

Feasibility Study for Providing Child Care at San Fernando Valley Commuter Rail Stations

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Child care is recognized by many transportation professionals as a key factor to consider when working to reduce traffic congestion. Fulfilling child-care responsibilities increases commute distance and trips for many working parents. It is also cited as one reason solo drivers are unable to carpool, vanpool, or use public transit. In order to increase transit ridership, a study was conducted for the Los Angeles County Transportation Commission to determine the feasibility of providing child-care facilities at two commuter rail stations in the San Fernando Valley area of Los Angeles. Each site offered opportunities for situating a facility at, or adjacent to, the rail center. Residents in both areas needed additional child-care facilities. To determine costs, a variety of area characteristics, including child-care demand and fees, were examined. Estimated capital and operating costs, weekly service fees, and administration options were identified. Total capital and operating costs were then applied to a pro forma budget designed to recoup costs through fees for the facility over an acceptable investment period. Overall, the study concluded that both sites should be pursued for child-care facilities.

To increase public transit services in Los Angeles County, the Los Angeles County Transportation Commission (LACTC) is developing a network of commuter rail lines. By October 1992 commuter rail service will begin operation throughout the San Fernando, Santa Clarita, and San Gabriel Valleys, and the southeastern portions of Los Angeles County. This new service will connect with existing service in Ventura, San Bernardino, and Orange counties. To improve patronage on two commuter rail lines that travel through the San Fernando Valley to downtown Los Angeles, LACTC conducted a preliminary study to assess the feasibility of providing child-care facilities at or adjacent to the proposed Chatsworth and Sylmar commuter rail stations in the San Fernando Valley.

BACKGROUND

The inextricable link between land use and transportation implies that solutions to traffic congestion cannot ignore issues associated with the location of various land uses—primarily jobs and housing, but also locations associated with the “other trips” category. Therefore, it is essential that transportation facilities and trip ends be brought closer together to achieve

greater efficiency and enhance mobility. A prime example of this proposition is the proliferation of double-income households during the past decade. These households have resulted in an explosive growth need for child care that is considered a new contributor to travel demand during the morning and evening peak periods.

Providing new and varied forms of public transportation may encourage more people to leave their cars behind, but these new forms of transportation will not necessarily attract working parents if they cannot find high-quality, affordable child care near a transportation route. Commuting parents often state that child care is a primary reason for not carpooling, vanpooling, or using public transit (1). Providing child-care facilities at multimodal public transportation centers such as two proposed commuter rail stations in Los Angeles County might make public transportation a practical travel option for more commuters, especially women, who are limited by child-care requirements.

On the basis of a survey done in Santa Clara County, California, in 1988, it was found that parents using child care add an average of 3.1 mi to their trips from home to work each day (2). Another survey conducted by the California Department of Transportation (Caltrans) found that employees indicated an extra 4 mi was added to the one-way commute to work because of child care (3).

The time and distance added to a parent's commute because of child-care responsibilities highlight the importance of situating child-care facilities at public transportation centers. Such facilities, in reducing commute time and distance by providing parents with easy access to child care, will attract larger numbers of prospective riders to public transportation, as long as the child care is affordable, of good quality, and of ample supply to meet demand. This trilemma—affordability, quality, and supply—are the factors upon which the success of any child-care facility ultimately depends (4).

Precedent-setting examples of child-care projects at intermodal facilities attempting to address this important link between child care and transportation to resolve the child care trilemma are described in the following sections.

Tamien Station, San Jose

The local transit district will provide space on their property for a child care center at this intermodal facility located in a predominantly residential area of San Jose. The facility serves approximately 6,000 bus, light rail, and commuter patrons

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each day. A 4-month feasibility study and site analysis is in process.

The district intends to contract with a nonprofit agency to operate the facility. Although the district recognizes that parent fees will need to be subsidized to make the program affordable to the community using the transportation facility, no plans for an ongoing subsidy by the transportation district have been established.

City of San Diego Metropolitan Transit Agency

In February 1990, the Mt. Erie Trolley Day Care Center was opened in San Diego. For this project the San Diego Metropolitan Transit District made property available near the light rail line and was leased to a local developer for \$1/year. The property was located adjacent to a housing project and the building was provided by the developer. The daily operations of the facility are the responsibility of the Mt. Erie Church. To enhance usage, the facility operates a child-care facility during the day and a senior citizen center in the evening.

DESCRIPTION OF COMMUTER RAIL STATION SITES

Each of the two proposed commuter rail station locations has unique demographic and environmental characteristics that provide both constraints and opportunities for accommodating prospective child care facilities at, or adjacent to, the sites.

Chatsworth is a rapidly growing residential area (45 percent growth during 1980–88) with light industrial development in a portion of the district. The median household income in 1987 was approximately \$45,000 and nearly one-quarter of the total population is under the age of 17.

The proposed station site is an 11-acre lot that will eventually include approximately 140,000 ft² of retail space in addition to the commuter rail station. Most of the adjacent land uses are commercial in nature. Development at the site will be phased. To comply with the commuter rail schedule, the station will be built by October 1992 and the retail development will be constructed later. Because of the imminent operation of the commuter rail, a child-care facility will probably be incorporated into the retail phase of the development. On the basis of the projected ridership at the station and the surrounding community characteristics, including the existing supply of child care, the Chatsworth site would accommodate a facility that could serve approximately 90 children.

Sylmar is a predominantly lower income area and has low to medium-density residential areas. The median household income in 1987 was approximately \$26,000. Slightly less than one-third of the total population is under the age of 17. Like Chatsworth, the area is growing fairly rapidly.

Currently, the station site is 5.8 acres, which is a section of a 22-acre plot in which single-family homes are expected to be constructed. The residential development will be composed of a mixture of detached dwellings, townhomes, and condominiums. Joint development options for the site are also being explored. State assemblyman Richard Katz drafted legislation to allocate Petroleum Violation Escrow Account

(PVEA) funds for partial construction costs of a child-care facility at or adjacent to this site. On the basis of a preliminary survey, staff at his office estimated that 75 children could be accommodated at this site. The small size of the station site and the parking requirements for commuter rail (approximately 300 spaces) may preclude putting a child-care facility on-site.

COMMUNITY SUPPLY AND DEMAND

The licensed child-care centers within a 1-mi radius of the two sites were contacted by telephone to determine their licensed capacity, ages of children served, vacancy rate, tuition, and hours of operation. At Chatsworth there appears to be a high demand for infant care, even though the cost of infant care averages \$123/week. The average cost for preschool care in this area is \$88.00/week; for school-age care, \$45.50/week. At Sylmar it appears that there is a demand for child-care services in the area; however, most residents can not afford to pay the market rate.

SPACE REQUIREMENTS AND SITE PLANNING CONSIDERATIONS

On the basis of the total licensed capacity, California state licensing regulations for day-care centers require a minimum of 35 ft² of usable indoor activity space per child. Additional space must be included for toilet facilities, circulation space (such as hallways), storage, laundry, food preparation, and offices. In addition, napping space is required for children under 2 years old. Using a figure of 65 ft²/child, these additional space requirements can be met. Because more space provides for a better quality center, 85 ft²/child is recommended. The additional space provides for expanded activity space above the state minimum requirements. Similarly whereas licensing regulations require a minimum of 75 ft² of outdoor space per child, 100 ft² is recommended in order to provide higher-quality care.

Given the number of children projected at each site, the state would require a minimum of 5,850 (Chatsworth) and 4,875 (Sylmar) ft² of indoor space and 6,750 and 5,625 ft² of outdoor space. The recommended amount is 7,650 and 6,375 ft² for indoor space and 9,000 and 7,500 ft² for outdoor space, respectively.

In designing a child-care facility, the site should be examined so that the best locations for the building, parking, access, play yards, and walkways can be determined. The facility must accommodate different age groups: infants, toddlers, 2-year-olds, and older preschool-age children. Secondary activities such as eating, sleeping, and food preparation also occur within the facility and must be considered in design.

Building Entry

Because safe pedestrian access is required from the parking area to the center, the location for pick up and delivery of children should be as close as possible to the main entrance. It is preferred that curbside parking be provided so that par-

ents and children do not cross traffic lanes. For the convenience of parents, the infant and toddler classrooms should be as close to the center's main entrance as possible. All primary use areas within the center must be accessible. Emergency vehicles need easy access to the center and the center should be marked so that it is easily identified by these vehicles. Provisions must also be made for access to and within the center for the physically disabled.

Parking

To ensure parking is near the center, spaces near the facility should be designated for child-care use only. Child-care facility staff parking would also need to be designated.

ZONING ISSUES AND SITE OPTIONS

Zoning

In the city of Los Angeles, child-care facilities are allowed in specific zones only and there is no limit on the number of children. Without a conditional use permit, child care is not permitted in industrial or manufacturing zones. However, it is possible to apply for a zoning variance to locate a child-care center in some unnamed zones.

Site Location

Chatsworth Option 1: Locate on Commuter Rail Property

On the basis of the preliminary plans for Chatsworth, there would be adequate space on the station property to accommodate a child-care center during Phase II of the plan. The main issues that should be considered regarding the specific location are whether there are any potential health and safety risks to the children in the program. There is a strip of light industry on the eastern side of lot, and this has raised some concerns about possible emissions. This light industry includes dog kennels and animal hospitals, a parking lot for waste control vehicles, a rebar loading facility, shipping and handling facilities, and some auto body refinishing shops. According to the local air-quality management district, the possible emissions of toxins from these types of facilities do not appear to warrant concerns. Before construction of the rail station facility, a local air regulation will require the level of volatile organic compounds emitted by auto refinishing facilities be reduced to a nonharmful level. An environmental impact report will substantiate whether any environmental concerns are justified.

Chatsworth Option 2: Locate on Proposed Adjacent Private Property

The second preferred option is to locate the child-care facility at the center of the property immediately west of the proposed station. Because there is ample land at the station site to

accommodate a child-care facility, this option should only be pursued if the environmental concerns at the station property are found to be substantive and significant. It might be possible to interest the owner of the property on the western side to include a child-care center in the development, however, if the owner is not willing to contribute the necessary property for the project, the cost to acquire the land could exceed the price of the facility.

Sylmar Option 1: Work with Residential Developer

The preferred location for the child-care facility is at the center of the proposed residential development that is next to the commuter rail station lot. The developer has a history of supporting the construction of child-care facilities. If guaranteed parking and a safe walking path to the facility are made available at this location, parents can still make one stop.

If this portion in the center of the development is not available, the next preferable site is close to one of the proposed access points of the housing development. The disadvantage of this site is that it requires a second stop by parents.

Sylmar Option 2: Locate on Station Property

A center to accommodate 75 children would require 10,500 to 13,900 ft² of property for suitable indoor and outdoor space. This option is an unlikely alternative because it would necessitate the displacement of some of the parking now being planned for the station. The addition of this type of facility on the property could, however, delay the rail project. One option that is being explored at the Tamien Station in San Jose is a child-care center above a parking structure. However, under Chapter 2-8 of the California State Building Code (Title 24), child-care facilities must be located on the first or second floor of a building, unless an exception has been granted by the state fire marshal. Additional restrictions regarding a sprinkler system and fire rating of the construction exist if the facility is to be located on the second floor.

Sylmar Option 3: Locate on Adjacent Property

Except for small pockets of commercial property, all other adjacent property within a two-block radius of the station would require a conditional use permit to enable a child-care facility to be placed there. Because of the severe shortage of child care, parents would be expected to use a facility located within a 1- to 2-mi radius of the rail station and use would depend on the fees, quality, ages of children served, and hours of the service. However, by increasing the distance from the station site, the center may in fact attract fewer commuter rail riders, even though a center at a distance would presumably reduce the number of miles that parents drive for child care. Thus, this option is not as ideal as a location next to the rail station, but in the event that it is the only alternative, it would help reduce commuting parents' trip distance to child care.

Developer Incentives

The city of Los Angeles has a series of developer incentives in place to encourage developers to build child-care centers. For example, a developer can qualify for a height and density bonus by including a child-care facility in a proposed development, and the development project as a whole can qualify for expedited processing through the regulatory and permitting process. Although these incentives are appealing to developers, those developers who consider building child-care centers often find these incentives insufficient to justify the expense of building the facility and frequently question the value a center will have as a tenant amenity. Although the perception may not necessarily be accurate, developers often feel that the relative appeal of the center to tenants will not be great, particularly if the developers pass on the cost of the facility to tenants in the form of higher lease rates. Because of the California State Building Code requirement restricting child-care centers to first and second floors, a center could replace lucrative ground-floor rental space.

COST PROJECTIONS

Given the shortage of child care in the Los Angeles area, there is enough demand for the size of centers being examined. Use, however, depends heavily on whether parents can afford the fees and the fees are determined by the quality of the program, the services offered, and the financial support the center receives from outside sources.

Construction Costs

Two cost scenarios were projected for each site. The first scenario meets minimum state requirements for indoor and outdoor square footage and assumes a construction cost of \$65/ft². The second scenario meets quality standards in the child-care industry and assumes a construction cost of \$100/ft². At the minimum level, Chatsworth would have 12,600 ft² and would cost approximately \$500,000 with all site work, construction, landscaping, and consulting fees included. At the recommended level the facility would have 16,650 ft² and would cost approximately \$960,000. For Sylmar, at the minimum level there would be 10,500 ft² at a cost of approximately \$415,000. At the recommended level, the site would have 13,875 ft² and would cost approximately \$800,000.

Additional Start-Up Costs

Additional start-up costs for a child-care center include indoor and outdoor furniture and equipment; office and staff workroom, lounge, and kitchen furniture and appliances; staff salaries before the center's opening; and program-curriculum design fees.

The costs do not vary by square footage, but they do vary by the capacity of the center. The total additional costs for Chatsworth would be \$140,000 and for Sylmar, \$120,000.

Ongoing Operation Expenses

Staff salaries are almost 70 percent of the total annual operating budget for a center. When benefits are included, the percentage rises to 80 percent. Therefore, the number of staff hired and the wages paid to staff are the critical elements in a center's budget. A lower staff-to-child ratio, higher staff salaries, and medical benefits promotes higher quality. These situations retain staff and reduce turnover, which also indicates a high-quality program. However, providing these salaries and benefits increases a center's operating budget and creates fees that are unaffordable to the parents who would like to use the center.

Two scenarios have been projected for each site. The first meets state minimum standards. The staff to child ratios are 1:4 for infants and 1:12 for preschoolers. Staff are paid \$5 to \$7/hr and have a minimal benefit plan. The second scenario meets accepted quality standards in the child-care industry. Staff-to-child ratios are at the high end of the National Association for the Education of Young Children standards. The ratios are 1:4 for infants, 1:6 for 2-year-olds, and 1:10 for 3- and 4-year-olds. Staff are paid \$6.50 to \$8.50/hr and receive a more comprehensive benefit package.

For Chatsworth, annual operating costs would be \$335,000 at the minimum level and \$480,000 at the recommended level. For Sylmar, the annual operating costs would be \$250,000 and \$390,000, respectively.

The annual operating budgets for both sites are exclusive of lease costs and an operator's fee for managing the center. Depending on the type of operator used, there may be either a management fee or operator cost plus profit that would need to be incorporated into the annual operating budget.

Fees and Demand

If parent fees are expected to cover the annual operating costs of these centers, weekly fees would need to be set at the amounts presented in Table 1.

Market rate fees for center care at Chatsworth are \$123 for infant care and \$88 for preschool care. Therefore, it is anticipated that the parents who would use the Chatsworth center could afford the recommended average weekly parent fees. However, at Sylmar the majority of the licensed child-care centers are funded entirely by the state or have sliding fee scales. There is only one full-day program that charges \$82.50/week at Sylmar, and this center has many vacancies. Therefore, it is assumed that the parents expected to use this center could not afford the weekly parent fees necessary to cover the operating expenses and would need the cost of care to be

TABLE 1 AVERAGE WEEKLY PARENT FEES (PER CHILD)

Site	Minimum		Recommended	
	Infant	Preschool	Infant	Preschool
Chatsworth	\$85.00	\$65.00	\$126.00	\$90.00
Sylmar	\$80.00	\$60.00	\$124.00	\$90.00

subsidized by some other source of funding such as government grants.

The projection of the total number of children of riders expected to use the commuter rail station child-care center is based on normative data compiled from employee child-care needs and assessments. A formula based on these survey data has been applied to the anticipated ridership population: 500 at Chatsworth and 300 at Sylmar. The total population figure has been reduced by the average percentage of employees who have children under 6 years old, the percentage of employees who are single parents or have a spouse who works, the percentage who are interested in using an on-site child-care center, and the percentage who could afford the cost of this care; it was then increased by the average number of children under 6 years old found in these households.

When this formula was applied to ridership assumptions, the expected usage of the center from rail riders is 45 children at Chatsworth and 27 children at Sylmar. It should be noted that this is the anticipated figure that would pay the full cost of the program. Usage of the child-care center would be greater if the center's fees were reduced (the fees could be set at a sliding scale according to income). If fees were not an issue, 73 children of riders at Chatsworth and 43 children at Sylmar would be expected to use the center.

Because of the shortage of child care in the area, there is anticipated additional usage of the center from community residents.

Start-Up Pro Forma Analysis

Chatsworth

The pro forma presented in Table 2 assumes that parent fees are set to cover the annual operating costs of the child-care center and the start-up funds are initially provided by the developer. It would take 21 to 24 years to recoup funds provided by the developer, depending on whether the minimum or recommended center characteristics are selected. In calculating the number of years it would take to recoup the funds, it was assumed that tuition increases at 4 percent per year, operating cost increases at 3% per year, the vacancy rate is 5 percent, and the permanent loan is at 10 percent interest over 20 to 25 years. For the minimum center, the weekly parent fees—\$92/week for infant care and \$72/week for preschool care—are under the market rate. However, the level of quality of the center could affect usage. For the recommended center the weekly parent fees—\$135.50/week for infant care and \$99.50/week for preschool care—are over the market rate by approximately \$11.00/week for both infant and

TABLE 2 CHATSWORTH PRO FORMA BUDGET (90-CHILD CAPACITY)

	Minimum	Recommended
Construction Costs	\$499,385	\$962,550
Equipment Costs	123,000	123,000
Personnel/Program Development	17,640	17,640
Total Start-up Costs	\$640,025	\$1,103,190
Number of Years to Recoup Funds	21 Years	24 Years

preschool care. These higher fees could outprice the service at the Chatsworth area. To keep fees closer to market rate for the recommended center, the start-up funds could be recovered over a longer period of time.

An alternative to this pro forma would be to contract with a for-profit provider to construct and operate the center. The provider would cover all start-up expenses and operate the center on an ongoing basis. The possibility of attracting a for-profit provider is greater at Chatsworth than Sylmar because of the difference in average household income level and greater profit potential.

Sylmar

The pro forma presented in Table 3 assumes that parent fees are set to cover the annual operating costs of the child-care center and that the majority of the construction costs are provided by the developer. It would take 10 to 18 years to recoup the funds provided by the developer, depending on whether the minimum or recommended center characteristics are selected. In calculating the number of years it would take to recoup the funds, it was assumed that tuition increases at 4 percent per year, operating cost increases at 3 percent per year, the vacancy rate is 5 percent, the PVEA funds reduce the start-up costs by \$500,000, and the permanent loan is at 10 percent interest over 5 to 20 years. Because the majority of child-care centers in Sylmar are for low-income families with fees based on a sliding scale according to income, and the one center that charges \$82.50/week has numerous vacancies, the weekly parent fees for both centers (\$82.00 to \$129.50/week for infant care and \$62.00 to \$95.50/week for preschool) are expected to outprice the service at the Sylmar site. The recommended center and subsequent higher fees will most likely be unaffordable for the community surrounding Sylmar, but the higher quality provided by this center could attract additional commuter usage.

ADMINISTRATION

Options for Operation

There are a variety of child-care operators that can be engaged to operate the proposed child-care facilities at the commuter rail stations. The type of organization selected will have an effect on the quality of the program, the locus of control, and

TABLE 3 SYLMAR PRO FORMA BUDGET (75-CHILD CAPACITY)

	Minimum	Recommended
Construction Costs	\$416,155	\$802,125
Equipment Costs	105,000	105,000
Personnel/Program Development	17,050	17,050
Total Start-up Costs	\$538,205	\$924,175
Less PVEA Funds	(500,000)	(500,000)
Balance	\$ 38,205	\$424,175
Number of Years to Recoup Funds	10 Years	18 Years

policy-making authority. The ability to set policy, such as program fees and hours of operation, will determine the population eventually served at the centers—whether transit riders or community residents.

Role of Sponsor

Several organizational models are used at employer-related child-care centers, and each offers a different approach to the control and responsibility issues. These distinctions have some similarities to the centers proposed because they are established for the purpose of serving a particular population rather than primarily being a community center.

The sponsor can simply rent space or property for a vendor to operate its own child-care program (little control, little responsibility). The sponsor can contract with a vendor to operate its own child-care program (little control, more responsibility). The sponsor can facilitate the spin-off of a separate organization (profit or nonprofit) to operate a center (more control, more responsibility). The sponsor may choose to operate the center directly (high control, high responsibility).

Because the sponsor wants to ensure that its goals are being met, the issue of control in achieving these goals is significant. For example, if the child-care facility is established in an effort to promote ridership on the commuter rail, the center must be operated in a manner that allows riders to use it. For example, it must be open during hours that permit rider use. It must meet the level of quality and provide the type of care (infant care, for example) required by this particular group of riders. If the program operator, rather than the sponsor, has the authority to set such stipulations, there is a risk that the basic goals will not be met.

Ideally, the sponsor provides policy direction (enrollment, tuition, services), defines quality assumptions, and participates in the proposed system for parent-consumer feedback. The sponsor typically designates a staff person to monitor the operation of the center (or the function can be assigned to a committee or task force). That individual or committee would be responsible for interacting with the operator, assuring contract compliance, and helping develop needed changes in policy or procedure.

Profit versus Nonprofit

Good-quality, well-operated child-care programs can be found among both for-profit and not-for-profit programs. Unfortunately, poor-quality programs are also found in both sectors. The advantage of some for-profit operations is the fact that they can absorb some of the start-up expenses. Non-profit programs [established as a qualified 501C(3) program] can more easily qualify for government and foundation grants, although some such financial resources are also available to for-profit providers.

An additional advantage of the nonprofit approach is that the funds (from parent fees) that would otherwise go toward profits of a for-profit operator can be put back into the center and this may allow parent fees to be lower than they would be otherwise. The disadvantage of this approach is that the

quality of the board leadership varies with the individuals that are on it and can also fluctuate over time as the membership changes.

For-Profit Programs

For-profit operators range from small mom-and-pop operators that manage a single center to large child-care chains. Operators vary tremendously in capability, sophistication, quality, and style. Some for-profit providers have a cookie-cutter type of program and will not tailor a program to fit a given situation. Others will design the service in a highly individualized manner and be very responsive to the contracting organization.

The larger child-care chains have deep pockets and thus provide some level of protection from liability exposure, the greatest protection is the quality of the service provided. Child-care centers are required to carry liability insurance, but the best insurance is the avoidance of a problem. Thus, the quality of the care provided is the key consideration.

Options for Funding

Finding funding for child care, both start-up and ongoing expenses, is a difficult proposition. There may be some joint partnership opportunities available that could create unique avenues for funding. For example, other employers in the vicinity of the rail stations might be willing to consider participating in a consortium.

There are limited foundation funds and public funds currently available for child-care operations. For example, some large child-care operators will fund some or all of the start-up expenses of the center. Another way of funding start-up expenses is to lease the building space: Modular units and facilities built using regular construction can be leased. The initial outlay of funds can be avoided but the payment of the lease adds additional expense to the operating budget, which increases parent fees and could require greater outside financial support.

GENERAL CONSIDERATIONS

The following are issues that should be considered as part of any future facilities at Chatsworth and Sylmar rail stations.

Guaranteed Ride Home

The parent-employee must be assured that guaranteed rides home will be available in the event of an emergency call from the child-care center. Because the commuter trains operate during peak hours only, it is imperative to coordinate guaranteed-ride-home programs for those commuters who use centers on the transportation facilities. Because of the frequency with which young children become ill and must leave the child-care center, parents are unlikely to use a child-care program if they are not guaranteed access to the children during the day.

Proximity to Tracks

Playground walls, exits, emergency gathering points, and other design features will need to be developed to ensure maximum safety of the children participating in the program. These features need to be created during the design phase of any child-care center located near the transportation facilities that are near active tracks. Additionally, the flow of pedestrians between the center and the parking area must be planned to guarantee safe passage of children and parents.

Noise Level

Necessary design features can be created to protect the children from excessive exposure to noise. Placement of the child-care center and outdoor space should take into consideration the frequency with which trains are passing by and ways to reduce the noise.

Diesel Fumes

Caltrans also indicates that although there is not a great deal of research on the issue of diesel particulates and their impact on children, this has not been a prohibitive factor at other project sites. The risk increases with the length of time the trains are idle in the station. Caltrans has conducted research at their Trans-Bay Terminal project in San Francisco, which is an enclosed area through which many diesel-operated buses pass daily. Even with this amount of traffic and the enclosed space, Caltrans did not find the air quality to be unsafe. Caltrans also stated that with fresh air combining with the diesel

particulates, the risk is even further reduced. In addition, this risk is no more than the risk of a child riding in a car on a busy freeway.

CONCLUSION

In summary, the child-care issue is an essential consideration in encouraging transit use. The provision of child care would enhance the appeal of transit and meet the excess demand for child care in each of the areas. However, a major factor to consider is that of holding down the costs and maintaining high-quality service. Operating costs can be covered by the fees, but some subsidization is required to obtain the land and to construct and equip the facilities.

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