

35158

EXHIBIT



*Traffic Management/Site Operations
Plan*

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OREGON ARENA PROJECT

Traffic Management Plan

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Traffic Management Plan

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EXHIBITS

Exhibit A	DEA - Traffic Circulation, Transit Services, and Parking Report , July 1991
Exhibit B	DEA - Simultaneous Events Transportation Management Plan, July 1991
Exhibit C	DEA - Traffic Management Program, November, 1991
Exhibit D	DEA - Traffic Systems Design Report, April 30, 1992

- Exhibit E OAC/Tri-Met Shuttle Bus Service Agreement
- Exhibit F OAC/Tri-Met Shuttle Operations Plan
- Exhibit G OAC/Tri-Met Shuttle Marketing Plan
- Exhibit H EB - Master Plan

OREGON ARENA PROJECT
Traffic Management Plan
Section One

INTRODUCTION

★ **BACKGROUND/HISTORY**

- The Arena Task Force
- Traffic Management Team
- The Traffic Management/Site Operations Plan

★ **SUMMARY MATRIX**

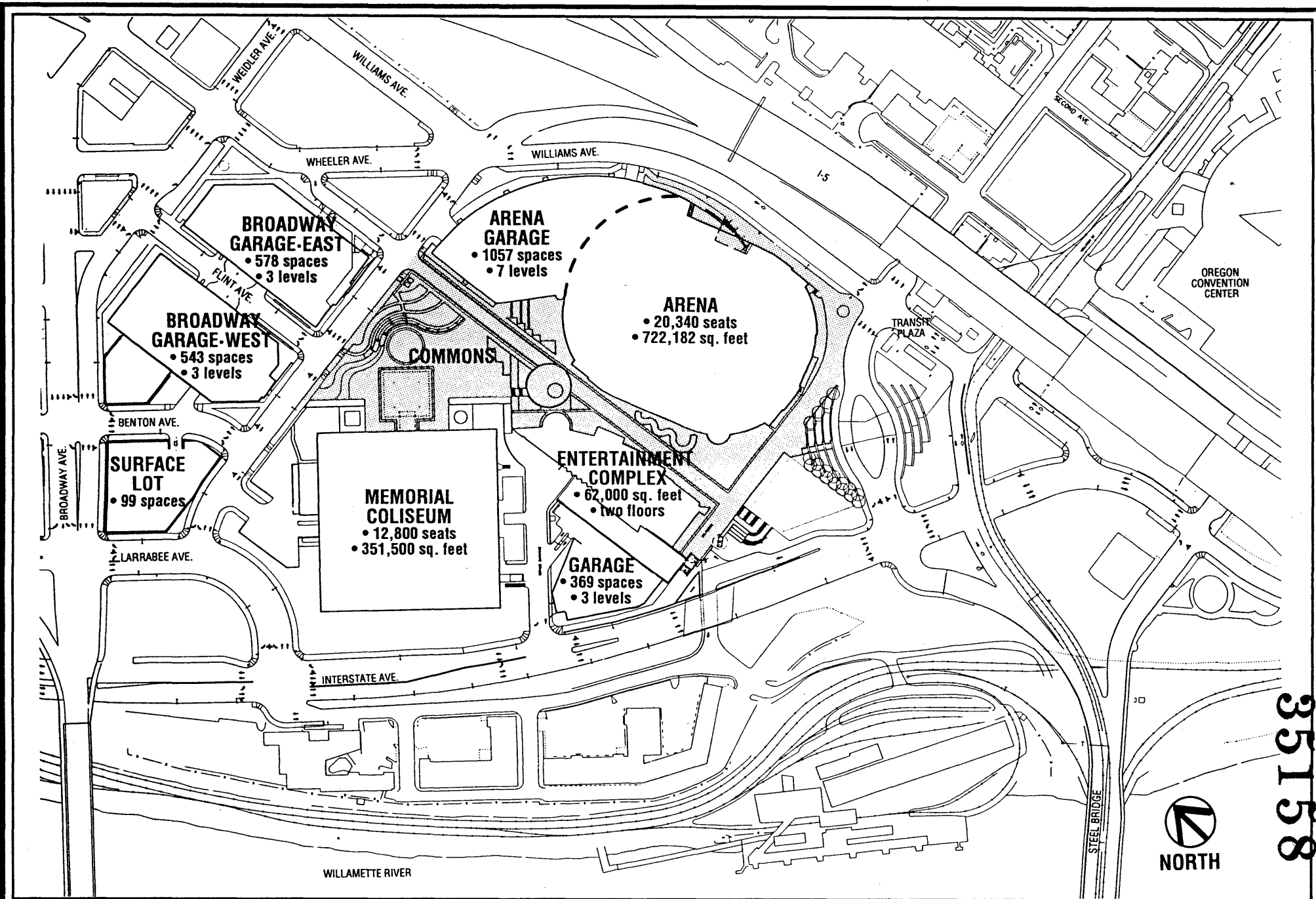
★ **TRANSPORTATION AND SITE OPERATION GOALS**

★ BACKGROUND/HISTORY

In the Fall of 1995, the Oregon Arena Corporation (OAC) and the City of Portland will unveil a major "entertainment district" on the eastside of the Willamette River. Located in the Lloyd District, this new complex is being designed by Ellerbe Becket, Architects and Engineers, and will feature:

- ◆ A state-of-the-art 20,340 seat arena
- ◆ An entertainment complex of offices, restaurants, and dedicated parking
- ◆ The 12,800 seat Memorial Coliseum
- ◆ Parking for more than 2,500 cars
- ◆ A variety of public spaces, including a new transit plaza, pedestrian walkways, landscaping features, and a major public "commons"

See map, next page ■■■▶



MAP KEY

 Pedestrian Plaza (Commons)

**OREGON
ARENA
PROJECT**

**Site Plan/Facilities
Information - 1995**

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The proposed site was chosen through an exhaustive site selection process, identifying and assessing numerous regional locations. This site was the clear choice due to the wealth of opportunities it possesses:

- ◆ Adjacency to light rail and transit stations
- ◆ Proximity to downtown
- ◆ Good pedestrian and bicycle access
- ◆ Location at the confluence of three freeways: I-5, I-405 and I-84.
- ◆ Ability to develop without displacing existing residential or business uses
- ◆ Potential for connections to the Willamette river
- ◆ The site "connects" downtown with the emerging Lloyd and Convention Center districts
- ◆ Unequaled views of the city skyline and Portland's West hills

While the advantages of this location are numerous, the "tightness" of the site presents many challenges. This requires a comprehensive approach to traffic design and management.

The Arena Task Force

In May and June, 1991, OAC sponsored a series of workshops to develop a consensus between various public and private agencies on transportation, traffic, and design objectives and guidelines for the project. These workshops included representatives from PDOT, ODOT, Portland Development Commission, MERC, Tri-Met and many other public and private agencies. These workshops provided a forum for unconstrained brainstorming. Notes from those workshops, which formed the basis for OAC and Ellerbe Becket's initial site master plan and transportation/site operations goals, are attached as Exhibit H. Out of these sessions, the Arena Task Force was formed to guide the project toward a public/private partnership.

Traffic Management Team

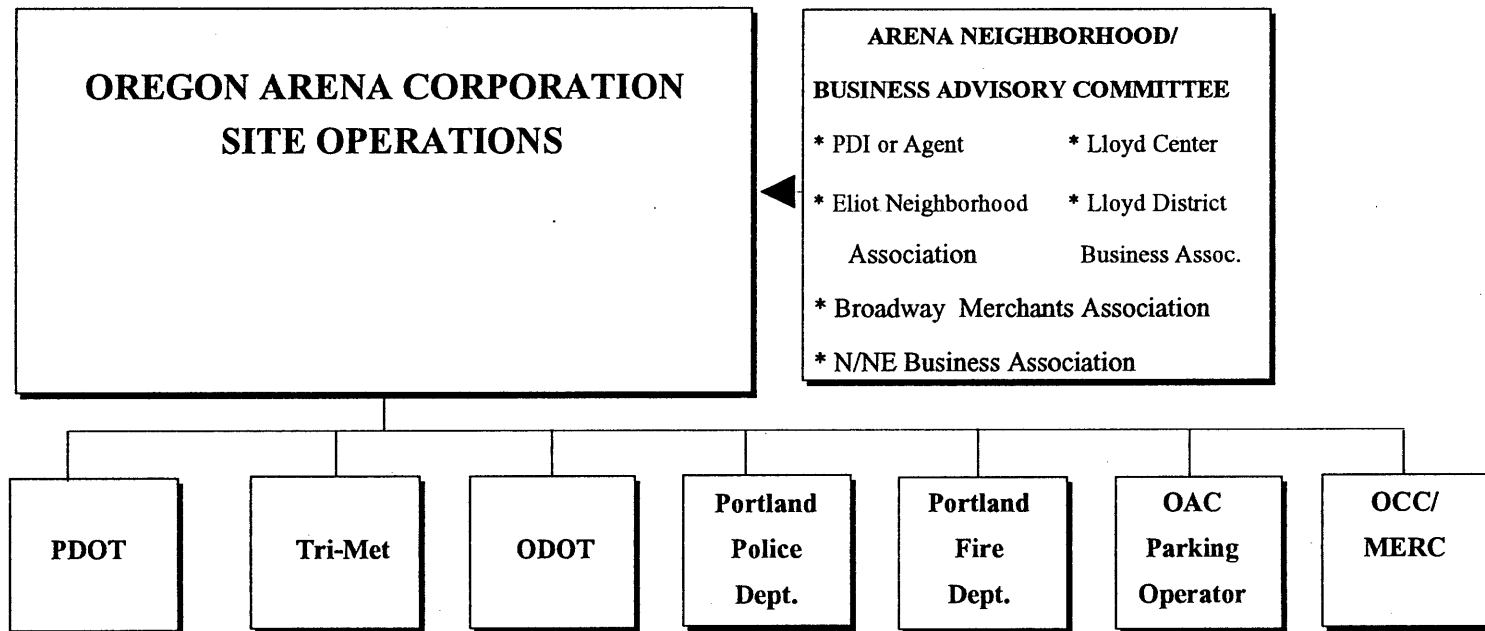
Since the workshops, David Evans and Associates (DEA), a Portland-based engineering firm, has been working with OAC on issues related to traffic and transportation. As part of their work, DEA prepared a Traffic Circulation, Transit Services, and Parking Report in July, 1991; a Simultaneous Events Transportation Management Plan in July 1991; and a Traffic Management Program in November, 1991 (see Exhibits A-C).

These documents have led to the formation of the Oregon Arena Project Traffic Management Team, responsible for organizing, testing, and ultimately, implementing the Traffic Management/Site Operations Plan (TMP). The Traffic Management Team, directed by OAC staff has met regularly to oversee the traffic and transportation planning. The team will continue to meet during construction and beyond. The Traffic Management Team will be monitored regularly by a group of area business and Eliot Neighborhood Association representatives known as the Arena Neighborhood/Business Advisory Committee. One of the initial charges of the AN/BAC, in conjunction with the TMT, will be to establish mutually agreed upon, quantitative thresholds beyond which traffic impacts, particularly parking on Eliot neighborhood streets, are acknowledged to be a problem requiring timely effective remedial action from OAC and the City of Portland. Corresponding diagnostic and mitigation measures will be subject to the respective budget processes of the City of Portland and OAC.

The Traffic Management/Site Operations Plan

While this document addresses details of transportation management and site operations, more highly technical and detailed information may be found in the Traffic Systems Design Report prepared by David Evans Associates, April 30, 1992 (see Exhibit D).

Figure 1
TMT Organizational Chart



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★ SUMMARY MATRIX

Element	Responsibility	Provider	Timeline	Funding Source
On-Site Parking Pages 13	OAC/COP	OAC/COP	Fall '94/Spring '95	OAC (Arena/Annex) COP (Broadway parking garages)
Off-Site Shuttle Pages 17	OAC	Tri-Met	Test during Summer '92 Full use when construction begins Summer '93	OAC (parking revenue)
Downtown Shuttle Page 19	OAC	Tri-Met	Under negotiation with City/APP	OAC (parking revenue) with City/APP
Tri-Met Bus Page 25	Tri-Met OAC Marketing.	Tri-Met	On-Line	Tri-Met
Restaurant Bus Page 26	Restaurants/Bus Co. (OAC coordinates)	Restaurants/Bus Companies	On-Line Construction and beyond	Restaurants/Bus Companies
Bicycles: Improvements Page 27	OAC/COP	OAC/COP	Fall '94	COP (public funding)
Pedestrian: Improvements Page 29	OAC/COP	OAC/COP	Fall '94	COP (public funding)
Parking (Pre-paid) Page 36	OAC	Ticketmaster and Fastixx	Available	OAC (parking revenue)
Signage: Highway Page 44	ODOT	ODOT	Construction completion	ODOT
Signage: Off site and Street Page 44	OAC/COP (OAC Design)	COP	Construction completion	COP (public funding)
Signage: Shuttle Page 44	OAC	OAC	Construction completion (temporary signs during construction)	OAC (private/parking revenue)

Element	Responsibility	Provider	Timeline	Funding Source
Signage: On Site Page 46	OAC/COP (OAC Design)	COP - pedestrian/traffic OAC - pylons	Construction completion	COP (public funding) OAC (private funding)
Construction Signage Page 57	OAC/COP/ODOT	COP OAC - specialty/non-traffic or code-related ODOT - as needed	In final design	COP/OAC/ODOT
Site Operations Page 49	OAC	OAC	Construction completion	OAC (private funding)
Security: Event/Operations Page 53	OAC	OAC	During construction and beyond	OAC (private funding)
Police: Traffic and Pedestrians Page 29	OAC	PPB/OAC	Construction and beyond	OAC (private funding)

★ TRANSPORTATION AND SITE OPERATIONS GOALS

- ◆ Emphasize and encourage transit, pedestrian, and alternative modes of transportation other than the automobile.
- ◆ Substantially improve traffic access and flow, relieve congestion, and enhance pedestrian safety.
- ◆ Create an urban street, parking, and transit environment in what was previously a suburban treatment (surface parking with poor pedestrian/automobile separation).
- ◆ Mitigate neighborhood and Lloyd District parking and traffic problems directly associated with Arena/Coliseum events.
- ◆ Create convenient access for all modes of transportation.
- ◆ Provide rapid ingress and egress, given the nature of three major public assembly buildings.
- ◆ Utilize information systems, such as radio and variable electronic signs, to provide up-to-the-minute data to patrons regarding traffic and site access.
- ◆ Utilize off-site parking in conjunction with a convenient shuttle service, in order to disperse and distribute traffic flow and volume.
- ◆ Instill a sense of anticipation that builds from the time one leaves their origination point up to the moment they arrive at their seat.
- ◆ Improve visual and physical connections to the Willamette River and Downtown.
- ◆ Improve traffic patterns by completing the Lloyd District "ring road" and connecting the Steel Bridge to Multnomah/Hassalo and the "ring road."

OREGON ARENA PROJECT***Traffic Management Plan***
Section Two**TRANSPORTATION MODES**★ **AUTOMOBILE**

- Ingress and Egress Points
- "Ring Road"
- Interstate Avenue
- Surrounding Streets
- On-Site Parking
 - Usage
- Parking within Walking Distance
 - The Arena and the Eliot Neighborhood
- Off-Site Parking and Bus Shuttle Service
 - Introduction to the Shuttle System
 - Shuttle Lots: Lloyd District
 - Shuttle Lots: Downtown
 - Routing
 - Operations
 - Security at Off-Site Lots
 - Pricing of the Shuttle
 - Shuttle Marketing
 - Shuttle Identity System
 - Testing of the Shuttle

★ **LIGHT RAIL AND TRADITIONAL BUS**

- MAX
- Traditional Bus/Park and Ride

★ **RESTAURANT BUSES**★ **BICYCLES**★ **PEDESTRIANS**

★ AUTOMOBILE

Although alternative transportation modes will be strongly encouraged, in the near-term the automobile will be the primary carrier to and from events at the site. This is primarily due to the nature of events that occur, with concerts and sporting events typically attended by groups of people in autos versus a daily commute by individuals to work. Therefore, roadway circulation and accessibility is critical.

Ingress and Egress Points

The roadway system has been designed to accommodate the daily traffic volumes through the site, as well as around the site. The overall goal is to disperse the site ingress and egress points, and to alleviate the congestion at the Broadway/Weidler/Vancouver/Williams intersection and other key ingress and egress points.

The current site design more than triples the access points to the Arena site and encourages the use of the Lloyd District Ring Road via Interstate Avenue as an alternative access to and from I-84, thus aiding I-5 access at the Broadway/Weidler/Vancouver/Williams intersection (see Section One - Site Plan).

"Ring Road"

One of the primary transportation planning goals of the Central City Transportation Management Plan is to develop an arterial circulation system ("Ring Road") around the Lloyd District. The Arena Masterplan completes this goal by reconfiguring several streets to connect with other Lloyd District streets, Lloyd Boulevard, 15th/16th Avenue, and Broadway/Weidler.

The completion of the "Ring Road" is also an important connection for Arena District access and traffic dispersion. The "Ring Road" will be completed by a new connection of Interstate Avenue and Broadway, and the Glisan/Interstate connection. This connection (the "Larrabee Street" connection) will be a four-lane, two-direction road that is signalized at both Broadway and Interstate. Dedicated left turn lanes in both directions will make this movement safe and convenient. Williams Avenue will be relocated, initially as a southbound-only road between the new Arena and I-5. Tri-Met buses will be the sole users of a

northbound, contraflow lane along relocated Williams Avenue. (Ultimately, the potential exists for the northbound segment of relocated Williams Avenue to be on the east side of I-5 and completed as part of a future Greeley-Banfield improvement project.)

Interstate Avenue

Interstate Avenue will be modified to more closely resemble a typical urban street between the new Larrabee Street connection and the existing Glisan Street underpass at the River Overlook, south of the Arena District site. Among the changes to Interstate Avenue will be median removal and the addition of traffic signals, sidewalks, dedicated bicycle lanes, street lighting, and trees (per the Lloyd District Guidelines).

To allow for a potential North Corridor light rail station, Interstate Avenue will be lowered between the existing Hassalo overpass and the Steel Bridge connection at Oregon Street. This lowered elevation removes existing physical and visual barriers to the river and Downtown.

Surrounding Streets

Access to I-5 remains at the existing ramp location. Hassalo Street is reconfigured to align with a new intersection at Interstate Avenue, and to allow for high volume pedestrian crossings between the Transit Plaza and the Arena. In addition, the Hassalo Street alignment completes the western end of the future Multnomah/Hassalo Street connector.

On-Site Parking

On-site parking is broken up into three separate facilities:

Table 1
Parking Facilities

Parking Facility	# Spaces	#Spaces/disabled	Total # Parking Spaces	No. of Levels
Arena Garage (Private)	1,035	22	1,057	7
Annex Garage (Private)	363	6	369	2
Broadway				
Garage/Lot East	570	8	578	3
West	535	8	543	3
Surface Lot	97	2	99	n/a
Total # Parking Spaces			2,646 (2,277 for events)	

The total on-site event parking count is 2,277. The current Coliseum surface lot has approximately 2,100 spaces.

- ◆ **Arena Garage** - The Arena garage is a seven-level structure that is attached to the Arena with direct access into the five Arena concourse levels. Of the 1,057 spaces, there are 22 parking spaces for the disabled and five elevators accessing the concourses. For all Trail Blazers games, this garage is dedicated to suite and loge level (Preferred) patrons, and Blazers/OAC sponsors. It is not available for general public parking.

For non-Blazers events, however, many patron spaces will likely open up. OAC estimates that as many as 774 spaces could be available to the general public during non-Blazers events.

- ◆ **Annex Garage** - The 369 parking spaces are on two levels below the building and are accessed off Interstate Avenue. The garage is serviced by four elevators and includes six spaces for the disabled. This facility is dedicated to uses within the building including the

OAC/Trail Blazers offices, two restaurants, a brew pub, the central box office, and other small retail uses. In the future, this garage may be used for event parking, after the public on-site garages have filled.

- ◆ Broadway Parking Garages - This publicly-funded complex consists of two garages and one surface parking lot. The East garage has 578 spaces, including 8 spaces for the disabled, serviced by one elevator. The West garage has 543 spaces, including 8 spaces for the disabled serviced by one elevator. The surface lot has 99 spaces including 2 spaces for the disabled.

The surface lot is designed to double as an overflow staging area for the Coliseum and Exhibition Hall during rare instances when the Coliseum's new north loading area and Coliseum/Arena service area are not sufficient.

Access to these garages is from entries along Broadway and from new streets continuing along the existing street alignments of Vancouver, Flint, Benton, and a new street running east/west connecting Larrabee and Wheeler. This new street is a critical link to the existing I-5 on-ramp as well as an accessway to the on-site garages.

Usage

The on-site parking facilities will be used during weekdays for Annex restaurant and office parking. OAC and Trail Blazers employees will use the Arena Garage for daytime parking and will park off site for events.

Table 2**Event-Related Vehicular Trips To/From On-Site Parking Facilities**

Time of Day	Inbound	Outbound	Total
2-3 pm	172	150	322
3-4 pm	181	106	287
4-5 pm	199	203	402
5-6 pm	452	147	599
6-7 pm	1,642	203	1,845
7-8 pm	983	175	1,158
8-9 pm	94	371	465
9-10 pm	105	1,922	2,027

Parking within Walking Distance

According to the DEA Traffic Management Program, July 8, 1991 (Exhibit C), there are approximately 1,560 privately-owned, off-street parking spaces within walking distance (of less than 5 minutes to the Arena site). These spaces are located primarily north and east of the site. It is anticipated that some of these spaces will continue to be used for event parking. Shuttle bus service would not be provided to these areas due to their close proximity ("walking distance") to the site.

The Arena and the Eliot Neighborhood

The Eliot Neighborhood, to the north of the site, has experienced problems in the past relating to traffic, vandalism, and noise from patrons of Coliseum events parking in their neighborhood. OAC, DEA, Barney & Worth, and the design team have been working with Eliot Neighborhood representatives to listen to their concerns and propose measures to be taken. While many of the concerns are well beyond the scope of the proposed Arena site, OAC has made a commitment to the Eliot neighborhood to help mitigate the existing and potential future traffic problems.

Among the issues and actions proposed are:

- ◆ OAC will include Eliot Neighborhood Association representatives on the Arena Neighborhood/Business Advisory Committee (AN/BAC);
- ◆ OAC will purchase, maintain and empty additional litter containers for placement at locations in the south Eliot area;

- ◆ OAC will implement the installation and monthly operating cost of a separate telephone line to receive reports of parking problems during events. This line will ring directly to OAC's security office, who will be able to contact Portland Police who will often already be on site (under contract with OAC for traffic control); and
- ◆ OAC/Blazers will aggressively encourage patrons to exercise safety and good judgment in their use of neighboring facilities during event times. OAC will further discourage parking in Eliot by promoting the use of off-site shuttle lots for events of 7,000+ spectators or if deemed necessary by the Traffic Management Team.
- ◆ OAC and the City of Portland will respond in a timely manner to traffic/parking impacts that have exceeded the threshold established by the AN/BAC.
- ◆ In conjunction with event-related traffic control, police and private security forces, both under contract with OAC, will patrol off-site parking lots and the Eliot Neighborhood.

Additionally, OAC and the City of Portland are committed to discussing creative joint action with the Eliot Neighborhood Association to address existing adverse event-related impacts. Potential remedies to be considered will include the following:

- ◆ Increased security patrols with tow-away enforcement;
- ◆ Additional street lighting;
- ◆ Parking permit system; and
- ◆ Event-related traffic mitigation and control devices.

Off-Site Parking and Bus Shuttle Service

The Arena and its family of facilities will increase the number of patrons from the existing 12,800 in Memorial Coliseum and its Exhibit Hall to 20,000 in the new Arena, with potential for more patrons during simultaneous events. The current street network will not allow the on-site parking capacity to keep up with the increased seating counts. As stated previously, the total on-site event parking inventory will be 2,277 spaces. Assuming 2.5 persons ride in each automobile for a typical Trail Blazers basketball game (per DEA report), that leaves 14,308 patrons parking off site or arriving via means other than private automobiles, and up to 18,500 off-site patrons during simultaneous events, assuming two sold-out events.

Table 3
Projected Event Transportation Use Breakdown for 1995***

Attendance	# Shuttle Patrons	# Shuttle Buses	# Persons Parking On Site*	# Persons Parking Off Site/ Walking*	# Persons Using Transit**	# Persons Using Restaurant Buses	# Persons Using T-Met Park & Ride
0-7,000	0	0-5	5,692	750	100	-	-
7,000-10,000	2,150	5-13	5,692	1,200	500	-	-
10,001-15,000	5,600	15-20	5,692	2,500	900	1,500	-
15,001-20,000 (Blazers Game)	7,755	18-25	5,692	3,500	900	1,500	-
25,000-35,000 (Simult. Events)	11,500	30	5,692	4,000	1,250	1,500	2,000

* Assuming 2.5 persons per car (based on DEA findings)

** Assuming percentage of ridership doubled from 1992 ridership

*** Refer to Table 6 for event transportation use breakdown during construction. The Table 3 number will be adjusted upon actual findings at Arena opening.

OAC will operate the shuttle system per the assumptions and projections of Table 3 through construction and one full year after the completion of the Arena. The prescriptions of Table 3 can be amended prior to this date if mutually agreed to by OAC and PDOT. The Traffic Management Team will then assess the quality, level, and appropriateness of shuttle service, and make corresponding recommendations to OAC for shuttle operations beyond the first full year. OAC will make all reasonable efforts to comply with these recommendations.

To help alleviate parking problems and congestion both during construction and after the new Arena is in operation, OAC will introduce a shuttle system that will connect nearby commercial lots to the event.

Introduction of the Shuttle System

The bus shuttle system is the single most important element of the TMP/SOP. The use of the shuttle service will be required during construction, and after the Arena and related facilities are complete. In fact, without the shuttle system, this development would not be feasible on this site. OAC and Tri-Met have finalized a long-term agreement to provide shuttle bus services (see Exhibit E). The shuttle service will disperse traffic, and alleviate parking problems in neighborhoods by utilizing underused commercial parking areas (primarily during non-work hours on evenings and weekends -- when most Arena events take place). Due to OAC's agreement with Tri-Met, ridership on regular transit will be encouraged. As noted in Table 3, an event must fill the on-site garages *before* the shuttle system is initiated. In addition, the shuttle system will be entirely funded by OAC, via off-site parking revenue, and will not require any city or public funding.

The shuttle bus system is geared toward event patrons, and routed for quick pick-up/drop-off at several Lloyd District and Old Town parking areas (see Exhibit F - OAC/Tri-Met Shuttle Operations Plan). OAC intends to become a visible partner in the promotion of transit services and alternative forms of transportation.

Memorial Coliseum will continue to be the shuttle destination point until the Arena opens. The redesigned Arena Transit Plaza won't be used for shuttle bus drop-off during construction. Ultimately, however, with Tri-Met as the shuttle operator, the Arena Transit Plaza is the ideal drop-off/pick-up point. OAC and their design team have been working with Tri-Met on the reconfigured Transit Plaza to allow regular bus service to operate in conjunction with shuttle buses. The Trail Blazers have agreed to assist Tri-Met by moving the start-times for most NBA games from 7:00 pm. to 7:30 pm. (except weekends.) Once the modified Transit Plaza is complete, and the Arena is on-line, it will serve as the shuttle bus drop-off and pick-up for the shuttle system.

Shuttle Lots: Lloyd District

The DEA parking inventory states that, within the Lloyd District, there are nearly 5,000 spaces in privately- and publicly-owned parking facilities which are nearby, yet beyond convenient walking distance. Most of the spaces are owned by Pacific Development Incorporated, Metro (with their new headquarters at NE Grand and Lloyd Boulevard), and MERC (Oregon Convention Center.) The State Office building and the Bonneville Power Administration building are being considered for potential usage as well.

Shuttle Lots: Downtown

Not including privately-owned lots, there are approximately 2,300 parking spaces located in the four city-owned parking garages in downtown Portland. These garages are an untapped source for off-site parking. The fact that they are utilized for primarily daytime use increases their feasibility for shuttle usage. It is assumed that roughly 65-70% of the parking in these garages would be available after 6:00 pm for an event at the Arena or Coliseum. Although during the Rose Festival and Christmas shopping season, the availability percentages will be altered at times.


The Old Town Garage and the adjacent One Pacific Square Garage are the most conveniently located. Situated at the western foot of the Steel Bridge, they are often empty during evening hours. OAC has initiated agreements with the garage owners to use these garages for off-site parking during events.

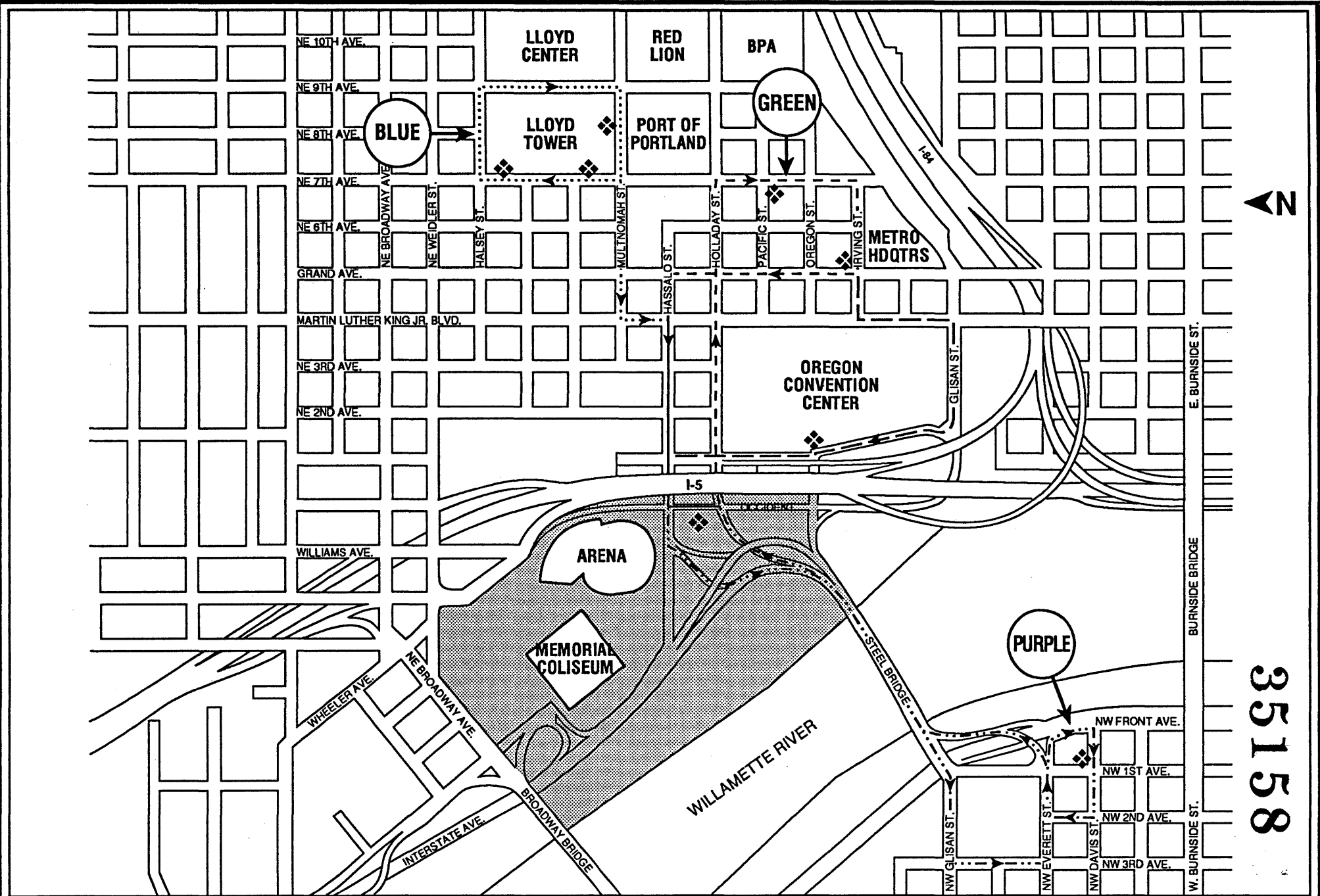
Routing

The shuttle lots and related bus routes have been carefully planned for convenient access, and to discourage patrons from parking in nearby neighborhoods and commercial lots not affiliated with the shuttle program. The anticipated attendance of each event will determine the exact number of buses and the off-site lots that will be opened. The shuttle operation will run for an Arena or Memorial Coliseum event with a projected combined attendance of 7,000 persons or more. During construction, with roughly half the on-site parking spaces taken away, nearly every event at the Coliseum will require shuttle service. Once the Arena opens in 1995, approximately 120 events at the Arena and Coliseum will require shuttle service operations. Of course, OAC will modify its criteria as necessary and with City approval, if event types and anticipated attendance of events require more or less shuttle service.

OAC will work with event promoters days in advance to determine the projected attendance level of an event and corresponding shuttle system that is required. In no case will the number of buses be less than those stated in Table 3. To help put Tri-Met's operations into gear, OAC will then contact Tri-Met and the Traffic Management Team to inform them of a "Level I, II or III" show. For a sold-out Arena event, the bus route will make a 15-minute round trip, utilizing 15 buses before the event and 25 buses afterwards. Buses will arrive at pick-up points before and after events, at a maximum of four-minute increments.

This full-service shuttle plan will have the capacity for approximately 4,700 spaces or 11,750 people. Tri-Met will use coach buses with double door access and a carrying capacity of approximately 70 people.

(See map, next page )



MAP KEY

- Blue Route
- Purple Route
- Green Route
- Shared Route
- Alternate Route (when available)
- Construction Area
- ◆ Shuttle Stops
- ◆ Green Route

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Shuttle Routing Plan

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Operations

As noted earlier, the off-site shuttle system works on the notion of a "free" shuttle ride with paid parking. As the patron enters the parking lot/garage, they will give the attendant either money or a pre-assigned parking pass. The attendant will give a Tri-Met transit pass to each patron in the car. This pass allows them to ride the shuttle bus (or a MAX train). Shuttle buses will arrive at the appointed stops at no more than four-minute intervals. MAX trains will operate on their standard schedule and will accommodate shuttle patrons only if space is available.

The transit passes will be checked periodically on the bus and by Tri-Met or OAC personnel. To allow for quick loading and unloading, no passes will be checked upon entry to the bus. However, signs will be posted at each loading area directing patrons to have their shuttle passes available for fare inspectors.

Security at Off-Site Lots

For all events, police will already be in the area, under contract and funded by OAC, to provide traffic control before and after events, as well as area/neighborhood security during events. These police are in addition to those on regular patrols and will be available to coordinate response to security problems at off-site lots or garages (refer to Table 5 - Event Security Staffing Breakdown). The Portland Police have coordinated efforts with private security patrols throughout the Holladay/Lloyd District. This coordination includes a common radio frequency, joint car prowls, and plans for event-related incidents. During events, Police will patrol the district and the Eliot Neighborhood. Private security services are under contract and funded by private companies throughout the Lloyd District.

For additional off-site lot security, Tri-Met shuttle buses will be running continually throughout the event and can report problems to the Portland Police. Tri-Met busses are equipped with direct radio communication to the Portland Police via dispatcher.

Attached are the preferred shuttle routes (see Section 8 - Construction -) to be used initially during construction and ultimately when the Arena is built. These initial routings take into account street closures anticipated during construction and initial construction phasing.

Pricing of the Shuttle

In addition to convenience, the pricing of off-site shuttle parking will be a primary incentive to patrons. The prices in 1995, will be approximately \$3.00 less than the on-site parking rate. Patrons wishing to ride the shuttle without parking at a designated shuttle area, may pay the standard Tri-Met bus fare, although the shuttle stops are primarily intended to serve the off-site lots.

Shuttle Marketing

OAC and the Trail Blazers will aggressively encourage event patrons to utilize shuttle service from off-site lots to reach the Arena and family of facilities. A key to the success of the shuttle system will be how well information is communicated to the public. This shuttle service will be used for all events attracting more than 7,000 patrons. In fact, anticipated attendance dictates that the Blazers games will most likely be the easiest, most consistent event to manage. For other events, such as a concert, advance notice will be required via media and possibly maps and information on the ticket backs and at ticket outlets.

OAC and Tri-Met have executed a Shuttle Marketing Plan that promotes traditional Tri-Met bus and MAX, and will encourage patrons to use existing Tri-Met Park & Ride facilities in the future (see Exhibit G - Shuttle Marketing Plan). This will include the marketing of shuttle services through bus graphics/advertising and printed material, and mention of Tri-Met services on printed Arena brochures, advertisements, and fliers.

OAC believes that a cooperative effort in marketing and communication can produce the desired result of increased usage of traditional transit, as well as the event shuttle system.

Shuttle Identity System

It is essential that the shuttle system have its own identity. OAC has hired Communication Arts, an environmental graphics/signage firm, to develop the graphic identity program for the shuttle system. This graphic treatment will tie-in with the Arena/Coliseum and facilities graphics program. By the time the Arena opens, OAC will have permanent graphic identity on the buses used for

shuttle service; similar to the graphic treatment of the Line 63/Washington Park buses. In addition, signage and informational graphics will be placed at all bus stops out of the public right of way.

OAC is committed to the development of an identity program that would merge the logo of Tri-Met, OAC and the Trail Blazers, a critical element in creating the basis for a long-term partnership, and generating substantial community awareness of event transit services. This planning is ongoing and will be fully developed and on line, in its initial stages, in time for Arena groundbreaking.

Testing of the Shuttle

OAC will test the shuttle bus service prior to actual disruption to the Coliseum site and its surrounding street network and parking areas. This will allow OAC to test the shuttle system and "get the bugs out" prior to when the shuttle system will be fully operational.

★ LIGHT RAIL AND TRADITIONAL BUS

General Tri-Met operations will continue to operate out of the reconfigured Transit Plaza. As part of the transit partnership with Tri-Met, OAC and the Trail Blazers will actively encourage the increased use of transit during on and off-event times. According to the David Evans event survey of 1991, 3.5% of Trail Blazers patrons arrive via MAX and traditional Tri-Met bus service. OAC anticipates this number to double by 1994, with an eventual goal of 10% or more by the year 2000. The addition of westside light rail will no doubt help.

MAX

The use of MAX as a major shuttle carrier is not feasible in the near future. Although the capacity of a single MAX train is much larger than buses, the significant cost of increasing headways and the relatively long distances the train must go before changing directions is problematic. MAX can certainly be used as a supplement for shuttle routes, but because the buses are more flexible in routing and frequency, they are seen as the major component of the shuttle system.

If Tri-Met is able to decrease MAX headways, funded by increased usage, from 15 minutes to 7½ minutes -- and extend "Fareless Square" into the Lloyd District -- it would have an impact on the viability of MAX as a shuttle carrier. In addition, the use of MAX as a parking shuttle carrier is most feasible after the Arena is built, due to construction constraints on pedestrians from the Coliseum LRT Station to the Coliseum (the South entrance to the new Arena will be 550 feet closer than the current condition).

Traditional Bus/Park and Ride

In addition to encouraging continued and increased ridership on traditional buses, OAC is exploring the use of Park and Ride facilities for events. Tri-Met and OAC will assess this option, particularly for simultaneous events.

★ RESTAURANT BUSES

Restaurant buses are used primarily for Blazers games (as opposed to other Coliseum events). Presently, 35-41 buses operate from restaurants to games, picking up their patrons after the game and dropping them off back at the restaurant. It is estimated that their number might increase for the new Arena. The restaurant buses will be accommodated on pull-off lanes southbound along the reconfigured Williams Avenue, designed specifically for this purpose.

The capacity for buses along Williams Avenue will not allow all of the anticipated number of buses to park at one time, although OAC is exploring the option to double-park restaurant buses along Williams Avenue after a game. In any case, a marshaling and monitoring program will be designed, and implemented by OAC.


If off-site staging is required, the buses will be parked off site (at a nearby location to be determined) and marshaled to the site, via radio communication, to pick-up passengers. This operation will be organized by OAC and coordinated by the bus companies. OAC is presently involved in this effort, working with MERC, Raz Transportation, Laidlaw Transit, Mayflower Contract Services, and Coliseum staff for existing traffic management.

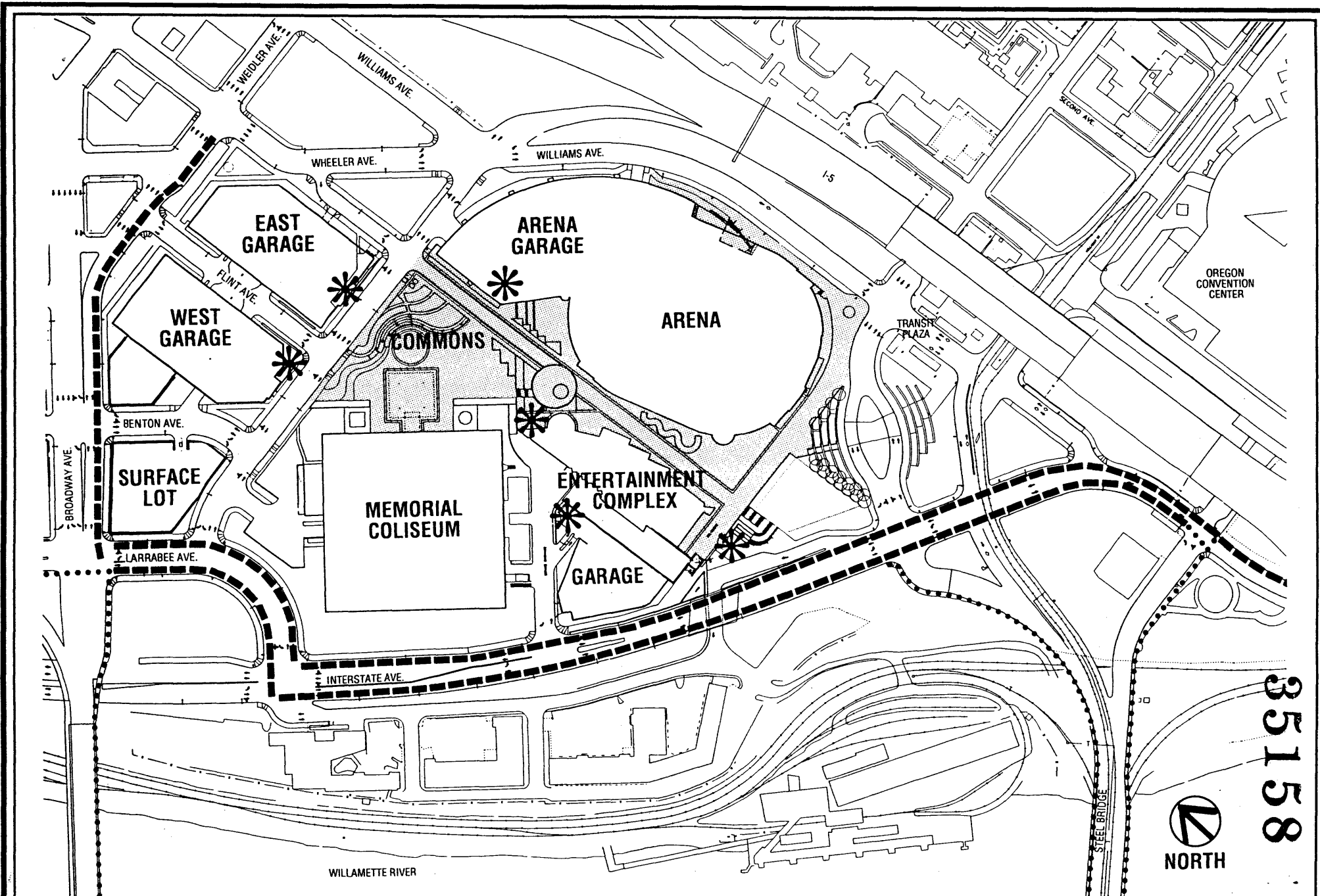
As with Construction, the Blazers and OAC will work with the bus companies and restaurants to encourage restaurant bus usage and operation when appropriate.

★ BICYCLES

Oregon Arena Project is providing bicycle lanes in each direction along the perimeter streets accessing the Arena District: Interstate Avenue, Broadway/Weidler, and Larrabee Street. These dedicated bicycle lanes will measure five feet wide, and are in addition to improved access on and off the Broadway and Steel Bridges.

There will be 155 bicycle parking spaces established throughout the development, with approximately half of them located under cover in parking garages. The remainder of the bicycle spaces will be located throughout the commons near the box office, centrally located between the two Arena entries and the Coliseum entry. Local bicycle and neighborhood newsletters will be notified of the on-site facilities.

(See map, next page )



MAP KEY

--- Dedicated Bike Lane

***** Bicycle Parking (155 spaces total)

..... Shared Bike/ Pedestrian

**OREGON
ARENA
PROJECT**

**Bicycle Parking/
Access Plan - 1995**

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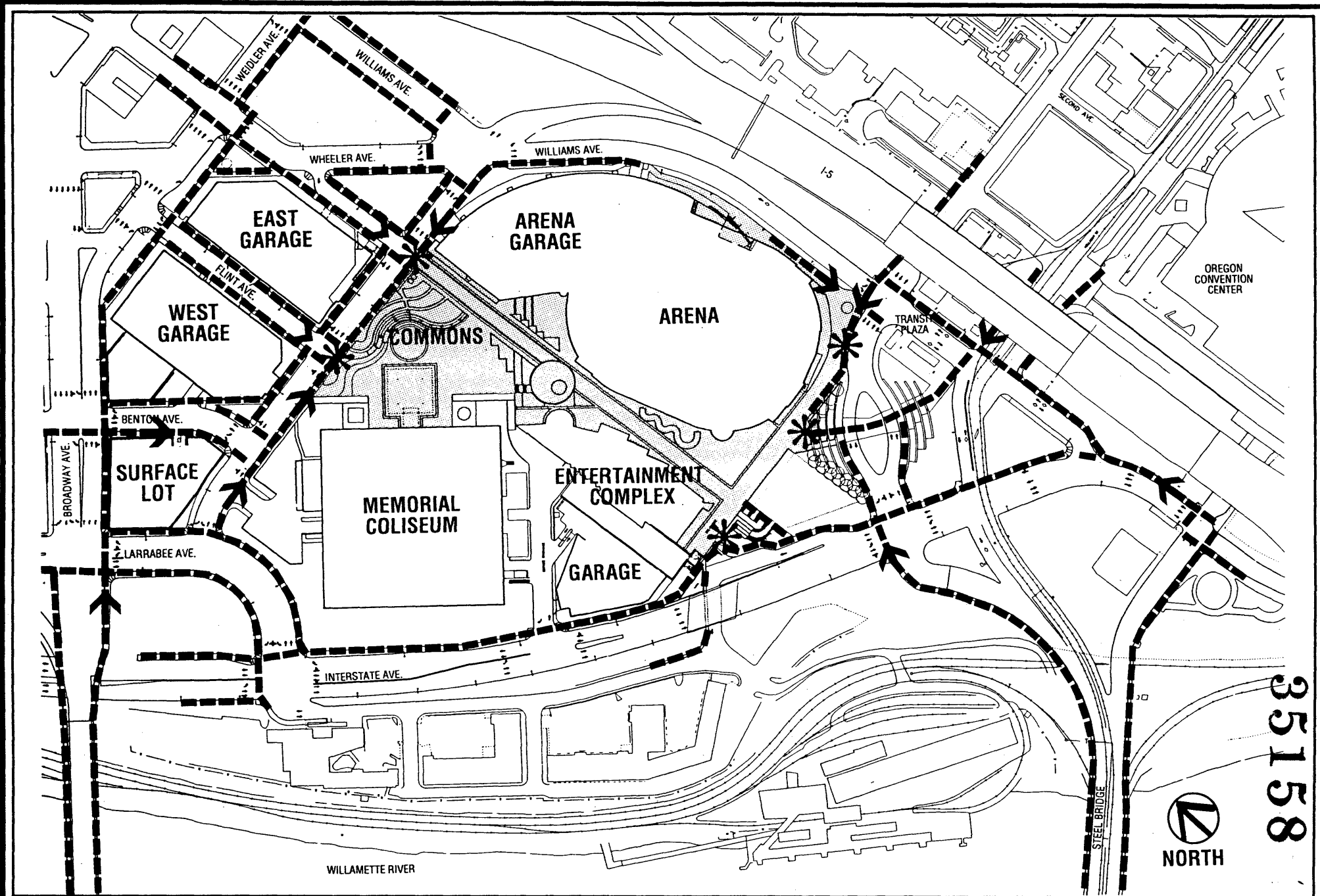
★ PEDESTRIANS

Pedestrian access and safety is critical to the success of the project. Over 40 marked new crosswalks will be included throughout the development (see Table 4 - Pedestrian Crossing Police Control Projection Breakdown). The crosswalks are located at primary crossing points and along routes of anticipated heavy pedestrian flow. The crosswalks will be clearly visible, both day and night, by being outlined with cold plastic or thermoplastic tape.

At Hassalo Street, the road has been redesigned to enable the two directions of traffic to be controlled independently. This will allow for 15,000-19,000 persons to cross in one hour. This landscaped gateway to Portland's Lloyd District will provide walkways for pedestrians north to south. For vehicles traveling east to west, a 60-foot median will separate the two directions of vehicular traffic. Separate pedestrian-actuated signals will be in operation during the day, and police officers will override the signals during events. This crossing and the Hassalo/Williams intersection crossing have been designed to carry large numbers of pedestrians in a relatively short period of time. For events of 10,000 persons or more, police control of these crossing will be provided at OAC's expense. The police will have manual control of the "walk" time that would normally occur. The police officer will operate the pedestrian signal with a pre-set maximum "walk" time so as to minimize congestion due to vehicle queuing at intersections. The police will also enforce the use of the pedestrian signals to prevent jay-walking.

Twelve-foot sidewalks are being constructed throughout the project site, including clearly defined crosswalks at signalized intersections. Pedestrian access from the north at Broadway or along Weidler/Wheeler will also be improved with clearly defined crosswalks at signals connecting to minimum twelve foot sidewalks to the Commons.

(See map, next page )



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MAP KEY

- Pedestrian Access Points
- Pedestrian Walkways
- Pedestrian Plaza (Commons)

**OREGON
ARENA
PROJECT**

**Pedestrian Crosswalk/
Access Plan - 1995**

Table 4
Pedestrian Crossing Police Control Projection Breakdown - 1995

Location	Event attendance	# Police at Crossing
Hassalo/Mid-block	0-7,000	1
	7,001-10,000	2 (1 Post-Event only)
	10,001-15,000	2
	15,000- 20,000	3
Hassalo/Williams	0-7,000	0
	7,001-10,000	1
	10,001-15,000	2 (1 Post-Event only)
	15,001-20,000	2
	25,000+*	3
Weidler/Vancouver	0-7,000	0
	7,001-10,000	1 (Post-Event only)
	10,001-15,000+	2
Wheeler/Williams/I-5 on-ramp	0-7,000	0
	7,001-10,000	1
	10,001-15,000	2
	15,000+	3
East/West Street	0-7,000	1
	7,001-10,000	2
	10,001-15,000	3
	15,000+	4
Interstate/Garage/Service	0-7,000	1
	7,001+	2

* Simultaneous Events at Coliseum and Arena

OREGON ARENA PROJECT

Traffic Management Plan
Section Three

SIMULTANEOUS EVENTS

★ SIMULTANEOUS EVENTS

In marketing and managing both the Coliseum and Arena, OAC will make reasonable efforts to stagger events to avoid simultaneous events on site. However, this occurrence is possible and must be anticipated. OAC will continually monitor and update this plan to account for new information and improved procedures.

If the Oregon Convention Center has an event planned at the same time as an Arena event, the District parking facilities, street network, intersections and freeway ramps will be overtaxed. The same will hold true for events taking place at the Arena and the Coliseum.

DEA prepared a simultaneous events report dated July 30, 1991 (see Exhibit B), in which they identified the number of available spaces in the District, park and ride spaces throughout the region, and potential solutions.

This simultaneous events possibility will require a focused, coordinated effort between several agencies, using a variety of traffic management strategies and communications. OAC will take the lead to coordinate this effort through the Traffic Management Team. For simultaneous events, this team will assess the needs of the two or three events and plan accordingly.

As part of this coordination, OAC will institute a simultaneous event-specific Traffic Management Team to:

- ◆ Create an OAC-funded media campaign to make the public aware of potential traffic congestion problems through media announcements, press releases, etc. Informing the public in advance, is the best way to alleviate spontaneous traffic congestion.
- ◆ Operate OAC-funded traffic surveillance and communications via closed circuit TV cameras to observe and relay traffic conditions to the OAC Control Center, which could then relay traffic advisories to the public.
- ◆ Work to increase transit service by both the public and private providers.

- ◆ Increase shuttle system; utilize regional park and ride facilities. Shuttle service to downtown lots and garages may be instituted.
- ◆ Help establish additional police traffic control, retained and funded by OAC, during simultaneous on-site events. In the event that the Oregon Convention Center is involved with a simultaneous event, OAC will look to MERC for shared funding.

OREGON ARENA PROJECT
Traffic Management Plan
Section Four

PARKING

- On Site: Attached Garage
- On Site: Annex Garage
- On Site: Public Garage
- Off Site: Parking and Shuttle Pre-Sale

★ PARKING OPERATIONS

The on-site and off-site parking will be managed by City Center Parking, OAC's parking operator. Although funded and/or operated by various agencies, the parking will be managed as a whole, utilizing a network communications system, common operations practices, cohesive uniforms for attendants, and consistent pricing policies.

On Site: Arena Garage

The parking spaces available in the attached Arena Garage for non-Blazers events will be pre-sold through computerized ticket sales at Ticketmaster, Fastixx, and other ticket outlets. The ticketing computer will print a parking ticket and directions indicating the garage location, entries, and roadway routes (on either the back of the ticket and/or on the ticket envelope). This will reduce congestion enroute to the event, and eliminate the time-consuming money exchange upon entering the garage.

On Site: Annex Garage

The Annex Garage will be used for restaurant patrons and restricted employee parking. For certain events, limited parking for event patrons will be available by valet, provided that public garages are full. OAC will control the dedication of parking for restaurants through an access control system incorporating time stamping of tickets upon entry, restaurant validation, and penalty for event parking.

On Site: Public Garage

The public garages will be pre-sold on an event-by-event basis, or for Blazers games, on a season-ticket basis, if agreed to by the City. OAC will work with the City on the pre-sell option, regulating the number of pre-sold spaces and setting aside dedicated spaces. This will allow for adequate on-site parking to be used by patrons going to other events on site, such as Exhibition Hall shows, Coliseum or Plaza events.

Off Site: Parking and Shuttle Pre-Sale

The intent is to pre-sell the off-site lots the same way as the on-site lots. OAC is working with ticketing agencies to add a parking pass onto the event ticket at the time of purchase. The ticketing computer will fill a specific lot, while

printing out a map showing street access and parking lot entry points. When that lot is filled, the computer will close the sale of that lot and move on to selling a second lot. This computer information will then be used by parking operations staff to determine the number of shuttle buses required for that event. OAC and Tri-Met will add buses according to event projections to account for drive-up parkers.

At the lot, the parking attendant will check the parking pass as the car arrives at its designated entry. They will also direct patrons to the shuttle bus stop. The bus stop will be clearly identified graphically with signage that ties in with the Arena District graphics. A parking identity sign at each lot will be illuminated if that lot is open and operational for an event. The lots will be color coded for easy identification with the parking pass. Trail Blazers season ticket holders will be offered a season parking pass to create a system of regular and consistent usage, reduce administrative costs, and guarantee usage in advance.

Pre-sold parking will be segregated from event-by-event parking patrons when feasible.

OREGON ARENA PROJECT
Traffic Management Plan
Section Five

COMMUNICATION/SIGNAGE

★ **SIGNAGE/ENVIRONMENTAL GRAPHICS/RADIO**

- Traffic/Highway Communication
- Street Directional Signage
 - Traffic Signals
- Variable Message Signage

★ **OFF-SITE COMMUNICATION/SIGNAGE**

- Off-Site Parking Signage
- Highway Fixed Signage
- Narrow Frequency/Highway Radio
- General Frequency Radio

★ **ON-SITE COMMUNICATION/SIGNAGE**

- Media Pylons
- Fixed Signage
 - Information Kiosks
- Arena and Coliseum Communication
- Parking Garage Communication

★ SIGNAGE/ENVIRONMENTAL GRAPHICS/RADIO

OAC acknowledges that the success of the Traffic Management/Site Operations Plan is dependent on effective communications and public relations. The communication plan is comprehensive in scope and realistic in its expectations. OAC acknowledges that the construction period will cause delays. However, if people are informed in advance, steps can then be taken to alleviate and avoid problems.

The signage and environmental graphics for the Arena District are an integral part of the communications effort. Identity, directional and informational graphics will be the first impression many people have of the project, whether it be from I-5, Downtown, as a pedestrian or bicyclist. OAC has commissioned Communication Arts Incorporated to design the signage and environmental graphics.

The signage will have a creative, consistent, and cohesive look. This includes all signage from the Arena and the shuttle bus stops . . . to the logo on the letterhead and the uniforms of Arena staff. The graphics for the project will go beyond merely relaying information. OAC is currently reviewing the signage package with PDOT to ensure that the signs in public rights-of-way conform to design criteria. PDOT needs to review and approve shuttle signage.

Together, these elements will build the anticipation of arrival and set the mood of excitement and pageantry.

Traffic/Highway Communication

ODOT and PDOT are planning Control Centers linked together to create a regional traffic and transportation information network, capable of pinpointing traffic problems or congestion points. OAC is planning an on-site Control Center to house equipment to tie into the regional control system.

When this system is on-line, qualified OAC staff will be able to:

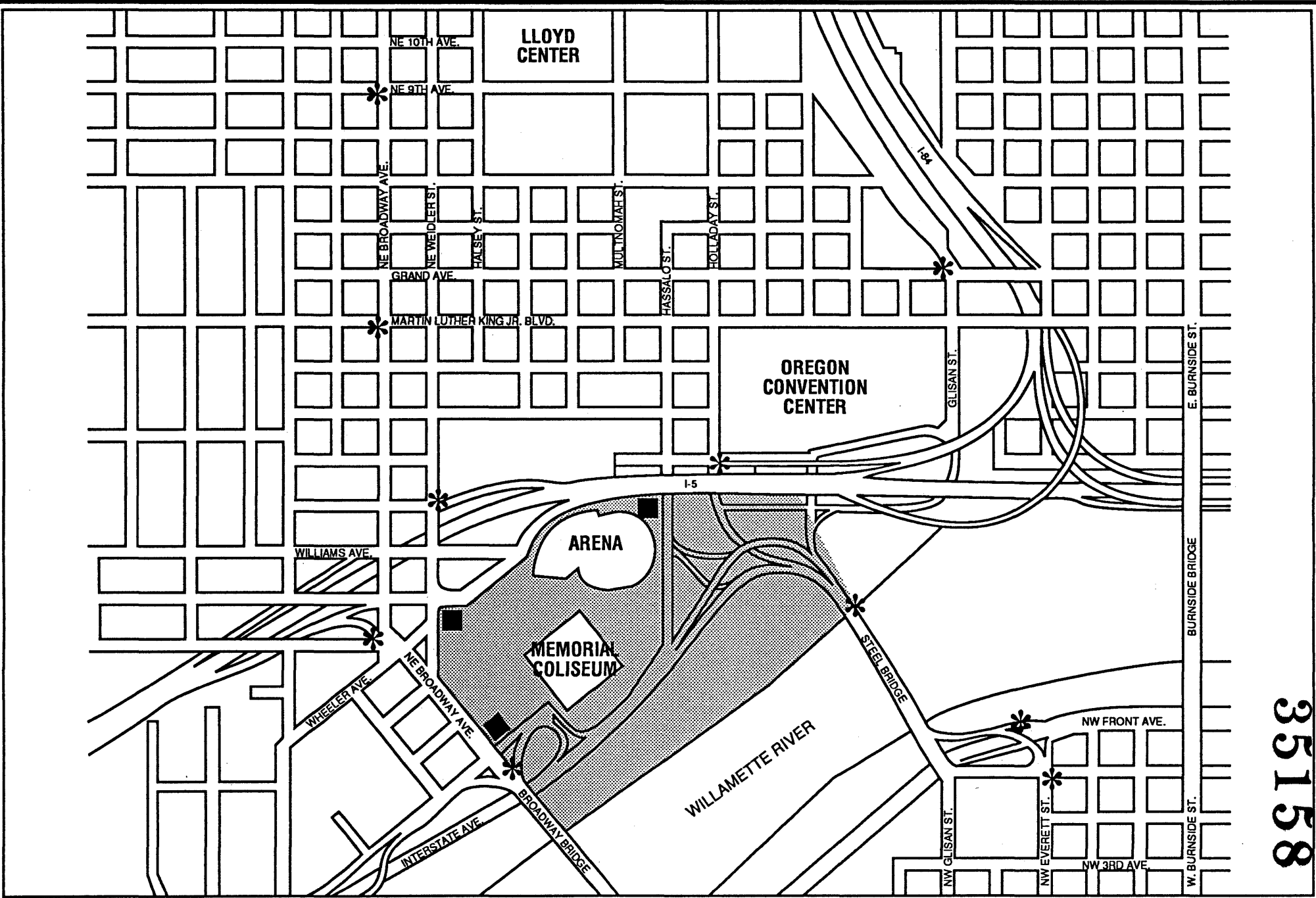
- ◆ Communicate, via computer modem, with regional traffic information systems;
- ◆ Access the City's computerized traffic signal system, implementing a pre-set, timed signal plan;
- ◆ Access off-site variable message signs; and
- ◆ Feed ODOT and PDOT information on traffic conditions and volumes upon event ingress or egress.

This network will be coordinated with the Oregon Convention Center and other major Lloyd District facilities.

Street Directional Signage (See map, next page )

Signage along City streets will direct vehicles to the Arena District for on-site parking and identify off-site shuttle lot locations. These signs will be located along the probable routes used by vehicles enroute to events in the District. Pending Bureaus of Traffic Management and Transportation Engineering approval, preliminary locations are as follows:

- ◆ I-5 northbound off-ramp at Weidler
- ◆ Grand Avenue facing south near Glisan
- ◆ Everett Street facing west at 11th
- ◆ Broadway facing east at 9th
- ◆ I-84 off-ramp at 15th and Holladay
- ◆ Front Avenue facing south at Hawthorne Bridge
- ◆ Martin Luther King, Jr. Blvd. facing north at Broadway
- ◆ First Avenue facing south at Hassalo
- ◆ East end of Broadway Bridge facing west
- ◆ East end of Steel Bridge facing west
- ◆ Larrabee facing south at the new East/West Street
- ◆ Williams facing north at Hassalo



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MAP KEY

* Major Directional Signage

■ Project Identity Signage

*Oregon
Arena
Project*

**Signage
Location Plan**

These signs will be consistent with the Arena graphics in color, lettering, and logos. These signs are subject to PDOT approval. The current plans are for these signs to be fixed, but they could be replaced with variable message signs in the future. For patrons leaving events, ODOT and PDOT-funded signage will identify the routes to freeways and arterial streets.

Traffic Signals

The traffic signals, both on and off site, will be linked to the on-site Traffic Control Center and the Portland Building. From the on-site Control Center traffic conditions will be monitored and, if necessary, traffic signals will be changed to accommodate the current traffic conditions. PDOT and OAC staff will pre-set several traffic signal scenarios that can be recalled from the Arena Control Center. PDOT will assign staff, initially, to work with OAC staff during events to monitor and test the various traffic scenarios. PDOT will subsequently give authorization to specific OAC staff to monitor and adjust traffic signals according to prescribed programs when appropriate.

Variable Message Signage

Variable Message Signs (VMS) are electronic signs on which the message can be changed from a remote location. VMS are part of a planned, future network of electronic signs along freeways, throughout major city streets and linked into private developments, such as the Oregon Arena Project. ODOT, PDOT and OAC are committed to this network and are presently planning for implementation. Both ODOT and PDOT have Freeway Management Systems planned which include VMS. OAC acknowledges that VMS will be developed in the future, and are planning fixed highway signs during the interim. The VMS on the freeway system will be installed and maintained by ODOT. The city street VMS would be installed and maintained by PDOT, if funds become available. OAC will install and maintain VMS on site and in parking garages at the Arena, as long as agreement can be reached with the City to allow additional advertising to support this investment.

The highway VMS locations will be used primarily to communicate information to vehicles traveling to and from an event. The messages for highways must be

simple and short, indicating exits for events, radio frequencies, and identifying congestion ahead.

DEA's work for OAC has proposed locations for VMS including:

- ◆ Northbound I-5 at SW Iowa;
- ◆ I-5 southbound at I-405;
- ◆ I-84 westbound at Holladay;
- ◆ I-405 eastbound at NW Vaughn; and
- ◆ Highway 26 eastbound at the Zoo.

★ OFF-SITE COMMUNICATION/SIGNAGE

Off-Site Parking Signage

Each off-site parking area will be identified with a color-coded sign, that when illuminated or highlighted, indicates that area as an operating shuttle lot. This color code will correspond with the pre-sold ticket and directional maps. These signs will be consistent with Arena District graphics and city policies. As previously indicated, many of the advance tickets for events will include a pre-sold parking ticket, which will direct the holder to an assigned parking area. This system will remove the confusion and congestion associated with searching for a parking space. OAC will fund the signage for off-site shuttle parking identification.

The shuttle bus stops near the off-site lots will be identified with fixed signs containing the Arena complex logo, consistent in graphic treatment with other Arena site signage. These signs will most likely be placed next to standard Tri-Met bus stop signs, and typically attached to a traffic signal or light pole.

In the future, variable message signs can be substituted for the fixed directional and identification signage to provide information on shuttle bus arrivals and other event information.

Highway Fixed Signage

The signage (type and location) along freeways and highways is regulated by ODOT and has extensive restrictions and limitations. However, this is a critical point at which to inform people going to events what the traffic conditions are and if there are alternate routes and exits. OAC will coordinate arena-related signage with ODOT along freeways and state highways.

Narrow Frequency/Highway Radio

Since the ODOT signs can only identify the facilities and designate exits, OAC is planning to implement a Highway Advisory Radio (HAR) channel to broadcast parking and facility information within an approximate one-mile area around the Arena site.

General Frequency Radio

Since the Blazers pre- and post-game radio shows have such a substantial listenership among patrons going to and from the games, radio traffic reports will play an important role. OAC intends to work with 1190 KEX's traffic helicopter to provide event-specific traffic reports.

Given the fact that most event traffic begins during or shortly after the evening rush hour, the traffic helicopter is a logical tool to use for pre-event traffic information. After events, radio and signage will be the primary sources of information.

In addition, radio broadcasters during those shows will give information regarding alternate highway routes and exits, as well as identify off-site shuttle parking areas. This will help alleviate traffic congestion on site.

This same technique will be applied to major concerts, where OAC will then target the radio stations playing music related to that concert.

OAC will provide parking and traffic information to all promoters of Arena/Coliseum events. OAC cannot ensure the broadcast or distribution of any of this information for any events other than Blazers games. OAC certainly understands the advantage of wide distribution of current traffic conditions and information, and will make all possible information available.