



SR-710 Study

Alternatives Analysis Report

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## Appendix K

Right of Way Technical Memorandum





## SR-710 Study

### TECHNICAL MEMORANDUM

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## Right of Way

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This Right of Way Technical Memorandum provides an overview of the methods used to evaluate each alternative being considered in the Alternatives Analysis from a right of way perspective. It also summarizes the impact to local right of way resources by alternative in a manner consistent with the requirements of a Level II Screening.

### Methodology

The Level II Screening seeks to carry each alternative resulting from the Level I Screening through the conceptual design process, whereby enabling a conceptual environmental analysis and the application of more detailed performance measures. Part of the conceptual environmental analysis is the evaluation of right of way impacts that may result from each alternative. For the purposes of this screening, full and partial property acquisitions and easements are all considered impacts. .

Right of way impacts were determined by overlaying the design footprint of each alternative on top of the Los Angeles County Assessor's parcel boundary layer in a Geographic Information System (GIS). The system identified properties that were impacted by the designs and each impacted property's underlying ownership information and physical characteristics were subsequently exported to a database for later use in right of way cost estimation.\* At this phase of the analysis, the impact assessment will be completed without site visits that would be required to verify the correctness of property ownership information. As such, the conclusions of the analysis are only as good as the underlying property information.

Several design alternatives evaluated in this screening contain sections of bored tunnel that will not impact the properties on the surface in such a way as to require acquisition of the property in fee. Similarly, some alternatives contain sections of overhead aerial structure that will not directly impact the underlying properties. The acquisition of subterranean and aerial easements will be considered in the right of way cost estimation process, although these properties were not listed as impacts for the purposes of this screening.

At this phase, it is impossible to conduct a full analysis that will conclusively determine how the conceptual designs will impact each property and whether a partial right of way acquisition could be required instead of a full acquisition. It should be noted that this analysis is a "worst-case" scenario, as it represents a conservative approach to identifying the number of impacted properties. As such, the actual number of impacts is expected to decrease as additional analysis is made possible by the ongoing refinement of the design should an alternative be chosen to move on to the next phase of development.



A number of transportation and infrastructure properties were identified by the analysis as being impacted. It was, however, agreed that the necessary relocation or reconfiguration of these properties would be handled by the agencies overseeing the design and construction of the project and would therefore not be considered impacts.

## Regional Setting

This SR-710 Study analyzes the impact of a number of proposed transit improvements in Los Angeles County in Southern California. As of the 2010 U.S. census, Los Angeles County is the most populated county in the U.S. with a population of 9,818,605. With the San Gabriel Mountains dominating the northern half of the county, the southern half accounts for the majority of the population. The City of Los Angeles is the largest in the region followed by a number of other cities with more than 100,000 residents. These cities as well as populated regions of unincorporated Los Angeles County comprise a large area of urban sprawl that is connected by several major state and interstate freeways. Among these is SR-710 which begins at the Port of Long Beach in the south and continues north to its terminus north of its intersection with I-10 near the City of Alhambra. The proposed alternatives discussed in this analysis are all located in this vicinity.

## Local Setting

The specific area that is the target of this study includes the cities of Pasadena, South Pasadena, Alhambra and Northeast Los Angeles. Within Northeast LA, specific neighborhoods are identified as El Sereno, Montecido Heights, Highland Park, Mount Washington, Glassell Park and Eagle Rock. The area is bounded by I-10 and I-5 to the south and west and SR-134/SR-210 to the North. SR-110/Arroyo Seco Parkway extends through the region from Downtown LA in the southwest to Downtown Pasadena. In contrast to the commercial/industrial region of Downtown LA, this area is primarily residential. Single family residences are common in neighborhoods throughout the region however multifamily units, condominiums and apartment complexes can be found nearer to major streets and commercial areas. Shopping centers, entertainment venues and services exist along these major streets to serve the area's residents but there are few major commercial or industrial districts within the study area.

## Resources in Study Area

### TSM/TDM

The TSM/TDM alternative includes a number of street, intersection and ramp improvements throughout the study area that are intended to improve access to freeways and the flow of traffic on arterial streets within the region. These improvements stretch from Eaglerock to East Pasadena in the northern region, and from Cal State LA to Rosemead in the southern region. Many of these improvements will occur at the intersections of major arterial streets along Fremont Street, Fair Oaks Drive, Garfield Avenue, Rosemead Boulevard, Huntington Drive and Atlantic Avenue. Improvements will also occur at the on and off ramps at the existing northerly terminus of SR-710 and along I-10. These are all generally residential areas, although these improvements tend to target major streets and intersections that are largely occupied by commercial properties.

### BRT-1

The BRT-1 alternative begins at Los Angeles Union Station where it turns east and stays on E. Cesar Chavez Avenue until it arrives at Mission Road. Roughly from its intersection in the south with E. Caesar Chavez Ave., Mission Road can then be followed northeast to its intersection with N. Huntington Drive in the neighborhood of Lincoln Heights. From here, it follows N. Huntington Drive northeast to Fair Oaks Avenue at which point it proceeds north on Fair Oaks to Woodbury Road. Turning west on Woodbury road, the alignment follows Woodbury and then Oak Grove Drive to the north where it ends near La Cañada High School.

Near the southern end, this alignment bisects the heavily commercial/industrial sector south of Mission Road and the large residential area to the North. In addition to a number of commercial and light industrial properties adjacent to the proposed route, the USC/Los Angeles County Medical Center and Lincoln Park are found on the south side of Mission Road. While many single family residences can be found in the adjacent residential

neighborhood, the residential properties immediately adjacent to Mission Road are primarily comprised of condominium complexes and apartments. This is true of the majority of the alignment's route along Huntington Drive and Fair Oaks Avenue until it reaches a somewhat more commercial region along the Fair Oaks Corridor near the intersection with Mission Street in South Pasadena. From this point north through Old Town Pasadena, the route follows Fair Oaks Avenue, which is primarily lined with commercial business, civic buildings, and Old Town Pasadena's Central Park. North of Old Town Pasadena, the route continues following Fair Oaks Avenue over SR-134, once again navigating primarily through residential neighborhoods on both sides of the main artery. The final stretch of the alignment, lying along Woodbury Road and Oak Grove Drive, takes the route near John Muir Junior High and La Cañada High School, ending along Oak Grove between La Cañada High School and Hahamonga Watershed Park, just south of NASA's Jet Propulsion Laboratory.

## **BRT-6**

The BRT-6 alternative begins in the south at the intersection of S. Atlantic Boulevard and Whittier Boulevard in East Los Angeles. Following Atlantic north, the route passes Garfield High School before crossing under SR-60 and continuing past East Los Angeles College. North of ELAC, the route continues through Monterrey Park along Atlantic which is lined with commercial businesses including grocery stores, restaurants, hotels, movie theaters and shopping centers.

North of Interstate 10, the area adjacent to Atlantic Boulevard becomes more heavily residential. Single and multi-family residential buildings line Atlantic throughout Alhambra except in those areas near intersections with other major streets. The route passes near William Northrop Elementary School and Alhambra High School before continuing through residential neighborhoods of northern Alhambra and then turning west on Huntington Drive into South Pasadena. Along Huntington Drive, the route passes primarily through multi-unit residential complexes and a few businesses before turning north along Fair Oaks Avenue. Fair Oaks is also lined with multi-unit residential buildings near Huntington but ultimately gives way to almost exclusively commercial properties as it continues north into Old Town Pasadena.

The route turns east from Fair Oaks Avenue onto Colorado Boulevard and follows the historic street lined with restaurants and shopping centers to S. Hill Avenue. Here it turns south along Hill and runs between Pasadena City College to the east and the California Institute of Technology to the west before turning west along California Boulevard. At S. Lake Ave, the route turns north again and meets itself at the intersection of Lake and Colorado, forming a loop around the Eastern end of Down Town Pasadena.

## **BRT-6a**

The BRT-6a alternative shares an alignment with the BRT-6 alternative but with the addition of an extra segment. This segment begins at the intersection of Fair Oaks Avenue and E. Glenarm St. in Pasadena. It continues east on E. Glenarm Street briefly before turning north on S. Raymond Avenue. The route continues on Raymond until turning east on E. California Boulevard and meeting up with the BRT-6 alignment at the intersection of E. California Boulevard and S. Lake Boulevard.

This extra segment takes the alignment through a primarily residential neighborhood south of Old Town Pasadena. This neighborhood consists of many single family residences but most of the properties along California Boulevard are multi-unit residential buildings with a few small businesses.

## **LRT-4a**

The LRT-4a alternative begins on the west side of S. Mednik Avenue across from the East Los Angeles Civic Center just south of California State Route 60. It proceeds north along Mednik Avenue and eventually SR-710, ultimately reaching the northerly terminus of existing SR-710. At this point, the alternative goes underground and begins to follow Fremont Avenue and Fair Oaks Drive north until its northerly terminus near E. California Boulevard.

Crossing through parts of East Los Angeles, Monterey Park, University Hills, Alhambra, South Pasadena and Pasadena, the alignment skirts a number of residential neighborhoods but primarily follows existing street and freeway rights of way, which are lined with mostly commercial properties. Large corporate office complexes exist along Corporate Center Drive and along Fremont Avenue north of Mission Road. California State University Los

Angeles lies on the west side of the alignment immediately north of Interstate 10 as well as an LA County Flood Control Channel further to the north. A large industrial facility, Grifols Biologicals, lies along the west side of the alignment north of Valley Boulevard.

North of approximately Commonwealth Avenue in Alhambra, the area is primarily residential as it heads north into Pasadena, with a few small businesses and some condominium complexes along major street intersections. South Pasadena Middle School and South Pasadena High School straddle the alignment south of Monterey Road. North of Monterey Road, a number of grocery shopping centers and restaurants abut Fair Oaks Ave. The area becomes heavily commercial north of the northerly terminus of the 110 freeway.

#### **LRT-4b**

The LRT-4b alternative is the same as LRT-4a except for a design variation between Mission Road and Huntington Drive. Beginning just north of the existing northerly terminus of SR-710, the alignment follows Mission Road to the east until turning north along S. Palm Avenue. It follows S. Palm north to Main Street where it goes underground and cuts through an exclusively residential neighborhood of Alhambra before rejoining the LRT-4a route at Huntington Drive. This variation takes the alignment through a heavily commercial district along S. Palm Avenue, which is lined with a number of manufacturing facilities, warehouses, and a self storage facility.

#### **LRT-4d**

The LRT-4d alternative is the same as the LRT4b alternative with the exception of two sections. It does not end in the south along Mednik Avenue. Instead, it departs Mednik along E. 1<sup>st</sup> Street to the east before crossing under SR-60 at Woods Avenue and ending in Beverly Blvd, South of Atlantic Ave. This variation takes the alignment through a large commercial complex at the intersection of Beverly and Pomona Boulevard, and through a residential neighborhood immediately south of SR-60.

The other deviation from the LRT-4b alternative begins at the intersection of S. Palm Street and W. Main Street in Alhambra. Instead of heading northwest, the alignment follows N. Raymond Avenue directly north before turning onto Huntington Drive west and then heading north on Fair Oaks Ave. This variation takes the route near Alhambra park and Park Elementary school, but otherwise travels through a similarly residential neighborhood consisting primarily of single family residences.

#### **LRT-6**

The LRT-6 alternative primarily follows Atlantic Boulevard from just south of Interstate 10 in the south to Huntington Drive in South Pasadena. Here, it turns west and follows Huntington Drive until heading north on Fair Oaks Drive to E. Filmore Street at the north end.

This alignment, which lies well east of the existing SR-710 alignment, travels through the heart of Monterey Park and Alhambra. These regions do have substantial residential sectors but as Atlantic Boulevard is a major thoroughfare, the route also passes through major commercial centers that include large shopping centers, entertainment venues, hotels, fitness centers and restaurants. The route also passes near East Los Angeles College and the Monterey Park Hospital.

The area adjacent to Atlantic Boulevard becomes predominantly residential between Interstate 10 and W. Mission Road. This area is comprised of many single family homes, although the majority of residential lots abutting Atlantic Boulevard are duplexes, triplexes and condominiums. As the alignment passes through Alhambra, the areas near Atlantic Boulevard and north of W. Mission Road are also predominantly residential, with interspersed commercial centers at major intersections. The area along Huntington Drive from Atlantic to Fair Oaks is lined with small commercial buildings and with residences set back away from the road. LRT-6a meets with the other LRT alternatives at the intersection of Huntington Drive and Fair Oaks Ave and continues north along the same path following Fair Oaks through downtown South Pasadena to a heavily commercial area of Pasadena near California Street.

## F-2

The F-2 alternative begins at the existing intersection between I-10 and SR-710 near California State University Los Angeles. It goes underground almost immediately north of the existing northerly terminus at Valley Boulevard. The alignment arcs toward the northwest passing under the neighborhoods of El Sereno and Monterey Hills, which are almost exclusively residential. From this region, the alignment then crosses under the Ernest E. Debs Regional Park where it continues northwest under parts of Highland Park and Mount Washington. Eventually, it emerges to the surface in the residential neighborhoods of Mount Washington and Glassell Park, ultimately connecting to State Route 2 in Eagle Rock.

These are primarily residential neighborhoods comprised largely of single family residences, though some large condominium complexes exist east of Debs Regional Park. The few commercial properties in this region are near the north end of the existing SR-710 and in Eagle Rock along Eagle Rock Boulevard. The commercial properties in Eagle Rock primarily serve the surrounding residential areas and include a number of grocery stores and other services. Among the more notable commercial/industrial properties near the existing SR-710 Terminus is Grifols Biologicals, a large industrial plant.

## F-5

The F-5 alternative shares a southern footprint with F-2. The differences begin where the alignment goes underground just north of the existing terminus of SR-710. The tunnel begins at Mission Road and heads north beneath primarily residential neighborhoods of El Sereno and South Pasadena. The alignment passes beneath Arroyo Seco Park just north of the 110 as it gradually turns west and surfaces in the neighborhood of Garvanza in Highland Park. The alignment meets SR-134 between Patrician Way and N. San Rafael in Pasadena.

Immediately north of SR-134 is the Annandale Golf Club. Nearly the entire area south of SR-134 is comprised of up-scale single family residential homes. However, the area also includes a few commercial parcels between N. Avenue 64 and Colorado Blvd. Additionally, the San Rafael and Monterey Hills Elementary schools are nestled in among residential lots.

## F-6

The F-6 alternative also has a similar beginning in the south at the existing terminus of SR-710 adjacent to the Grifols Biological property. The alignment continues north through residential neighborhoods along Sheffield Avenue and Maycrest Avenue. North of Huntington Drive, the alignment turns slightly east as it comes alongside Meridian Avenue and Meridian Senior High School, just south of Monterey Road. The area north of Monterey Road transitions from single family residential properties to multifamily units and condominiums, with a few commercial properties near Oak Grove Park at Mission St. North of the 110, the alignment turns northeast slightly through more residential neighborhoods passing just east of the Westridge School and along S. Pasadena Avenue until joining the southerly prolongation of SR-210.

Though primarily a residential area, some commercial properties do exist near the intersection of the alignment with Huntington Drive and between Monterey Road and Mission Street. Additionally, there is a very large industrial parcel north of W. Mission Road just east of the intersection with N. Concord Ave.

## F-7

Beginning almost immediately as a tunnel south of W. Mission Road, the F-7 alternative follows a route similar to F-6, bearing slightly east toward the existing southerly terminus of SR-210. Passing under largely residential neighborhoods of South Pasadena and Pasadena, the alignment passes just to the west of South Pasadena Senior High School. North of Monterey Road, there are several commercial and industrial properties along Mission Street between Fairview Avenue and Meridian Avenue. These properties include the offices of the Pasadena Unified School District. North of the 110, the alignment passes under primarily residential properties until meeting up with the existing terminus of SR-210. The vast majority of residential properties in this area are moderate to high end single family homes with occasional multi-unit residences near the intersections of larger streets.

## H-2

The H-2 alternative begins at the northerly terminus of the existing SR-710. It follows Concord Avenue and Fremont Avenue north to Monterey Road, where it turns west (near South Pasadena Senior High School and the Pasadena Christian Church), crosses the 110 freeway, and then turns north along N. Ave 64, eventually making its way to SR-134 near Colorado Boulevard and Melose Avenue.

Largely residential areas dominate the area around the H-2 alignment, though there are occasional commercial properties near the intersections of major streets. There is a very large industrial property on the north side of W. Mission Road west of its intersection with Concord Avenue. Another large industrial property belonging to Agrifols Biologicals sits adjacent to the proposed alignment west of the existing northerly terminus of SR-710.

Other industrial properties can be found along Fremont Avenue near the intersections of Commonwealth Avenue, Main Street, Huntington Drive and Monterey Road. Some additional commercial properties, including the Arroyo Seco Golf Course, can be found near the intersection of Pasadena Avenue and the 110 freeway. A few commercial properties are found along N. Avenue 64 but this is largely a residential area north of Meridian Street.

## H-6

The H-6 alternative begins at the northerly terminus of existing SR-710 and proceeds due north along Sheffield Avenue. It then follows N. Huntington Drive and Fair Oaks Avenue until turning west on Columbia Avenue and then north to meet the existing southerly terminus of SR-210.

In an otherwise residential area, there are some commercial properties located along some major streets. Several of these properties exist along Fair Oaks Avenue between Monterey Road and the 110 freeway. There is also a large industrial building on the north side of W. Mission Road, west of its intersection with Concord Avenue. Grifols Biologicals is another industrial complex on the west side of the alignment near the northern end of the existing SR-710.

The appears to be a mix of single family residences and multi-unit condominiums in the area with the bulk of the single family residences near the north and south ends of the proposed alignment.

## Summary of Potential Effects to Resources

### TSM/TDM

The largest impacts caused by the various improvements in the TSM/TDM alternative occur at the intersection of major streets in the regions. These areas are targeted because of existing congestion and because of their potential to be reshaped or widened to facilitate better traffic flow. Because these major intersections are dominated by businesses seeking accessibility to passersby, the majority of impacts caused by this alternative are to commercial properties such as restaurants, drug stores, spas, service stations and others. Some of the smaller intersections and intersections in more completely residential areas do impact some residential properties which include single family residences, condominiums and other multi-unit complexes.

There appear to be 40 commercial properties impacted by the various options of the TSM/TDM alternative with as many as 30 requiring full acquisitions and 10 requiring partial acquisitions.

Additionally, there appear to be 34 residential properties potentially impacted by the alternative with as many as 23 requiring full acquisitions and 11 requiring partial acquisitions.

### BRT-1

Because of the street widening required to facilitate improved bus transit along the southerly portion of this alternative, several properties along the alignment will likely be impacted. Due to the alignment in this area falling almost entirely within N. Mission Road, the widening appears to only impact commercial parcels that face the street. In all, there are 19 commercial parcels that could potentially be impacted by the alternative. None of these

impacts appear to require full fee acquisitions but rather partial acquisitions of the property along the street. There appear to be no impacts to residential property, and no impacts further north along the larger existing streets.

### **BRT-6**

This alternative was designed to work within the confines of the existing street alignment. As a result, it does not appear that there will be any right of way impacts resulting from the alternative. All improvements required to facilitate the movement of the bus along its route should be able to be completed within the existing street right of way.

### **BRT-6a**

Just as there are no anticipated right of way impacts along the BRT-6 alternative, there are also no impacts along this additional segment of the proposed route.

### **LRT-4a**

The majority of the LRT-4a alternative is either underground or aerial. The aerial segments largely follow existing CalTrans or other public rights of way. For this reason, the only properties impacted will be those used for station sites, traction power substations, tunnel ventilation, and the portal areas at the ends of the alignment.

There appear to be 130 commercial properties potentially impacted by the alternative. These include office buildings, restaurants, warehouses, stores, parking lots, and a service station. As many as 40 of these properties may require full acquisitions, with 90 requiring only underground or aerial easements.

There appear to be 90 residential properties potentially impacted by the alternative with 10 requiring full acquisitions and 80 requiring underground or aerial easements. These are mostly multi-unit dwellings.

### **LRT-4b**

Similar to the LRT-4a alternative, LRT-4b remains aerial or underground through the majority of its route. The exceptions are mostly station areas or areas where the track is transitioning from overhead to underground.

There appear to be 112 commercial parcels potentially impacted by this alternative with as many as 47 requiring full acquisitions and 65 requiring underground or aerial easements. These include office buildings, restaurants, warehouses, stores, parking lots, and a service station.

There appear to be 87 residential properties potentially impacted by this alternative with as many as 8 requiring full acquisitions and 79 requiring underground or aerial easements. These include single family residences and multi-unit dwellings.

### **LRT-4d**

The LRT-4d alternative also has a large aerial component, but tunnel segments are cut and cover trenches instead of bored tunnels. Because these trenches will need to be excavated during construction and only returned to vacant land in the after condition, the properties impacted by these segments are considered full acquisitions.

There appear to be 78 commercial properties impacted by the alternative with as many as 61 requiring full acquisitions and 17 requiring overhead or underground easements. These include office buildings, restaurants, warehouses, stores, parking lots, a service station and a medical building.

There appear to be 44 residential properties potentially impacted by this alternative with 42 requiring full acquisitions and 2 requiring underground or aerial easements. These include primarily single family residences as well as some duplexes and multi-unit dwellings.

### **LRT-6**

The LRT-6 alternative is primarily at grade, resulting in a greater number of potential impacts to both commercial and residential properties.



There appear to be 242 commercial properties impacted by this alternative with as many as 151 requiring full acquisitions and 91 requiring partial acquisitions. These include office buildings, restaurants, warehouses, stores, parking lots, service stations, medical buildings, a theater, an auto sales lot, an animal hospital, city government buildings and public utilities.

There appear to be 245 residential properties potentially impacted by this alternative with as many as 63 requiring full acquisitions and 182 requiring partial acquisitions. These include some single family residences, duplexes, triplexes, quadruplexes and multi-unit dwellings (greater than 10 units).

## **F-2**

The F-2 alternative is largely underground but does surface to make the connection to SR-2. The majority of potential impacts occur in this portal area.

There appear to be 39 commercial properties impacted with as many as 9 requiring full acquisitions and 30 requiring underground easements. These include stores, service stations and a few other commercial and light industrial lots.

There appear to be 884 residential properties impacted with 304 requiring full acquisitions and 580 requiring underground easements. These include mostly single family residences with some duplexes, triplexes, quadruplexes and multi-unit dwellings (greater than 10 units)

## **F-5**

The F-5 alternative is primarily underground but must surface near its interface with SR-134. The majority of potentially impacted parcels occur in this area.

There appear to be 61 commercial properties potentially impacted by this alternative with 37 requiring full acquisitions and 24 requiring underground easements. These include restaurants, stores, office buildings, a church, a golf course, public utilities and some light industrial buildings.

There appear to be 646 residential properties impacted by this alternative with 218 requiring full acquisitions and 428 requiring underground easements. These include mostly single family residences and a few multi-unit dwellings.

## **F-6**

The F-6 alternative is at grade, but much of the property at the north and south ends of the proposed alignment is owned by CalTrans and will not require the acquisition of property. The majority of potential impacts occur in the area of South Pasadena.

There appear to be 36 commercial properties potentially impacted by the proposed alternative, all of which may require full acquisitions. These include parking lots, office buildings, service stations, a church, utilities and several industrial buildings.

There appear to be 440 residential properties impacted by this alternative, all of which may require full acquisitions. These include many single family residences, several condominium complexes, duplexes, triplexes, multi-unit dwellings and several vacant residential lots.

## **F-7**

The F-7 alternative is almost entirely underground from the northerly terminus of existing SR-710 to the southerly terminus of SR-210. When it surfaces at these portals it is only impacting property already owned by CalTrans. In this way it minimizes potential impacts.

There appear to be 33 commercial properties potentially impacted by this alternative with only 2 requiring full acquisitions and 31 requiring underground easements. These include some commercial and light industrial buildings and as well as some vacant commercial lots.

There appear to be 404 residential properties potentially impacted by this alternative with only 3 potentially requiring a full acquisition and 401 requiring underground easements. These include mostly single family residences and a few multi-unit dwellings.

## H-2

The H-2 alternative is completely at grade and though it attempts to follow existing street rights of way, the widening required results in potential impacts to commercial and residential properties.

There appear to be 69 commercial properties potentially impacted by this alternative with as many as 44 requiring full acquisitions and 25 requiring partial acquisitions. These include stores, restaurants, office buildings, parking lots, a medical building, a church, service stations and a park.

There appear to be 542 residential properties potentially impacted by this alternative with as many as 472 requiring full acquisitions and 70 requiring partial acquisitions. These include single family residences, duplexes, triplexes, quadruplexes, multi-unit dwellings, condominiums and vacant residential lots.

## H-6

The H-6 alternative utilizes largely existing street rights of way and properties already owned by CalTrans. In this way, it is able to minimize potential impacts to residential properties. The route does however pass through a more strictly commercial area along Fair Oaks Avenue which results in additional potential commercial impacts.

There appear to be 77 commercial properties potentially impacted by this alternative with as many as 35 requiring full acquisitions and 42 requiring partial acquisitions. These include stores, office buildings, service stations, parking lots, restaurants and a medical building.

There appear to be 95 residential properties potentially impacted by this alternative with as many as 19 requiring full acquisitions and 76 requiring partial acquisitions. These are largely condominiums, duplexes, triplexes, multi-unit dwellings and some single family residences.

## Summary of Potential Effects to Resources by Alternative

The table below summarizes the number of potentially impacted properties for each alternative. If one alternative has multiple options, the number of properties for each option are separated by a slash.

TABLE 1  
Potential Impacts to  
Resources by Alternative

Properties (Acquisition Type)	TSM/TDM	BRT-1	BRT- 6/6a	LRT- 4a/b/d	LRT-6	F-2	F-5	F-6	F-7	H-2	H-6
Commercial (Full)	30	0	0/0	40/47/61	151	9	37	36	2	44	35
Residential (Full)	23	0	0/0	10/8/42	63	304	218	440	3	472	19
Commercial (Part/Easement)	10	19	0/0	90/65/17	91	30	24	0	31	25	42
Residential (Part/Easement)	11	0	0/0	80/79/2	182	580	428	0	401	70	76

\* Digital Map Products LandVision™ Data Source for Los Angeles county: DataQuick® and Los Angeles County Assessor: Tax Year 2011