



Metro

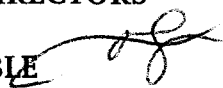
Metropolitan Transportation Authority

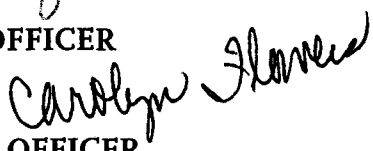
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FEBRUARY 8, 2008

TO: BOARD OF DIRECTORS

THROUGH: ROGER SNOBLE 
CHIEF EXECUTIVE OFFICER

FROM: CAROLYN FLOWERS 
CHIEF OPERATIONS OFFICER

SUBJECT: METRO CONNECTIONS DATA REQUEST

ISSUE

At the October 18, 2007 Executive Management and Audit Committee Meeting, the Board directed the Chief Executive Officer to report back to the Board within 90 days with the following information: Metro Connections criteria for aligning service hours with customer demand; an approach for reallocating service hours to comply with the Metro Ridership Plan's proposed 15-minute peak hour headways while adhering to the Ten Year Financial Plan; a detailed implementation schedule for Metro Connections to include forecasts for increasing ridership at each stage; a report identifying all bus service that duplicates or competes with existing rail service or other bus lines; and plan for additional investment in field supervision.

This report responds to the Board motion requesting additional information about Metro Connections in relationship to the Metro Ridership Plan.

DISCUSSION

Criteria for Service Hour Alignment

The principal effort to align service hours with customer demand will occur with the June 2008 Service Change when the number of trips scheduled on each bus route will be adjusted to better meet demand. The approach is to analyze trip level data collected by the Automated Passenger Counters (APCs) during 2007 and identify those time periods for each line in the system that offer 12 minutes or better service, where there are either too many or not enough bus trips being operated.

This process is being automated through HASTUS (Horaires et Assignations pour Systeme de Transport Urbain et Semi-urbain), the automated system designed to produce bus schedules at specific stops, locations and times. The APC data provides the average load for each trip that has been sampled. Scheduled trips are grouped into time period segments by

line number, direction of travel and trip start time. Minimum and maximum load levels are being used to identify if an adjustment in service is required. The minimum and maximum load levels vary to reflect the seating capacity of equipment operating on the line (40, 45 or 60 foot buses).

If the maximum load level is being exceeded, then a trip addition is recommended. If the minimum load level is not being met, then a trip deletion is recommended. One hour time slices are being used to ensure that the resulting changes in headways are generally three-minutes or less.

Maximum load levels are being set at an average of 47 passengers for a 40-foot bus and 67 for an articulated bus. Load minimums are being set at 33 passengers on a 40 foot bus and 46 on an articulated bus. This effort is a work in progress and the minimum and maximum levels may be refined as the evaluation process progresses. Systemwide, the goal of the process will be a net reduction of 600 daily bus trips (about 3% of service).

In addition to implementing schedule efficiencies in June 2008, service hours are being reallocated from poorly performing or duplicated bus routes to initiate new Rapid service in major travel corridors, and conform some existing Rapid bus lines to minimum requirements established by the Court ordered New Service Plan.

Reallocating Hours to Achieve 15-Minute Policy Headways

Staff was directed to identify how service hours could be reallocated to comply with the Ridership Plan's proposal to operate all services with headways of 15 minutes or less while adhering to the Ten Year Financial Plan. This report identifies a conceptual approach for reallocating existing resources to achieve this objective. The specifics of which would need to be refined before being implemented.

We operate a total of 196 bus lines, including contracted service. Of the total 196 lines, 56 lines operate with service frequencies greater than 15 minutes. To operate all service with at least 15 minute frequencies, while adhering to the Ten Year Forecast, requires reallocating hours among the services.

Attachment 1 identifies bus services operating with headways wider than 15 minutes. The services are grouped into three categories: 1) services that are to be considered for cancellation (in whole or in part) as part of meeting multi-year financial objectives; 2) Consent Decree Pilot Project services which must be maintained at prior service levels until November 30, 2010; and 3) services which will be considered for improvement to 15 minute peak headways. In each grouping, services are listed in rank order of their Route Performance Index. The Route Performance Index is a standardized evaluation measure that takes into account service type, productivity, capacity utilization, and subsidy per passenger. The attachment also identifies the headways and vehicles required to upgrade these services.

Issues related to this concept that require further consideration include: community level impacts associated with the loss of service coverage, the likelihood that all of the routes receiving the improved service would be able to attract sufficient ridership to meet

minimum performance standards, and overlapping recommendations coming forward in June 2008 to reduce or cancel some of the services covered in this analysis. Those recommendations are in response to a prior Board motion regarding the 25 worst performing lines.

Metro Connections Implementation Schedule and Ridership Forecasts

A detailed forecast of Metro Connections implementation from December 2007 through June 2009 is provided in Attachment 2. The forecast includes service hour impacts and ridership impact estimates (including new riders).

The forecast summary shows a projected 2.8 million annual increase in new riders from the implementation of remaining elements of Metro Connections. Most of these riders will be associated with new higher speed services now planned or under study. The implementation of specific elements of the service change scenario will be revised to reflect public comment and alternative actions developed by the sectors prior to each service change.

Bus and Rail Service Duplication

Instances of service duplication include where there are two or more Metro or municipal transit services operating along the same streets for at least 2 miles and /or sharing ten or more stops. Branches of the same route were not considered to be duplicative.

Overall, a total of 50 instances were identified. Of these, two were bus lines duplicating rail service and the remainder were bus lines duplicating other bus lines. Attachment 3 provides a summary of the duplicated segments, grouped in four categories:

- **Metro Connections**- This category includes proposals already under consideration as part of Metro Connections, such as consolidating services on the Harbor Transit way and El Monte Busway, and restructuring downtown bus service.
- **Unavoidable**- This includes those instances where service duplication occurs mid-route and there are no reasonable alternative routings that would not result in additional duplication. Also may include instances where alternative services operate at very wide headways and/or with significantly shorter service days.
- **Constrained by Pilot Program**- Services included in the New Service Program are included in this group. These routes cannot be restructured until the plan requirements sunset or without potential legal action.
- **Further Consideration**- All other instances were grouped in this category together with possible actions to reduce or eliminate the duplication. Identified instances may turn out to be unavoidable if alternative services operate with wider headways or significantly shorter service days. In such cases, removal of duplicate services could only occur where there are adjustments to the alternative services to compensate for the loss of service.

Additional Field Supervision

Service consistency and service reliability are integral to the retention of new riders. Key to consistency and reliability efforts is the supervision of daily operations. Our commitment to supervision of service was recently compared with nine other transit providers (Dallas, Seattle, Boston, Philadelphia, New York, Cleveland, Chicago, Houston, and Orange County). The survey found that our Field Supervision force is half the average of the study group. To address this deficiency, additional Field Supervision positions will be requested through the FY09 budget development process.

NEXT STEPS

Instances of poor performing routes and duplicative service segments will continue to be addressed as additional elements of Metro Connections are defined. The detailed schedule for Metro Connections will continue to be modified in response to public comment, and as the sectors develop additional proposals.

ATTACHMENTS

1. Bus Lines with Greater than 15-Minute Frequency Ranked by Route Performance Index
2. Annualized Impacts of Metro Connections
3. Lists of Duplicated Segments of Bus and Rail Services

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ATTACHMENT 1

Lines with Greater than 15 Minutes Frequency Ranked by Route Performance Index (RPI)

Line	Line Name	Current Frequency	Service Type	Annual Riders	Annual Revenue Service Hours (RSH)	Current Buses Assigned	Addtl Annual RSH Required for 15 Minute Frequency	Addtl Buses Required for 15 Minute Frequency	RPI
Candidate Services for Cancellation									
177	Contract Pasadena - Monrovia - Duarte via Foothill Blvd	30	Local	95,880	10,481	3			0.16
126	Yukon Av.-Manhattan Beach Bl..	60	Local	52,020	3,927	2			0.22
202	Willowbrook -Compton- Wilmington	30-60	Local	102,510	6,936	3			0.23
608	Contract Greshaw Connection	60	Shuttle	24,225	3,035	1			0.28
220	Robertson Bl..	40	Local	137,425	8,315	2			0.29
168	Lassen St.- Paxton St.	60	Local	72,420	4,157	2			0.29
211	Prairie Av.-Inglewood Av.	30	Local	179,520	8,619	4			0.33
209	Van Ness - Arlington Aves.	35-45	Local	202,470	10,353	3			0.35
287	San Gabriel-Sierra Madre-El Monte	20-35	Local	389,234	19,433	6			0.36
154	Burbank Bl.-Oxnard St.	60	Local	201,960	9,971	3			0.37
127	Compton Bl. - Bellflower	60	Local	147,390	6,707	2			0.37
201	Silverlake Bl..	40	Local	309,516	13,413	3			0.38
607	Contract North Inglewood Shuttle	35	Shuttle	49,980	5,126	3			0.39
256	Contract Eastern Ave - Avenue 64 - Hill Ave	30-45	Local	585,222	27,120	6			0.39
254	Contract Willowbrook - Huntington Park - Lorena St - City Terrace	30	Local	220,509	9,865	3			0.41
124	El Segundo Bl.- Santa Fe Ave.	30-60	Local	235,110	8,670	3			0.43
684	Pomona -Cal Poly- Brea Mall	60	Shuttle	94,529	7,980	2			0.44
685	Glendale Comm. College Shuttle	30	Shuttle	134,130	7,599	2			0.44
439	LA - LAX - Redondo Beach Express	30-45	Express	287,358	21,994	5			0.45
270	Contract Monrovia - El Monte - Norwalk	20-60	Local	565,729	21,172	6			0.46
258	Garfield Av.-Eastern Av.-Arizona Av.	22	Local	435,285	16,779	6			0.47
155	Universal City Sta.-Burbank Station Via Alameda Av.	40-60	Local	133,620	4,998	2			0.47
620	Boyle Heights Shuttle	15-20	Shuttle	204,000	10,430	3			0.49
267	El Monte-Altadena-City of Hope	30	Local	891,820	34,453	8			0.49
243	Porter -Winnetka Av./Ventura Bl.-Tampa Av.	20-30	Local	631,422	18,462	6			0.49
236	Balboa Bl.-Sylmar/Rinaldi St.-Woodley Av.-Van Nuys	60	Local	618,766	20,565	3			0.51
292	Sylmar/San Fernando Metrolink Sta.-Burbank Sta. via Glenoaks Bl..	20-30	Local	686,984	22,103	4			0.51
687	Los Robles Shuttle	20	Shuttle	621,265	28,409	7			0.52
102	E. Jefferson Bl.-Coliseum St.	30-40	Local	634,219	19,319	6			0.53
183	Sherman Oaks-Glendale Sta.-Magnolia Bl.-Glendale Galleria-Chevy Chas	30	Local	645,280	21,780	6			0.55
265	Paramount-Montebello	26-40	Local	559,753	18,703	5			0.55
120	Imperial Hwy.-Aviation Sta.	25-45	Local	692,689	19,869	6			0.56
645	Warner Ctr.-Mulholland-Valley Cir.-W.Hills Med. Cntr.	20-40	Shuttle	107,100	5,916	0			0.57
487	LA - Sierra Madre-El Monte Express	20-30	Express	550,282	24,818	8			0.75
Total				11,499,622	481,473	134			
Pilot Project Services									
577	Contract - El Monte - Lb VA Hospital Express	20	Express	169,065	23,205	6			0.32
214	Contract South Broadway / Main Loop - Artesia Transit Center	20	Local	140,505	7,115	4			0.36
305	Crosstown Bus	30	Local	758,100	32,014	4			0.51
Total				1,067,670	62,333	14			
Candidate Services For Frequency Improvement									
121	Imperial Hwy.-Wilmington Blue Line Sta.-Whitwood Cntr.	20-35	Local	876,880	26,907	6	8,200	4	0.60
634	Contract - Sylmar Mission College Shuttle	30	Shuttle	52,530	3,137	1	3,700	1	0.61
96	Contract Los Angeles - Burbank - Sherman Oaks via Riverside	20	Local	1,046,535	39,096	10	6,100	3	0.62
169	Saticoy St.-Sunland Bl..	33-44	Local	588,433	16,936	6	16,300	8	0.62
612	Imperial Sta.-Huntington Prk.	30	Shuttle	589,818	27,050	7	4,100	2	0.63
268	Baldwin Ave.-Washington Bl.	30-45	Local	765,396	22,039	11	8,800	3	0.65
665	Cal State LA-City Terrace Shuttle	25-27	Shuttle	246,181	9,286	3	4,100	2	0.69
130	Contract Artesia Blvd	30-40	Local	1,136,974	30,491	10	6,100	3	0.74
266	Contract Rosemead Blvd - Lakewood Blvd	18-20	Local	1,497,450	33,752	8	10,200	5	0.77
252	Huntington Dr.-Soto St. Shuttle	30	Local	762,508	13,140	3	2,000	1	0.82
445	LA -San Pedro Park n Ride Express	30-50	Express	388,095	18,618	4	12,200	6	0.82
128	Contract Alondra Blvd	20-25	Local	462,570	10,710	4	8,200	4	0.82
550	W. Hollywood - San Pedro Express	20-25	Express	872,757	35,171	5	8,200	4	0.83
446	LA - San Pedro Express	25-40	Express	1,305,174	47,429	14	9,900	4	0.87
460	Los Angeles-Norwalk-Disneyland	20-30	Express	1,259,159	55,019	10	8,200	4	0.90
611	Huntington Park-Vernon Shuttle	30	Shuttle	1,029,981	29,022	7	4,100	2	1.01
489	L.A. - Rosemead Bl. Express	20	Express	147,135	3,366	4	10,200	5	1.48
Total				14,853,346	515,513	131	130,600	61	

**ATTACHMENT 2
SUMMARY OF ANNUALIZED IMPACTS -- Metro Connections**

Line - Description	Change in Rev. Hrs.	Aversely	Riders Impacted Positively	New
DECEMBER 2007	0	3,413,300	2,988,000	902,000
New Rapid 728	52,000	0	1,609,100	80,500
Restructure 28/83/84	25,200	1,348,000	157,600	0
New Rapid 770	36,100	0	529,100	26,500
Restructure 38/70/71	(24,400)	627,000	0	0
Restructure Line 68/New Line 35/335	(63,600)	492,000	0	0
Adjustments to 704/720/920	(12,200)	0	0	0
Restructure 45/46/252	300	168,000	80,400	0
Add Weekend Service 780/Adjust 180/181	4,700	683,700	0	705,800
Restructure 270/460	0	88,700	611,800	89,200
Cancel Echo Park Ave on 200	(700)	5,900	0	0
Other Minor Adjustments	(17,400)	0	0	0
JUNE 2008	(215,000)	3,749,800	8,901,200	890,200
Conform Rapids 705,714 & 770	44,000	0	2,483,000	248,400
New Rapids 715/724/730/753/762/794	112,000	0	6,418,200	641,800
Cancel Poor/Duplicative Services 102,121,124,126,127,154,155,168,175,177, 201,202,211,220,254,256,265,442, 608,612,620,626,634 & 940	(131,700)	3,077,400	0	0
Restructuring 60,62,105,183,201,209, 237 & 258	(24,300)	672,400	0	0
Trip Reassignment	(215,000)	0	0	0
DEC 2008	(200,000)	6,607,200	12,880,600	644,000
Cancel Poor/Duplicative Services 120,183,201,209,236,243,258, 267,292,439,607,645,685 & 687	(283,600)	6,136,300	0	0
Cancel Poor Owl Service 10 lines between 12am -4am 9 lines between 2am -4am	(26,500)	470,900	0	0
Reduced Interlining	0	0	0	0
Improve System to 15 Min.e Peak Headways 96,121,128,130,169,252,266,268,445,446, 460,550,611,612,634 & 665	110,100	0	12,880,600	644,000
JUNE 2009	(58,000)	2,684,300	3,876,500	387,700
Implement New Services-Rapid 716	50,600	0	3,876,500	387,700
Cancel Poor/Duplicative Services 287,487 & 684	(108,600)	2,684,300	0	0