Document Summary Information Sheets

The following pages summarize the background and details of historic transportation studies and documents related to Downtown Lafayette. A summary table for each study identifies the themes, the solution options that have been tested for each, recommendations that have been vetted in the public process, and measures that have garnered community consensus and been implemented.

Document Name	Adopted Downtown Specific Plan- Getting Around Chapter
Author	City of Lafayette
Date	September 10, 2012
Summary Description	This chapter describes the context and provides the plan for each mode of travel – motor vehicle, pedestrian, bicycle, and transit – and for parking. It includes a Transportation Demand Management section that describes how to maximize alternative modes – walking, bicycling, transit – while still providing adequate vehicular capacity. The DSP's intent is to have a downtown that is safe and convenient for getting around and provides more parking where it can be best utilized.
Themes	• Achieve a balance between the potentially conflicting goals of improving traffic flow and maintaining and enhancing the City's quality of life and sense of place, particularly in the Downtown Core. • Mitigate future congestion where feasible through physical improvements and, more importantly, through offering more land use options and enhancing alternative transportation options • Manage traffic congestion through mitigation and capacity management measures rather than roadway widening. • Encourage the cooperative efforts with Lafayette Elementary School, Stanley Middle School, and the City to address downtown congestion associated with school drop-off and pick-up. • Encourage the cooperative efforts with Lafayette Elementary School, Stanley Middle School, and the City to address downtown congestion associated with school drop-off and pick-up. • Adjacent high speed and high volume traffic, super-blocks with few protected crossings, gaps in the walkway network, and limited enhancements, such as wide walkways, wide intersection corners, street furniture, and other amenities, often limit walkability. The aim of the DSP is to encourage walking as an alternative to vehicular travel by improving pedestrian facilities • Adding bicycle lanes to existing downtown streets – while desirable to improve bicycle circulation – is difficult due to the associated trade-offs requiring some combination of reduced travel lane widths, sidewalk widths, median widths, elimination of on-street parking, or landscape buffers. • Better transit connections and frequency could connect residents to the downtown and BART and reduce the need to drive to, from, and within the downtown. Equally important, improved transit could offer an alternative to driving for downtown employees. • Improve downtown circulation through TDM strategies: User Information and Marketing; Commuter Financial Incentives; Transportation Management Associations; Car-Sharing; and Commute Trip Reduction Programs. • Only 44 spaces are in off-street, City-owned parking lots and available without restriction to the public as opposed to patron-only lots. This supply of public parking in the Downtown Core is extremely low when compared to other communities.

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	• On-street metered spaces in the Downtown Core are largely underutilized, with occupancy rates ranging from less than 10 percent to 77 percent. This is lower than the optimum industry standard of 85 percent occupancy.
Options Considered	• A shuttle running the length of Mount Diablo Boulevard in the downtown and the section of Moraga Road north of St. Mary's Road would provide a transit option that could reduce traffic congestion. The level of reduction would depend on the levels of service and ridership. A shuttle might also ameliorate the need to make multiple car trips within the downtown. A person could park in the less-congested East End and use a shuttle to make stops in the Downtown Core. Such a program, however, would be a significant undertaking for a city the size of Lafayette with limited resources. The experience of other similarly situated suburban communities with shuttles has not been particularly encouraging. • Encourage local and regional programs to support alternative modes of travel, recognizing that walking, biking, using transit, and parking in the right location may mitigate traffic congestion and preserve the small town character.
Recommendations	• Analyze the impacts and benefits of removing the four parking spaces on the east side Moraga Road south of Plaza Way. • Work with school administrators and parents to develop options for school commuting, including carpooling, walk and bike-pooling, employee parking, and satellite drop-off and pick-up locations. • Investigate the interest and feasibility of reestablishing school bus service to Lafayette Elementary School and increasing service to Stanley Middle School. • Work with school administrators and parents to develop options for school commuting, including carpooling, walk and bike-pooling, employee parking, and satellite drop-off and pick-up locations. • Provide connections between the schools and the Lafayette / Moraga Trail. • Implement those sections of the Master Walkways Plan and Trails Master Plan that will improve pedestrian access to, from, and within the downtown, particularly between residential neighborhoods and the downtown. • Improve and increase north-south pedestrian crossings on Mount Diablo Boulevard using crosswalk enhancements, • Develop connections between properties and streets and in between properties to shorten pedestrian and bicycle travel by considering internal pathways through new development sites and connections to adjacent developments. • Assess the feasibility of a pedestrian connection between Brook Street and the Methodist Church parking lot using the private East Street. • Assess the feasibility of improving the bicycle connection between the

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	Lafayette-Moraga Trail, schools, and BART Station. • Determine the feasibility of a local shuttle service and related support facilities, such as park-and-ride lots, to serve downtown and BART. • Work with transit providers and transportation funders to develop a strategy for providing increased headways and connections.
Outcome/ Community Response	Concern raised about traffic generated from new development. Plan adopted recently and implementation is just beginning. The Lamorinda Program Management Committee is considering whether or not to conduct a Lamorinda shuttle study.

Document Name	Downtown Specific Plan Final EIR (2010): Transportation Excerpt
Author	Design, Community and Environment
Date	August 10, 2010
Summary Description	Changes made from the Downtown Specific Plan DEIR
Themes	Delay at Deer Hill and Oak Hill Roads would create a significant impact at the all-way stop controlled intersection.
Options Considered	• Widening Deer Hill Road to three lanes eastbound at SR 24 westbound ramps and making two right turn lanes onto First Street. • Adding a center, left turn lane on Moraga Road between School and Brook Streets is not an acceptable due to inadequate lane width to accommodate bicycles and the lack of separation between vehicles and pedestrians. • Adding an additional westbound, left-turn lane on Deer Hill at the westbound on-ramps and eliminating the westbound bike lane • Widening Moraga Road to add a second northbound right turn lane approaching Mt. Diablo Blvd. is not a feasible mitigation. • Adding a center left-turn lane on Moraga Road between School Street and Moraga Blvd. is not a feasible mitigation.
Recommendations	1. Restripe southbound Oak Hill Road approaching Mt. Diablo Blvd. to two-left-turn only lanes, one through lane and one right-turn lane. 2. The Lamorinda Nexus Study should be revised to include recommended improvements. 3. All-way stop control at Deer Hill Road and Happy Valley Road will not be sufficient for future anticipated growth. 4. Notify adjoining jurisdictions per the requirements of the Lamorinda Action Plan. 5. Goal 6: Improve Citizens' Health, Reduce Traffic Congestion and Provide Alternative Modes of Travel Through Bicycling
Community Response/ Outcome	FEIR recently certified by Council therefore few recommendations have been implemented. Community has raised concerns about the level of congestion related to both the DSP's implementation and from development in adjacent jurisdictions.

Document Name	Downtown Specific Plan DEIR Traffic and Transportation
Author	Design, Community and Environment
Date	January 26, 2010, prepared by TJKM Transportation Consultants in November, 2009.
Summary Description	This chapter includes a description of existing traffic and circulation conditions; transit, bicycle, and pedestrian facilities; and parking conditions in and around the Plan Area.
Themes	Among the primary goals of the Plan are to balance vehicular travel through the downtown by providing a safe pedestrian and bicycle system, as well as to ensure an accessible and continuous pedestrian network with appropriate supporting infrastructure.
Options Considered	• Widening Moraga Road to add the second northbound right-turn lane would require substantial reconstruction of the sidewalk, landscaping, and structural elements of Plaza Park along the east curb area, and result in a reduction of the usable recreation and community activity area at the Park. In addition, the resulting easterly shift of the southeast corner of the intersection would increase the crossing distance for pedestrians crossing Mount Diablo Boulevard or Moraga Road to or from that corner. • To reduce impacts to less-than-significant levels, a center left-turn lane should be added on Moraga Road between School Street and Moraga Boulevard. The center left-turn lane would be used by southbound Moraga Road traffic turning left at School Street or at Lafayette Elementary School. Adding a center left-turn lane on this portion of Moraga Road would require narrowing all lanes to approximately 10-foot widths, eliminating existing striped shoulders between traffic lanes and curbs, and eliminating existing parking along the west curb. • Deer Hill Road should be restriped to include three eastbound through lanes at the State Route 24 westbound ramps intersection in the future, • Further improvement could be achieved by adding a second westbound left turn lane on westbound Deer Hill Road approaching the State Route 24 westbound ramps intersection, in addition to the eastbound lane additions identified above. • Constructing the additional capacity needed to mitigate the peak hour/peak direction delay impacts on State Route 24 in the study area, such as additional mainline freeway lanes, etc., would be extremely expensive and disruptive. Caltrans is currently working on a study that may propose high-occupancy vehicle (HOV) lanes on State Route 24. However, the feasibility, schedule, and funding for such a project are unknown at this time, and therefore it is not considered a feasible mitigation. • Constructing the additional capacity needed to mitigate the peak hour

Document Name	Downtown Specific Plan DEIR Traffic and Transportation
	delay impacts on Pleasant Hill Road north of State Route 24, such as widening for additional through lanes, etc., would likely be prohibitively expensive and disruptive because of the topography of the roadway alignment, as well as the negative impacts on and the cost to acquire adjacent properties. Additional capacity would also be contrary to the Action Plan measures to meter traffic flow on Pleasant Hill Road.
Recommendations	1. Oak Hill Road should be restriped to include two southbound left-turn-only lanes at the Mt. Diablo Blvd. intersection in the future, revising to provide two left-turn only lanes, one through lane, and one right-turn lane. 2. Based on a preliminary signal warrant analysis (Peak Hour Volume Warrant), a traffic signal should be installed at the intersection of Oak Hill Road/State Route 24 eastbound off-ramp. The City should monitor the intersection and install the traffic signal at such time that signal warrants are met. 3. Based on a preliminary signal warrant analysis (Peak Hour Volume Warrant), a traffic signal should be installed at the intersection of Deer Hill Road and Happy Valley Road when mid-day or PM peak hour operations deteriorate to LOS E, or as determined by the City of Lafayette. 4. The City should monitor the intersection of Deer Hill Rd. and Oak Hill Rd. and install a traffic signal when warrants are met. Signalization of this intersection is already contemplated in the Lamorinda Nexus Study, and as such, the related impacts would already be mitigated. 5. The City should monitor the intersection of First St. and the SR24 Eastbound On-ramp and install the traffic signal at such time that PM peak hour operations deteriorate to LOS F for the southbound left turn. Development projects within the Plan Area should contribute a fair share to the funding of this mitigation, as determined by the City of Lafayette. 6. Address localized roadway circulation impacts during the environmental and design review processes for the downtown parking facility location that is ultimately chosen. Measures to consider for minimizing impacts include providing adequate signage that efficiently leads motorists to the parking structure and providing additional median openings.
Community Response / Outcome	Community comments on the DEIR were incorporated into the FEIR as appropriate. The Community has raised concerns about the level of congestion related to both the DSP's implementation and from development in adjacent jurisdictions.

Document Name	Staff Report regarding circulation issues within the Moraga Road corridor and the findings of MORTRAC
Author	Carol Federighi, Councilmember and MORTRAC Chairperson Ann Merideth, Community Development Director
Date	May 2004
Summary Description	For the Lafayette School Board and City Council the staff report provides a brief background of the MORTRAC process, including the identification of the key circulation problems and the development of feasible solutions to these problems. The report then focuses on the role of the schools in mitigating problems and suggesting next steps.
Themes	Congestion: • Heavy traffic congestion in the mornings and afternoons make it difficult to turn off of and/or onto Moraga Road, particularly left turns across traffic. Traffic congestion and long backups also are the result of people making left turns off of Moraga Road. • Local schools contribute a significant amount to traffic congestion. • Growth in Moraga has made traffic conditions worse, and new growth will continue to increase congestion. Safety: • There is significant speeding and a lack of enforcement of speed limits resulting in accidents and unsafe turning movements off of and/or onto Moraga Road from side streets and private driveways. • Moraga Road is unsafe because of a lack of pedestrian and bicycle facilities, particularly for children, and because of road conditions, such as poor lighting, limited visibility, rough surfaces and poor drainage.
Options Considered	Twenty-nine options were considered and are reviewed separately in the Recommendations and Implementation Table
Recommendations	1. Request the Lafayette School District to consider program(s) to modify locations, habits, and patterns of school drop-off/pick-up activities for both Stanley and Lafayette School. 2. Facilitate and increase enforcement of speed laws. 3. Construct pedestrian paths along both sides of Moraga Road. 4. Improve bicycle and pedestrian safety on First Street. 5. Negotiate with the Moraga to use the Palos Colorados traffic signal to meter traffic on Moraga Road. 6. Implement intersection improvements at Moraga Road / Brook-School Streets. 7. Implement an on-going vegetation management program to improve walkway clearance and sight distances at side streets, driveways, sidewalks and around curves on Moraga Road. 8. Deploy a facilitator to keep traffic moving through the drop-off and pick-up area and minimize blockages of the driveway openings at Moraga Road 9. Eliminate double-parking in the drop-off and pick-up area

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	10. Restore signage to prohibit left turns from the Lafayette School driveway onto Moraga Road 11. Create new and/or satellite drop-off and pick-up locations, such as adjacent to the Stanley School sports field off St. Mary's Road or at the new Library 12. Create and encourage parents to use appropriate locations for short-term parking 13. Implement a "walking school bus" with designated stops along routes used by parents going to and from the schools 14. Stagger school bell times and/or school buses 15. Educate parents and students about best traffic practices – the DOs and the DON'Ts 16. Provide incentives for children to ride bikes or walk to and from school, and provide disincentives for parents driving children to and from school as part of an independent transportation demand management program 17. Develop a civics curriculum with ties to Moraga Road traffic issues 18. Investigate the operation of a school bus line on Moraga Road
Outcome / Community Response	• Implemented recommendations 1-4, 6, 7 and 18 above. • Met with the Lafayette School District to explore if and how MORTRAC's ideas can be implemented. Recognizing that certain projects will take time and ongoing collaboration, MORTRAC recommended that the initial joint meetings also be used to establish subcommittees that could work together to follow up each project to its conclusion. • Contacted the Lamorinda School Bus Board to request a discussion regarding the feasibility of school bus service along Moraga Road and was determined that there was insufficient support.

Document Name	City Council Staff Report on Recommendations regarding circulation improvements within the Moraga Road corridor
Author	Moraga Road Transportation Advisory Committee (MORTRAC)
Date	October 2003
Summary Description	The intent of the MORTRAC process is to address community concerns about the level of vehicular traffic and its impact on the quality of life, especially pedestrian and bicycle safety, neighborhood character and traffic congestion.
Themes	Preliminary Problem Statement: Congestion • Heavy traffic congestion in the mornings and afternoons make it difficult to turn off of and/or onto Moraga Road, particularly left turns across traffic. Traffic congestion and long backups also are the result of people making left turns off of Moraga Road. • Local schools contribute a significant amount to traffic congestion. • Growth in Moraga has made traffic conditions worse, and new growth will continue to increase congestion. Safety • There is significant speeding and a lack of enforcement of speed limits resulting in accidents and unsafe turning movements off of and/or onto Moraga Road from side streets and private driveways. • Moraga Road is unsafe because of a lack of pedestrian and bicycle facilities, particularly for children, and because of road conditions, such as poor lighting, limited visibility, rough surfaces and poor drainage.
Options Considered	Refer to pages 4-9 of the staff report
Recommendations	Refer to pages 4-9 of the staff report
Community Response / Outcome	General support for items A-G. Items B, C, F and G generally implemented.

Document Name	*Technical Memorandum / Mount Diablo Boulevard / Moraga Road Corridor Analysis*
Author	Fehr & Peers Associates
Date	March 24, 2000
Summary Description	Reviews existing operations and proposed scenarios for the two corridors including roadway geometry, travel lane assignment, and signal timing and excess capacity analysis
Themes	• Congestion focused in morning at Moraga Road/Brook Street/School Street intersection due to heavy pedestrian demand reducing green time available to vehicles. • Morning congestion on northbound approach at Mt. Diablo Boulevard/Moraga Road due to signal timing, lack of capacity and crosswalk at Plaza Way • Lafayette and Stanley Schools bell times • Lack of capacity at Mt. Diablo Boulevard/Moraga Road in the PM Peak Hour • Parking maneuvers and delivery operations on Mt. Diablo Boulevard between Oak Hill road and Moraga Road in PM • Discussion of excess capacity
Key Options Considered	• Increasing the pedestrian crossing time to 2.5 secs/foot • Minimize cycle lengths where possible • Coordinate the end of vehicle platoons to reduce queue spillback • Widen Mt. Diablo Boulevard to three lanes eastbound between Oak Hill Road and First St. • Lengthening turn pockets on eastbound approach to Mt. Diablo Boulevard/Moraga Road • Change the alignment of the northbound approach to M. Diablo Boulevard/Moraga Road to left-turn lane, left-through lane and right turn (existing was left-turn pocket, left-through lane and right-turn lane) • Modify Safeway driveway from two lanes in to two lanes out and a left-turn pocket. • Convert Plaza Way to one-way eastbound and Golden Gate Way into two-way road. • Remove westbound right-turn pocket at Mt. Diablo Boulevard/Oak Hill Road
Recommendations	1. Do not lengthen pedestrian walking times 2. Remove the Plaza Way crosswalk 3. Change Plaza Way to one-way eastbound 4. Restrict PM peak hour on-street parking eastbound on Mt. Diablo Boulevard 5. Change the alignment of the northbound approach to Mt. Diablo Boulevard/Moraga Road to left-turn lane, left-through lane and right turn (existing was left-turn pocket, left-through lane and right-turn lane) 6. Modify Safeway driveway from two lanes in to two lanes out and a left-turn pocket. 7. Increase green time for eastbound, left-turn at Mt. Diablo Boulevard/ Happy Valley Road to encourage use of Deer Hill Road 8. Install signals at Deer Hill Road intersections, if warranted, to encourage

Document Name	*Technical Memorandum / Mount Diablo Boulevard / Moraga Road Corridor Analysis*
	more traffic to by-pass Mt. Diablo Boulevard 9. Encourage schools to modify their start times to limit the overlap with commute traffic
Community Response / Outcome	Recommendations 1-3, 5-7 and 9 were implemented

Document Name	*Town of Moraga Available Roadway Capacity Study*
Author	Robert L. Harrison Transportation Planning
Date	January 1999
Summary Description	Sought agreement on methodology for collecting and analyzing existing and future traffic data in Lamorinda to determine the amount of vehicle capacity that would exist on the Moraga Way, Moraga Road and St. Mary's Road-Glenside Drive-Reliez Station Road-Olympic Boulevard corridors.
Themes	• Identification of existing capacity on key arterial streets and mitigated capacity; • agreement on traffic counts and methodology used to analyze intersections; • trip generation procedures to • Comparison of Lamorinda policies and standards • Significant congestion on the northerly end of the Moraga Road Corridor in downtown Lafayette • Evaluation of traffic impacts from approved new development • Available capacity dependent on direction of travel • Along the Moraga Road corridor, the intersection that most severely limits the existing capacity is at Moraga Boulevard. Lafayette's Downtown Traffic Plan calls for signalizing which will greatly increase capacity. • Moraga Road/School and Brook Streets is the second most capacity limiting intersection on the corridor • Existing significant side street delay south to Old Jonas Hill which would worsen with additional trips. • Total existing available capacity of the three corridors is most limited at morning peak hour. Existing available capacity at this time of day is 150 added peak hour trips. Existing available capacity in the afternoon peak hour is about 310 total added trips. • Total mitigated available capacity with a signal at Moraga Blvd. increases from 0 to 570 trips. Brook-School Street would change from an existing capacity of 90 to 400 trips if planned improvements in the Downtown Traffic Plan (realign Brook Street) are installed.
Options Considered	Methodologies used for calculating LOS (HCM and CCTA) Adoption of LOS standards for STOP sign controlled intersections
Recommendations	Trip Generation Procedures for New Development
Community Response / Outcome	Lamorinda jurisdictions now use trip generation procedures and LOS calculations consistent with CCTA requirements.

Document Name	*Lafayette Downtown Traffic Study for Moraga Road Corridor*		
Author	Dowling Associates		
Date	January 8, 1998.		
Summary Description	Studied options for a long-range strategy for improving Moraga Road. Includes a pedestrian and bicycle study, traffic operations analysis and supplemental traffic studies. Developed alternatives including a two-way, left-turn lane, removal of on-street parking and bike lanes, widening the street via taking property, and dedicated left-turn lanes.		
Themes	• Evaluation of two total system alternatives for Moraga Road including long term and interim plan. • Pedestrian and bicycle study of issues along the Moraga Road corridor. • Traffic operations analysis		
Key Options Considered	• North of Brook Street Five lanes: o Four through lanes plus a two-way left-turn lane (TWLTL) north of Brook St. Requires removal of bike lanes and parking. Option may not work effectively if a signal is installed at Moraga Blvd. High potential for congestion relief. o Modified TWLTL Through traffic unimpeded northbound, merge required southbound. Bike lanes removed, parking maintained. Moderate potential for congestion relief. • Modified TWLTL (one southbound, two northbound through lanes north of Brook St.) with the following options at Brook/School: o Two southbound through lanes, i.e. existing conditions. Impact-moderate congestion. o One southbound through lane; one southbound dedicated left turn lane between Brook and School Streets. Impact-highly congested. Problem with the two westbound, left turn lanes on Mt. Diablo Blvd. merging into one southbound lane. o Two southbound through lanes; one southbound dedicated left turn lane accomplished by widening between Brook and School Streets through property acquisition. Impact-uncongested. • Grade separated pedestrian crossing of Moraga Road		
Recommendations	1. Five lane alternative north of Brook Street to serve the long-term needs for downtown circulation as well as regional mobility; 2. If funding is availability continuing five lanes between Brook and School Streets. 3. Provide alternative parking to accommodate the long-term		

	transportation needs and compensate for removal of parking. Cheaper to replace parking elsewhere than to widen Moraga Rd. 4. Removal of crosswalks not at signals 5. Widening sidewalk in front of School 6. Extending the length of the sidewalk to Old Jonas Hill Road 7. Construction of a pathway on First Street, 8. Turn restriction signage at Brook Street 9. Remove bike lanes on Moraga Road north of Brook/School streets and use alternative route. 10. Install new traffic signal at Moraga Blvd. when warrants are met. 11. Do not install a traffic signal at Hamlin Road and Tanglewood Drive as it is not warranted at the time. 12. Do not install a traffic signal at Silver Springs Rd. Mtn. View Dr./ Old Jonas Hill Road as it is not warranted at the time. 13. Do not install a southbound left turn lane at the Madrone Drive intersection. 14. Do not remove the Brook Street signal and the crosswalk on its south leg.		
Community Response / Outcome	Recommendations Implemented: #3 partially (new Moraga lot), #4 and 6-14.		

Document Name	*Lafayette Downtown Feasibility Study / Lamorinda Transportation Improvement Program (Draft)*		
Author	Robert L. Harrison Transportation Planning		
Date	Revised June 1997		
Summary Description	As the first phase of the Downtown Feasibility Study, the report identified and evaluated those transportation improvements that were consistent with the goals and policies of the revised General Plan and that would provide a significant transportation service for downtown Lafayette by reducing traffic congestion in downtown at Moraga Road/Mt. Diablo Boulevard intersection.		
Themes	• Reviewed existing conditions on the Mt. Diablo Blvd. and Moraga Road corridors. • Evaluation criteria based on Consistency with General Plan Goals and Policies; Improvements in Transportation Service and Cost. • Reviewed recommendations from the Lafayette Traffic Study. • Large-scale capacity improvements such as new roadways or freeway ramps not considered.		

Options Considered	• Adding a third, eastbound through lane on Mt. Diablo Blvd. between Oak Hill and Moraga Roads.
	• Add third lane and widen to accommodate two through lanes and two right turn lanes at Mt. Diablo Blvd.
	• At Mt. Diablo Blvd. and Moraga Road:
	  ○ Provide three southbound lanes (one left, one through and one through-right)
	  ○ Provide two northbound right turn lanes by rebuilding and expanding Plaza Park; add a right-turn arrow, prohibit RTOR for pedestrian safety
	• Eliminate Plaza Drive and its on-street parking.
	• Make Plaza Drive one-way
	• Cul de sac Plaza Drive at Moraga Road.
	• Develop a bike path to divert bikes away from Mt. Diablo Blvd./Moraga Road along the EBMUD right-of-way
	• Restrict left turns onto Moraga Blvd. either all or part time
	• Provide pedestrian crossing signal at Moraga Blvd.
	• Prohibit all left turns from Moraga Road during peak periods at School/Brook intersections
	• Prohibit northbound left urns onto Brook and provide a southbound left turn lane onto School; eliminate bike lanes on Moraga Road
	• Provide southbound left turn lane onto School Street; eliminate all left turns at Brook Street and consolidate all pedestrian crossings to School Street, (removes signal at Brook St.)
	• Provide both southbound and northbound left turn lanes on Moraga Road by removing bike lanes and widening the road by demolishing the Masonic Hall and Town Hall Theater		

Document Name	*Lafayette Downtown Feasibility Study / Lamorinda Transportation Improvement Program (Draft)*		
	• Provide traffic signal at Hamlin Road and Tanglewood Drive • Provide traffic signal at Silver Springs Road/Mtn. View Drive/Old Jonas Hill Road. • Add a southbound, left turn lane at Madrone Drive and Moraga Road. • Provide a continuous walkway on Moraga Road to Old Jonas Hill Road • With new traffic signals add coordination and adjust signal timing on Moraga Road • Preparing a comprehensive analysis of pedestrian and bicycle issues		
Recommendations	1. At Mt. Diablo Blvd. and Moraga Road provide a. Three southbound lanes at Safeway Plaza b. Two northbound right turn lanes and rebuild and expand Plaza Park c. Three eastbound through lanes 2. Provide the "Mt. Diablo Boulevard Bike and Pedestrian Trail;" 3. Prohibit all left turns at all hours at Moraga Boulevard; 4. Provide a pedestrian signal at Moraga Blvd. 5. Prohibit all left turns at all hours at Brook Street; 6. Modify the signal operation at Moraga Road/School Street and Brook Street to eliminate the Brook Street signal. 7. Remove the bike lanes on Moraga Road, but keep space for bikes. 8. Add bike signage to direct traffic to First Street path 9. Consolidate all pedestrian crosswalks to School Street or keep existing with reduced traffic service 10. Add a traffic signal at Silver Springs Road/Mt. View Drive/Old Jonas Hill; 11. Complete the walkway on Moraga *Road* to Old Jonas Hill Road; 12. Provide traffic signal coordination; 13. Conduct pedestrian and bike route program including suggested route to school plan. 14. Future comprehensive analysis of pedestrian and bicycle issues. 15. Don't install a traffic signal at Hamlin/Tanglewood at this time. 16. Southbound left turn lane at Madrone is not a high priority.		
Community Response / Outcome	Additional analysis of recommendations was conducted later in the Lafayette Downtown Traffic Study for Moraga Road Corridor. Concern was raised about the loss of parking on Plaza Drive. Recommendations Implemented: #1a, 1b (park expansion only), 1c, 3 (full signal installed). # 5-6 were tested and not supported.		

Document Name	*Lafayette Downtown Feasibility Study / Lamorinda Transportation Improvement Program (Draft)*		
	#7, 11, 12, 15 were fully implemented. #8 and 16 were not implemented #9 was opposed by the public; #13 was partially implemented via updating the Downtown Feasibility Study, the Bikeways Master Plan, and the on-going demonstration SRTS analysis		

Document Name	*Lamorinda Traffic Study / Transportation Improvement Program (Final)*		
Author	Barton-Aschman Associates, Inc.		
Date	August 1, 1994		
Summary Description	Purpose to address transportation problems with the Lamorinda communities by identifying actions and measures to mitigate the impacts of traffic congestion between Highway 24 and the Town of Moraga.		
Themes	• Identification of existing transportation problem areas • Identification of potential transportation strategies and programs • Adoption of the Lamorinda Transportation Improvement Program (LTIP) • LTIP Implementation • Mitigation of traffic density between Moraga and SR-24.		
Options Considered	• Major Capital Improvement Program projects: Gateway Extension, the Bollinger Canyon Extension, the Pleasant Hill Extension and the Moraga Road/Mt. Diablo Blvd. Bypass projects • Projects reviewed for transportation related benefits, impacts and growth inducing potential.		
Recommendations	Identified several transportation projects including the extension of Golden Gate Way to Moraga Road; addition of a new eastbound SR 24 off-ramp at First Street; extension of Oak Hill to Moraga Road; extension of Pleasant Hill Road to Glenside; creation of a Glenside by-pass and extension of Bollinger Canyon Road. 1. Develop Lamorinda School Bus Program 2. Increase CCCTA bus service 3. Provide BART shuttle bus service 4. Adopt standardized Lamorinda definitions of significant impacts 5. Develop a Lamorinda TDM program 6. Work with schools to stagger school start times 7. Review school boundaries to minimize trip lengths 8. Support independent carrier commuter bus service 9. Signalize Moraga Rd/Hamlin-Tanglewood intersection 10. Coordinate traffic signals on Mt. Diablo Blvd. and Moraga Rd. 11. Modify the right-turn lane from First St. to EB SR-24 on-ramp to allow dual right turns. a. With a through/right and a dedicated right lane; maintain left turn from shopping center driveway b. Exclusive northbound through, a through/right and exclusive right-turn; Eliminate left turn from shopping center drive and southbound left turn into office development 12. Redesign the right-turn lane from SR-24 EB off-ramp to Oak Hill with smaller curb radius		

Document Name	*Lamorinda Traffic Study / Transportation Improvement Program (Final)*		
	13. Add a left-turn lane at Moraga Rd. and Madrone Dr. 14. Modify the Brook-School/Moraga Rd. intersection to separate thru and left- turn movements on Moraga Rd. a. Prohibit left turns from Moraga Road northbound, during peak hours or b. Prohibit left turns at Brook Street only and restripe Moraga Rd. to provide a left turn lane at School St. c. In addition to a., eliminate the Brook Street signal and restrict turns to right in and out only; consolidate pedestrian crossings at School St. d. Provide side by side left turn lanes on Moraga Rd. between Brook and School; requires widening roadway and relocating bike lanes to the sidewalk; widen sidewalk to 10 ft. on both sides. Requires relocation of Masonic Hall and Town Hall Theater. e. Realign Brook Street to intersect Moraga Rd. at School St. to form a standard four-leg intersection; i. requires roadway widening and removal of Masonic Hall and four condos to the west or ii. Alternatively Masonic Hall could be kept and its parking area reconfigured with portion of former Brook St. 15. Restrict left turn access at Moraga Rd. and Moraga Blvd. 16. Eliminate sub-standard bike lane on Moraga Rd. 17. Add a third eastbound through lane on Mt. Diablo between Oak Hill and Moraga Rd. Widening can be minimized by eliminating the westbound right-turn lane at Oak Hill, but only as a short term option until gas station tanks can be removed. 18. Add carpool parking lots at: a. Pleasant Hill at Olympic, b. Pleasant Hill at Deer Hill, c. Deer Hill north of BART, and d. Lafayette Community Center 19. Conduct feasibility study and preliminary engineering of a project to reduce traffic congestion in downtown Lafayette through the Moraga Rd./Mt. Diablo Blvd. intersection		
Community Response / Outcome	Recommendations Implemented #1, 4, 5, 10, 11a, 12, 16, 17 (partially), 18d, and 19. Tested recommendations 14 a and b. Recommendations Not Implemented because outside of Lafayette's control: 2, 3, 6-8 Recommendations not implemented due to lack of public support: 14, 15 18a-c.		

Document Name	*Core Area Study in the City of Lafayette*		
Author	TJKM Transportation Consultants		
Date	September 13, 1989		
Summary Description	Conducted a capacity analysis for Lafayette and Moraga existing and plus approved projects conditions and identified mitigation measures and cost estimates. Reviewed intersections throughout downtown Lafayette and on Deer Hill Road.		
Themes	Evaluated existing traffic conditions and future land use impacts. Used consultant's capacity analysis methodology		
Options Considered			
Recommendations	Adding additional travel and turn lanes; optimizing signal timing; installing traffic signals. 1. Add northbound/southbound vehicle and ped phase at Mt. Diablo and Mtn. View 2. At Mt. Diablo and Happy Valley, add eastbound left turn lane and optimize signal timing. At build out: Add an exclusive SB left turn and exclusive NB right turn. 3. At Mt. Diablo and Lafayette Circle add an exclusive northbound right turn lane and an exclusive southbound through lane. Optimize signal timing. At build out: add additional eastbound through, exclusive EB exclusive right turn lane. 4. Mt. Diablo and Moraga Road: add additional eastbound through lane, an exclusive northbound through lane and an exclusive southbound right and left turn lanes. Add pedestrian phasing for west leg of Mt. Diablo; optimize signal timing. 5. Mt. Diablo/First St: add an exclusive right turn lane in the westbound direction. Split the north/south phases; optimize signal timing. At build out add exclusive northbound right turn lane to reduce overall intersection delay. 6. Deer Hill/Happy Valley Rd.: install signal and add a southbound left-turn lane. 7. Deer Hill/Oak Hill: Install a signal. 8. Deer Hill/SR 24 Westbound Off-ramp: install signal. At build out restripe NB approach to include exclusive Left turn lane, share through /left turn lane and a right turn lane. 9. Deer Hill/First St.: add an additional eastbound right turn lane. Add an EB-WB left turn phase; optimize signal timing. 10. Moraga Rd./School St-Brook St.: Add exclusive left turn lanes NB, SB and EB. Rephase timing to include NB/SB left turn phase, a NB/SB through phase and an EB/WB phase. Eliminate the all pedestrian phase and optimize signal timing. 11. Moraga Rd/St. Marys Road: Add an additional SB left turn lane. Re-phase timing to include a NB/SB left turn phase, a NB/SB through phase, an EB approach phase and a WB approach phase; optimize signal timing.		

Document Name	*Core Area Study in the City of Lafayette*		
	12. Install interconnect conduit, etc. for Mt. Diablo Blvd. signal system		
Community Response / Outcome	Recommendations Implemented: 1, 2 & 3 (partially), 4, 5 (partially), 8, 9, 12. Likely lack of community support for 10 and 11 an		

Document Name	*City of Lafayette Traffic Safety Study*		
Author	Omni-Means, Ltd.		
Date	no date (est. 1986–1988)		
Summary Description	Conducted peak hour counts at six intersections along Moraga Road between Mt. Diablo Boulevard and Sky-Hy Drive; identified high accident areas and analyzed and recommended safety and operation improvements; reviewed alternative solutions; developed a schedule and cost estimates.		
Themes	• Moraga Road within the City limits • Traffic a result of traffic focused on a few arterial streets • Effects of Future Traffic Growth: greater potential for through traffic increases as a result of Moraga's development than Lafayette's • Further growth in through traffic will probably result in severe congestion and delay at virtually all of the key intersections along the corridor. • Detailed Accident/Operations Analysis based on SWITRS 1980-88. • On-going accident surveillance program		
Options Considered	• Identified a list of locations most in need of investigation due to collision history. • Operational difficulties at: o Moraga Rd./Moraga Blvd. due to long delays turning out of Moraga Blvd. and southbound left turns onto Moraga Blvd.; o Moraga Rd./Brook-School Sts. due to back up caused by vehicles waiting to make left turns; o Moraga Rd./Hamlin Rd. due to long delays turning out of Hamlin and southbound left turns onto Hamlin Rd. o Moraga Rd./Old Mtn. View Dr. due to delay from vehicles turning out of Old Mtn. View Dr. • Assessment of signal warrants at unsignalized intersections (none met) • Remove curb parking and bike lane to create southbound left-turn lane at Moraga Blvd. to reduce collisions. • Remove parking on Brook St. to accommodate right and left turn lanes on eastbound Brook. • Modify signal control on Brook so right turns don't automatically activate signal. • Modify signal control to provide two separate pedestrian phases for Brook and School Sts. to allow minor street traffic to proceed when the other street pedestrian phase is activated. • Prohibit left turns from Moraga Rd. onto Brook and School Sts. during AM and PM peak. • Encourage parents to pull forward through Lafayette's school's parking lot. • Restripe an under used small parking lot on the north side of the		

Document Name	*City of Lafayette Traffic Safety Study*		
	half circle driveway to increase parking spaces, then remove some of the parking spaces along the driveway to create dedicated passenger loading/unloading zone. • Add 1-2 seconds of all red to increase clearance time for left-turn motorists before through traffic proceeds. • Widening of Moraga Road at Madrone Dr. to provide an inbound left turn lane. • Remove Moraga Rd. bike lanes due to insufficient width. • New shoulder areas could be created on Moraga Road's winding section by installing drain pipe and covering it.		
Recommendations	Installation of striping and guard rail; roadway widening to accommodate left-turn pockets and additional travel lanes; pruning to improve sight distance; lane re-assignments at Brook Street; modifications to the Lafayette Elementary School Parking lot; left-turn prohibitions; realignment of the Moraga Road/School Street/Brook Street intersection; install overhead street lighting where missing; and improved demarcation of pedestrian shoulder area. 1. At Madrone Drive: a. Install edge delineators around the curve; b. Trim vegetation; c. Install guard rail; d. Widen to accommodate inbound left-turn 2. At Tanglewood/Hamlin: a. Trim vegetation; b. Lengthen southbound left-turn lane in Hamlin to increase storage length 3. At St. Mary's Rd.: a. Extend the white strip for the southbound left turn to the north to alert drivers to merger sooner. 4. At Brook –School Streets: a. Modify eastbound Brook to accommodate separate right and left turn lanes b. Revise Lafayette School access by designating 3-4 passenger loading spaces along the inside curb of the driveway c. Restripe the schools' existing north end of the parking lot to accommodate more vehicles. d. Prohibit left turns from Moraga Road during AM and pM peak periods. e. Restripe Moraga Road to allow one left turn lane at either Brook or School Streets f. Widen Moraga Road without bike lanes to allow side by side left turn lanes for School and Brook Sts. g. Purchase right-of-way and totally reconstruct streets to provide an aligned four-way intersection		

<table>
<tr><td>Document Name</td><td>City of Lafayette Traffic Safety Study</td><td></td><td></td></tr>
<tr><td></td><td>h. Remove the traffic signal at Brook and restrict access to right turns only.
5. Remove bike lanes and direct bicycle travel to the parallel route on First St.
6. Widen Moraga Road to accommodate four travel lanes plus Caltrans bike lanes.
7. Widen Moraga Road at select locations from St. Mary’s Rd south past Madrone Drive and install a two-way left turn lane to provide easier access into and out of private driveways;
8. Install overhead street lighting along the entire two lane section of Moraga Road in addition to what is already present.</td><td></td><td></td></tr>
<tr><td>Community Response / Outcome</td><td>Recommendations implemented: #1a-c, 2a, 3a, 4b and 5
Recommendations tested: 4d
Unsure if implemented: 2b, 4c
Recommendations not implemented: 4a, 4e-h and 6-8</td><td></td><td></td></tr>
<tr><td>Information of Note</td><td><u>Comparison of ADT Volumes</u>

<table><tr><td>Location:</td><td>1989</td><td>2008</td></tr><tr><td>Moraga Rd. south of City limits</td><td>14,057</td><td>15,500</td></tr><tr><td>Moraga Rd. south of Herman Rd.</td><td>16,600</td><td>14,100</td></tr><tr><td>Moraga Rd. south of Moraga Blvd.</td><td>22,700</td><td>20,800 (2009)</td></tr></table></td><td></td><td></td></tr>
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