Committee and should therefore be exclusively studied further within the Draft Environmental Impact Statement, and

WHEREAS, in October and November 1995, the Project Management Group and the Citizens Advisory Committee formed independent design option narrowing recommendations and downtown Portland alignment alternative recommendations and forwarded them the Steering Group for consideration, and

WHEREAS, in November 1995, the Steering Group adopted the *South/North Design Option Narrowing Final Report* (Exhibit A) which identifies the design options that best meet the project's adopted goal and objectives and that will advance into the Draft Environmental Impact Statement for further study, and

WHEREAS, in November 1995, the Steering Group adopted the proposed light rail alignment for 5th/6th Avenues in downtown Portland,

THEREFORE, BE IT RESOLVED, by the Council of the City of Portland, a municipal corporation of the State of Oregon, has determined that the downtown Portland design option which would generally retain current automobile access and pedestrian facilities, which would generally provide for a lane of joint bus and light rail operations and a lane of exclusive bus operations on 5th/6th Avenues adequately addresses the criteria established by Resolution No 94-1989 as adopted by the Metro Council and the C-TRAN Board of Directors and shall therefore be exclusively studied further within the Draft Environmental Impact Statement, and that Exhibit B is adopted as the *South/North Downtown Portland Tier I Final Report*, and

BE IT FURTHER RESOLVED, that the Council supports amending the South/North Phase One northern terminus to be in the vicinity of the Veterans Administration Hospital and Clark College in Vancouver, Washington, and

BE IT FURTHER RESOLVED, that the Council concurs with the design options selected by the South/North Steering Group for further study within the Draft Environmental

Impact Statement as described in the *Design Option Narrowing Final Report* (Exhibit A) which are generally as follows

- 1 *Minimum Operable Segments* (a) A full-length project from the vicinity of the Clackamas Regional Center, through downtown Milwaukie, Portland and Vancouver, to the vicinity of the Veterans Administration Hospital/Clark College, (b) a bi-state minimum operable segment from the vicinity of downtown Milwaukie/Market Place station and park-and-ride lot to the vicinity of the Veterans Administration Hospital/Clark College, and (c) three Oregon-only minimum operable segments each with a southern terminus in the vicinity of the Clackamas Regional Center and a northern terminus at a) the vicinity of the Rose Quarter, b) the vicinity of the Edgar Kaiser Medical Center, or, c) the vicinity of the Expo Center
- 2 *South Terminus* North of Clackamas Town Center alignment with a Sunnyside Park-and-Ride Terminus east of I-205, and, South of Clackamas Town Center alignment to S E 93rd Avenue Clackamas Town Center area Terminus
- 3 *Railroad Avenue/Highway 224* Alignment adjacent to Railroad Avenue
- 4 *Downtown Milwaukie* McLaughlin Boulevard/Main Street with a Monroe Street Alignment, and, Southern Pacific Branch Line with a Monroe Street alignment
- 5 *Ross Island Crossing* North Ross Island Crossing alignment with a West of McLoughlin Boulevard sub-option
- 6 *Caruthers Crossing and Southeast Portland* Caruthers Modified with a West of Brooklyn Yards alignment
- 7 *Steel Bridge to Kaiser* East I-5/Kerby Avenue alignment, and, Wheeler Avenue/Russell Avenue alignment
- 8 *North Portland* All-I-5 alignment, and, All-Interstate Avenue (Metro work with Tri-Met and City staff to evaluate, as soon as the technical data for the DEIS is available, which North Portland crossover option warrants further study, and staff will report back to the South/North Project Management Group, Citizen Advisory Committee and Steering Group)
- 9 *Hayden Island* West of I-5 (under ramps)
- 10 *Columbia River Crossing* Low-level lift span
- 11 *Downtown Vancouver* Two-way on Washington Street, and

Adopted by the Council, **DEC 07 1995**

Commissioner Earl Blumenauer
Stephen Iwata

Auditor of the City of Portland
By *Betta Olson*
Deputy

December 7, 1995

1908

Agenda No

RESOLUTION NO

35473

Title

Adopt the South/North Steering Group's design option recommendations for further study within the Tier II, Draft Environmental Impact Statement Process (Resolution)

INTRODUCED BY		Filed	
Earl Blumenauer		DEC 1 1995	
		Barbara Clark Auditor of the City of Portland	
NOTED BY COMMISSIONER		By <u>Cay Kershner</u> Deputy	
Affairs			
Finance and Administration			
Safety			
Utilities			
Works Earl Blumenauer <i>EB/MB</i>			
BUREAU APPROVAL		For Meeting of	
Bureau Portland Office of Transportation <i>John Truitt</i>		Action Taken	
Prepared By Date		___ Amended	
Steve Iwata 11/29/85		___ Continued to _____	
Budget Impact Review			
___ Completed ___ X Not Required			
Bureau Head			

AGENDA		FOUR FIFTHS AGENDA	COMMISSIONERS VOTED AS FOLLOWS		
				YEAS	NAYS
Consent	Regular <input checked="" type="checkbox"/>	Blumenauer	Blumenauer	<input checked="" type="checkbox"/>	
NOTED BY		Hales	Hales	<input checked="" type="checkbox"/>	
City Attorney		Kafoury	Kafoury	<input checked="" type="checkbox"/>	
City Auditor		Lindberg	Lindberg	<input checked="" type="checkbox"/>	
City Engineer		Katz	Katz	<input checked="" type="checkbox"/>	