

TRANSPORTATION SYSTEMS MANAGEMENT

TRANSIT ELEMENT

SEMI-ANNUAL REPORT

JANUARY 1 - JUNE 30, 1982

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

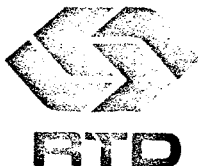
PLANNING DEPARTMENT

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John A. Dyer
General Manager

July 28, 1982

TO: Board of Directors

FROM: John A. Dyer

SUBJECT: SEMI-ANNUAL TRANSPORTATION SYSTEMS MANAGEMENT (TSM) REPORT
JANUARY TO JUNE 1982

INTRODUCTION

Transportation Systems Management (TSM) is an approach to solving transportation problems by improving the efficiency of the existing surface transportation network. These actions focus on the application of low cost capital transportation improvements that increase the system ability to move people.

Highlights of accomplishments and activity in the TSM field from January 1 to June 30, 1982, are as follows:

1. Midday Bus Storage Facility - West Side of Los Angeles Central Business District (LACED)

Upon review of available air space under the Santa Monica Freeway, Planning Staff located a site with approximately 77,000 square feet at Washington Boulevard (between Figueroa Street and Union Avenue) that will accommodate from 45 to 70 buses. Storing this number of buses in downtown Los Angeles would reduce annual out-of-service mileage from 400,000 and 625,000 miles and would result in an annual cost savings between \$625,000 to \$975,000. Subsequent to the negotiation of a lease for this site with Caltrans, this facility will be designed by District Engineering staff for implementation in the latter part of this year.

2. Downtown Bus Movement Study

In February 1981, the City of Los Angeles Department of Transportation, in cooperation with District Planning Staff, completed a study of traffic conditions in the downtown area to determine feasible solutions at locations where buses were experiencing inordinate delays. The most recent implemented accomplishments as a result of this study were:

- The bus passenger loading zone on the east side of Olive Street, south of Fifth Street, was improved

by a minor construction project to improve safety for boarding passengers. This new facility will improve our loading speeds to allow for more buses to board simultaneously. Other routes using the farside stop may be considered for use of this stop, further improving bus movements on this busy corridor.

- The routing of the seven Busway-Wilshire Lines (480, 487, 489, 491, 492, 493 and 494) was modified in both directions on June 20, 1982. The westbound modification removed buses from the severe congestion on Seventh Street and reduced the travel time on each line. The eastbound modification eliminated delays encountered at Wilshire Boulevard and Flower Street particularly in the afternoon peak period. These modifications were made possible because of the securing of critically needed bus zones by the Los Angeles City Department of Transportation.

3. Establishment of a Bus Turnaround Facility at Sunset Boulevard and Pacific Coast Highway

When Line 2 was implemented in June of 1981, operation consisted of a one-way loop operation due to a lack of turnaround facilities in the vicinity of the intersection at Pacific Coast Highway and Sunset Boulevard. In an effort to locate and establish a turnaround facility, District Planning Staff submitted a project proposing the implementation of a permanent turnaround facility near this intersection to the Los Angeles County Transportation Systems Management (TSM) Steering Committee. The location of the proposed facility is a parking lot adjacent to this intersection operated by the Los Angeles County Department of Beaches.

This project was subsequently recommended by the Committee and will provide direct permanent two-way service along the entire length of Sunset Boulevard thereby providing improved access to the beach recreational areas. In addition, this facility will eliminate the necessity of adding an additional base bus and approximately \$250,000 in annual operating costs if the terminal were established in the City of Santa Monica or Malibu. In the interim, the District is operating on a temporary basis through an existing parking lot so that needed two-way service can be provided on Sunset Boulevard.

4. Double Deck Bus Deployment

District Planning Staff conducted an extensive study of numerous lines within our system to determine the type of service best suited for deployment of these unique high occupancy vehicles. Park/Ride Lines 760 and 762 were selected to be converted into an all double deck bus operation in February 1982, which saved 4 peak buses totaling approximately \$500,000 annually in reduced operating costs.

5. Establishment of Bus Staging and Layover Facility on the West Side of the Los Angeles Central Business District

Recently, District Planning Staff negotiated the acquisition of a critical layover zone along 11th Street between Figueroa and Georgia Streets with the Los Angeles City Department of Transportation. This location was obtained to establish a layover facility for lines formerly utilizing the Greyhound Station. This facility will enable three District lines to provide more convenient service in safer locations for many patrons destined to the LACBD Convention Center, the growing westside financial district and the major hotels on the westside.

6. Establishment of SB 620 Park-Ride Lots

Parking lots are constructed at locations that facilitate car pooling and transit usage, as part of Caltrans' SB 620 Park-Ride Program. District Planning Staff works in cooperation with their staff in determining which locations can be most efficiently served by existing District services. The following project was established since January of this year:

- Diamond Bar Park-Ride Lot - Line 762 was extended to serve this lot in March of 1982. Since this lot is filled to capacity, Caltrans is planning to expand this facility through the use of adjacent land in FY 1983-84.

Future projects are planned by Caltrans and are identified in the attached report.

During the next year, the following TSM projects are scheduled for completion:

1. Ventura Boulevard Bus Priority Traffic Signal Preemption Project

The City of Los Angeles is now in the plans, specifications and engineering phase of this project. Actual implementation is tentatively scheduled for June of 1983. The potential transit related benefit of this project is a 7 to 10 percent reduction in travel time for approximately 17,000 daily passengers on Lines 35, 150 and 425 between Reseda and Lankershim Boulevards.

2. Broadway/Hill Street Couplet

The City of Los Angeles Department of Transportation is studying the feasibility of converting Broadway and Hill Street to one-way streets conceptually from Bernard Street on the north and either 12th or 18th Street on the south with a contra-flow lane on Hill Street. Although this project is only in the preliminary design stages, District Planning Staff is carefully analyzing the potential impacts to the District's 27 local and express lines that operate on these two streets which have approximately 61,000 daily boardings/alightings.

3. Transit Centers

The West Los Angeles Transit Center is now tentatively scheduled for opening in December 1982. This program will be extensively covered in a forthcoming Freeway Transit Report.

4. Freeway Bus Shelter Program

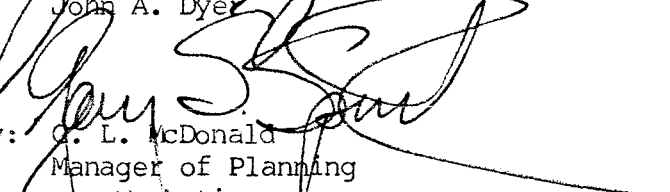
Caltrans is scheduled to install passenger shelters and other amenities at each of the following freeway bus stops by late Fall of this year: (1) Hollywood Freeway-Alvarado Street, Vermont Avenue and Western Avenue; (2) Harbor Freeway-Santa Barbara Avenue, Slauson Avenue and Manchester Avenue; (3) San Bernardino Freeway-Puente Avenue and Azusa Avenue. Upgrading these shelters will not only enhance the trips of the almost 3,000 existing patrons using these stops but should also increase the attractiveness of District express services to current auto users.

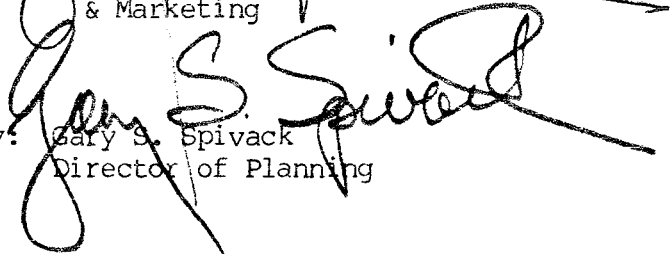
A listing of projects showing implementation dates and respective benefits is attached. Also attached is a report that goes into all District TSM activities in more detail.

Staff will continue to apprise your Board of all TSM activities on a periodic basis.

Respectfully,


John A. Dyer

For 
By: Gary S. Spivack
Manager of Planning
& Marketing


By: Gary S. Spivack
Director of Planning

Attachment

JAD/RFA:drd

REGIONAL TRANSIT DEVELOPMENT PROGRAM
Transportation Systems Management (Transit Element)
1982 Report

Prepared By:
Southern California Rapid Transit District
Planning Department
July 1982

TRANSPORTATION SYSTEMS MANAGEMENT (Transit Elements)
ELEMENT I - REGIONAL TRANSIT DEVELOPMENT PROGRAM

PROJECTS	IMPROVEMENTS	AGENCIES INVOLVED	EXPECTED DATE OF IMPLEMENTATION	STATUS	BENEFITS
Downtown Bus Movement Study	13 recommended traffic and transit related improvements to facilitate bus movement in the Downtown CBD.	City of Los Angeles	Ongoing to be fully implemented by July 1984.	11 of the 13 recommended improvements have been implemented. The last two will be completed by the end of FY 83-84.	Reduces operational difficulties in the congested CBD for several major lines and enhances schedule adherence which makes public transit more attractive to our patrons and the general public.
Establish Bus Staging & Layover area in NW vicinity of Los Angeles CBD	Off-street terminal would reduce on-street congestion and minimize deadheading.	City of Los Angeles and County of Los Angeles	Initial 6/81 Working on potential expansion.	New layover and staging area at Temple and Fremont in NW L.A. CBD. Line 456 rerouted to this location in 12/80 and Lines 53 and 455 in 6/81. Zone extension for near term future changes.	Improves accessibility to the rapidly growing West side financial district which will increase ridership and the productivity of these lines.
Fleet Mix Upgrading	Ensure availability of the proper number and type of vehicles for maximum efficiency.	UMTA funding	20 Double Deck Buses deployed March 1982.	Establishes a fleet replacement program. Double Deck buses were implemented on Park/Ride Lines 760 and 762.	Implementation of these high capacity vehicles reduced the number of buses required on those lines from 12 to 8 which saves approximately \$500,000 on an annual basis. Future acquisition of high occupancy vehicles will continue to reduce operating expenses by increasing our people carrying capacity.
Diamond Bar Park/Ride Lot. Location Diamond Bar Blvd. & Pomona Fwy. (S.R. 60)	Facility provides parking for 150 cars.	Caltrans	March 1982	Service was established to this facility by Line 762 in March 1982.	Improves inter-modal interface in the east San Gabriel Valley.

TRANSPORTATION SYSTEMS MANAGEMENT (Transit Elements)

ELEMENT I - REGIONAL TRANSIT DEVELOPMENT PROGRAM

PROJECTS	IMPROVEMENTS	AGENCIES INVOLVED	EXPECTED DATE OF IMPLEMENTATION	STATUS	BENEFITS
1980 Sector Improvements	Simplify route system & make more efficient; provide additional travel opportunities, reduce overcrowding, reduce travel time and delay.	Los Angeles County & Cities for routing concurrence and bus stop approval.	Phase I impl. June 1980 Phase II impl. Dec. 1980 Phase III impl. June 1981 Phase IV impl. Sept. 1981 Phase V impl. Dec. 1982	Phase I - improved coordination between municipal carriers & restructured Eastside, South Central & Hollywood service. Phase II - service restructured in Glendale, Burbank & South Central area. Phase III - restructuring major lines in West Los Angeles. Phase IV - minor restructuring & line renumbering in West & South Los Angeles & Glendale. Restructuring of Harbor Fwy. Transit lines.	When fully implemented this program will have a simple logical numbering system that will allow existing and potential patrons to more efficiently use the simplified transit network; provide access between communities and other regional transit generators that were not previously available.
Bus Stop Information	Faster boarding, fewer questions to driver, reduced calls to PAX.	City of Burbank, Burbank-Glendale-Pasadena Airport, City of Los Angeles.	SEV Pilot Program began June 1980	Staff recommendation to abandon program due to update difficulties and substantial vandalism on signs in test program.	Not applicable.
Off-Peak Promotion	Increased ridership during off-peak on lines with low mid-day ridership.	Major Shopping Centers	First of 4 projects initiated Aug. 15, 1980. Shopping centers now participating are Santa Monica Place. We are currently negotiating with the Panorama Mall, ARCO Plaza, Peacock Alley, Ward Plaza, Park Western Plaza and Pico Rivera Plaza.	Continuing Program	When riders are encouraged to travel during the mid-day where sufficient capacity exists, the necessity for adding buses during the peak periods is reduced and overcrowding is relieved.

TRANSPORTATION SYSTEMS MANAGEMENT (Transit Elements)

ELEMENT I - REGIONAL TRANSIT DEVELOPMENT PROGRAM

PROJECTS	IMPROVEMENTS	AGENCIES INVOLVED	EXPECTED DATE OF IMPLEMENTATION	STATUS	BENEFITS
Automatic Vehicle Monitoring (AVM)	Develops management tools for operations control, Scheduling and Planning. Lines 20, 21, 22, 44, 200 and 217 are the candidate lines on this project.	UMTA funding	Completely implemented and tested June of 1982.	Currently, all four reports (Productivity, Schedule Adherence, Running Time, Boardings/Alightings by Stop) have been successfully produced and are being modified and improved.	District-wide implementation will provide an accurate up-to-date data base to determine the most efficient level of service on each line and enables the dispatchers to more effectively react to day-to-day operational problems.
Establish Bus Staging & Layover area in SW vicinity of L.A. CBD.	Off-street terminal would permit through routing of Freeway Transit lines from Greyhound Station.	City of Los Angeles	September 1982	Layover and staging area will be located along 11th St. between Figueroa and Georgia Sts.	Provides safer more convenient service for numerous patrons to the growing west side financial district, Convention Center and the major hotels on the west side.
San Diego Fwy. (I-405) Rimerton Rd. Park/Ride Lot	Small lot provides parking for 26 cars.	Caltrans	July 1982	Line 88 was modified in July 1982 to serve this facility.	Will improve transit access for residents in the vicinity of Mulholland Pass and the west Los Angeles areas to the L.A. CBD.
Upgrade existing Freeway Transit On-Line Stations	Upgrade signing & lighting and provide shelters at: 1. Hollywood Fwy. at Alvarado Vermont & Western. 2. Harbor Fwy. at Manchester, Slauson & Sta. Barbara. 3. San Bernardino Fwy. at Puente & Azusa.	Caltrans	Fall 1982	All Hollywood, San Bernardino and Harbor Freeway stops will be completed by Fall 1982.	Enhance transit travel for approximately 3,000 existing patrons and increases attractiveness of District express services to current auto users.

TRANSPORTATION SYSTEMS MANAGEMENT (Transit Elements)

ELEMENT I - REGIONAL TRANSIT DEVELOPMENT PROGRAM

PROJECTS	IMPROVEMENTS	AGENCIES INVOLVED	EXPECTED DATE OF IMPLEMENTATION	STATUS	BENEFITS
Seventh & Maple Channelization	Improve visibility for turning vehicles & reduce congestion for through vehicles	City of Los Angeles	Fall 1982	This intersection which is used by 16 District lines, is scheduled for completion by Fall 1982.	Reduces traffic delay to motorists and transit patrons. Improves schedule reliability.
West L.A. Transportation Center; location- Fairfax Ave.- Apple St.- Washington Blvd.	A full multi-modal facility to serve as an interface of local and freeway transit lines operating in the (1) Hollywood-Wilshire regional core & (2) the West Los Angeles sub-region.	Caltrans; City of Los Angeles; City of Culver City.	December 1982	Route modifications for lines to serve facility have been approved by Board of Directors in March 1982	Significantly enhances and integrates transit services for approximately 3,000 patrons by providing improved accessibility. Also, enhances the attractiveness of transit to current auto users.
Utilization of Airspace under the Santa Monica Freeway	Off-street terminals would reduce on-street congestion and minimize deadheading.	Caltrans	December 1982	District is currently negotiating a lease with Caltrans for mid-day storage. Facility at Toberman & the Santa Monica Fwy.	This facility will reduce out-of-service mileage from 400,000 to 625,000 and will save between \$625,000 to \$975,000 annually.
Glendale Fwy. (S.R.-2/Foothill Blvd. - La Canada-Flintridge)	Provides a 75-space parking lot.	Caltrans	Summer 1983	Currently in the planning, specification and engineering phase (PSE). Upon completion, the District will consider serving lot with Lines 402, 406 and 407.	Improves inter-modal interface, productivity of these express services and provides accessibility of express lines to residents of Foothill area.
Bus turnaround at Sunset-Pacific Coast Hwy.	Ability to efficiently operate Sunset Blvd. route to the end of the street and Pacific Coast Highway.	Caltrans City of Los Angeles County of Los Angeles	Summer 1983	Currently pending negotiations for parking lot operation by Gladstones 4-Fish Rest.	Provides direct two-way service along the entire length of Sunset Blvd. Since the only other suitable turnaround locations would require an additional base bus, approximately \$250,000 in annual operating costs will not be incurred.

TRANSPORTATION SYSTEMS MANAGEMENT (Transit Elements)

ELEMENT I - REGIONAL TRANSIT DEVELOPMENT PROGRAM

PROJECTS	IMPROVEMENTS	AGENCIES INVOLVED	EXPECTED DATE OF IMPLEMENTATION	STATUS	BENEFITS
LAX Transit Center within Lot "C" Complex	A full multi-modal facility to serve as an interface for Department of Airports shuttle, SCRTD services, Culver City and Santa Monica Bus Lines.	Los Angeles Department of Airports.	Summer 1983	SCRTD currently developing concept with Department of Airports staff.	Establishment of this transit center will not only provide a centralized location for bus interface between eight District lines and two municipal carriers, but it will also provide a safe modern transfer location for approximately 700,000 existing annual passengers.
Ventura Blvd. Signal Pre-emption between Vineland Ave. & Reseda Blvd.	Improve bus travel time.	City of Los Angeles.	Summer 1983	City of Los Angeles now expects to complete plans and specifications by September 1982.	Implementation will reduce travel time from 7 to 10 percent for approximately 17,000 existing patrons on Lines 35, 150 and 425.
Computerized Customer Information System (CCIS)	Increase PAX operator productivity with a computer assisted information system.	UMTA funding.	Ongoing Contingent upon funding June 1984 or sooner.	Subsequent to the successful pilot project in the San Fernando Valley, the District currently has a pending capital grant with UMTA to expand the CCIS system District-wide.	For the public, it means faster and more accurate information for approximately 3 to 4 million annual callers by increased operator productivity, a 50% reduction in training time, reduction in data update time and the potential for sharing the data base with other departments.
Havenhurst Ave. and Magnolia Blvd./Ventura Fwy. (SR -101)	Facility provides parking for 110 cars.	Caltrans and the City of Los Angeles.	June 1984	Implementation is pending the resolution of a cooperative agreement between Caltrans and the City. The District will consider serving this facility by existing trips on Line 35.	Will provide for the establishment of more efficient express service from the west San Fernando Valley. Also, will encourage transit usage.

TRANSPORTATION SYSTEMS MANAGEMENT (Transit Elements)

ELEMENT I - REGIONAL TRANSIT DEVELOPMENT PROGRAM

PROJECTS	IMPROVEMENTS	AGENCIES INVOLVED	EXPECTED DATE OF IMPLEMENTATION	STATUS	BENEFITS
Oxnard St. and the Hollywood Fwy. (SR -170)	Facility provides parking for 110 cars.	Caltrans	June 1984	Facility is pending funding approval. If implemented, the District would consider service by Lines 412 and 426.	Improves inter-modal interface, accessibility of express service to residents of the North Hollywood area, and productivity of express lines.
Broadway/Hill Street couplet	Convert both streets to one-way operation with a contra-flow lane on Hill St.	City of Los Angeles	Unknown	The City DOT plans to complete their preliminary traffic analysis by the end of this year. District Planning staff is analyzing the potential impacts of this project on the 27 major lines which operate on these streets and have approximately 61,000 boardings and alightings.	When successfully implemented this project will reduce traffic congestion and travel times on all of our services and improve schedule adherence for our patrons.
East/West Downtown Bus Movement Study	Provide priority treatment for High Occupancy Vehicles (HOV) on 5th and 6th Sts. in the L.A. CBD.	City of Los Angeles	Unknown	The City DOT has completed traffic counts on both streets and it appears the volumes are too high to accommodate priority treatment. However, District planning staff will continue to advocate this project based on an auto disincentive approach.	Reduce travel time for HOV's which would encourage transit usage and improve schedule adherence.
Ten Problem Intersections	Develop solutions to avoid delay to buses at the ten problem intersections in the City of Los Angeles.	City of Los Angeles	Unknown	The District submitted 16 problem intersections to the City DOT. A preliminary report should be forthcoming by late summer 1982.	Reduces traffic delay on several major local lines thereby, improving schedule reliability and attractiveness of transit.

TRANSPORTATION SYSTEMS MANAGEMENT (Transit Elements)
ELEMENT I - REGIONAL TRANSIT DEVELOPMENT PROGRAM

PROJECTS	IMPROVEMENTS	AGENCIES INVOLVED	EXPECTED DATE OF IMPLEMENTATION	STATUS	BENEFITS
Ventura Freeway on-line station development	Construction of on-line Freeway Transportation on the Ventura Freeway at Laurel Canyon Boulevard, Van Nuys Boulevard, Balboa Boulevard, Reseda Boulevard, and Winnetka Avenue. District initiated request on 9/22/81.	Caltrans	Unknown	Currently Caltrans staff is evaluating traffic impact on on-line stations at the proposed locations. Caltrans is in the process of developing a Project Report which will determine feasibility and funding.	Establishment of these facilities will improve coordination between local and express lines and will allow the District to completely restructure existing express service to more efficiently serve the San Fernando Valley residents.
Compton Transit Terminal	This facility will be served by seven District local lines and by Continental Trailways under the present conceptual design.	City of Compton's CRA	Unknown	City CRA is still in the preliminary design stages.	Establishment of this facility will enhance the coordination between these seven lines and improve service for the approximately 1,400 daily passengers.
Universal City Transportation Ctr. Location- Ventura Bl. Riverton Rd. in the San Fernando Valley	A full multi-modal facility to serve as an interface of local and freeway transit lines between (1) the Valley and L.A. CBD; (2) the Valley & Hollywood-Wilshire; and (3) other District sub-regions.	County of Los Angeles City of Los Angeles Caltrans	Unknown	Due to an impasse in negotiations with the County regarding the sale price of land, implementation is uncertain.	Upon implementation, this facility would improve inter-modal interface from the San Fernando Valley to the L.A. CBD and the Hollywood-Wilshire areas for approximately 18,000 daily riders.
Wilshire Blvd. Signal Pre-emption	Improve bus travel time.	City of Los Angeles	Unknown	City would consider only after Ventura Blvd. Signal Pre-emption project is implemented and evaluated.	Reduce travel time by at least 10% for approximately 70,000 daily riders.
Westlake Blvd. and the Ventura Fwy. (SR. -101) RFA/dmg	Facility will provide parking spaces for 100 cars.	Caltrans	Unknown	This project is at a standstill due to a pending lawsuit against Caltrans. If implemented, the District will consider serving this facility by Line 123.	Improves accessibility to express service for residents of Thousand Oaks who work in the L.A. CBD.

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CHAPTER I

INTRA-MODAL TSM ACTIONS

INTRODUCTION

Transportation Systems Management is an approach to solving transportation problems by improving the efficiency of the existing surface transportation network. These actions focus on the application of low capital urban transportation improvements that increase the system capacity to move people. The District's role in the overall TSM process lies in three action categories (1) intra-modal, (2) inter-modal and (3) extra-modal.

Intra-modal TSM actions primarily involve improvements to and within the District's transit system, i.e., sector improvement programs, upgrading the existing fleet and line-by-line operational analysis. Inter-modal projects involve inter-agency cooperation with Los Angeles City, County and Caltrans. These projects include transportation center development, signal preemption, identification of deficient street segments, park-and-pool developments and ramp metering. Extra-modal projects involve staff participation and support of programs such as staggered work hours, coordination of accessible fixed-route and accessible demand-response bus stops and development of car and van pool programs.

Accomplishments and activity in the TSM field from January 1, 1982 to June 30, 1982 are described in the following report.

Sector Improvement Program

Major revisions of District bus service and routes have been partially implemented in four separate phases since June of 1980. In addition to improving service and establishing important new regional transportation links, the entire system is being renumbered to enable patrons to more easily distinguish both the regional aspects of each line and the type of service provided. Due to the passage of Proposition A, Phase V of this program is being postponed until December of this year to more accurately monitor the impact of the lower fares on ridership and to make adjustments and revisions accordingly.

Other Service Improvements

In response to ridership or geographic changes within our service area, the Planning Department analyzes and recommends route modifications to reflect these changes in an effective manner. Service modifications which have been implemented recently follow:

- Lines 232, 423, 456, 841 and 860 within the City of Long Beach - As a result of a community redevelopment project within the Long Beach CBD which involved major alterations in traffic flow patterns, these lines were rerouted along one basic street operation. The benefits of these improvements included the reduction of distance that passengers must walk to make a transfer and the centralization of service near the revitalized CBD, which makes trips to this area much more convenient and attractive for approximately 2,500 daily passengers. These services have improved schedule adherence and provide more attractive services.
- Line 41 - Route Modification - City of Inglewood - In response to a petition from over 100 senior citizens requesting service to a multi-story residence in Inglewood, this line was rerouted along Regent Street. In addition to this senior citizen residence, service was also provided to two other major senior citizen center complexes with the same route modification.
- Line 426 - Route Extension in the San Fernando Valley - Since the new Division 8 is located west of the present terminus at Reseda Boulevard and Sherman Way, staff recommended extending service from this terminal to Topanga Canyon Blvd. and Nordhoff Street. This extension of service will provide an attractive limited express service to existing auto-oriented commuters in the West San Fernando Valley and will improve the lines overall productivity.

- Lines 34, 455, 456 and 755 - Route Modification in Downtown Los Angeles - As part of the District's on-going effort to improve bus movement within the Downtown Los Angeles CBD, travel times were analyzed on these lines which currently operate over heavily congested Seventh Street. Staff's analysis indicated that a significant reduction in travel time could be realized if these lines operated on Fifth and Sixth Streets. In addition to an annual cost savings of \$15,000, the implementation of this route modification will improve schedule adherence and provides a more convenient service to our riding public.
- Line 758 - Route Extension in Downtown Los Angeles - In response to numerous requests for direct service to the Civic Center area, this line was extended from Third and Flower Streets to Temple and San Pedro Streets. Since the provision of this extended service makes this line more attractive, an increase in patronage is expected.
- Line 2 - A route modification was implemented in late spring that permits a two-way operation on Sunset Blvd. to Pacific Coast Highway. This is an interim measure utilizing a Safeway parking lot to make the turnaround move. Service will be significantly improved for residents of the Pacific Palisades by this operational modification.
- Line 120 - Route Modification - West Imperial Terminal - This line was extended from Imperial Highway and Sepulveda Boulevard to the West Imperial Terminal to provide a more adequate layover zone. The extension of service will provide a frequent direct service for residents from South Central Los Angeles and from the Cities of Paramount, Downey and La Mirada in Los Angeles County, as well as La Habra and Brea in Orange County.
- Line 154 - Route Modification - Tarzana - In response to increasing development along Burbank Boulevard in this area, staff recommended modifying the route of this line from Hatteras Street onto the segment of Burbank Boulevard between Louise Avenue and Lindley Street. In addition to providing service to an area where ridership potential exists, this service change will save approximately \$19,000 annually.

Double Deck Bus Deployment

An analysis was conducted to determine the most efficient use of the 20 double deck buses recently acquired. The parameters considered within this analysis included the types of service best suited for these high occupancy vehicles, determination of lines where savings in equipment would be maximized and specific routes with sufficient vertical clearance to safely operate this unique type of equipment. Lines 760 and 762 were selected and converted into an all double deck bus operation in February 1982, which resulted in a savings of four peak buses totaling \$500,000 annually.

Automatic Vehicle Monitoring (AVM)

This demonstration project was started in September 1980, to develop management tools for operations control, scheduling and planning. The test is being conducted on Lines 20, 21, 22, 44, 200 and 217. Dispatching capabilities have been operational since approximately September of 1980 and use of in-vehicle digital communication was tested around June of 1981. In the coming fiscal year, a grant for an AVM Productivity Demonstration Program (a three-year program) is pending UMTA approval which will add equipment on 100 buses to the present 200 buses currently in the system. This program will improve the system's flexibility and hopefully demonstrate that applying the AVM Program District-wide is justified. Within the current element of this program four reports were produced on the candidate lines which were:

- Productivity
- Schedule Adherence
- Running Time
- Boardings/Alightings by Stop

Thus far, all four reports have been successfully produced and are currently being modified and improved.

Computerized Customer Information System (CCIS)

A pilot program was conducted within the San Fernando Valley in 1981 to determine the viability of the CCIS project. Based on a subsequent evaluation it was concluded that this computer assisted information system was a success which produced benefits for both the District and the public. For the public, it means faster and more accurate information for approximately 3 to 4 million annual callers; for the District, it means an increase in operator productivity, a fifty percent reduction in training time, a reduction in data update time and the potential for sharing the data base with other departments.

During the coming fiscal year, it is anticipated that a pending capital grant with UMTA will be approved to expand the CCIS systemwide.

Bus Stop Information Signing

The District had several bus stop information sign pilot programs which were consolidated into one final test conducted in the South Bay area. The results of the previous tests indicated that the signs were easily vandalized and difficult to update especially in view of the phased implementation of the 1980 SIP. Due to the high maintenance costs associated with the candidate signs and the uncertainty of a long term funding source, staff has recommended abandoning this program and removal of existing signs in both the San Fernando Valley and the South Bay areas. This recommendation is currently being considered by the General Manager.

Low Productivity Lines

As part of the District's on-going service economy program, lines with low productivity ratings are identified to more efficiently deploy our resources. Under this program, \$6.7 million were saved on an annualized basis which effected 111 routes within our system. These changes were implemented in March and June of this year.

Ridership Promotions

In an effort to promote off peak ridership and increase patronage on low productivity lines, the District has developed several marketing programs. The primary on-going program is:

- Shopping Center Promotion - Gold tokens good for one ride have been sold to merchants at seven regional shopping centers. Merchants give these tokens away free to customers who make a minimum purchase. To date seven major shopping centers have participated in this program within which the District has sold 21,000 tokens providing almost \$16,000 in revenue to the District.

CHAPTER II

INTER-MODAL TSM ACTIONS

Midday Bus Storage Facility - West Side of Los Angeles Central Business District (LA CBD)

The District recently has negotiated a lease with CALTRANS for 77,000 square feet of property under the Santa Monica Freeway at Washington Boulevard (between Figueroa St. and Union Ave.) that will accommodate from 45 to 70 buses. Storing this number of buses in downtown Los Angeles would reduce annual out-of-service mileage from 400,000 to 625,000 miles and would result in an annual cost savings from \$625,000 to \$975,000.

In the future, this property could be converted into a joint midday storage and layover facility. Currently, this facility is in the design stage and should be implemented by December of 1982.

Establishment of Bus Staging and Layover Facility on the West Side of the Los Angeles Central Business District (LA CBD)

Recently, the District acquired a critical layover zone along 11th Street between Figueroa Street and Georgia Street. This location was obtained through negotiations with the City Department of Transportation to establish a layover facility for lines formerly utilizing the Greyhound Station. This facility will enable three District lines to provide more convenient service for many patrons to the Convention Center, the growing westside financial district and the major hotels on the westside. These passengers will also enjoy improved interface in safer locations to lines serving the South Bay, San Fernando Valley and Western Los Angeles areas. Implementation of this service is scheduled to commence in September 1982.

Downtown Bus Movement Study

In February 1981, the City of Los Angeles Department of Transportation in cooperation with District Planning staff completed a study of traffic conditions in the downtown area to determine possible locations where buses were experiencing inordinate delays. In addition to the past improvements indicated in the prior TSM summary report in December 1981, the following recommendations were implemented since the previous report was issued:

- o The bus passenger loading zone on the east side of Olive Street south of Fifth street was improved by a minor construction project to improve safety for boarding passengers. This new facility will improve our loading speeds to allow for more buses to board simultaneously. Other routes using the farside stop may be considered for use of this stop, further improving bus movements on this busy corridor.

- o The routing of the seven Busway - Wilshire Lines (480, 487, 489, 491, 492, 493, 494) was modified in both directions on June 20, 1982. The westbound modification removed buses from the severe congestion on Seventh Street and reduced the travel time slightly on each line. The eastbound modification eliminated delays encountered at Wilshire Boulevard and Flower Street particularly in the afternoon peak period. These modifications were made possible due to the efforts of the Los Angeles City Department of Transportation in securing critically needed bus zones on Grand Ave. and Wilshire Blvd.

During the next year the following actions under this program are scheduled for completion:

- To facilitate bus turn movements, the curb returns on the southeast corner of First and Olive Streets and the northwest corner of First and Spring Streets are scheduled for construction in FY 83-84.
- The recommendation to restripe First Street at Olive Street to add a second left turn lane for westbound traffic is pending a decision on the Broadway/Hill Street Couplet Project. If the City DOT decides not to install the couplet project, the First Street project will be implemented as soon as practically possible.

Upon implementation, these improvements will reduce travel time for patrons and enhance schedule adherence, both of which will make public transit more attractive to our patrons and the general public.

Other Downtown Improvements

- Broadway-Hill Street Couplet - The City of Los Angeles is studying the feasibility of converting Broadway and Hill Street to one-way operations conceptually from Bernard Street on the north and either 12th or 18th Street on the south with a contra-flow lane on Hill Street. Since the District operates 27 local and express lines with approximately 61,000 daily boardings and alightings on these two streets, a careful analysis is necessary to determine the potential impacts on these lines. The City plans to complete their preliminary traffic analysis by the end of, this calendar year to determine this projects feasibility.

- East-West Downtown Bus Movements

In cooperation with the City of Los Angeles, a study is being conducted analyzing what type of HOV treatments would be appropriate to improve bus operations on east-west streets in the CBD. This

study will include determining the feasibility of using contra-flow and/or concurrent flow lanes on Fifth and Sixth Streets to significantly improve our heavily patronized services on these streets. Currently, the City has completed the traffic counts on Fifth and Sixth Streets. A preliminary analysis based on traffic volume indicates that contra-flow lanes would not be feasible on these two streets. However, District staff will continue to justify this type of facility based on an auto disincentive approach.

- Bus Delay Locations - Based on data compiled by the District's Transportation Department staff, sixteen intersections where significant bus delays occur have been submitted to the Los Angeles City Department of Transportation. An analysis determining what traffic improvements can be made to improve bus movements at these locations should be completed within the next three months. In addition, left turn lanes were recently installed on Seventh Street at Maple Avenue, to facilitate left-turn movements of buses and the general movement of traffic through the intersection.

Transit Centers

- West Los Angeles Transit Center - This facility which will be located beneath the Santa Monica Freeway at Washington Blvd. and Fairfax Ave. will serve as a terminal for four District lines and one Culver City line. In addition, this center will be served by one through local and eight express lines. Since the inception of this project, extensive interagency cooperation by Caltrans and City of Los Angeles has facilitated the planning and engineering phases of this center.

Establishment of this new transit center will significantly enhance and integrate transit services for approximately 3,000 patrons and provide improved accessibility for transit users in the densely populated West Los Angeles area. It is anticipated that former auto users will be attracted to transit by centralizing transit services in an area for local and freeway express buses to easily pick-up and discharge passengers at sheltered curbside stops.

Route modifications for lines serving the WLATC were approved by the Board of Directors on March 25, 1982, which will commence, concurrent with the implementation of this facility scheduled for December of this year.

- Los Angeles International Airport Transit Center - This center which is to be built in cooperation with the

Department of Airports will be located within their Parking Lot "C" on 96th Street east of Sepulveda Blvd. Three through lines will serve this location and four local lines will terminate there.

It is anticipated that Santa Monica and Culver City Municipal Bus Lines will also serve this center. Upon implementation of this facility, the Department of Airports will provide a shuttle service into the airport from Lot "C" with their existing shuttle operation, thereby permitting the District to cancel Line 608 (Airport Shuttle).

Establishment of this transit center will not only provide a centralized location for bus interface between eight District lines and two municipal lines, but it will also provide a safe modern transfer location for approximately 700,000 existing annual passengers. The tentative implementation date for this project is late 1983.

- Universal City Transit Center - This center is to be located on a site at Ventura Blvd., and Fruitland Dr. Currently, this lot which is owned by the Los Angeles County, is being used as a park/ride lot for two express lines and one local line. Since this lot is in a prime location in the southeast San Fernando Valley, the District and Caltrans have jointly endeavored to convert this site into a major transfer center which would include: a four bus bay loading platform, layover facilities, passenger amenities and bicycle lockers, in addition to approximately 150 on-site parking spaces for autos. Upon implementation, five express lines and two local lines will serve this center and provide improved intermodal interface for approximately 18,000 daily riders.

Recently, negotiations between the District and the County have come to an impasse over the selling price of the property. However, the County is currently investigating the feasibility of developing a proposal which could include exchanging the air rights over Division 7 as partial consideration for the Universal City site.

- Compton Transit Terminal - This center is to be located within the City of Compton at Willowbrook Ave. and Compton Blvd. by the City's Community Redevelopment Agency. If implemented the center would be served by seven District local lines with approximately 1,400 current daily boardings, as well as by Continental Trailways. Since the City of Compton's CRA has not developed a final design concept for this facility, a tentative implementation date cannot be determined at this time.

SB 620 Park-Ride Lots

Under this program Caltrans constructs park-ride lots at locations where a facility of this type would encourage carpooling and transit usage. The status of the facilities within this program follows:

- Diamond Bar Park-Ride Lot - Line 762 was extended to serve this lot in March of 1982. Caltrans is still planning to expand this facility through the use of adjacent land in FY 83-84.
- Rimerton Road (Mulholland Drive) and the San Diego Freeway-A small 26 space parking lot was constructed earlier this year along Rimerton Road and the bus only slip-ramp on the northbound on and off ramps will be completed by July. Upon completion, Line 88 will be modified to serve this new facility.
- Glendale Freeway and Foothill Boulevard (La Canada-Flintridge) - This 75 space lot is located at the intersection of Foothill Boulevard and the Glendale Freeway off-ramp and is pending final funding approval from Sacramento and if approved, is scheduled for completion by the summer of 1983. Upon implementation, the District will consider serving this facility with Lines 402, 406 and 407.
- Paxton Street and the Interchange of the Simi Valley and Foothill Freeways - This 110 space facility which is located at the intersection of Paxton Street and Foothill Boulevard is also pending final funding approval and is tentatively scheduled for completion by April of 1983. When this lot is completed, service by Line 410 will be considered.
- Hayvenhurst Avenue and Magnolia Boulevard/Ventura Freeway On-Ramp - Funding for this 110 space lot has been approved. However, implementation is pending the resolution of a cooperative agreement between Caltrans and the City of Los Angeles. Assuming this agreement is consummated in the near future, this facility should be completed during FY 83-84. When this facility is constructed, service by selected trips from Line 35 will be considered.
- Oxnard Street and the Hollywood Freeway - This 110 space lot which is located on Oxnard Street across from the Laurel Plaza Shopping Center in North Hollywood, is pending funding for construction in FY 83-84. Although an implementation date is relatively uncertain at this time, the District would consider serving this facility by Lines 412 and 426 when construction is completed.

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- Westlake Boulevard and the Ventura Freeway - This 100 space facility is located near the Ventura Freeway and Duesenberg Drive in the City of Thousand Oaks and has been approved for funding. However, due to a pending law suit against Caltrans, the implementation date cannot be determined at this time. When this lot is constructed, service by Line 123 will be considered.

Although the specific benefits are difficult to quantify, these lots will potentially encourage current auto users to either form a car or van pool, or ride public transit, reducing energy consumption and increasing the productivity of our express lines.

Establishment of a Bus Turnaround Facility at Sunset Boulevard and Pacific Coast Highway

This project involves a proposed bus turnaround loop through an existing Los Angeles County operated beach parking lot at the intersection of Pacific Coast Highway and Sunset Boulevard. In June of 1981 this project was submitted to the Los Angeles County Transportation Systems Management (TSM) Steering Committee for their consideration and analysis for potential implementation. The Los Angeles County Road Department completed their analysis and issued a report in February 1982 recommending the establishment of a turnaround facility at this location. In addition to the District, this project involves the Los Angeles County Department of Harbors and Beaches, the Gladstones -4- Fish Restaurant and Caltrans. Currently, the owners of the restaurant are negotiating with the Los Angeles County Engineer Department to take over operation of this parking facility. Contingent upon the resolution of these negotiations and Caltrans' approval of a traffic signal modification at this intersection, the District's facility, programmed for FAU funding during FY 82-83, could begin construction in the latter part of this year.

Upon implementation, this project will provide direct two-way service along the entire length of Sunset Boulevard, thereby providing improved access to the beach recreational areas. In addition, this facility will eliminate the need to turnaround within the City of Santa Monica or Malibu which would necessitate an additional base bus costing between \$250,000 to \$290,000 annually. In the interim, Line 2 is operating on a temporary detour through an existing parking lot so that needed two-way service can be provided on Sunset Boulevard.

Freeway Bus Shelter Program

In a program to upgrade existing freeway bus stops, Caltrans will be installing passenger shelters and improved lighting and signing at the following locations: (1) Hollywood Freeway-Alvarado Street, Vermont Avenue and Western Avenue;

(2) Harbor Freeway-Santa Barbara Avenue, Slauson Avenue and Manchester Avenue; (3) San Bernardino Freeway-Puente Avenue and Azusa Avenue. Planning and engineering has been completed and construction should be completed by late summer or the early fall of 1982.

As part of this program, the District has agreed to design, fabricate, install and maintain transit guide signs on surface streets at locations adjacent to pedestrian entrances to freeway bus stop platforms and to enclosed bulletin boards within each of the shelters. Upgrading these shelters will not only enhance the trips of the almost 3,000 existing daily patrons utilizing these stops, but will also increase the attractiveness of District express services to current auto users.

Ventura Boulevard Bus Priority Traffic Signal Preemption Project

The City of Los Angeles is now in the process of developing a project to demonstrate the potential benefits of providing priority for buses by preempting traffic signals on a major surface arterial. Project limits are from Reseda to Lankershim Boulevards (10.3 miles) on Ventura Boulevard, involving at least 48 intersections. Due to manpower reassignment within the City, the plans, specifications and engineering (PS and E) phase of this project is now scheduled for completion by September 1982.

Data is currently being obtained and analyzed on current bus travel times on Ventura Boulevard for Lines 35, 150 and for the recently implemented limited express Line 425. Potential benefits anticipated by the establishment of this facility are a 7 to 10 percent reduction in travel times for approximately 17,000 daily passengers within the project area and improved traffic control at the involved intersections as a result of the installation of new eight phase traffic signal controllers.

Ventura Freeway On-Line Stations

In September 1981, the District requested Caltrans to construct on-line bus stations at five locations along the Ventura Freeway between the Hollywood Freeway and Winnetka Avenue.

Five proposed stations are under consideration: Laurel Canyon Boulevard, Van Nuys Boulevard, Balboa Boulevard and Winnetka Avenue. Currently, these stations are being evaluated by Caltrans' staff in terms of traffic impact on the freeway ramps and on the adjacent surface arterials.

Upon implementation, these stations will provide improved interface between our express and local lines and increase the productivity of existing express services. In addition, the proposed on-line stations will provide increased flexibility in designing line haul express service to suit the needs of commuters within the San Fernando Valley.

ACKNOWLEDGEMENTS

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