



John A. Dyer
General Manager

April 1, 1983

TO: Board of Directors

FROM: John A. Dyer

SUBJECT: PRELIMINARY ASSESSMENT OF TRANSIT SERVICE
REQUIREMENTS FOR THE 1984 OLYMPIC GAMES

BACKGROUND

On July 28, 1984, ceremonies will be conducted at the Los Angeles Coliseum which will signal the start of the 23rd Olympic Games. For sixteen days, Los Angeles will serve as the host of a spectacle without peer in the sports world. Because of the great numbers of participants and spectators involved, enormous burdens will be placed on the transportation infrastructure of the region.

To date, most of the attention regarding local transportation addresses the needs of the Games' participants: athletes, officials, media, and associated support personnel. In terms of sheer numbers, however, the challenges associated with accommodating the transit needs of the many spectators involved are far greater. It is a foregone conclusion that public transit will play a major role in meeting these challenges.

In order to begin preparations necessary to successfully accomplish the many tasks involved, staff has completed a preliminary assessment of transit service requirements for the 1984 Olympic Games. All known Olympic Game venues and their associated events have been examined and projections have been prepared regarding estimated passenger volumes and transit trip requirements. This information is presented in Exhibits I and II. Further, this preliminary assessment focuses attention on the following major sites:

- Exposition Park Complex (includes the Los Angeles Coliseum, the Sports Arena, and the Olympic Swim Stadium);
- Rose Bowl;
- UCLA Pauley Pavilion, and
- Dodger Stadium.

ASSUMPTIONS

Staff's preliminary assessment is based on a series of assumptions regarding venue capacity, event scheduling, event attendance, and probable benefits and/or drawbacks inherent in various types of service. Key assumptions include:

- Existing base service or other service will be provided to all major venues;
- The majority of the venues will have one or more events each day;
- All venues will be filled to capacity for all events;
- Venue staff and employees will provide an additional 5% of the seated capacity;
- Acceptable spread of service will be designed for two hours before the event and two hours after the event;
- A transit vehicle load factor of 125% of seated capacity (approximately 56 passengers per trip).

Based on these assumptions, projections were prepared illustrating overall public transit trip requirements for mode splits ranging from 10% to 40%. The overall trip requirements were then evaluated by service categories including (1) existing line service, (2) shuttle services, (3) separate regional park-ride service (either scheduled or reserved seat), and (4) possible bus charter or lease service.

For study purposes it was also assumed that:

- Existing line service would be augmented with short lines operating within a 20 minute one-way range to/from the venue;
- Shuttle services would operate within two to four miles of the venue;
- Park-ride service would operate within a 30 to 45 minute range of the venue;
- Lease/charter service would provide one trip per bus per event.

Projected passenger volumes and trip requirements are indicated on Exhibits I through IV.

It should be noted that only a coarse estimate of vehicle requirements is possible at this time since the projections developed for this preliminary assessment were derived from a limited amount of information. For example, several venues remain to be determined and information pertaining to passenger/spectator origins is unavailable. Further, the extent to which charter service will be provided by both public and private carriers is unknown at this time. Consequently, the trip estimates and vehicle

requirement projection do not address specific routes. The District will, of course, play a major role in meeting the public transportation needs for the Games; however, the projections developed in this preliminary assessment assume the overall transportation requirements and does not imply a "District-only" commitment. Rather, the bus requirements may be provided by a host of local agencies including municipal carriers, neighboring transit districts, or even private carriers. The District should, if possible, coordinate the operations to the maximum extent possible to ensure the most service possible with the least duplication of efforts.

POLICY ISSUES

The preliminary assessment also assumes that policies will be formulated by the District's Executive Staff, the Board of Directors, and other agencies as required. Basically, policy formulation may be necessary to address matters pertaining to funding, service, equipment, and manpower. Key issues include:

- Sources of funding;
- Legal aspects of using public funds for other than regular line service; commitment to the MOU with the LACTC;
- Pricing of service;
- Establishing HOV/Bus preferential lanes around and to venue sites;
- Rehabilitation costs of surplus buses;
- Type(s) of equipment to be assigned to Olympic service as opposed to regular service;
- Spare vehicle requirements for the duration of the Games;
- Utilization of equipment (i.e., use of peak-hour vehicles during off-peak periods);
- Maximum extent peak-hour buses will be used;
- Type(s) of service to be provided (other than regular service);
- Impact of lease/charter arrangements on regular operational requirements;
- Manpower requirements for special services;
- Degree and type of involvement of other public operators, charter operators, others;

Other matters requiring attention in terms of policy formulation may be identified in forthcoming months.

METHODOLOGY

The assumptions regarding venue capacity, attendance, spread of service, and vehicle loads were used to develop the hourly number of trips required to serve each event at mode splits of 10%, 20%, 30%, and 40%. Previous experience with major spectator events suggested that 1) augmentation of regular line service would produce approximately 1.0 trips per vehicle hour; 2) shuttle services operating within a reasonable radius of the venue would produce approximately 2.3 trips per vehicle hour; 3) regional park-ride service would produce approximately 1.0 trips per vehicle hour, and 4) charter/lease service would produce 1.0 trip per bus per event.

Applying the above mentioned assumptions, staff developed two estimates of transit vehicle requirements to serve events conducted at the Exposition Park Complex, the Rose Bowl, Pauley Pavilion at UCLA, and Dodger Stadium. The estimates of vehicle requirements to serve the four major venues are outlined in Exhibits III and IV.

ANALYSIS

The estimates presented in Exhibits III and IV illustrate the differences in vehicle requirements resulting from changes in the service category emphasis. Exhibit III shows estimated vehicles required if 10% of the trips were to be provided by regular line service; 50% of the trips were operated on shuttle service, and 40% of the trips were provided by park-ride service. In Exhibit IV, the service category emphasis was changed so that shuttle service would operate 80% of the trips while regular and park-ride services would both provide 10%.

As mentioned earlier, the vehicle requirements indicated on Exhibits III and IV are approximations for discussion purposes only. However, it is apparent that some of the estimated projections exceed the District's present capabilities in terms of equipment and manpower needs particularly for the events scheduled during the evening peak travel period. The level of assistance required from other transit sources would vary depending upon the mode split target and the service category emphasis.

Analysis of Service by Category

Regular Line Service: It is assumed that line service will have to be continued regardless of any proposal adopted. Additional service beyond the constant 10% assumed in the scenarios studied may be required including the temporary provision of midday and/or night service on peak-hour only lines. It may be worthwhile to consider designating appropriate routes from areas throughout the County as Olympic service lines which operate at enhanced levels of service for the duration of the Games. Intensifying regular line service to special events/attractions is done on a regular basis. Examples include augmentation required to accommodate rider demand generated by the race track seasons, summer beach travel, and for travel to Disneyland. However, drawbacks to relying completely on line service include: (1) inability to rapidly accommodate crush loads; (2) poor trip

to service hour ratio; (3) lack of existing high intensity service to some venues such as the Rose Bowl.

Shuttle Service: Shuttles are high intensity services which operate over a designated route usually from a two-to-four mile distance from the event facility. They are potentially the most productive services if operated within a limited radius of the Olympic venues. Past experience with shuttle operations show that from 6,000 to 10,000 riders per hour may be transported although the operational optimum appears to be approximately 8,000 riders per hour. To achieve this level of productivity, passengers must be loaded simultaneously through front and rear doors, and fare collection should be separated from the loading operation. Higher loading standards may be permissible if the trip is short, even to 200% capacity. Despite the high volumes of riders carried, multiple shuttle services may be required to accommodate travel to the higher capacity venues. Drawbacks include the need to either carpool or use line service to access the shuttle if the spectator's origin is a long distance from the venue. The traffic burden in the vicinity of the shuttle terminal is also likely to be heavy. Preferential treatment along the route and at the venues is strongly recommended because of the high volume of buses and the crucial need to perform multiple trips with each bus.

Park-Ride Service: Park-ride services are long-distance high-speed routes which operate point-to-point between parking facilities and major attractions/generators. The District presently operates commuter park-ride services between suburban areas and downtown Los Angeles, as well as special service to the Hollywood Bowl during the summer months. Because of the longer distances operated, as well as for safety reasons, these services are scheduled closer to seated capacity. Scheduling may be conventional, or determined by pre-reservation. Fixed schedules are potentially less productive since adjustments in trip requirements are difficult at short notice. In any case, per-capita fares would be charged and the service would be offered to all riders. Because the service is venue specific, it may be more productive than regular line service, although less productive than shuttle service. Assuming that sufficient auto parking facilities can be identified, park-ride service could lessen the traffic burden in the vicinity of Game sites.

Charter Service: In chartering, a vehicle is reserved for a specific group at a flat rate per day or event. It is the most flexible service because it can be tailored to the groups needs; however, it is the least productive because it requires the most equipment and staff. If public subsidies are not available, charters by the District would be designed to recover all costs. Whenever possible, vehicles would be assigned to other uses as opposed to remaining inactive during events.


Lease Service: In leasing, the vehicle and driver are rented to another operator or agency for a period of time. During this period, they are under the sole control of the lessee. The major drawback is the lack of control over the equipment/driver for the duration of the lease.

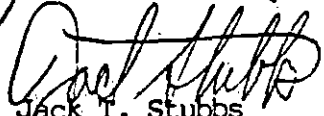
The amount of public or private charter participation for the Games is difficult to project in view of the event ticketing procedures as they are understood at this time. It appears that group ticket purchases are discouraged with possibly the only exception being tour packages assembled overseas.

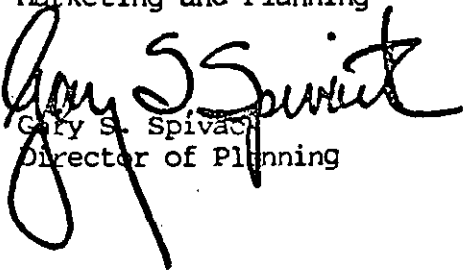
CONCLUSION

The projections developed in this preliminary assessment were derived from a limited amount of information. Venues for some events and their associated times remain to be decided. However, the generally heavy travel demand projected and the potential impact to the District's peak vehicle requirements suggests the need for a definition of the service policies to be pursued. Continued dialogue with the LAOC, Caltrans, and appropriate City and County agencies should also provide input in terms of direction. As additional information becomes available, more finite plans may be developed that will more closely identify vehicle and manpower requirements and associated costs. For discussion purposes, a summary of the preliminary service options is also attached (Exhibit VI).

Respectfully,


John A. Dyer

By: 
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Acting Director of
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By: 
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Attachments

ESTIMATED PASSENGER VOLUMES AND TRIP REQUIREMENTS BY HOURLY PERIODS

SEVENTEEN VENUES

MODE SPLIT	6-7A 7-8A		8-9A		9-10A		10-11A		11A-12N		12-1P		1-2P		2-3P		3-4P		4-5P		5-6P		6-7P		7-8P		8-9P		9-10P		10P-12A			
	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps	Passes	Tps		
100																																		
To Event	10,237	184	9,291	167	2,572	47	1,260	23	420	8	1,942	35	2,992	54	9,555	172	14,070	252	7,035	126	9,765	175	9,817	177	1,154	21								
From Event									1,942	35	1,517	64	8,032	145	7,822	140	2,310	42	2,887	51	2,939	54	1,995	36	6,195	111	7,770	139	13,965	250	20,737	372		
Total	10,237	184	9,291	167	2,572	47	1,260	23	2,362	43	5,459	99	11,024	199	17,377	312	16,380	294	9,922	177	12,704	229	11,812	213	7,349	131	7,770	139	13,965	250	20,737	372		
200																																		
To Event	20,475	367	18,900	389	4,830	87	2,520	45	1,165	25	3,885	70	6,615	118	14,490	330	27,615	493	14,595	260	19,530	349	19,110	342	2,310	42								
From Event									2,310	61	7,560	136	15,750	282	15,120	274	5,460	98	4,725	85	6,615	119	4,305	77	12,399	221	15,015	268	27,930	498	42,000	751		
Total	20,475	367	18,900	339	4,830	87	2,520	45	3,765	86	11,445	206	22,365	400	29,610	604	33,075	511	19,320	345	26,145	464	23,415	419	14,709	263	15,015	268	27,930	498	42,000	751		
300																																		
To Event	30,711	548	27,900	498	7,587	136	3,780	65	2,047	34	5,826	104	9,921	178	22,994	410	39,847	709	21,892	389	29,294	523	29,057	519	3,070	55								
From Event									5,039	90	11,339	203	23,625	421	22,679	403	8,190	144	7,086	124	9,526	170	6,850	114	18,585	320	22,522	401	41,894	747	62,999	1,122		
Total	30,711	548	27,900	498	7,587	136	3,780	65	7,086	124	17,165	307	33,546	599	45,673	813	48,037	853	28,978	513	38,820	693	35,907	633	21,655	375	22,522	401	41,894	747	62,999	1,122		
400																																		
To Event	41,010	733	35,235	630	10,185	183	5,040	90	2,730	49	7,770	140	13,290	238	30,720	548	53,130	949	29,190	522	39,060	699	38,745	693	4,095	73								
From Event									6,720	121	13,020	233	29,400	526	30,300	542	10,980	196	9,450	169	12,765	229	9,195	165	24,780	442	30,030	536	55,860	998	86,000	1,502		
Total	41,010	733	35,235	630	10,185	183	5,040	90	9,450	170	20,790	373	42,690	764	61,020	1,090	64,110	1,145	38,640	691	51,825	928	47,940	858	28,875	515	30,030	536	55,860	998	86,000	1,502		

Note: Tps = Trips

Events Included:

- 1. Athletics
- 2. Boxing
- 3. Swimming
- 4. Fencing
- 5. Volleyball
- 6. Basketball
- 7. Cycling
- 8. Baseball
- 9. Equestrian
- 10. Football
- 11. Gymnastics
- 12. Judo
- 13. Weight Lifting
- 14. Wrestling
- 15. Water Polo
- 16. Archery
- 17. Handball

Events not Included (Base Information not Available at Present Time):

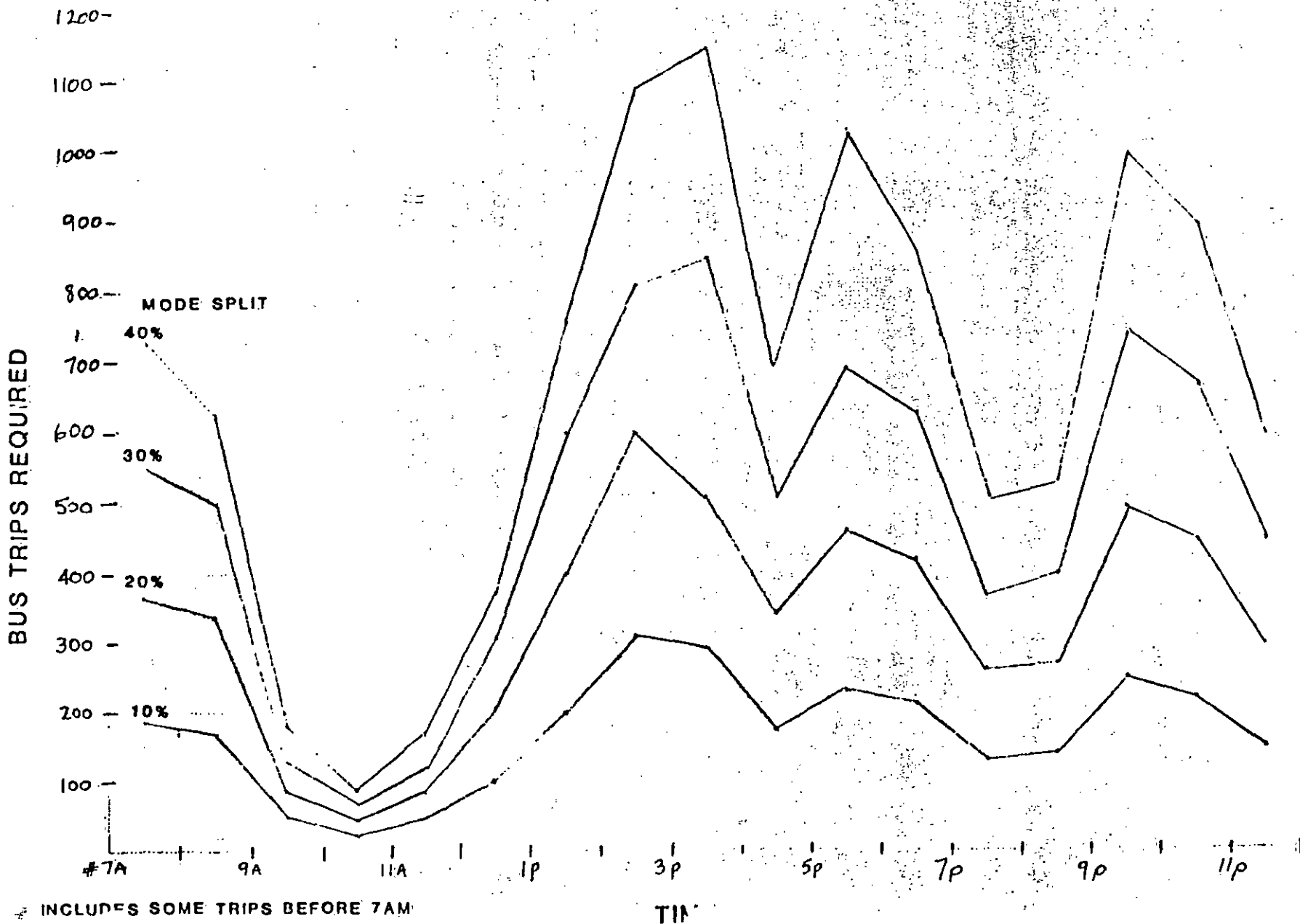
- 1. Yachting
- 2. Hockey
- 3. Pentathlon
- 4. Tennis
- 5. Canoeing/Rowing
- 6. Shooting

Assumptions

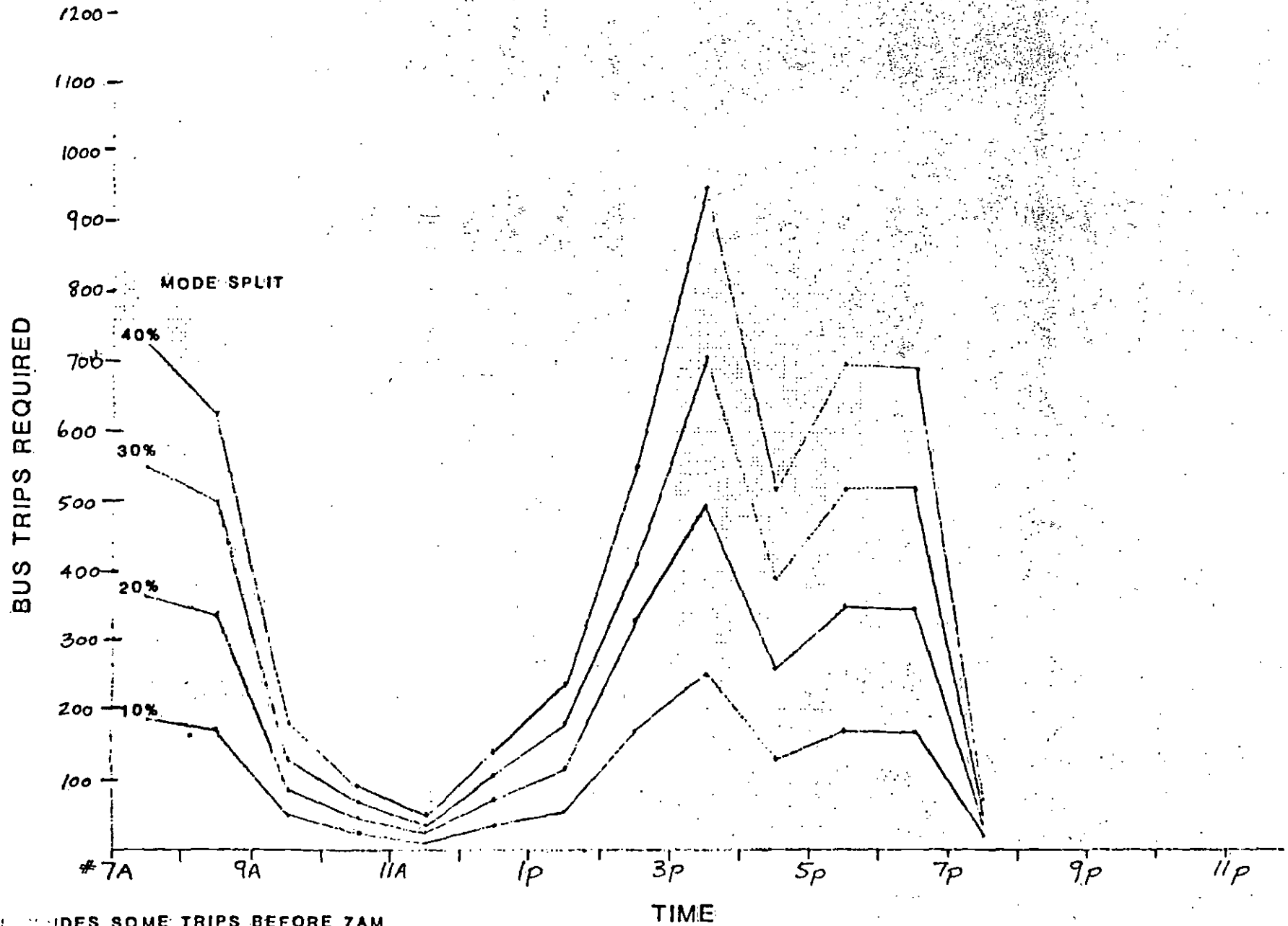
- 1. Full capacity each event.
- 2. Capacity + 5.0% for employees and support personnel.
- 3. Load Factor of 125.0%/Trip = 56 Passengers.

TOTAL ONE WAY TRIP REQUIREMENTS BY MODE SPLIT FOR SEVENTEEN VENUES OF 1984 OLYMPICS

EXHIBIT 1
Page 2

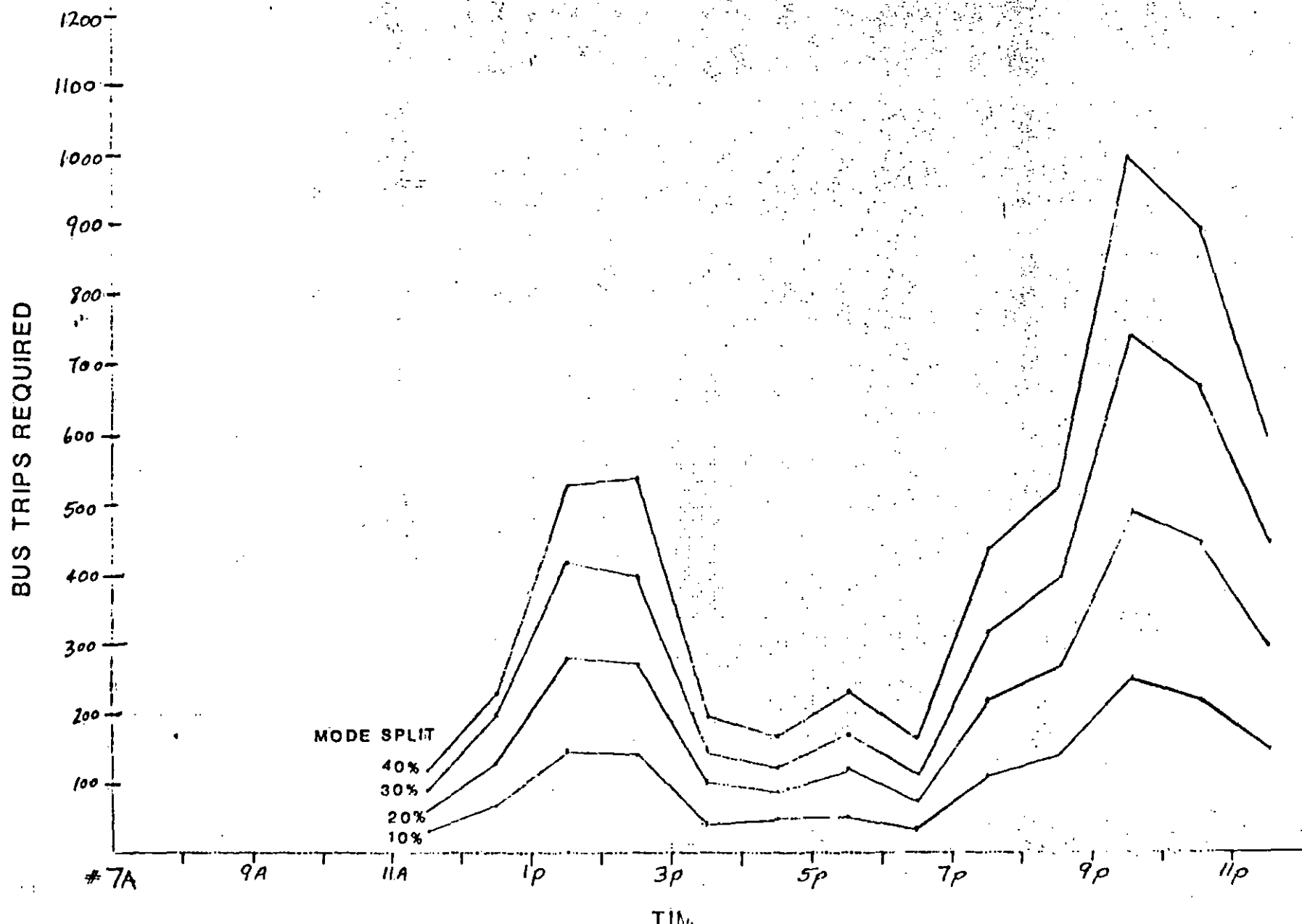


TO EVENT BUS TRIPS REQUIRED BY MODE SPLIT FOR SEVENTEEN VENUES OF 1984 OLYMPICS



INDICATES SOME TRIPS BEFORE 7AM
 [] DENOTES REGULAR WEEKDAY PEAK PERIODS

FROM EVENT BUS TRIPS REQUIRED BY MODE SPLIT
FOR SEVENTEEN VENUES OF 1984 OLYMPICS



VENUE CAPACITIES BY DAY - 17 of 23 VENUES

EXHIBIT 2

VENUE	EVENT	MOV. SPLIT	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
			7-28	7-29	7-30	7-31	8-1	8-2	8-3	8-4	8-5	8-6	8-7	8-8	8-9	8-10	8-11	8-12
Coliseum	Open Ceremonies		105,000															
Coliseum	Track/Field								105,000	105,000	105,000	105,000		105,000	105,000	105,000	105,000	105,000
Sports Arena	Boxing			16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800
Olympic Stadium	Swimming			10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500
Long Beach Convention Center	Fencing						2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625
Long Beach Sports Arena	Volleyball			10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500
Yachting - Long Beach Center*	Yachting*																	
Forum	Basketball			17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850	17,850
Velodrome	Omnis. Cycling			8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400						
San Anita Race Track	Equestrian			21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000		21,000	21,000	21,000	21,000	21,000	21,000
Knex Bowl	Football			105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000
Peuley Pavilion	Gymnastics			10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500
Dayer Stadium	Baseball			52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500	52,500
Cal-State Los Angeles	Judo									5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250
E. Los Angeles	Hockey*																	
Arnold Marymount	Weight Lifting			5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250
Anaheim Convention Center	Wrestling			8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400
Pepperdine	Water Polo					5,250	5,250	5,250	5,250			5,250	5,250					
El Dorado Park	Archery													3,150	3,150	3,150	3,150	3,150
	Pentathlon*																	
	Handball				7,350	7,350	7,350	7,350	7,350	7,350	7,350	7,350	7,350	7,350	7,350	7,350	7,350	7,350
	Tennis*																	
	Cannon*																	
	Rowing*																	
	Shooting																	
Totals =			105,000	258,300	266,700	253,050	271,425	260,925	287,175	212,625	305,025	192,150	215,775	213,675	318,675	207,375	259,875	136,500
	10%		10,500	25,810	26,670	25,305	27,143	26,093	28,718	21,263	30,502	19,215	21,577	21,367	31,867	20,737	25,987	13,650
	20%		21,000	51,660	53,340	50,610	54,285	52,185	57,435	42,525	61,005	38,430	43,155	42,735	63,735	41,475	51,975	27,300
	30%		31,500	77,490	80,010	75,915	81,427	78,278	86,152	63,787	91,507	57,645	64,732	64,102	95,602	62,212	77,962	40,950
	40%		42,000	103,320	106,680	101,202	108,576	104,370	114,870	85,050	122,010	76,860	86,310	85,470	127,470	82,950	103,950	54,600
	50%		52,500	129,150	133,350	126,525	135,712	130,462	143,587	106,312	152,512	96,075	107,887	106,837	159,337	103,687	129,937	68,250

PASSENGER REQUIREMENTS/DAY @ 1

* - Information Unavailable

RS/rdv - 3-29-83/Olympic Rpt., Chart /1.6

10% - Regular Service, 50% and 60% Shuttle, 40% Park/Ride

		MODE SPLIT	10%	20%	30%	40%			MODE SPLIT	10%	20%	30%	40%
<u>EXPOSITION PARK</u>							<u>ROSE BOWL</u>						
Coliseum-Sports Arena Olympic Swimming Stadium							Football						
Capacity	132,300						Capacity	105,000					
Regular Service 10%		Psgrs Buses	662 12	1323 24	1985 39	2646 47	Regular Service		-	-	-	-	
Shuttles (3) 50%		Psgrs Buses	2886 29	5775 55	8664 79	11550 112	Shuttles (1) 60%	Psgrs Buses	3150 19	6300 37	9450 57	12600 75	
Park and Ride 40%		Psgrs Buses	2646 47	5292 95	7938 142	10584 189	Park and Ride 40%	Psgrs Buses	2100 38	4200 75	6300 113	8400 150	
Sub-Total		Psgrs Buses	6194 88	12390 174	18587 256	24780 348	Sub-Total	Psgrs Buses	5250 57	10500 112	15750 170	21000 225	
<u>PAULEY PAVLION</u>							<u>DODGER STADIUM</u>						
Gymnastics							Capacity						
Capacity	10,500						Capacity	52,500					
Regular Service 10%		Psgrs Buses	105 2	210 4	315 6	420 8	Regular Service		-	-	-	-	
Shuttle (1) 50%		Psgrs Buses	525 3	1050 6	1575 10	2100 13	Shuttle 60%	Psgrs Buses	1575 14	3150 28	4725 42	6300 57	
Park and Ride 40%		Psgrs Buses	420 8	840 17	1260 21	1680 30	Park and Ride 40%	Psgrs Buses	1050 19	2100 38	3150 57	4200 75	
Sub-Total		Psgrs Buses	1050 11	2100 25	3150 37	4200 51	Sub-Total	Psgrs Buses	2625 33	5250 66	7875 99	10500 132	

<u>RECAP</u>	<u>MODE SPLIT</u>	<u>10%</u>	<u>20%</u>	<u>30%</u>	<u>40%</u>
<u>EXPOSITION PARK</u>					
Regular Service 10%		12	24	35	47
Shuttle 50%		29	55	79	112
Park and Ride 40%		47	95	142	189
Sub-Total		88	174	256	348
<u>PAULEY PAVLION</u>					
Regular Service 10%		2	4	6	8
Shuttle 50%		3	6	10	13
Park and Ride 40%		8	15	23	30
Sub-Total		13	25	39	51
<u>ROSE BOWL</u>					
Regular Service		-	-	-	-
Shuttle 60%		19	37	57	75
Park and Ride 40%		38	75	113	150
Sub-Total		57	112	170	225
<u>DODGER STADIUM</u>					
Regular Service		-	-	-	-
Shuttle		14	28	42	57
Park and Ride		19	38	57	75
Sub-Total		33	66	99	132
GRAND TOTAL (4) VENUES		191	377	474	756

FOUR VENUES ESTIMATED BUS REQUIREMENTS BASED ON ONE (1) HOUR PERIODS

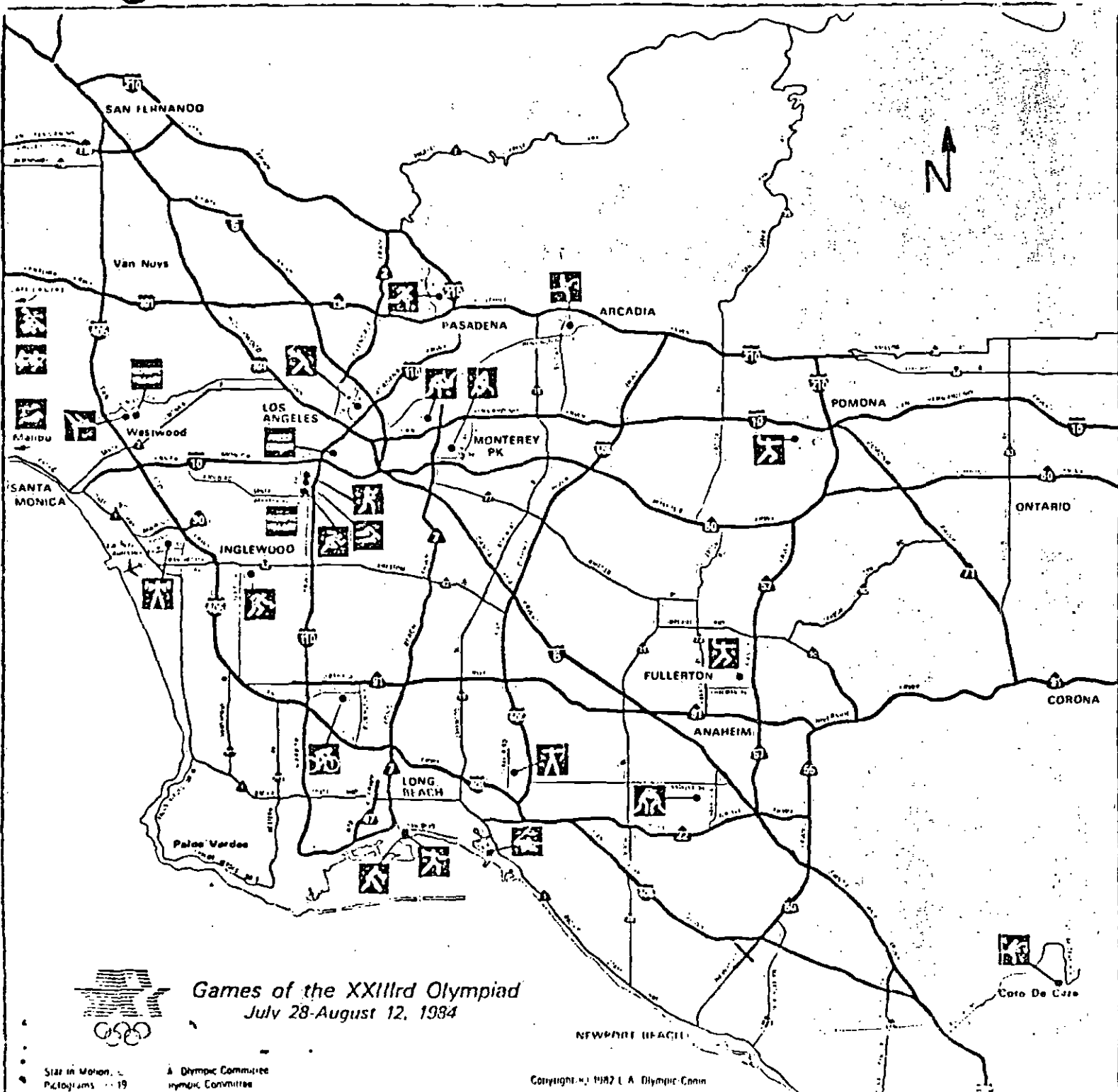
10% - Regular Service, 80% Shuttle, 10% and 20% Park/Ride

		MODE SPLIT	10%	20%	30%	40%			MODE SPLIT	10%	20%	30%	40%
<u>EXPOSITION PARK</u>							<u>ROSE BOWL</u>						
Coliseum-Sports Arena Olympic Swimming Stadium							Football						
Capacity	132,300						Capacity	105,000					
Regular Service 10%		Psgrs Buses	662 12	1323 24	1984 35	2646 47	Regular Service						
Shuttles (3) 80%		Psgrs Buses	5292 41	10584 83	15876 124	21168 165	Shuttles (1) 80%	Psgrs Buses	4200 25	8400 50	12600 75	16800 100	
Park and Ride 10%		Psgrs Buses	662 12	1323 24	1984 35	2646 47	Park and Ride 20%	Psgrs Buses	1050 19	2100 38	3150 56	4200 75	
Sub-Total		Psgrs Buses	6615 65	3230 131	19845 194	26460 259	Sub-Total	Psgrs Buses	5250 44	10500 88	15750 131	2100 175	
<u>PAULEY PAVILION</u>		MODE SPLIT	10%	20%	30%	40%	<u>DOUGHER STADIUM</u>		MODE SPLIT	10%	20%	30%	40%
Gymnastics							Baseball						
Capacity	10500						Capacity	52500					
Regular Service 10%		Psgrs Buses	53 1	105 2	158 3	210 4	Regular Service						
Shuttle (1) 80%		Psgrs Buses	420 3	840 7	1260 10	1680 13	Shuttle 80%	Psgrs Buses	2100 13	4200 25	6300 38	8400 50	
Park and Ride 10%		Psgrs Buses	53 1	105 2	158 3	210 4	Park and Ride 20%	Psgrs Buses	525 9	1050 19	1575 28	2100 38	
Sub-Total		Psgrs Buses	525 5	1050 11	1575 16	2100 21	Sub-Total	Psgrs Buses	2625 22	5250 44	7875 66	10500 88	

PRELIMINARY DESCRIPTION OF SERVICE OPTIONS

	<u>Low</u>	<u>Medium</u>	<u>High</u>
1) Regular Service	<ul style="list-style-type: none"> Existing levels of service 	<ul style="list-style-type: none"> Augment lines to major venues CBD - direct to major venues 	<ul style="list-style-type: none"> Augmentation of all regular service to all venues CBD - direct to all venues (some via combination of venues)
2) Shuttles	<ul style="list-style-type: none"> Serve four major venues: Rose Bowl UCLA Coliseum Dodger Stadium 	<ul style="list-style-type: none"> Serve four major venues: + Loyola/IAX 	<ul style="list-style-type: none"> Serve four major venues: + Long Beach venues + Pepperdine (Malibu)
3) Park/Ride	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Serve two major venues from up to five sites: Coliseum & Rose Bowl To minor venues (by geographic sectors) 	<ul style="list-style-type: none"> All venues from all geographic sectors
4) Charter/Lease	<ul style="list-style-type: none"> All remaining available buses 	<ul style="list-style-type: none"> Minimal; priority given to smaller remote venues; or minimal lease 	<ul style="list-style-type: none"> No charter or lease
5) Small venues	<ul style="list-style-type: none"> Existing levels on existing lines; some venues not served 	<ul style="list-style-type: none"> Augment selected lines; some route diversion to serve venues 	<ul style="list-style-type: none"> Provide inter-venue service over selected routings (may require transferring)
6) Remaining System	<ul style="list-style-type: none"> Normal seasonal service adjustments 	<ul style="list-style-type: none"> Augment selected lines in each sector and expand midday, night and weekend service 	<ul style="list-style-type: none"> All lines operate midday, nights, and weekends

- NOTE:
- A) Options are for general discussions only.
 - B) Equipment and cost estimates to be developed.
 - C) Actual determinations dependent upon identification of available equipment and funding.



	Archery..... El Dorado Pk	3150
	Athletics..... L.A. Memorial Coliseum	105000
	Baseball..... Dodger Stadium	52500
	Basketball..... The Forum	17850
	Busing..... L.A. Memorial Sports Arena	16800
	Canoeing..... Lake Castles	
	Cycling..... CSU Dominguez Hills	8400
	Equestrian..... Santa Anita	21000
	Fencing..... L.B. Convention Center	2625
	Football..... Rose Bowl	105000
	Gymnastics..... Pauley Pavilion UCLA	10500
	Handball..... CSU Fullerton CSPU Pomona	7350
	Hockey..... East Los Angeles College	
	Judo..... CSU Los Angeles	5250
	Modern Pentathlon..... Coto De Caza	
	Rowing..... Lake Ca	
	Shooting..... To Be Determined	
	Swimming..... Univ of Southern California	10500
	Water Polo..... Pepperdine University	5250
	Tennis..... To Be Determined	
	Volleyball..... Long Beach Arena	10500
	Weightlifting..... Coto De Caza Mountain View	5250
	Wrestling..... Anaheim Convention Center	8400
	Yachting..... Long Beach Marina	



Games of the XXIIIrd Olympiad
July 28-August 12, 1984

<u>RECAP</u>	<u>MODE SPLIT</u>	<u>10%</u>	<u>20%</u>	<u>30%</u>	<u>40%</u>
<u>EXPOSITION PARK</u>					
Regular Service 10%		12	24	35	47
Shuttle 80%		41	83	124	165
Park and Ride 10%		12	24	35	47
Sub-Total		65	131	194	259
<u>PAULEY PAVLION</u>					
Regular Service 10%		1	2	3	4
Shuttle 80%		3	7	10	13
Park and Ride 10%		1	2	3	4
Sub-Total		5	11	16	21
<u>ROSE BOWL</u>					
Regular Service		-	-	-	-
Shuttle 80%		25	50	75	100
Park and Ride 20%		19	38	56	75
Sub-Total		44	88	131	175
<u>DODGER STADIUM</u>					
Regular Service		-	-	-	-
Shuttle 80%		13	25	38	50
Park and Ride 20%		9	19	28	38
Sub-Total		22	44	66	88
GRAND TOTAL (4) VENUES		136	274	407	543

1984 OLYMPIC GAMES

Examples of Service Allocation

- Given: 1) Serves four major venues only (Coliseum, Rose Bowl, UCLA, and Dodger Stadium).
 2) Buses listed would be required during daily PM peak.
 3) Buses listed exclusive of spares.
 4) Buses listed do not account for potential interlining.

Assumes 40% mode split to "Public Transit" at four major venues.

Type of Service	I		II		III	
	% Allocation	# Buses	% Allocation	# Buses	% Allocation	# Buses
1. Regular Service 1 Trip/Bus/Hour	10	55	10	55	10	
2. Shuttles 2.3 Trips/Bus/Hour	50	257	45	244	40	2
3. Park-Ride 1 Trip/Bus/Hour	40	444	20	222	Ø	
4. Charter @ 50 Pass./1 Trip/Event	Ø	-	25	600	50	1,2
5. Smaller Venues	Ø	-	Ø	-	Ø	
6. Remaining System	Ø	-	Ø	-	Ø	
* Totals	100%	756	100%	1,121	100%	1,4

Cost = # Buses x 16 Hrs. x \$40. Hr. x 16 Days.

* Est. Cost \$7.75M \$11.4M \$15.2M