
Emerald Glen Park- Phase 4 Recreation & Aquatic Center

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

**Lead Agency:
City of Dublin**

**Prepared By:
Jerry Haag, Urban Planner**

September, 2014

Table of Contents

Introduction	2
Applicant/ Contact Person.....	2
Project Location and Context	2
Project Description.....	4
Environmental Factors Potentially Affected.....	10
Evaluation of Environmental Impacts	11
Attachment to Initial Study	24
1. Aesthetics	24
2. Agricultural Resources.....	25
3. Air Quality	26
4. Biological Resources	28
5. Cultural Resources.....	28
6. Geology and Soils	29
7. Greenhouse Gas Emissions.....	30
8. Hazards and Hazardous Materials	31
9. Hydrology and Water Quality.....	32
10. Land Use and Planning.....	34
11. Mineral Resources.....	35
12. Noise	35
13. Population and Housing	45
14. Public Services	45
15. Recreation.....	46
16. Transportation/Traffic.....	46
17. Utilities and Service Systems.....	51
18. Mandatory Findings of Significance	52
Initial Study Preparers	54
Agencies and Organizations Consulted	54
References	54
Attachment 1.....	56
Attachment 2.....	57

City of Dublin
**Environmental Checklist/
Initial Study**

This Initial Study has been prepared in accord with the provisions of the California Environmental Quality Act (CEQA) and assesses the potential environmental impacts of implementing the proposed project described below. The Initial Study consists of a completed environmental checklist and a brief explanation of the environmental topics addressed in the checklist.

Project Sponsor & Contact Person

City of Dublin
Parks and Community Services Department
100 Civic Plaza
Dublin CA 94568
(925) 556 4500

Attn: Douglas Rooney, Parks & Facilities Development Coordinator

Project Location and Context

The City of Dublin Planning Area consists of approximately 18.76 square miles of land area lying in eastern Alameda County, also known as the Livermore-Amador Valley, or the Tri-Valley area. Surrounding jurisdictions include the City of San Ramon and unincorporated Contra Costa County to the north, unincorporated Alameda County to the east and west and the cities of Pleasanton and Livermore to the south.

Exhibit 1 shows the location of Dublin in relation to surrounding communities in the East Bay.

The project is proposed to be constructed as the final phase of Emerald Glen Park, a 48-acre community park located in the Eastern Dublin Planning Area. More specifically, the park is located between Gleason Drive and Central Parkway west of Tassajara Road and east of Tassajara Creek.

The park was envisioned in the Emerald Glen Park Master Plan as a five-phase project. The Emerald Glen Park Master Plan was approved by the City Council in 1998. The phases of the park built to date are as follows:

Phase 1- Completed in 2000 and comprising 22.4 acres includes:

- Three Ball Diamonds – two 60' and one 90'
- Two Soccer Fields
- Lighted Skateboard Park
- Two lighted Basketball Courts

- Four lighted Tennis Courts
- Children's Play Area including:
 - Tot lot for 2-5 yo
 - Play apparatus for 5-12 yo
 - Splash pad water play area
 - Nature Play rock and slide complex
 - Sand pit
- Entry Plaza
- Restroom and Concession Building
- Informal picnic area
- Parking lot for 132 cars with three entry drives from Gleason Drive

Phase 2 – Completed in 2004 and comprising 4.5 acres includes:

- Additional Entry Plaza
- Water Feature with Public Art and arbor
- Entry drive from Central Parkway
- Additional Restroom building
- Temporary Preschool building
- Temporary parking lot for 51 cars
- City maintenance yard

The Emerald Glen Park Master Plan was updated in 2004 to show revised programming and extent for the three phases of the park that remained incomplete.

Phase 3 – Completed in 2006 and comprising 10.9 acres includes:

- Two additional Soccer Fields
- A pair of Bocce Ball Courts
- Large Group Picnic Area with arbor
- Additional Restroom building
- Additional Children's Play Area including:
 - Tot lot for 2-5 year olds
 - Play apparatus for 5-12 year olds
- Informal Arboretum
- Additional drive from Central Parkway
- Parking lot for 223 Cars

Phase 4 – is yet to be completed and per the revised Master Plan is to contain:

- A Gymnasium
- An Aquatic Center
- Volleyball courts
- An additional parking lot of undetermined size

Phase 5 – is yet to be completed and per the revised Master Plan is proposed to contain:

- An Amphitheater
- A small lake
- A Community Center

In 2012 the City Council approved another revision to Master Plan that combined Phases 4 & 5 into a single development that would complete the remaining 10.2 acres of vacant land that occupies the center of the park. The mix of facilities planned in Phases 4 & 5 would be combined into a single complex that is to be built in 3 phases, and is designated as the Emerald Glen Recreation and Aquatic Center.

The proposed development area within the park is adjacent to and on the north side of Central Parkway with adjacent residential neighborhoods facing the development area across the street to the south, and across the remaining park and creek to the west. The closest residential structure is approximately 440 feet from the front door of the proposed aquatic center development.

Project Description

The project being considered by the City of Dublin is the fourth and final phase of Emerald Glen Park. The 10.2 acres of parkland would include an outdoor amphitheater, and plaza with public art and the Emerald Glen Recreation and Aquatic Center (identified as the "Center" in this document). The Center has been planned for many years to be the primary water recreation complex in the community and to complement existing recreation facilities in Emerald Glen Park.

Proposed improvements as part of the park development would be built in phases as described below. This Initial Study analyzes full build-out of all proposed improvements.

Phase I improvements: These are anticipated to consist of the following:

- Indoor pool (the "natatorium") for lap swimming, exercise, swimming lessons and recreational swimming contains 11,900 sq. ft. The structure is approximately 105-feet x 117-feet, and stands 38'-6" tall at its apex. This pool would operate on a year-round basis. The Natatorium would be connected to the remainder of the Recreation and Aquatic Center that would have a total size of 28,506 sq. ft., inclusive of the natatorium area. The Center would include restrooms, locker and shower facilities, a community room, a party room, administrative and support staff offices, storage areas, and pool equipment and chemical storage areas.
- Outdoor shallow pool for play purposes. This would be opened seasonally.
- Outdoor waterslide structure with associated run-out lanes for 6 slides.. The slide structure is 55'-0" to the top of the roof structure. There is also an outdoor sport pool for competition swimming, water polo, recreational lap swimming and contains recreation features like a rock climbing wall, water volleyball and water basketball.
- Outdoor sport pool for seasonal lessons, exercise, swim meets, water polo and recreational swimming.
- The Center would be used for city classes and party rentals and includes the natatorium. Within the Center, there is a multipurpose community room that is 1,810 sq. ft.
- Public restrooms that would include a full set of locker rooms and restrooms in the Center, with a separate storage room / restroom building that is located out on the pool deck adjacent to the sport pool.

- Lobby and reception area to be located in the Center.
- City administrative offices to be located in the Center, to include 939 sq. ft.
- Lifeguard rooms and a first aid station within the Center to include 1,007 sq. ft.
- Pool storage, mechanical and pool chemical storage which would include an estimated 2,596 sq. ft. within the Center.
- An outdoor amphitheater would be located in the northeast corner of project development area. Performances at the amphitheater would occur in the afternoons and evenings with a maximum estimated seating capacity of 1,314 persons. Limited amplified sound would be employed as would limited exterior performance lighting. The earth berm at the amphitheater is approximately eight feet in height, and the seating area faces away from the adjacent residential areas.
- Special events that would occur within the project development area are anticipated to include:
 - Farmers Market – 6 times a year Thursdays 6-8 PM April – September
 - Splatter Festival – 2 days a year in September 10 AM- 9 PM
 - Family movie night – 3 Saturdays a year in summer 2 in July and one in August
 - Summer Concert Series– six Saturdays in the summer / fall. Typically 6-8 PM

Phase II Improvements would contain:

- An addition to the Center building containing approximately 17,145 sq. ft. This addition would complete the recreation and community center components of the Center including a Fitness room with exercise equipment and weights, exercise rooms with mats, a teen center, a multipurpose room, additional restrooms and a gymnasium of approximately 3,585 square feet with interior sports courts.

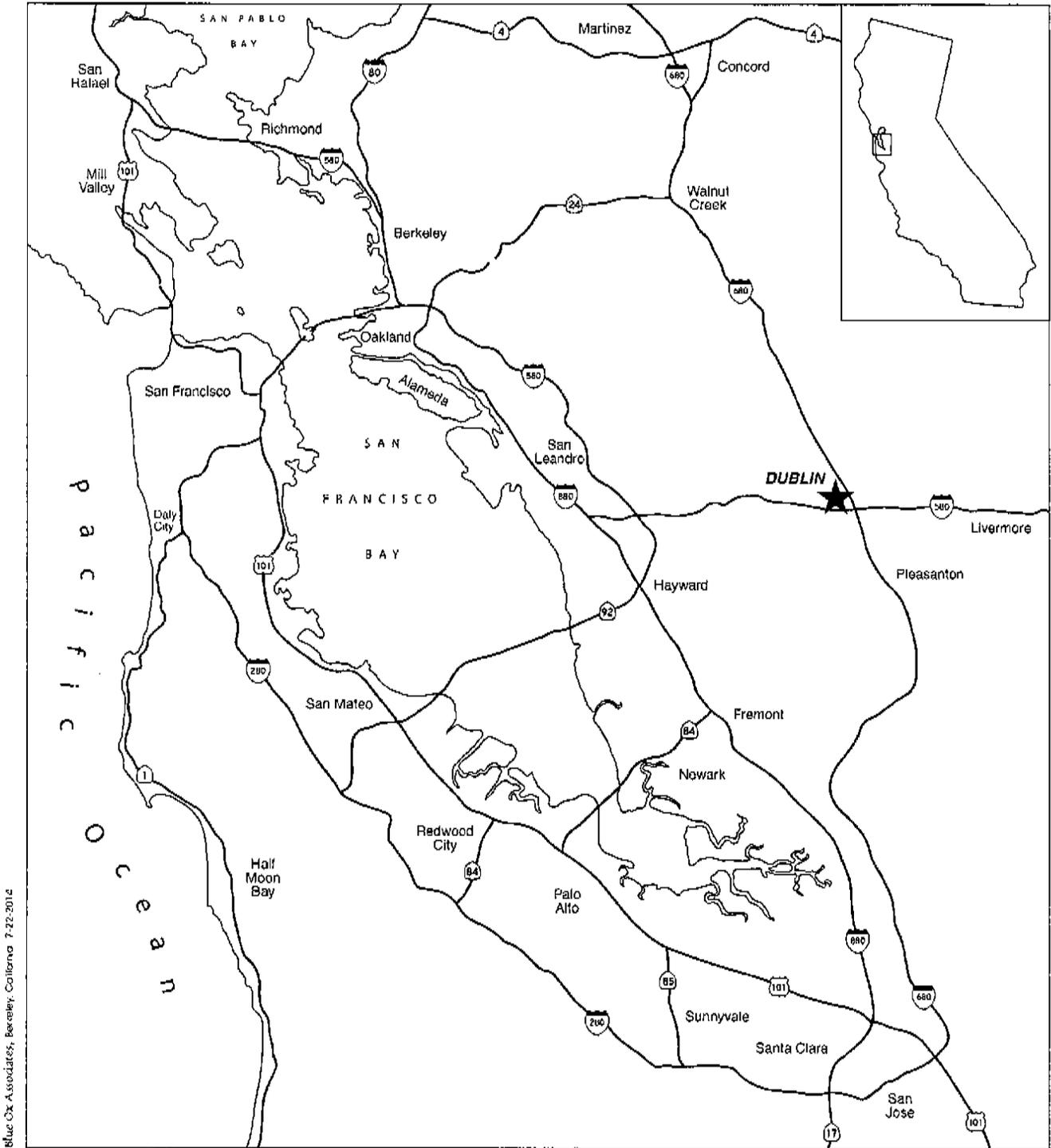
Phase III improvements would consist of:

- A freestanding preschool building adjacent to the Center would include up to 3,585 sq. ft. and include an outdoor play yard. There would be 4 staff members and approximately 20 students using this facility. Hours are estimated as 7:00 am – 6:00 pm.

The project would also include fine grading of the project development area, paving of a 136 car parking lot, installation of a 45 grass-pave auxiliary parking area, construction of interior walkways, landscaping, trenching to provide utility connections, installation of site lighting and identification signs. The project is planned to commence development in January of 2015, and the development of the entire project is anticipated to take 18 months to complete.

Potable, recycled water and wastewater service would be extended to the site from nearby roadways and from the adjacent site.

The project development area would include one or more pieces of public art, with details as to be number, size, location and design to be determined.



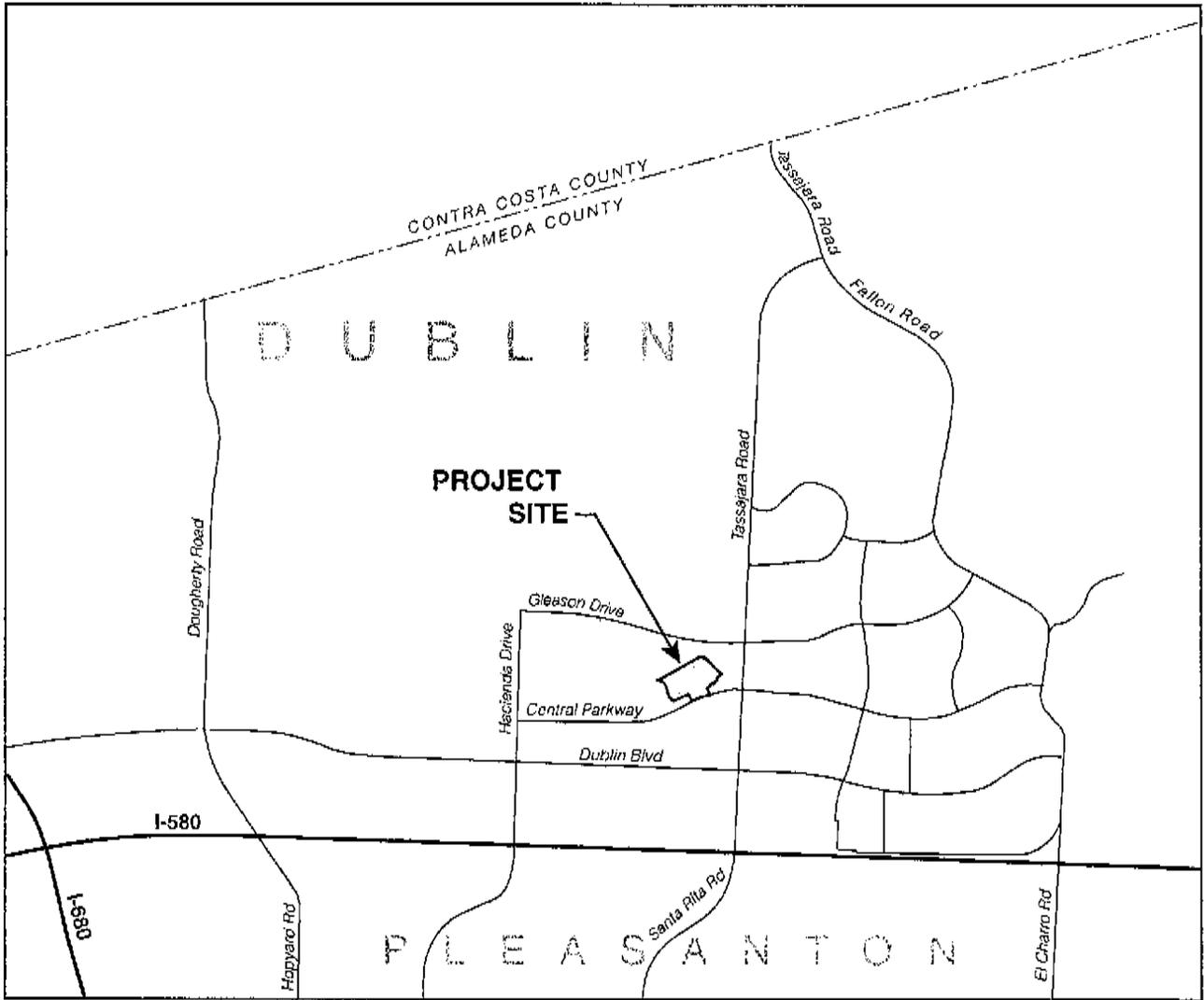
Blue Oak Associates, Berkeley, California 7-22-2012

**CITY OF DUBLIN
EMERALD GLEN RECREATION & AQUATIC CENTER
INITIAL STUDY**

**Exhibit 1
REGIONAL LOCATION**

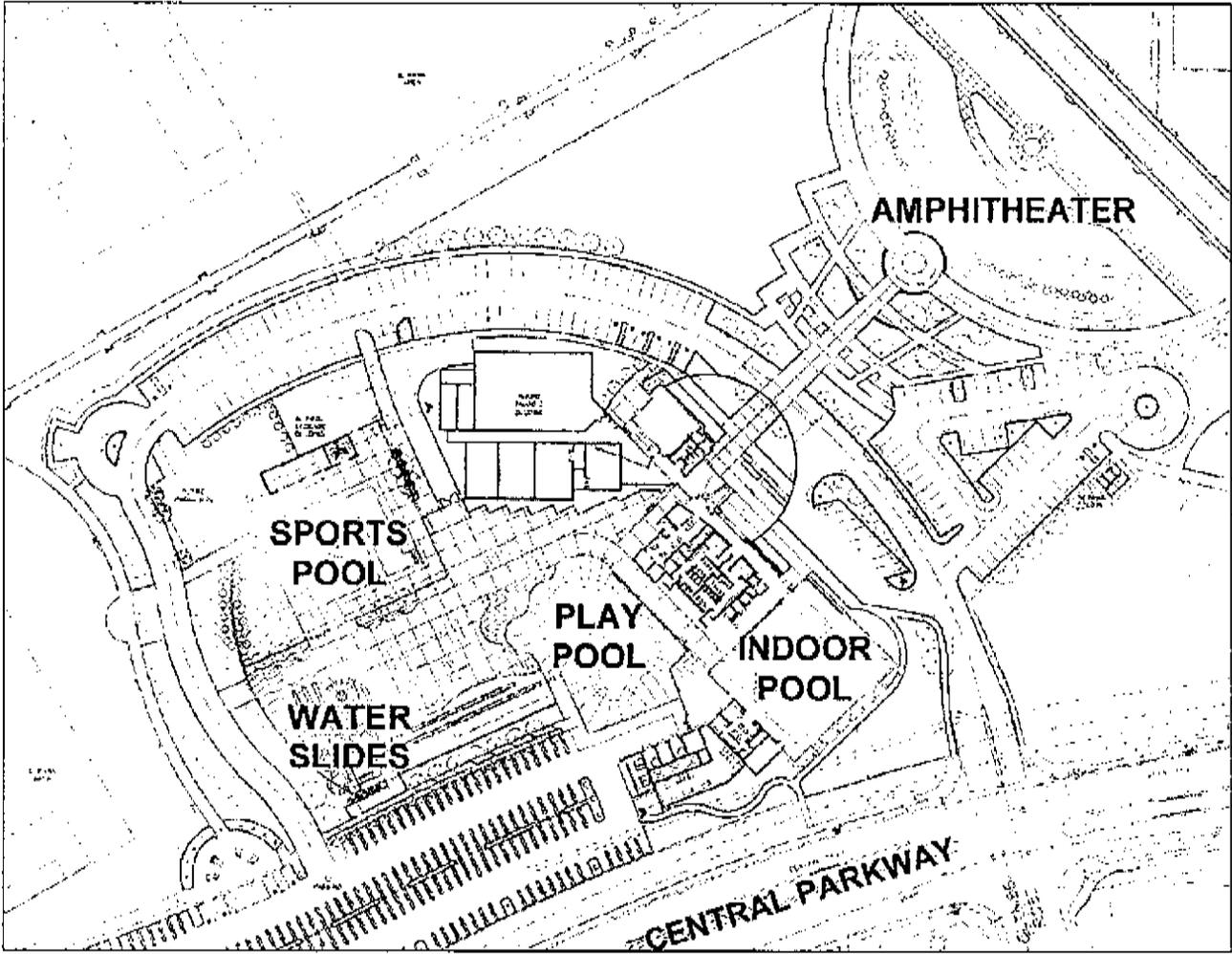
0 2 4 6 8 10 miles

Blue Ox Associates, Berkeley, California 07-22-2014



CITY OF DUBLIN
EMERALD GLEN RECREATION & AQUATIC CENTER
INITIAL STUDY

Exhibit 2
SITE CONTEXT



SOURCE: The Dahlin Group, 2014.

- 1. Project description:** Proposed development of Phase 4 of Emerald Glen Park and a Recreation and Aquatic Center. Proposed improvements would include multiple swimming pools, a water slide, a community building, an outdoor amphitheater, vehicle parking, interior trails, public restrooms and related facilities.
- 2. Lead agency/sponsor:** City of Dublin
- 3. Contact person:** Douglas Rooney, Parks & Facilities Development Coordinator
- 4. Project location:** Northwest corner of Tassajara Road and Central Parkway within Emerald Glen Community Park.
- 5. General Plan designation:** Parks/Public Recreation
- 6. Zoning:** Planned Development
- 7. Other public agency required approvals:**
Water and Sewer connections (DSRSD).

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "potentially significant impact" as indicated by the checklist on the following pages.

X	Aesthetics	--	Agricultural Resources	X	Air Quality/GHG
--	Biological Resources	--	Cultural Resources	--	Geology/Soils
X	Hazards and Hazardous Materials	--	Hydrology/Water Quality	--	Land Use/ Planning
--	Mineral Resources	X	Noise	--	Population/Housing
--	Public Services	--	Recreation	-	Transportation/ Circulation
--	Utilities/Service Systems	--	Mandatory Findings of Significance		

Determination (to be completed by Lead Agency):

On the basis of this initial evaluation:

I find that the proposed project **could not** have a significant effect on the environment and a **Negative Declaration** will be prepared.

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made or agreed to by the project proponent. A **Mitigated Negative Declaration** will be prepared.

I find that the proposed project **may** have a significant effect on the environment and an **Environmental Impact Report** is required.

I find that although the proposed project **may** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on earlier analysis as described on the attached sheets. An **Environmental Impact Report** is required, but must only analyze the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed in an earlier EIR or negative declaration pursuant to applicable standards, and b), have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed on the proposed project, nothing further is required.

Signature: Douglas Rooney by [Signature] Date: 7/26/14
Printed Name: Douglas Rooney by [Signature] For: City of Dublin

Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except "no impact" answers that are adequately supported by the information sources a lead agency cites in the parenthesis following each question. A "no impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "no impact" answer should be explained where it is based on project-specific factors as well as general factors (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less-than-significant with mitigation, or less-than-significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less-than-Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-than-Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c) (3) (D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed: Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

- c) Mitigation Measures. For effects that are "Less-Than-Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead Agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached and other sources used or individuals contacted should be cited for discussion.
- 8) This is a suggested form and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each agency should identify the significance criteria or threshold, if any, used to evaluate each question and the mitigation measures identified, if any, to reduce the impact to a less than significant level.

Environmental Impacts (Note: Source of determination listed in parenthesis. See listing of sources at end of checklist used to determine each potential impact).

Note: A full discussion of each item is found following the checklist.

1. Aesthetics. *Would the project:*

- a) Have a substantial adverse impact on a scenic vista?
- b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings and historic buildings within a state scenic highway? (Source: 2, 5)
- c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Source: 2, 5)
- d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? (Source: 5)

2. Agricultural Resources. *Would the project:*

- a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance, as show on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use? (Source: 2, 5)
- b) Conflict with existing zoning for agriculture use or a Williamson Act contract? (2)
- c) Conflict with existing zoning for, or cause rezoning of forestland (as defined by PRC Sec. 12220(g), timberland (as defined in PRC Sec. 4526), or timberland zoned Timberland Production (as defined in PRC Sec. 51104 (g)? (Source: 1, 2)
- d) Result in the loss of forest land or conversion of forest land to non-forest use? (5)
- e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to a non-agricultural use or conversion of forestland to a non-forest use? (Source: 2, 5)

Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
		X	
			X
		X	
	X		
			X
			X
			X
			X
			X
			X

- 3. Air Quality** (Where available, the significance criteria established by the applicable air quality management district may be relied on to make the following determinations).
Would the project:
- a) Conflict with or obstruct implementation of the applicable air quality plan? (Source: 1)
 - b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Source: 1, 2)
 - c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors? (1, 2)
 - d) Expose sensitive receptors to substantial pollutant concentrations? (5)
 - e) Create objectionable odors affecting a substantial number of people? (5)
- 4. Biological Resources.** *Would the project*
- a) Have a substantial adverse effect, either directly through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service? (2,5)
 - b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service? (2, 5)
 - c) Have a substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means? (2, 5)

Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
			X
	X		
			X
		X	
			X
			X
			X
			X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites? (5)				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (5)				X
f) Conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan? (Source: 1, 2)				X
5. Cultural Resources. <i>Would the project</i>				
a) Cause a substantial adverse impact in the significance of a historical resource as defined in Sec. 15064.5? (Source: 2, 5)				X
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to Sec. 15064.5? (Source: 2)			X	
c) Directly or indirectly destroy a unique paleontological resource or unique geologic feature? (Source: 2)			X	
d) Disturb any human remains, including those interred outside of a formal cemetery? (2)			X	
6. Geology and Soils. <i>Would the project</i>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Fault Zoning Map issued by the State Geologist or based on other known evidence of a known fault? (Source: 2, 5)				X
ii) Strong seismic ground shaking? (2)				X
iii) Seismic-related ground failure, including liquefaction? (Source: 2)				X
iv) Landslides? (Source: 2)				X
b) Result in substantial soil erosion or the loss of topsoil? (Source: 2)			X	

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- and off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (2)			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (Source: 2)			X	
e) Have soils capable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for wastewater disposal? (2)				X
7. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (7)			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
8. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials? (7)			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous into the environment? (7)		X		
c) Emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Source: 7)			X	

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Sec. 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (7)				X
e) For a project located within an airport land use plan or, where such plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (Source: 2, 7)				X
f) For a project within the vicinity of private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Source: 2, 7)				X
g) Impair implementation of or physically interfere with the adopted emergency response plan or emergency evacuation plan? (Source: 6)				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (4)				X
9. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements? (Source: 2, 6)			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (Source: 2, 6)				X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (Source: 5)			X	
d) Substantially alter the existing drainage pattern of the site or areas, including through the alteration of a course or stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Source: 2, 5)			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Source: 2, 6)			X	
f) Otherwise substantially degrade water quality? (Source: 2, 6)				X
g) Place housing within a 100-year flood hazard area as mapped on a Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map? (Source: 2, 6)				X
h) Place within a 100-year flood hazard area structures which impede or redirect flood flows? (Source: 2, 6)				X
i) Expose people or structures to a significant risk of loss, injury, and death involving flooding, including flooding as a result of the failure of a levee or dam? (Source: 2, 6)				X
j) Inundation by seiche, tsunami or mudflow?				X
10. Land Use and Planning. Would the project:				
a) Physically divide an established community? (Source: 1, 5)				X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (Source: 1, 5)				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan? (Source: 1, 5)				X
11. Mineral Resources. <i>Would the project</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (1)				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (Source: 1)				X
12. Noise. <i>Would the proposal result in:</i>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the general plan or noise ordinance, or applicable standards of other agencies? (3)		X		
b) Exposure of persons or to generation of excessive groundborne vibration or groundborne noise levels? (Source: 3)			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the project? (3)			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels without the project? (3)		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (2)				X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (2)				X
13. Population and Housing. <i>Would the project</i>				
a) Induce substantial population growth in an area, either directly or indirectly (for example, through extension of roads or other infrastructure)? (2, 5)				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (2, 5)				X
c) Displace substantial numbers of people, necessitating the replacement of housing elsewhere? (Source: 2, 5)				X
14. Public Services. <i>Would the proposal:</i>				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services? (Source: 6)				
Fire protection?			X	
Police protection?			X	
Schools?				X
Parks?				X
Other public facilities			X	
15. Recreation:				
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Source: 6)				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Source: 6)				X

16. Transportation and Traffic. *Would the project:*

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and all non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit? (Source: 4)
- b) Conflict with an applicable congestion management program, including but not limited to, level of service and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? (Source: 4)
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (Source: 4)
- d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses, such as farm equipment? (Source: 4)
- e) Result in inadequate emergency access? (4)
- f) Conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities or otherwise decrease the performance of safety of such facilities? (4)

17. Utilities and Service Systems. *Would the project*

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (Source: 6)

Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
		X	
		X	
			X
		X	
			X
			X
		X	

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (6)			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (6)			X	
d) Have sufficient water supplies available to serve the project from existing water entitlements and resources, or are new or expanded entitlements needed? (6)			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments? (Source: 6)			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state and local statutes and regulations related to solid waste? (6)			X	
18. Mandatory Findings of Significance.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number of or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects).				X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

Source used to determine potential environmental impacts

1. Dublin General Plan
2. Eastern Dublin General Plan/Specific Plan EIR (1993)
3. Project Acoustic Report (2014)
4. Project Traffic Analysis (2014)
5. Site Visit
6. Discussion with City staff or service provider.
7. Other Source

XVII. Earlier Analyses

Earlier analyses used. Identify earlier analyses and state where they are available for review.

- Eastern Dublin General Plan Amendment and Specific Plan EIR (SCH # 91103064, certified by City Council Resolution No. 51-93 on May 10, 1993. This document is also known as the Eastern Dublin EIR in this Initial Study. Multiple Addenda to this EIR have been certified by the City.

Attachment to Initial Study

Discussion of Checklist

Legend

- PS: Potentially Significant
LS/M: Less Than Significant After Mitigation
LS: Less Than Significant Impact
NI: No Impact

1. Aesthetics

Project Impacts

- a) *Have a substantial adverse impact on a scenic vista?* LS. The proposed project would be located within the central portion of existing Emerald Glen Park, a large community park in Eastern Dublin. The park is located between Gleason Drive and Central Parkway west of Tassajara Road and east of Tassajara Creek. There are existing facilities already developed within the park including public restrooms, a group picnic area with arbor, soccer fields, softball fields, a skate park, vehicle parking areas, pedestrian walkways, water play areas, and landscape features. The existing park is a public gathering point in this portion of the community and also serves as a scenic vista to nearby residents and passersby on adjacent major roads. Proposed improvements would consist of a multi-purpose community recreation building, swimming facilities and related improvements consistent with existing park improvements within Emerald Glen Park. The primary site improvements would be "at-grade" and would not result in a substantial adverse impact to a scenic vista. The recreation and aquatic center, water slide tower, pool area screen walls, and amphitheater project would have varying heights above grade, but would be sufficiently screened and landscaped to soften the appearance of their respective heights relative to the adjacent existing park development such that they would not result in a substantial adverse impact to a scenic vista.
- b) *Substantially damage scenic resources, including but not limited to trees, rock outcroppings and historic buildings within a state scenic highway?* NI. Tassajara Road is identified as a local scenic highway in the Dublin General Plan, but is not a state-designated scenic highway. Construction of the proposed recreation improvements would occur in an unimproved portion of Emerald Glen Park and would not damage any major stands of trees, major rock outcroppings or other significant scenic resources. No impact would result with respect to this topic.
- c) *Substantially degrade the existing visual character or quality of the site and its surroundings?* LS. Future construction of Recreation and Aquatic Center would change the visual character and quality of the site, which is currently vacant, into a major recreation facility. The proposed facility is the planned expansion of existing Emerald Glen Park, within the center portion of the park, and would be consistent

with existing recreational features within the park. This impact would be less-than-significant.

- d) *Create light or glare?* LS/M. Implementation of the proposed project could facilitate new lighting in the central portion of Emerald Glen Park for security and evening events. With the proximity of residences south of the site along the south side of Central Parkway, this could be a significant impact. The closest residential structure is approximately 440 feet from the front door of the proposed aquatic center development, and newly planned lighting for parking areas would be within approximately 335 feet of the closest existing residence. Currently there is existing site lighting at the parking area adjacent to Central Parkway that is within approximately 217 feet of the closest existing residence. Adherence to the following measure will reduce potential light and glare impacts to a less-than-significant level.

Mitigation Measure AES-1. New light fixtures associated with the Recreation and Aquatic Center shall not exceed an illumination level of 9.8 foot candles at the edge of the park property along the north side of Central Parkway. To meet this level, new fixtures shall be equipped with cur-off lenses and directed downward. Photometric calculations shall be prepared prior to operation of the Center to demonstrate this standard is met.

A portion of the project would include construction of six water slides, estimated to be 55 feet above the final ground surface. Use of the slide during daylight hours could result in generation of glare off of the site which could impact other park users and nearby residents. Adherence to the following measure will reduce this impact to a less-than-significant level:

Mitigation Measure AES-2. Exterior finished for the waterslide structure, fencing and exterior building cladding materials shall be of non-reflective material.

2. Agricultural and Forestry Resources

Project Impacts

- a-e) *Convert Prime Farmland, conflict with agricultural zoning, convert prime farmland to a non-agricultural use or impact forest or timberland.* NI. Proposed improvements that could be facilitated by the proposed park improvements would be located within an urbanized area of Dublin. The site is not zoned or used for agricultural production nor is it subject to a Williamson Act contract. Therefore no impacts would result in terms of loss of agricultural lands, agricultural operations, Williamson Act contracts or any timberland or forests.

3. Air Quality

Project Impacts

- a) *Would the project conflict or obstruct implementation of an air quality plan?* NI. The proposed Recreation and Aquatic Center has been envisioned within Emerald Glen Park Master Plan for a number of years and has been included as a key component of the community park in the Dublin General Plan and Eastern Dublin Specific Plan. No amendments to these land use regulatory documents are proposed and no impacts would occur with conflicts with the applicable regional air quality plan. The regional clean air plan is based on land use assumptions contained in local General Plan documents. No impact would result with respect to this topic.
- b) *Would the project violate any air quality standards?* LS/M. Approval and construction of the Recreation and Aquatic Center could create short-term air quality impacts related to grading of the site for the future multipurpose building, other park improvements and excavation for swimming pools. Although the Eastern Dublin EIR contains Mitigation Measure 3.11/10 to reduce the impact of dust deposition from construction activities, the Bay Area Air Quality Management District (BAAQMD) has updated recommended mitigations to reduce fugitive dust impacts to a less-than-significant level. The proposed project shall adhere to the following measures as recommended by the BAAQMD.

Mitigation Measure AIR-1. The project applicant shall adhere to the following dust control measures, which shall replace those included in EDSP EIR Mitigation Measure 3.11/1.0:

- a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- b) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d) All vehicle speeds on unpaved roads shall be limited to 15 mph.
- e) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- f) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- g) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- h) Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

In addition to the above, the City will also be required to adhere to air quality Mitigation Measures 3.11-2.0-4.0. These measures require project-level construction activities limit interference with regional traffic, installation of emission controls on construction equipment and completion of a construction impact reduction plan.

In terms of long-term operational impacts, the size of the proposed improvements would involve approximately 10.2 acres of land within the existing Emerald Glen Park. The size of the proposed project would be below the operational screening size of 2,613 acres for a city park established in the May 2011 *Air Quality Guidelines* published by the Bay Area Air Quality Management District. Therefore, the project does not have the potential to violate air quality standards and no significant impact would result with respect to operation of the proposed facility.

- c) *Would the project result in cumulatively considerable air pollutants?* NI. The Eastern Dublin EIR found that emission of reactive organic gasses and nitrous oxide associated with build-out of the Eastern Dublin Specific Plan to be significant and unavoidable. Since the proposed Recreation and Aquatic Center is an integral part of the Eastern Dublin Specific Plan parks network, this impact will remain significant and unavoidable as identified in the Eastern Dublin EIR. However, there would be no new or more severe significant impacts with respect to cumulatively considerable air quality emission impacts than have been previously analyzed and no further analysis is required.
- d) *Expose sensitive receptors to significant pollutant concentrations?* LS. The project site is surrounded by existing recreational uses within Emerald Glen Park with a residential community located south of the site, across Central Parkway. A preschool facility has historically operated within Emerald Glen Park, but would temporarily relocated off of the site to allow for construction of the proposed park expansion. A new preschool building with associated Play yard will be Phase 3 of the project. The presence of the preschool would represent sensitive receptors near the Complex.

Operation of the Recreation and Aquatic Center would generate a number of new vehicle trips (see Section 16, Traffic and Transportation). However, proposed recreational uses on the site as envisioned would not generate significant pollutants. With the exception of the preschool, no other sensitive air quality receptors, such as hospitals, convalescent care uses or senior occupancy complexes. This impact is expected to be less-than-significant.
- e) *Create objectionable odors affecting a significant number of people?* NI. No impacts are anticipated with regard to significantly objectionable odors, since the proposed

project involves a recreation facility in an existing community park that would not generate significant odors.

4. Biological Resources

Project Impacts

- a) *Have a substantial adverse impact on a candidate, sensitive, or special-status species?* NI. The project site is currently vacant and has been graded as part of the overall construction of Emerald Glen Park. No significant stands of trees would be removed that provides nesting and roosting habit for bird species. No impacts to candidate, special-status or other sensitive plant or wildlife species would occur should the project be approved and constructed.
- b, c) *Have a substantial adverse impact on riparian habitat or federally protected wetlands?* NI. The project site has been graded as part of the larger Emerald Glen Park construction. No wetlands or other waters have been observed on the site that would be impacted by approval and construction of the Recreation and Aquatic Center. No impacts would occur with respect to this topic.
- d) *Interfere with movement of native fish or wildlife species?* NI. the project site is surrounded by existing park facilities, roads or dwellings. No movement of wildlife or fish would be blocked as part of the proposed project.
- e, f) *Conflict with local policies or ordinances protecting biological resources or any adopted Habitat Conservation Plans or Natural Community Conservation Plans?* NI. The project site lies within the Eastern Alameda County Conservation Strategy (EACCS) planning area. The City of Dublin utilizes the Conservation Strategy as guidance for environmental permitting for public projects, and private development projects are encouraged to use the EACCS as a resource as well. The Conservation Strategy embodies a regional approach to permitting and mitigation for wildlife habitat impacts associated with land development, infrastructure, and other activities. The Conservation Strategy is neither a Habitat Conservation Plan nor a Natural Community Conservation Plan, but is a document intended to provide guidance during the project planning and permitting process to ensure that impacts are offset in a biologically effective manner. No impacts would therefore result.

5. Cultural Resources

Project Impacts

- a) *Cause substantial adverse change to significant historic resources?* NI. No structures exist on the site. No impacts are therefore anticipated with regard to historic structures.
- b, c) *Cause a substantial adverse impact or destruction to archeological or paleontological resources?* LS. Subsurface excavation would occur as a result of constructing

swimming pools, the multi-purpose building and other project improvements. All grading and excavation will be subject to EDSP EIR Mitigation Measures 3.9/5.0 and 3.9/6.0-10.0. These measures require in-depth analysis of artifacts uncovered on construction sites and other actions consistent with CEQA. The project will also comply with City of Dublin General Plan Conservation Element Guiding Policy 7.7.1.2 that requires grading operations within the City to follow State regulations regarding stop-work and other procedures upon discovery of archeological and historic sites as set forth in the California Public Resources Code. Less-than-significant impacts would result with respect to this topic.

- d) *Disturb any human remains, including those interred outside of a formal cemetery?* LS. Adherence to Eastern Dublin EIR Mitigation Measures and applicable sections of the Conservation Element of the Dublin General Plan, as referenced above, will ensure that impacts to human remains will be less-than-significant.

6. Geology and Soils

Project Impacts

- a) *Expose people or structures to potential substantial adverse impacts, including loss, injury or death related to ground rupture, seismic ground shaking, ground failure, or landslides?* NI. Future structures on the project site would be subject to potentially significant groundshaking in the event of a moderate to severe seismic event in the Bay area. Eastern Dublin EIR Mitigation Measure 3.6/1.0 reduced this impact but not to a less than-significant level. This mitigation required new structures in the Eastern Dublin planning area to comply with current local and state building codes. Although future employee and visitors would be subject to impacts related to groundshaking, this impact was overridden by the City of Dublin when approving the Eastern Dublin Specific Plan in 1993. The project is also required to comply with Eastern Dublin EIR Mitigation Measures 3.6/2.0-7.0 that mandate removal and reconstruction of unstable soils, use of engineered building foundations and design of structures to account for potential soil failure. With adherence to applicable Eastern Dublin EIR mitigation measures, no new or more severe impacts would occur than was previously analyzed in the Eastern Dublin EIR. The project site and surrounding area is relatively flat with minimal potential for significant landslide.
- b) *Is the site subject to substantial erosion and/or the loss of topsoil?* LS. There could be limited potential for soil erosion as a result of constructing the multi-purpose building, swimming pools and similar improvements. Adherence to normal and customary City of Dublin requirements of installing erosion control features near graded areas during the rainy season will ensure that less-than-significant impacts would occur with respect to soil erosion or loss of topsoil.
- c-d) *Is the site located on soil that is unstable or expansive or result in potential lateral spreading, liquefaction, landslide or collapse?* LS. Large portions of the Eastern Dublin planning area are subject to expansive soils. Adherence to Eastern Dublin EIR Mitigation Measures 3.6/14.0-16.0 require the preparation of site-specific

structural designs to overcome expansive soils by reducing the amount of soil moisture, use of appropriate building foundations and use of appropriate pavement design. In addition to site-specific Eastern Dublin EIR mitigation measures, proposed project improvements would be constructed to City of Dublin public works standards to ensure this impact would be less-than-significant.

- e) *I have soils incapable of supporting on-site septic tanks if sewers are not available?* NI. Any sewer services for the project will be public, as provided by DSRSD for all of Eastern Dublin. There would therefore be no impact with respect to this topic this topic.

7. Greenhouse Gas Emissions

Discussion:

- a,b) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?* LS. The City has a qualified Climate Action Plan (CAP), which was adopted in 2010 and updated in 2013. Environmental review was completed for the CAP which concluded that, with the implementation of the communitywide GHG reduction measures under the CAP and the applicable GHG emissions reductions under State law, the cumulative impacts from GHG emissions in the City in 2020 would be less than significant. The CAP provides direction for determining whether a proposed project is consistent with it (CAP, p. 53). The CAP identifies the following three considerations for making a consistency determination; related discussion is included for each factor.

a. The extent to which the project supports or includes applicable strategies and measures, or advances the actions identified in the CAP. The CAP includes specific emissions reduction measures for new development, as set forth in Section V and summarized in CAP Appendix E. The following emissions reduction measures will be implemented by the project.

- Provide bicycle parking
- Green building ordinance
- Construction & Demolition ordinance, as recently amended to increase the diversion requirement from 50% to 75%
- Citywide diversion goal of 75% (there will be recycling cans throughout the center to promote recycling)

Additionally, the following emissions reduction measures are not in Appendix E but will be implemented by the project, including:

- LEED Silver Requirement for new City Buildings (applies to projects that are greater than \$3 million)
- Bay-Friendly Landscaping Policy (to the extent feasible)

In accordance with the CAP, conditions of approval will be imposed on the aquatic center project to ensure that the above measures are binding and enforceable. Emissions from the proposed project will be further reduced by the applicable State GHG emission reduction measures set forth in Section VI of the CAP.

b. The consistency of the project with ABAG population growth projections as outlined in the One Bay Area Plan (Projections 2010), which are the basis of the CAP GHG emissions projections. The 2013 CAP emissions projections assume a Dublin population of 62,700 in 2020 based on the 2010 Census and ABAG One Bay Area Plan (CAP, Table 8). The project proposes an aquatic center on approximately 10 acres of the 48 acre Emerald Glen Community Park. The park and its existing and proposed improvements, are intended as a community park. As such, the park primarily serves Dublin residents; approximately 90% of park patrons are from Dublin. The project does not include residential development and will not directly increase population growth in the City. The project is expected to produce a limited number of new jobs; however many will be seasonal, and most would be expected to be filled by Dublin residents given the nature of the project and the park. Thus, the project are consistent with ABAG projections in the One Bay Area Plan.

c. The extent to which the project would interfere with implementation of CAP strategies, measures, or actions. As noted in item "a" above, the aquatic center project includes all applicable emissions reduction measures for a project of its type and thus, will not interfere with implementation of CAP strategies, measures or actions.

Based on consistency with the City's qualified CAP, development of the aquatic center project will have less than significant impacts related to Greenhouse Gas emissions.

8. Hazards and Hazardous Materials

Project Impacts

- a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?* LS. The proposed project would involve the routine transport, use and disposal of pool chemicals and similar substances which, in appropriate quantities, could be considered hazardous. However, the use, storage, disposal and transport of such materials is strictly regulated by federal, state and local requirements. This impact would be less-than-significant.
- b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material into the environment?* LS/M. Disturbance of the ground surface for grading and excavation of swimming pools, building foundations, utility placement and related activities could release hazardous materials into the environment, including but not limited to pesticide residue from previous activities on the site or similar conditions. Adherence to the following will reduce this impact to a less-than-significant level:

Mitigation Measure HAZ-1. Prior to commencement of grading or trenching activities, the City shall obtain a Phase I Environmental Site Assessment to ensure that no recognized environmental conditions are present in site soils or in groundwater under the site. If substances above regulatory screening levels are found, a remediation plan shall be prepared and approved by appropriate regulatory agencies, which may include the Regional Water Quality Control Board or the Alameda County Environmental Health Services Department. Remediation of contaminated material could include removal of contaminated material to an approved off-site location or similar measure. Remediation shall be completed per the approved plan and carried out by licensed contractors. The remediation plan shall include safety plans for workers and users of Emerald Glen Park, as may be required. Necessary clearances shall be secured from appropriate regulatory agencies prior to the issuance of a grading permit.

- c) *Emit hazardous materials or handle hazardous or acutely hazardous materials, substances, waste within one-quarter mile of a school?* LS. The proposed project would be located within one-quarter mile of a future preschool. However, the proposed Complex would not emit or handle substantial quantities of hazardous materials so that this impact would be less-than-significant.
- d) *Is the site listed as a hazardous materials site?* NI. The project area is not listed on the State of California Department of Toxics Substances Control list (the Cortese List) as of January 15, 2014 (see www.calepa.ca.gov/Site.Cleanup/Cortese_List.cfm). No impacts are therefore anticipated with respect to this topic.
- e,f) *Is the site located within an airport land use plan of a public airport or private airstrip?* NI. Although portions of Eastern Dublin are located within the Airport Influence Area (AIA) of Livermore Municipal Airport, the site is located outside the AIA of this airport (see Figure 3-1, Livermore Municipal Airport Land use Compatibility Plan, (http://www.acgov.org/cda/planning/generalplans/documents/LVK_Ch3_Revised_120111.pdf).
- g) *Interference with an emergency evacuation plan?* NI. Proposed improvements would occur in a vacant portion of Emerald Glen Park. The improvements would not block any existing or proposed public rights-of-way and not interfere with an emergency evacuation plan. No impact would result with respect to this topic.

9. Hydrology and Water Quality

Project Impacts

- a) *Violate any water quality standards or waste discharge requirements?* LS. In terms of wastewater discharge requirements, the proposed project would add a small number of new restroom facilities and would also include a small quantity of swimming pool backwash. Based on discussions with staff representatives of the

Dublin San Ramon Services District, the special district that provides wastewater collection, treatment and disposal for properties in Dublin and San Ramon, the District has sufficient treatment capacity available at the District's facility (source: Stan Kolodzie, DSRSD, 4/7/14) so that no violation of wastewater discharges would occur and no mitigation measures are required.

In terms of surface quality standards, the City of Dublin Public Works Department will require implementation of standard measures to control short-term erosion from graded areas in adjacent bodies of water, including but not limited to Tassajara Creek west of the site. This is a standard requirement for all new development consistent with the Clean Water Act and National Pollution Discharge Elimination System (NPDES) requirements. A Stormwater Pollution Prevention Plan (SWPPP) will also be required by the Dublin Public Works Department to ensure that any potential long-term impacts to water quality impacts are at a less-than-significant level.

- b) *Substantially deplete groundwater recharge areas or lowering of water table?* NI. Proposed recreation and aquatic facilities would be provided water from the Dublin San Ramon Services District, which relies primarily on imported water as a water supply, so that no local groundwater would be pumped that would lower the local water table. Although the project site is currently vacant, it is designated for future park uses in the Dublin General Plan and Eastern Dublin Specific Plan and is not intended as a long-term groundwater recharge area. No impacts would result with respect to this topic and no mitigation measures are needed.
- c,d) *Substantially alter drainage patterns, including streambed courses such that substantial siltation or erosion would occur or substantially alter drainage patterns or result in flooding, either on or off the project site?* LS. The site is currently vacant and proposed construction of recreational and aquatic improvements would add significant amounts of new impervious surfaces. Since there are no existing stream or creeks on the project site, there would be no modifications to existing watercourses. As part of the normal and customary review process, the City of Dublin will require installation of construction-level and long-term operational water quality provisions to limit polluted runoff and reduce peak stormwater flows from the site, consistent with the requirements of the Alameda County Clean Water Program. No impacts are anticipated with respect to this topic and no mitigation measures are required.
- e) *Create stormwater runoff that would exceed the capacity of drainage systems or add substantial amounts of polluted runoff?* LS. Construction of the proposed project would increase stormwater runoff from the site, since the amount of impervious surface on the site would increase due to construction of buildings, pathways, swimming pools and other hardscape surfaces. No such surfaces currently exist on the site. The City of Dublin would construct necessary drainage improvements as part of the project to ensure that the capacity of local and regional drainage systems would not be exceeded (source: Jayson Imai, Dublin Public Works Department, 7/30/14).

Adherence to the Alameda County Clean Water Program, as enforced by the City of Dublin for all development projects, will ensure that the quantity of polluted stormwater would not significantly increase. These programs require installation of vegetated bioswales adjacent to paved areas, covering of solid waste dumpsters and similar features. Overall, the amount of increased stormwater and polluted stormwater would be less-than-significant.

- f) *Substantially degrade water quality?* NI. As noted in the above response, the construction of proposed recreation facilities within Emerald Glen Park would be subject to surface water pollution controls as mandated by the Alameda County Clean Water Program to ensure that no impacts would result with respect to this project. Under the Clean Water Program, the project contractor will be required to install silt fencing, hay bales and similar features to minimize polluted runoff during the annual rainy period of each year. No impacts would therefore occur.
- g-i) *Place housing within a 100-year flood hazard area as mapped by a Flood Insurance Rate Map, or impede or redirect flood flow, including dam failure?* NI. No residences would be constructed as part of the proposed project, so no impacts would result with respect to this topic.
- j) *Result in inundation by seiche, tsunami or mudflows?* NI. There are expected to be no impacts with regard to seiche, tsunami or mudflows, since the project site is located significantly east of San Francisco Bay that would be affected by a seiche or tsunami. The project site is generally flat and would not be significantly impacted by mudflows. No impacts are anticipated with respect to this topic.

10. Land Use and Planning

Project Impacts

- a) *Physically divide an established community?* NI. All proposed improvements would be constructed within the central, vacant portion of Emerald Glen Park and would not divide an existing community. Proposed aquatic-related improvements have been planned as part of the larger Emerald Glen Park for a number of years, so that no impacts would result with respect to this topic.
- b) *Conflict with any applicable land use plan, policy or regulation?* NI. The proposed project would comply with the goals and policies contained in the Dublin General Plan and Eastern Dublin Specific Plan. No amendments are proposed to either document. In addition, the proposed Complex would be consistent with the City's Parks and Recreation Master Plan and the Emerald Glen Park Master Plan (source: D. Rooney, Dublin Parks & Community Services Dep't. 9/10/14). No impacts would occur with respect to this topic.
- c) *Conflict with a habitat conservation plan or natural community conservation plan?* NI. The City of Dublin lies within the Eastern Alameda County Conservation Strategy (EACCS) planning area. The City utilizes the Conservation Strategy as guidance for environmental permitting for public projects, and private development projects

are encouraged to use the EACCS as a resource as well. The Conservation Strategy embodies a regional approach to permitting and mitigation for wildlife habitat impacts associated with land development, infrastructure, and other activities. The Conservation Strategy is neither a Habitat Conservation Plan nor a Natural Community Conservation Plan, but is a document intended to provide guidance during the project planning and permitting process to ensure that impacts are offset in a biologically effective manner. There is no existing habitat conservation plan or natural community conservation plan for major pedestrian and bicycle improvements. There would therefore be impacts with respect to this topic.

11. Mineral Resources

Project Impacts

- a, b) *Result in the loss of availability of regionally or locally significant mineral resources?* NI.
No impacts would occur to any mineral resources, since no such resources have been identified within the project area.

12. Noise

Project Impacts

- a) *Would the project expose persons or generation of noise levels in excess of standards established by the General Plan or noise ordinance or applicable standards of other agencies?* LS/M. This section of the Initial Study is based on a report entitled "Environmental Noise Impact Report for Emerald Glen Aquatics Center" prepared by Rosen, Goldberg, Der & Lewitz (RGDL) dated September 24, 2014. This report is attached as Attachment 1 to this Initial Study. The report notes that residential areas are located across the street from the park in the north, south and west directions. The project uses would include a play pool, a sports pool, an indoor pool and waterslides

Noise sources associated with the project include the voices of children and adults using the aquatics facilities, the amplified sound at the amphitheater, the rooftop mechanical equipment at the project buildings and traffic on nearby roadways. Other elements of the project that would be associated with later phases of the project include a multi-purpose building (exercise equipment and teen center), a gymnasium (interior sport court) and a preschool building. The preschool would have 20 children and would be located at least 500 feet from the nearest residences. The sound of children playing would be comparable to or less than other park and project activities and the preschool would be within the Zoning Ordinance criteria (DMC 8.82 Day Care Centers). The project elements identified above are primarily interior uses that are farther from the residences than other project elements. The combination of distance as well as the fact that most noise would be generated indoors (and reduced in magnitude by the building structure) means that the noise from these sources would not contribute significantly to project generated noise levels in adjacent residential areas.

Major noise sources associated with the project would include:

Aquatics Facilities. The project includes two outdoor pools (one play pool and one sports pool), a separate outdoor area for water slides and one indoor pool (natatorium). The indoor pool will be open year round for teaching and exercise. The sports pool will be used for water polo, and swim meets, as well as recreation. The sports pool will be closed November through January. The play pool and waterslide season will be June through August.

Noise levels from the sports pool were estimated based on measurements of a high school swim meet. The play pool noise levels are based on measurements of other recreational pools of similar size. Noise from the *natatorium* was also based on the recreational pool noise measurements including an assumption that the building shell provides a noise reduction of 7 dBA based on acoustical test data for the "pillow" roof material. The water slide noise levels are based on measurements of noise from another *free-fall* water slide amusement park.

Amphitheater. Performances at the amphitheater would occur in the afternoons and evenings with a maximum estimated seating capacity of 1,314 persons. Limited amplified sound would be employed. Uses of the amphitheater would include a summer concert series (six Saturdays in the summer/fall, typically 6 – 8 PM) and family movie night (three Saturdays a year in the summer).

Noise levels from the amphitheater are based on an average level of 83 dBA at the seating area. This noise level is representative of a pop or rock music band playing amplified sound through a PA system that is controlled to a reasonable performance guideline of 95 dBA at a distance of 20 feet from the stage/speakers. The estimated noise level throughout the seating area includes an adjustment to account for the speakers being oriented toward the audience (away from adjacent residences) to minimize sound transfer to the community.

Rooftop Mechanical Equipment. Rooftop mechanical equipment associated with the first phase of the project includes an air-conditioning unit on the multi-purpose building at the north side of the natatorium and an *indirect direct evaporative cooler* (IDEC) on the pool equipment building on the west side of the natatorium. Since the design of all of the mechanical equipment is not finalized (including the later project phases) noise levels are based on a recommended performance standard of 50 dBA during the daytime/evening (7 AM – 10 PM) and 40 dBA during the night (10 PM – 7 AM) at the nearest residences. A review of manufacturer's data for potential equipment indicates that the performance standard can be met but may require sound attenuation measures such as silencers or barriers (e.g. the preliminary design includes roof parapets which could act as noise barriers).

Increased Vehicular Traffic. Project generated traffic would access the project site from entrances on Central Parkway and Gleason Drive. Based on the traffic

analysis for the project¹ the peak hour traffic volumes attributable to the project will be 79 vehicles on Central Parkway and 37 vehicles on Gleason Drive.

Facility Use Assumptions. In order to assess the project generated noise levels predictions were made for the peak summer season. The assumptions represent a higher level of activity than is actually expected. The assumptions are as follows:

Natatorium 5:30 AM - 10:00 PM, seven days a week

5:30 AM - 10 AM is quiet lap swim.

Play Pool and Water Slides 7:00 AM - 10:00 PM

Usage between 7 AM and 10 AM is relatively light and quiet.

Usage between 7 PM and 10 PM occurs three days per week.

Sport Pool 5:30 AM -10:00 PM (water polo; lap swimming; swim meets)

5:30 AM - 10 AM is quiet lap swim.

Usage from 7 PM - 10 PM is seven days a week.

One swim meet per week beginning at 8 AM.

Amphitheater 1 concert per week, 6 PM - 8 PM

1 movie night per week for two hours between 7 PM and 10 PM.

Rooftop HVAC Equipment and Indoor Pool Equipment

Operates 24-hours and meets a sound level of 50 dBA during the daytime

(7 AM to 10 PM) and 40 dBA at night (10 PM and 7 AM) at nearest residences

Project Generated Noise Levels. The project generated noise levels were calculated at the nearby residential areas as shown in Exhibit 4. Additional locations are assessed to the south of the project site. Location R6 represents residences that are beyond the first row of homes and acoustically shielded from Central Parkway traffic noise by intervening buildings. Location R7 represents residences that are farther from the roadway than the first row of homes but are not acoustically shielded by intervening buildings.

Table 1 shows the project generated noise levels for each of the residential receivers. For each receiver the noise level contribution from each of the sources is listed. The project includes an 8-foot tall wall around the perimeter of the pool areas. This wall will reduce noise from most ground level sources by about 8 dBA for receivers that are outdoors or in the ground level of the homes. The noise reduction from the wall is not included in Table 3 because most of the residences are two or more stories and the wall will not be effective in reducing noise for the upper floors of these residences.

For each receiver, three noise level descriptors are shown. The CNEL is the 24-hour average noise level and is used for comparison with the City's General Plan standards. The L_{eq} and the L_{max} are shown to help the reader more fully understand

¹ Emerald Glen Recreation and Aquatic Complex - Traffic Impact Analysis, Omni-Means Engineers and Planners, July 30, 2014.

the project generated noise. The L_{eq} (average noise level) is the average during the period when each of the project elements are in use. The L_{max} (maximum noise level) represents the instantaneous noise level during louder single events such as discrete yells, shouts and whistles.

The L_{eq} is an average noise level over a particular time period. The L_{eq} takes into account both the louder instantaneous noise levels (L_{max}) as well as the quieter times during a measurement when there are no loud events. Therefore, the L_{eq} is always less than the L_{max} . Similarly, the CNEL is generally less than the L_{eq} because the CNEL is a 24-hour average and most of the noise sources do not occur continuously for 24 hours. The exception is mechanical equipment which runs 24 hours. In that case, the CNEL is greater than the L_{eq} because of the adjustment applied to noise occurring during the evening and nighttime hours to account for people's increased sensitivity to noise.

The last column in Table 1 shows the combined CNEL and L_{eq} when all sources are active. The L_{max} in the combined column is the highest source L_{max} since the intermittent noise events would not likely occur at the same exact time and therefore, would not be additive.

Table 1. Project Generated Noise Levels

Residential Receiver Location		Noise Level Descriptor	Noise Level, dBA						
			Sports Pool	Play Pool	Indoor Pool	Water Slides	Amphi-theater	Mech Equip	Combined
R1	The Glen at Dublin Green	CNEL	51	48	43	52	45	46	57
		L _{eq}	53	51	44	55	57	45	61
		L _{max}	66	64	57	66	65	45	66
R2	Dublin Greene Townhomes	CNEL	51	50	46	51	47	51	57
		L _{eq}	52	53	48	54	59	50	62
		L _{max}	65	66	61	64	67	50	67
R3	Waterford Place	CNEL	48	46	45	46	48	49	55
		L _{eq}	49	49	47	49	60	48	62
		L _{max}	62	62	60	60	68	48	68
R4	Persimmon Drive Homes	CNEL	44	38	32	41	46	35	49
		L _{eq}	45	41	33	44	58	34	58
		L _{max}	58	54	46	55	66	34	66
R5	Gleason Drive Homes	CNEL	46	40	35	41	48	38	51
		L _{eq}	47	43	37	44	60	37	61
		L _{max}	60	56	50	55	68	37	68
R6	Belcarra Court	CNEL	41	37	32	41	35	35	46
		L _{eq}	42	40	34	44	48	34	51
		L _{max}	55	53	47	56	56	34	56
R7	Second Row of homes along Central Parkway	CNEL	50	47	41	50	44	45	55
		L _{eq}	51	50	43	53	56	44	60
		L _{max}	64	63	56	64	64	44	64

Source: RDGL, 2014

Table 2 shows the calculated increase in traffic noise for the various roadways around the project. The increase in CNEL is based on the weekday and Saturday peak hour traffic information provided in the project's traffic study.

Table 2. Traffic Noise Level Increases

Roadway	Segment	Increase in CNEL, dBA					
		Increase Due to Project		Increase Due to Project and 2035 Growth		Increase Due to Project over 2035 Growth	
		(Existing+Project re: Existing)		(2035+Project re: Existing)		(2035+Project re: 2035)	
		Sat	Wkday	Sat	Wkday	Sat	Wkday
Gleason Dr.	West of Creekview	0.1	0.1	2.3	2.0	0.0	0.0
	Creekview to Tassajara	0.1	0.1	2.3	2.0	0.1	0.1
	East of Tassajara	0.3	0.2	2.4	1.1	0.2	0.2
Central Parkway	West of Hacienda	0.0	0.0	3.9	4.1	0.0	0.0
	Hacienda to Killian	0.8	1.0	3.6	3.7	0.4	0.5
	Killian to Glynnis Rose	0.6	0.7	3.0	3.1	0.4	0.4
	Glynnis Rose to Tassajara	0.5	0.6	2.7	3.1	0.3	0.4
Tassajara Rd.	East of Tassajara	0.1	0.2	2.5	4.6	0.1	0.1
	North of Gleason	0.0	0.1	2.5	2.1	0.0	0.0
	Gleason to Central Pkwy	0.1	0.1	2.4	2.3	0.0	0.1
Creekview Dr.	Central Pkwy to Dublin Blvd	0.0	0.0	2.3	2.6	0.0	0.0
	North of Gleason	0.0	0.0	2.3	2.0	0.0	0.0
	South of Central Parkway	0.1	0.1	1.1	2.0	0.1	0.1
Glynnis Rose Dr.	South of Central Parkway	0.2	0.2	2.5	2.5	0.1	0.1

Source: RGDL, 2014

Potential noise impacts of the proposed project include:

Project Generated Noise Affecting Existing Residences. The City's General Plan noise standard for residences is a CNEL of 60 dBA. Based on the project generated noise levels presented in Table 3, the CNEL from the project will be 58 dBA or less at the surrounding residences. Since the project generated CNEL is less than 60 dBA, it would be considered normally acceptable.

However, the calculated noise level includes a presumption that amplified sound from the amphitheater is limited. If there are no restrictions on amplified sound (whether from the amphitheater, aquatics park center or multi-purpose building) than a CNEL of 60 dBA could be exceeded and this would be a significant impact. Adherence to the following measure will reduce this impact to a less-than-significant level.

Mitigation Measure Noise-1. An amplified sound policy shall be prepared and implemented for the project that would include, at a minimum, the following elements:

- a) Maximum noise level limits for the amphitheater (e.g. 95 dBA at 20 feet);
- b) Maximum noise level limits for the pools, water slide and multi-purpose room.

Compatibility of Project with Ambient Noise Levels. The City's General Plan noise standard for neighborhood parks is a CNEL of 60 dBA. Based on the measurement of noise on the project site (see measurement Location ST-3 in Table 1), the ambient noise is within this level and the project will be exposed to "normally acceptable" noise levels. Therefore, this is a less than significant impact.

- b) *Exposure of people to excessive groundborne vibration or groundborne noise levels?* LS. The project does not include ground vibration sources that would affect the neighboring residential land uses. Construction equipment, however, can generate potentially noticeable ground vibration. The distance between the project site and the nearest homes is about 160 feet and ground vibration from sources such as bulldozers would attenuate to a level that is not noticeable nor represent a significant risk for damage to existing structures at that distance. This impact will be less-than-significant.
- c) *Substantial permanent increases in ambient noise levels?* LS. Table 3 shows the increase in traffic noise due to the project is less than 1 dBA at all locations. Table 5 shows the project generated increase in noise from traffic and operation of the aquatics center combined. The CNEL at R1, R2, R3 and R5 (existing plus project in Table 5) would fall within the 60 and 65 dBA range where the threshold for a significant increase is 3 dBA. The predicted increase at these receivers ranges from 0.6 to 2.5 dBA which is less than the 3 dBA threshold of significance.

The CNEL at R4, R6 and R7 (existing plus project in Table 3) will be less than 60 dBA, and therefore, the threshold for a significant increase is 5 dBA. The predicted increase at these receivers ranges from 0.8 to 4.5 dBA in the neighboring residential land uses and this is less than the 5 dBA threshold.

Table 3. Project Generated Noise Increase

Residential Receiver Location		CNEL, dBA			
		Existing	Existing + Project	Increase	Threshold for significant increase
R1	The Glen at Dublin Green	60.2	62.3	2.1	3
R2	Dublin Greene Townhomes	60.2	62.5	2.3	3
R3	Waterford Place	60.2	61.9	1.7	3
R4	Persimmon Drive Homes	58.2	58.7	0.5	5
R5	Gleason Drive Homes	62.6	63.0	0.4	3
R6	Belcarra Court	44.7	48.3	3.6	5
R7	Second Row of homes along Central Parkway	52.8	57.3	4.5	5

Source: RGDL, 2014

Based on the information in Table 3 as well as the traffic noise increases shown in Table 3, the increase in daily average noise levels (CNEL) would be a less than significant impact.

Although noise from the project would generally not exceed the thresholds for a significant increase, periodic noise from operation of the project (e.g. children playing, whistles and amplified sound) would be clearly noticeable within residential areas near the project.

- d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels without the project?* LS/M. Many different types of construction equipment will be needed to construct the pools, buildings and infrastructure. This equipment includes excavators, backhoes, cranes, graders, trenchers, dump trucks, loaders, compactors, bulldozers, pavers, concrete trucks, air compressors, pneumatic equipment, roller compaction equipment, hand compaction equipment and other heavy machinery. Construction is not expected to require pile driving (source: G. Markel, project architect, 7/18/14).

The noisier activities tend to occur during the grading and foundation phases of construction. After the building shells are constructed, the noise levels are significantly lessened as the construction activities begin to occur indoors.

Most machinery proposed to be used in the construction of the proposed project would produce maximum noise levels of up to 85 dBA at a distance of 50 feet. This includes concrete mixer trucks, cranes, bulldozers, dump trucks, graders, pavers, pneumatic tools, rollers and scrapers. Several of these machines may operate within a small area during the same time frame, and the additive effect of these noise sources must be considered. For example, if three of these

machines operate for a length the maximum noise level produced may reach 90 dBA at a distance of 50 feet.

The nearest residences are about 350 from the center of the site. Based on a source level of 90 dBA at 50 feet, the maximum noise level would be reduced to 73 dBA at the nearest residences assuming a standard attenuation rate of 6 dBA per doubling of distance. Since this noise level is comparable a vehicle on Central Parkway or Gleason Drive, and the construction activities are temporary, this is a less than significant impact.

However, in order to minimize disruption and potential annoyance to nearby residents and other park users during construction, the following mitigation measure is recommended:

Mitigation Measure Noise-2. Construction activities shall adhere to the following. These requirements shall be included on contractor construction plans and specifications.

- a) Construction activities, including the maintenance and warming of equipment, shall be limited to Monday through Friday, and non-City holidays, between the hours of 7:30 AM and 5:30 PM except as otherwise approved by the City Engineer.
 - b) All construction equipment shall be equipped with mufflers and sound control devices (e.g., intake silencers and noise shrouds) no less effective than those provided on the original equipment and no equipment shall have an un-muffled exhaust.
 - c) All construction equipment shall be properly maintained to manufacturer specifications and kept in tune to minimize noise emissions.
 - d) Stationary equipment shall be placed so as to maintain the greatest possible distance to nearby sensitive receptors.
 - e) All equipment servicing shall be performed so as to maintain the greatest possible distance to the sensitive receptors.
 - f) The construction contractor(s) shall provide an on-site name and telephone number of a contact person. In the event that construction noise is intrusive to an educational process, the construction liaison will revise the construction schedule to preserve the learning environment.
- e,f) *Be located within an airport land use plan area, within two miles of a public or private airport or airstrip?* NI Although portions of Eastern Dublin lie within the Airport Influence Area of Livermore Municipal Airport, no significant noise contours from the airport extend north of the I-580 freeway no impact would result with respect to this topic (source: Livermore Municipal Airport Land Use Compatibility Plan, 2012).



SOURCE: Rosen Goldberg Der & Lewitz, Inc., 2014.

CITY OF DUBLIN
EMERALD GLEN RECREATION & AQUATIC CENTER
INITIAL STUDY

Exhibit 4
NOISE MEASUREMENT
LOCATIONS

13. Population and Housing

Project Impacts

- a) *Induce substantial population growth in an area, either directly or indirectly?* NI. The project does not include a housing component and no impacts would result with respect to this topic.
- b,c) *Would the project displace substantial numbers of existing housing units or people?* NI. The site is vacant no dwellings units or people would be displaced.

14. Public Services

Environmental Impacts

- a) *Fire protection?* LS. Proposed recreational facilities envisioned on the site would be served by fire and emergency services provided by the Alameda County Fire District. The closest fire station is Station 17, located at 6200 Madigan in Eastern Dublin. No new or expanded Fire Department facilities would be required to serve the proposed project, although there may be some increase in fire department calls for service to the site (Bonnie Terra, Alameda County Fire Department, 4/7/14). Impacts to fire protection would be less-than-significant.
- b) *Police protection?* LS. Construction and operation of the Recreation and Aquatic complex could increase the calls for service from the Dublin Police Services Department however, Department staff notes that approval and implementation of the Plan would not require expansion of existing police facilities or the construction of new police facilities to serve project components (Tom McCarthy, Public Police Services Department, 4/7/14). This is anticipated to be a less-than-significant impact.
- c) *Schools?* NI. There would be no impact to the Dublin Unified School District, since no dwellings would be constructed that would generate school-aged children.
- d) *Other governmental service, including maintenance of public facilities?* LS. There would be minimal and less-than-significant impacts with respect to maintenance of recreation and aquatic facilities, since the installation of improvements would be consistent with City design requirements and would not require maintenance for a number of years.
- e) *Solid waste generation?* LS. Construction of facilities would generate minor and less-than-significant amounts of solid waste in terms of construction debris and similar material from construction of proposed improvements.

15. Recreation

Project Impacts

- a) *Would the project increase the use of existing neighborhood or regional parks?* NI. The purpose of the project is to increase recreational opportunities for residents of Dublin, as set forth in the Dublin General Plan, the Eastern Dublin Specific Plan the the City’s Parks and Recreation Master Plan. Emerald Glen Park is identified as one of the major community parks in Eastern Dublin and no impacts would result with respect to this topic.

- b) *Does the project include recreational facilities or require the construction of recreational facilities?* NI. The proposed project does include recreational facilities and impacts are anticipated with respect to this topic, as identified throughout this initial study.

15. Transportation/Traffic

Project Impacts

a,b) *Conflict with applicable plans related to the effectiveness of the circulation system, including all modes of travel, including intersections, streets, highways and other components or conflict with an applicable congestion management program, including level of service standards, travel demand measures and other applicable standards?* LS. Traffic and transportation impacts of the proposed project were analyzed in the report entitled “Emerald Glen Recreation and Aquatic Complex Traffic Impact Analysis” prepared by the firm of Omni Means engineers and planners dated July 30, 2014. Major portions of the Omni Means report are attached to this Initial Study as Attachment 2. Copies of the report technical appendices incorporated by reference into this Initial Study and are available for review at the Dublin Parks and Community Services Department during normal business hours.

The Omni report calculates build-out of all phases of the Complex as follows. Detailed trip generation of the build-out of project components is as follows.

Table 4. Project Build-Out Trip Generation

Time Period	Project Trips
Weekday	
Daily Trips	1,708 daily trips (854 in, 854 out)
Mid-Day Peak Hour Trips	182 mid-day trips (104 in, 78 out)
PM Peak Hour Trips	163 PM trips (66 in, 97 out)
Saturday	
Daily	1,264 daily trips (632 in, 632 out)
Saturday peak hour	107 pk. hr. trips (33 in, 74 out)

Source: Omni-Means, 2014

The project trips were assigned onto the street network based on location of the project access driveways, background traffic volumes, proximity of principal

roadways, and area demographics in the City of Dublin. Consideration was given to project driveway turning restrictions (i.e., locations with right-turn only access) and adjacent intersections. The City of Dublin anticipates almost all patrons (90%) would be Dublin residents with trips originating within the Dublin City limits (based on attendance data from another City pool facility and preferential admission pricing for Dublin residents). Only a small percentage of trips are expected to derive from outside of Dublin, such as Pleasanton or Livermore. Based on these factors, project trip assignment has been distributed as follows:

- 10% on Tassajara Road to/from north of Gleason Drive;
 - 5% on Tassajara Road to/from south of Dublin Boulevard;
 - 20% on Gleason Drive to/from east of Tassajara Road;
 - 5% on Gleason Drive to/from west of Creekview Drive;
 - 10% on Central Parkway to/from east of Tassajara Road;
 - 5% on Central Parkway to/from west of Hacienda Drive;
 - 5% on Central Parkway to/from neighborhoods west of Killian Street;
 - 10% on Glynnis Rose Drive & Killian Street to/from neighborhoods south of Central Parkway;
 - 20% on Dublin Boulevard to/from west of Hacienda Drive;
 - 5% on Dublin Boulevard to/from east of Tassajara Road;
 - 5% on Hacienda Drive to/from south of Dublin Boulevard.
- 100%

The City of Dublin has established intersection LOS significance criteria for both signalized and unsignalized intersections presented as follows:

The City shall strive to phase development and roadway improvements so that the operating Level of Service (LOS) for intersections in Dublin does not exceed LOS D. However, intersections within the Downtown Dublin Specific Plan area are excluded from this requirement and may operate at LOS E or worse.²

Therefore, for this project, a project impact is considered significant as follows:

If the intersection operation degrades from LOS D or better under No Project conditions to LOS E or worse under project conditions.

Or if the intersection already operates below acceptable level of service under No Project conditions (LOS E-F) and the project adds 50 or more peak hour trips to the intersection under project conditions.

Pedestrian and Bicycle Circulation:

If a project would conflict with adopted policies and programs or plans that support pedestrian and/or bicycle circulation, including disruption of existing facilities or inadequately provides for designated pedestrian facilities and on-street &/ or off-street bicycle facilities (such as identified in Pedestrian or Bicycle

² *City of Dublin, General Plan, Chapter 5 - Land Use & Circulation: Circulation & Scenic Highways Element, Roadway Standards, Updated March 23, 2012.*

Master Plan). Or if the project conflicts with other adopted policies, standards, or guidelines as required by the City municipal codes.

Public Transit Facilities:

If the project disrupts existing service routes, or increases demand above transit load capabilities, or conflicts with the policies, plans, and programs supporting public transit.

Complete Streets:

If the project would conflict with the City's complete streets policies for pedestrian, bicycle, and transit oriented circulation.

Traffic Safety:

If the project design contained a dangerous or hazardous element inconsistent with the City's design standards &/or industry accepted standards (such as Institute of Transportation Engineers or Caltrans.)

With peak hour project trips added to existing (no project) traffic volumes, study intersection LOS have been calculated and are shown in Table 5. With existing plus project volumes all ten project study intersections would operate at acceptable levels during all three peak hour periods with no change in levels of service and only small increases in vehicle delays at some intersections (five seconds or less at external intersections and three seconds or less at project driveway intersections).

**Table 5. Existing + Project Conditions:
Peak Hour Intersection Level of Service (LOS)**

Intersection	Weekday Mid-day		Weekday PM		Saturday Peak	
	Existing	Existing + Proj.	Existing	Existing + Proj.	Existing	Existing +Proj.
Gleason Drive / Driveway – Creekview Dr.	A 8.5	A 8.5	B 7.6	B 7.6	A 8.1	A 8.1
Gleason Drive / Driveway (mid-block)	nb rt: A 9.2 wb lt: A 7.7	A 9.2 A 7.7	A 9.7 A 8.5	A 9.7 A 8.6	A 9.0 A 7.7	A 9.0 A 7.7
Gleason Drive / Driveway (east)	nb rt: A 9.1	A 9.2	B 10.1	B 10.2	A 9.0	A 9.1
Gleason Drive / Tassajara Road	B 14.0	B 14.2	C 21.3	C 21.6	B 14.2	B 14.3
Central Parkway / Hacienda Drive	B 18.0	C 20.6	B 16.9	B 19.1	C 20.4	C 20.9
Central Parkway / Driveway – Killian St.	sb: A 9.5 nb: B 10.2 wb lt: A 7.5 eb lt: A 7.7	A 9.9 B 11.1 A 7.6 A 7.8	B 10.0 B 12.6 A 7.9 A 7.9	B 10.6 B 13.8 A 7.9 A 8.0	A 9.5 B 12.1 A 0.0 A 7.8	A 9.8 B 12.8 A 0.0 A 7.7

Central Parkway / Driveway – Glynnis Rose	B 10.8	B 11.3	B 11.3	B 11.7	B 10.8	B 11.0
Central Parkway / Tassajara Road	C 21.1	C 21.4	C 21.2	C 21.6	C 20.6	C 20.7
Dublin Boulevard / Hacienda Drive	C 21.8	C 21.8	C 26.8	C 26.8	C 34.8	C 34.9
Dublin Boulevard / Tassajara Road	C 25.1	C 25.1	C 28.9	C 29.1	C 33.6	C 33.6

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay in seconds.
Source: Omni Means, 2014

The traffic analysis also included consideration of near-term projects in the Eastern Dublin area by Year 2020. These are development projects which have been approved but are not yet constructed, or are currently being reviewed by the City. With near-term plus project volumes, conditions would remain similar to near-term no project conditions (see Table 6). Delay increases, if any, would be limited to three seconds or less, with most intersections experiencing delay increases of less than one second. The Central Parkway/Hacienda Drive intersection would change from LOS B to C during the mid-day peak hour, but the delay increase would be 2.5 seconds. Similarly, the Central Parkway/Killian Street intersection's northbound approach would change from LOS B to C during the PM peak hour, but the delay increase would be under three seconds. The Dublin Boulevard/Hacienda Drive and Dublin Boulevard/Tassajara Road intersections would experience no change in level of service, with delay increases, if any, of 0.1 seconds.

The project access driveways could continue to operate at LOS B or better conditions, except for the Killian Street northbound approach at LOS C during the PM peak hour, and delay increases, if any, would be under two seconds. There would be no significant impacts to intersection operation based on the significance criteria.

**Table 6. Near-Term (Year 2020) + Project Conditions:
Peak Hour Intersection Level of Service**

Intersection	Weekday Mid-day		Weekday PM		Saturday Peak	
	Near-Term	N.T. +Proj.	Near-Term	N.T. + Proj.	Near-Term	N.T. +Proj.
Gleason Drive / Driveway – Creekview Dr.	B 10.0	B 10.1	A 8.6	A 8.6	A 8.1	A 8.1
Gleason Drive / Driveway (mid-block)	nb rt: A 9.4 wb lt: A 7.8	A 9.4 A 7.9	A 9.8 A 9.0	A 9.8 A 9.0	A 9.1 A 7.8	A 9.1 A 7.9
Gleason Drive / Driveway (east)	nb rt: A 9.4	A 9.4	B 10.5	B 10.6	A 9.2	A 9.2
Gleason Drive / Tassajara Road	B 17.9	B 18.1	C 27.2	C 29.1	B 18.8	B 19.1
Central Parkway / Hacienda Drive	B 19.6	C 22.1	C 26.5	C 27.2	C 20.5	C 20.8
Central Parkway / Driveway – Killian St.	sb: A 10.0 nb: B 10.4	B 10.4 B 10.9	B 10.5 B 14.9	B 11.1 C 16.5	B 10.2 B 13.5	B 10.6 B 14.5

	wb lt: A 7.6 eb lt: A 7.9	A 7.7 A 8.0	A 8.3 A 8.0	A 8.4 A 8.2	A 0.0 A 7.8	A 0.0 A 7.9
Central Parkway / Driveway – Glynris Rose	B 11.2	B 11.9	B 12.5	B 13.1	B 11.2	B 11.5
Central Parkway / Tassajara Road	C 27.6	C 27.4	C 33.7	D 35.1	C 23.2	C 23.8
Dublin Boulevard / Hacienda Drive	C 30.5	C 30.6	E 69.1	E 69.1	E 56.3	E 56.3
Dublin Boulevard / Tassajara Road	D 52.8	D 52.9	E 59.1	E 59.2	D 50.6	D 50.7

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay in seconds.
Source: Omni Means, 2014

Long-term cumulative Year 2035 plus project conditions were also evaluated (see Table 7). The eight intersections operating at LOS D or better without the project would continue to operate acceptably at LOS D or better with the project. Delays at these intersections would increase by three seconds or less, with several experiencing no change in delays.

The two Dublin Boulevard intersections would continue to operate at LOS E-F with the same LOS conditions as “no project” conditions, with no delay increases at the Dublin Boulevard/Hacienda Drive intersection and a small (0.1 second) increase at the Dublin Boulevard/Tassajara Road intersection. The project would add less than 50 trips to either intersection during any peak hour. Therefore the project impact is not considered significant. The unsignalized intersections were analyzed for peak hour signal warrants. The intersections would not qualify for signalization under MUTCD peak hour warrant criteria.

**Table 7. Cumulative (Year 2035) + Project Conditions:
Peak Hour Intersection Level of Service**

Intersection	Weekday Mid-day		Weekday PM		Saturday Peak	
	Year 2035	Year 2035 +Proj.	Year 2035	Year 2035 + Proj.	Year 2035	Year 2035 +Proj.
Gleason Drive / Driveway – Creekview Dr.	B 10.9	B 10.9	A 9.0	A 9.1	A 8.7	A 8.7
Gleason Drive / Driveway (mid-block)	nb rt: A 9.6 wb lt: A 8.0	A 9.6 A 8.0	B 10.2 B 9.5	B 10.2 B 9.6	A 9.3 A 8.0	A 9.3 A 8.0
Gleason Drive / Driveway (east)	nb rt: A 9.6	A 9.6	B 10.7	B 10.8	A 9.3	A 9.4
Gleason Drive / Tassajara Road	B 17.9	B 18.1	C 27.5	C 28.9	B 19.3	B 19.5
Central Parkway / Hacienda Drive	C 26.0	C 27.9	C 25.6	C 28.9	C 23.1	C 25.4
Central Parkway / Driveway – Killian St.	sb: B 10.4 nb: B 11.1 wb lt: A 7.7 eb lt: A 8.0	B 10.9 B 12.1 A 7.8 A 8.2	B 11.2 C 18.8 A 8.9 A 8.3	B 12.0 C 21.2 A 9.0 A 8.4	B 11.0 B 15.0 A 7.7 A 8.0	B 11.5 C 16.3 A 7.7 A 8.1

Central Parkway / Driveway – Glynnis Rose	B 11.8	B 12.7	B 14.3	B 15.3	B 11.8	B 12.1
Central Parkway / Tassajara Road	C 31.1	C 31.8	D 38.9	D 40.9	C 27.5	C 27.5
Dublin Boulevard / Hacienda Drive	D 52.4	D 52.2	F 148.5	F 148.5 45 trips	F 136.3	F 136.3 26 trips
Dublin Boulevard / Tassajara Road	F 133.9	F 134.1 18 trips	F 182.7	F 182.5 17 trips	E 59.8	E 59.9 10 trips

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay in seconds.

Source: Omni Means, 2014

No impacts are anticipated with respect to increasing motorized traffic volumes on local, regional and CMA designated roadways.

- c) *Result in a change of air traffic patterns?* NI. The proposed project would have no impact on air traffic patterns, since it involves consideration of a community recreation facility no changes to air traffic patterns would occur.
- d) *Substantially increase hazards due to a design feature or incompatible use?* LS. The proposed project would be constructed on the grounds of the existing Emerald Glen Park and accessed via the existing driveways currently serving the park. Two driveways are located on Central Parkway (at Glynnis Rose Drive and Killian Street) and three are located on Gleason Drive (one at Creekview Drive and two mid-block driveways). The Central Parkway/Glynnis Rose driveway intersection is signalized will full access to/from all approaches. The Central Parkway/Killian Street driveway intersection's outbound driveway approach is restricted to right-turns only. The Gleason Drive/Creekview Drive driveway intersection is signalized with full access. The Gleason Drive western mid-block driveway allows for inbound left turns, while the eastern driveway is restricted to right turns in and out. Impacts related to hazards and/or incompatible uses are anticipated to be less-than-significant.
- e) *Result in inadequate emergency access?* NI. Proposed improvements would be located in within Emerald Glen Park with ample access around proposed buildings and other improvements. No impacts would occur with respect to this topic.
- f) *Conflict with adopted policies, plans or programs supporting alternative transportation modes?* NI. Emerald Glen Park is bounded by major arterial roads (Central Parkway, Tassajara Road and Gleason Drive) that include public transit and bicycle lanes. No impacts are anticipated wit respect to this topic.

16. Utilities and Service Systems

Environmental Impacts

- a) *Exceed wastewater treatment requirements of the RWQCB?* LS. Proposed park and recreation improvements would include restrooms and a small amount of pool filter backwash that would generate a limited amount of wastewater. The wastewater treatment provider, Dublin San Ramon Services District (DSRSD) staff

have indicated that the District's wastewater treatment plant in Pleasanton, has adequate capacity to accommodate the amount of wastewater to be generated by build out of the project (source: Stan Kolodzie, DSRSD engineer, 4/7/14)

With respect to surface water quality standards, the City of Dublin will ensure that any grading or trenching operations on the project site will comply with the Alameda County Clean Water Program and other applicable water quality regulations. If necessary, installation of erosion control facilities will be required for construction during the rainy season, consistent with standard City requirements.

- b,d,e) *Require new water or wastewater treatment facilities or expansion of existing facilities, are sufficient water supplies available and is adequate wastewater capacity available to serve the project?* LS. Staff of the Dublin San Ramon Services District (DSRSD) confirms that there would be adequate capacity in the District's wastewater plant to accommodate future wastewater flows. DSRSD staff has also confirmed that an adequate water supply is available to serve the proposed project. (source: Stan Kolodzie, DSRSD, 4/7/14).
- c) *Require new storm drainage facilities?* LS. Refer to Items "c,d and e" in Section 9, Hydrology.
- f,g) *Solid waste disposal?* LS. Small and less-than-significant quantities of solid waste would be generated by construction of project improvements envisioned in the Plan.

17. Mandatory Findings of Significance

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number of or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?* No. The preceding analysis indicates that there would be no potential impacts to fish and wildlife habitats, fish and wildlife populations, rare or endangered plant or wildlife species threaten or eliminate a plant or animal community, restrict the range of any rare or endangered species or eliminate any important examples of California history or prehistory.
- b) *Does the project have impacts that are individually limited, but cumulatively considerable?* ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects). No such cumulatively considerable impacts have been identified in the Initial Study.

- c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?* No. No such impacts have been discovered in the course of preparing this Initial Study.

Initial Study Preparers

Jerry Haag, Urban Planner, project manager and author
Jane Maxwell, exhibits
George Nickelson, Omni Means, traffic and transportation
Robert Tuma, Omni Means, traffic and transportation
Alan T. Rosen, RGDL, acoustics
Harold Goldberg, RGDL, acoustics

Agencies and Organizations Consulted

The following agencies and organizations were contacted in the course of this Initial Study:

City of Dublin

Paul McCreary, Parks & Community Services Director
Herma Lichtenstein, Project Manager (former)
Doug Rooney, Parks and Facilities Development Coordinator
Brent Smith, Parks and Facilities Development Manager
Obaid Khan, PE, Transportation Engineer
Jayson Imai, PE, Associate Civil Engineer
Bonnie Terra, Alameda County Fire Department
Tom McCarthy, Dublin Police Services
Kathleen Faubion, AICP, Assistant City Attorney

Dublin San Ramon Services District

Stan Kolodzie, project engineer

Dahlin Group

Gregor Markel, Project Architect

References

Eastern Dublin General Plan Amendment and Specific Plan
Environmental Impact Report (SCH # 91103064, May 10, 1993).

Dublin General Plan, June 2013

Eastern Dublin Specific Plan, January 19, 2010

Downtown Dublin Specific Plan, December 2010

Bay Area Air Quality Management District's Clean Air Plan, September 15, 2010

Climate Action Plan, City of Dublin, updated July 2013

California Department of Toxic Substances Control, website, July 2014

Parks and Recreation Master Plan, City of Dublin, 2006 update

Dublin San Ramon Services District, Urban Water Management Plan, 2010 Update

Livermore Municipal Airport, Airport Land Use Compatibility Plan, ESA Associates, August 2012

Parks and Recreation Master Plan, City of Dublin, 2006 update

Attachment 1- Acoustic Report

ROSEN
GOLDBERG
DER &
LEWITZ, Inc.

Acoustical and Vibration Engineering

ENVIRONMENTAL NOISE IMPACT REPORT FOR:

Emerald Glen Aquatics Center
4201 Central Parkway
Dublin, CA
RGDL Project #: 14-008

PREPARED FOR:

Jerry Haag
Urban Planner
2029 University Avenue
Berkeley, CA 94704

PREPARED BY:

Harold S. Goldberg, P.E.
Principal Consultant

Alan Rosen
Principal

DATE:

24 September 2014

1. Introduction

The Aquatics Center (Project) is proposed to be constructed as the last phase of Emerald Glen Park, a community park which is located between Gleason Drive and Central Parkway west of Tassajara Road. The park is currently developed with organized sports play fields, lighted tennis courts, a skate park and picnic areas. The central portion of the park, which is proposed for the planned aquatic complex, is vacant.

Residential areas are located across the street from the park in the north, south and west directions. The project uses would include a play pool, a sports pool, an indoor pool and waterslides. This study estimates the noise levels that would be generated by the construction and use of the project and evaluates the potential for noise impact at the nearby residential areas and assesses the compatibility of the project with the existing noise environment using Dublin's noise and land use compatibility standards.

2. Environmental Noise Fundamentals

Noise can be defined as unwanted sound. It is commonly measured with an instrument called a sound level meter. The sound level meter captures the sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels. To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-weighting filter is used. A-weighting de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local General Plans as well as federal and state noise regulations (e.g. Caltrans, EPA, OSHA and HUD). The abbreviation dBA is sometimes used when the A-weighted sound level is reported.

Because of the time-varying nature of environmental sound, there are many descriptors that are used to quantify the sound level. Although one individual descriptor alone does not fully describe a particular noise environment, taken together, they can more accurately represent the noise environment. The maximum instantaneous noise level (L_{max}) is often used to identify the loudness of a single event such as a car passby or airplane flyover. To express the average noise level the L_{eq} (equivalent noise level) is used. The L_{eq} can be measured over any length of time but is typically reported for periods of 15 minutes to 1 hour. The background noise level (or residual noise level) is the sound level during the quietest moments. It is usually generated by steady sources such as distant freeway traffic. It can be quantified with a descriptor called the L_{90} which is the sound level exceeded 90 percent of the time.

To quantify the noise level over a 24-hour period, the Day/Night Average Sound Level (DNL or L_{dn}) or Community Noise Equivalent Level (CNEL) is used. These descriptors are averages like the L_{eq} except they include a 10 dB penalty during nighttime hours (and a 5 dB penalty during evening hours in the CNEL) to account

for peoples increased sensitivity during these hours. In environmental noise, a change in noise level of 3 dB is considered a just noticeable difference while a change of 5 dB is clearly noticeable, but not dramatic. A 10 dB change is perceived as a halving or doubling in loudness.

3. Acoustical Criteria

3.1. City of Dublin General Plan

The Noise Element of the City’s General Plan has policies regarding noise and land use compatibility. Table 1 provides guidelines for the compatibility of land uses with various noise exposures. The City uses the Community Noise Equivalent Level (CNEL) descriptor. A CNEL of 60 dBA or less is considered normally acceptable for residential land use. It should be noted that the City’s compatibility standards are normally intended to be used for traffic and transit noise.

Table 1: Land Use Compatibility for Community Noise Environments

<u>Land Use Category</u>	<u>COMMUNITY NOISE EXPOSURE (dB)</u>			
	<u>Normally Acceptable</u>	<u>Conditionally Acceptable (Noise Insulation) Features Required</u>	<u>Normally Unacceptable</u>	<u>Clearly Unacceptable</u>
Residential	60 or less	60 - 70	70 - 75	Over 75
Motels, hotels	60 or less	60 - 70	70 - 80	Over 80
Schools, churches, nursing homes	60 or less	60 - 70	70 - 80	Over 80
Neighborhood parks	60 or less	60 - 65	65 - 70	Over 70
Offices: retail commercial	70 or less	70 - 75	75 - 80	Over 80
Industrial	70 or less	70 - 75	Over 75	

Conditionally acceptable exposure requires noise insulation features in building design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

3.2. City of Dublin Noise Ordinance

Chapter 5.28 of the City of Dublin’s Municipal Code prohibits “...*loud, or disturbing, or unnecessary, or unusual or habitual noise or any noise which annoys or disturbs or injures or endangers the health, repose, peace or safety of any reasonable person of normal sensitivity present in the area*”. The noise ordinance states that it is appropriate to consider the level and character of the noise as well as the level and character of the background noise. Since the City’s Noise Ordinance does not contain quantifiable noise level limits, it is not possible to apply the noise ordinance as a threshold for assessing project generated noise in the context of this noise study.

3.3. Increase in Noise

The California Environmental Quality Act Guidelines require the determination of whether a project will generate a substantial increase in noise levels in the project vicinity above levels existing without the project. CEQA does not specify a method for determining when a project would cause a significant increase in noise. Likewise, the City of Dublin does not have criteria for determining when a noise increase is significant. An FAA Draft Policy discusses screening and impact thresholds for increases in aircraft noise. These thresholds, which are used to assess the significance of noise increases due to the project, consider an increase in CNEL to be significant if it is;

- 5 dBA or greater and the future CNEL is less than 60 dBA.
OR
- 3 dBA or greater and the future CNEL is 60 dBA or greater and less than 65 dBA.
OR
- 1.5 dBA or greater and the future CNEL is 65 dBA or greater.

4. Existing Noise Environment

To quantify the existing ambient noise levels, noise measurements were made at the project site and near the adjacent residences. The major source of noise during the ambient measurements was traffic on Central Parkway and Gleason Drive. Noise from traffic on distant roadways including I-580 also contributed to the ambient noise levels. Aircraft flyovers were occasionally noticeable.

Figure 1 shows the project site and the noise measurement locations. Table 2 shows the results of the short-term noise measurements. Figure 2 and 3 show the results of the long-term noise measurements. The weekly average CNEL at Location LT-1 was 60 dBA and LT-2 it was 58 dBA. In general, the weekday CNEL is about 2 to 3 dBA greater than the weekday CNEL.

The location with the lowest measured ambient noise level was ST-2 which is at the cul-de-sac of Belcarra Court. This location is shielded from the Central Parkway traffic noise by the homes along the roadway. The L_{max} of a general aviation airplane was 64 dBA. During the noise measurement the sound of distant traffic was very low. Other distant sounds were faintly audible, including what sounded like small weapons being fired near the Santa Rita Jail which has an outdoor firing range.

Figure 1: Site Plan and Ambient Noise Measurement Locations

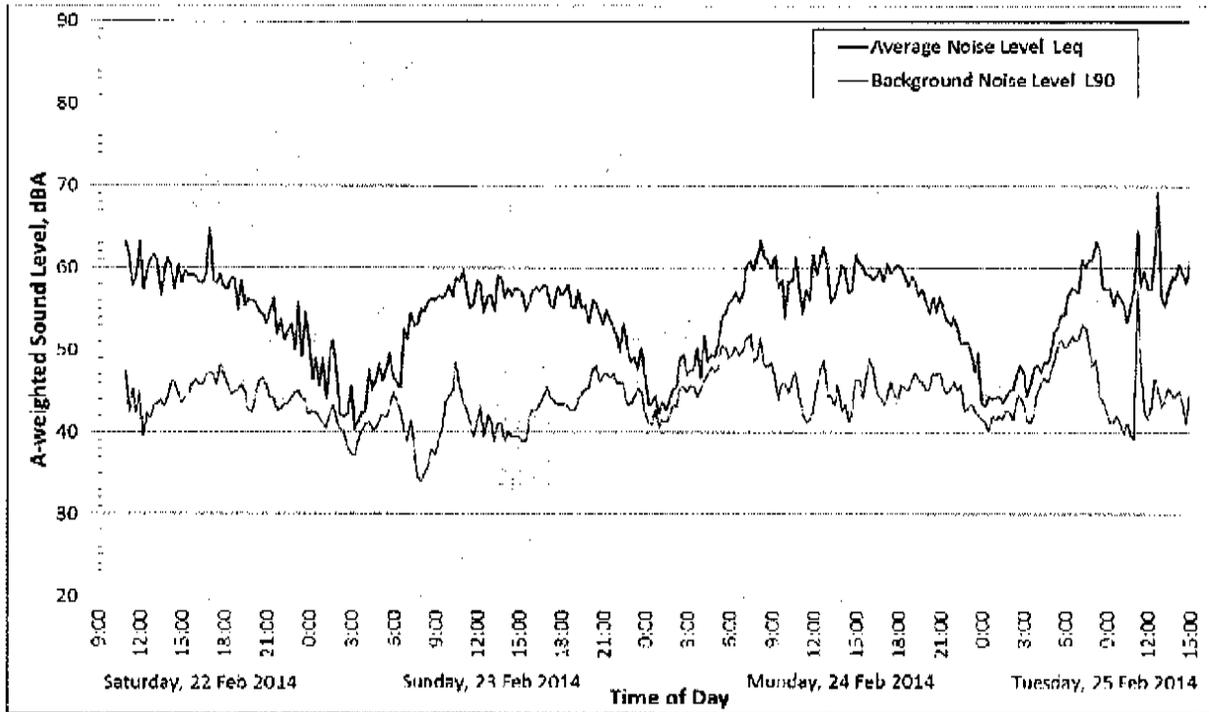


Table 2: Short-Term Ambient Noise Measurement Results

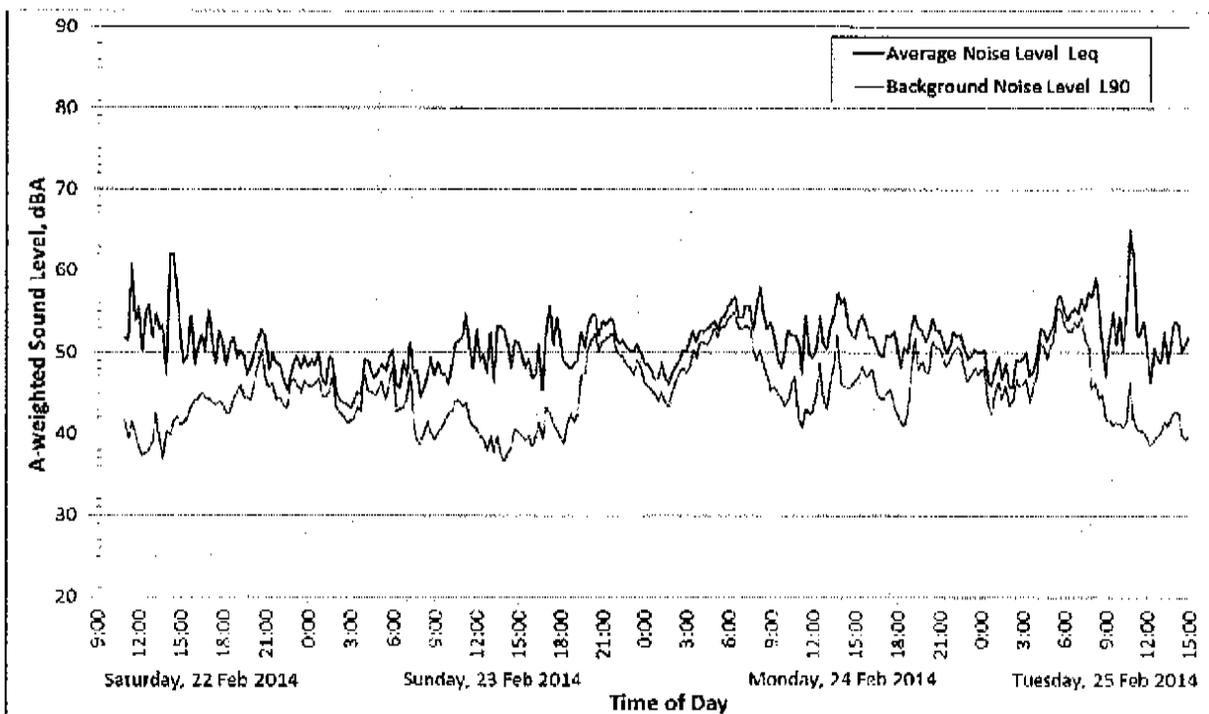
Location	Date/Time	A-Weighted Noise Level, dBA					
		L _{eq}	L _{max}	L ₁₀	L ₅₀	L ₉₀	CNEL*
ST-1	22 Feb 2014 11:30 - 11:45 AM	63	78	68	57	47	63
ST-2	25 Feb 2014 2:56 - 3:11 PM	49	64	52	42	39	45
ST-3	25 Feb 2014 3:22 - 3:37 PM	53	70	55	51	48	60

*CNEL is calculated based on correlation with simultaneous measurement at long-term measurement location.

**Figure 2: Long-Term Noise Measurement Results
Location LT-1: Central Parkway**



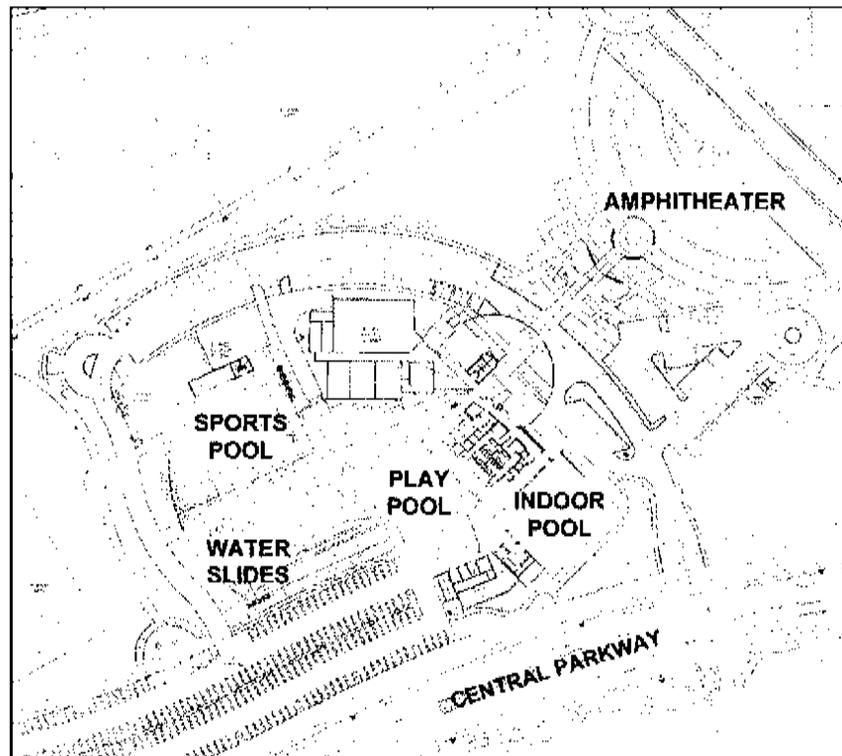
**Figure 3: Long-Term Noise Measurement Results
Location LT-2: Persimmon Drive**



5. Project Noise Sources

The noise sources associated with the project include the voices of children and adults using the aquatics facilities, the amplified sound at the amphitheater, the rooftop mechanical equipment at the project buildings and traffic on nearby roadways. The locations of the project facilities are shown in Figure 4.

Figure 4: Project Noise Source Locations



Other elements of the project that would be associated with later phases of the project include a multi-purpose building (exercise equipment and teen center), a gymnasium (interior sport court) and a preschool building. The preschool would have 20 children and would be located at least 500 feet from the nearest residences. The sound of children playing would be comparable to or less than other park and project activities and the preschool would be within the Zoning Ordinance criteria (DMC 8.82 Day Care Centers).

The aforementioned project elements are primarily interior uses that are farther from the residences than other project elements. The combination of distance as well as the fact that most noise would be generated indoors (and reduced in magnitude by the building structure) means that the noise from these sources would not contribute significantly to project generated noise levels in adjacent residential areas.

5.1. Aquatics Facilities

The project includes two outdoor pools (one play pool and one sports pool), a separate outdoor area for water slides and one indoor pool (natatorium). The indoor pool will be open year round for teaching and exercise. The sports pool will be used for water polo, and swim meets, as well as recreation. The sports pool will be closed November through January. The play pool and waterslide season will be June through August.

Noise levels from the sports pool were estimated based on measurements of a high school swim meet. The play pool noise levels are based on measurements of other recreational pools of similar size. Noise from the *natatorium* was also based on the recreational pool noise measurements including an assumption that the building shell provides a noise reduction of 7 dBA based on acoustical test data for the “pillow” roof material. The water slide noise levels are based on measurements of noise from another *free-fall* water slide amusement park.

5.2. Amphitheater

Performances at the amphitheater would occur in the afternoons and evenings with a maximum estimated seating capacity of 1,314 persons. Limited amplified sound would be employed. Uses of the amphitheater would include a summer concert series (six Saturdays in the summer/fall, typically 6 – 8 PM) and family movie night (three Saturdays a year in the summer).

Noise levels from the amphitheater are based on an average level of 83 dBA at the seating area. This noise level is representative of a pop or rock music band playing amplified sound through a PA system that is controlled to a reasonable performance guideline of 95 dBA at a distance of 20 feet from the stage/speakers. The estimated noise level throughout the seating area includes an adjustment to account for the speakers being oriented toward the audience (away from adjacent residences) to minimize sound transfer to the community.

5.3. Rooftop Mechanical Equipment

The rooftop mechanical equipment associated with the first phase of the project includes an air-conditioning unit on the multi-purpose building at the north side of the natatorium and an *indirect direct evaporative cooler* (IDEC) on the pool equipment building on the west side of the natatorium. Since the design of all of the mechanical equipment is not finalized (including the later project phases) noise levels are based on a recommended performance standard of 50 dBA during the daytime/evening (7 AM – 10 PM) and 40 dBA during the night (10 PM – 7 AM) at the nearest residences. A review of manufacturer's data for potential equipment indicates that the performance standard can be met but may require sound attenuation measures such as silencers or barriers (e.g. the preliminary design includes roof parapets which could act as noise barriers).

5.4. Increased Traffic

Project generated traffic would access the project site from entrances on Central Parkway and Gleason Drive. Based on the traffic analysis for the project¹ the peak hour traffic volumes attributable to the project will be 79 vehicles on Central Parkway and 37 vehicles on Gleason Drive.

5.5. Facility Usage Assumptions

In order to assess the project generated noise levels predictions were made for the peak summer season. The assumptions represent a higher level of activity than is actually expected. The assumptions are as follows:

Natatorium 5:30 AM - 10:00 PM, seven days a week
5:30 AM - 10 AM is quiet lap swim.

Play Pool and Water Slides 7:00 AM - 10:00 PM
*Usage between 7 AM and 10 AM is relatively light and quiet.
Usage between 7 PM and 10 PM occurs three days per week.*

Sport Pool 5:30 AM -10:00 PM (water polo; lap swimming; swim meets)
*5:30 AM - 10 AM is quiet lap swim.
Usage from 7 PM - 10 PM is seven days a week.
One swim meet per week beginning at 8 AM.*

Amphitheater 1 concert per week, 6 PM - 8 PM
1 movie night per week for two hours between 7 PM and 10 PM.

Rooftop HVAC Equipment and Indoor Pool Equipment
*Operates 24-hours and meets a sound level of 50 dBA during the daytime
(7 AM to 10 PM) and 40 dBA at night (10 PM and 7 AM) at nearest residences*

5.6. Project Generated Noise Levels

The project generated noise levels were calculated at the nearby residential areas as shown in Figure 5. Locations R1 – R5 represent the nearest residences to the south, north and west. Additional locations are assessed to the south of the project site. Location R6 represents residences that are beyond the first row of homes and acoustically shielded from Central Parkway traffic noise by intervening buildings. Location R7 represents residences that are farther from the roadway than the first row of homes but are not acoustically shielded by intervening buildings.

¹ *Emerald Glen Recreation and Aquatic Complex - Traffic Impact Analysis*, Omni-Means Engineers and Planners, July 30, 2014.

Figure 5: Site Plan and Residential Receiver Locations



Table 3 shows the project generated noise levels for each of the residential receivers. For each receiver the noise level contribution from each of the sources is listed. The project includes an 8-foot tall wall around the perimeter of the pool areas. This wall will reduce noise from most ground level sources by about 8 dBA for receivers that are outdoors or in the ground level of the homes. The noise reduction from the wall is not included in Table 3 because most of the residences are two or more stories and the wall will not be effective in reducing noise for the upper floors of these residences.

For each receiver, three noise level descriptors are shown. The CNEL is the 24-hour average noise level and is used for comparison with the City's General Plan standards. The L_{eq} and the L_{max} are shown to help the reader more fully understand the project generated noise. The L_{eq} (average noise level) is the average during the period when each of the project elements are in use. The L_{max} (maximum noise level) represents the instantaneous noise level during louder single events such as discrete yells, shouts and whistles.

The L_{eq} is an average noise level over a particular time period. The L_{eq} takes into account both the louder instantaneous noise levels (L_{max}) as well as the quieter times during a measurement when there are no loud events. Therefore, the L_{eq} is always less than the L_{max} . Similarly, the CNEL is generally less than the L_{eq} because the CNEL is a 24-hour average and most of the noise sources do not occur continuously for 24 hours. The exception is mechanical equipment which runs 24 hours. In that case, the CNEL is greater than the L_{eq} because of the adjustment applied to noise occurring during the evening and nighttime hours to account for people's increases sensitivity to noise.

The last column in Table 3 shows the combined CNEL and L_{eq} when all sources are active. The L_{max} in the combined column is the highest source L_{max} since the intermittent noise events would not likely occur at the same exact time and therefore, would not be additive.

Table 3: Project Generated Noise Levels

Residential Receiver Location		Noise Level Descriptor	Noise Level, dBA						
			Sports Pool	Play Pool	Indoor Pool	Water Slides	Amphitheater	Mech Equip	Combined
R1	The Glen at Dublin Green	CNEL	51	48	43	52	45	46	57
		L_{eq}	53	51	44	55	57	45	61
		L_{max}	66	64	57	66	65	45	66
R2	Dublin Greene Townhomes	CNEL	51	50	46	51	47	51	57
		L_{eq}	52	53	48	54	59	50	62
		L_{max}	65	66	61	64	67	50	67
R3	Waterford Place	CNEL	48	46	45	46	48	49	55
		L_{eq}	49	49	47	49	60	48	62
		L_{max}	62	62	60	60	68	48	68
R4	Persimmon Drive Homes	CNEL	44	38	32	41	46	35	49
		L_{eq}	45	41	33	44	58	34	58
		L_{max}	58	54	46	55	66	34	66
R5	Gleason Drive Homes	CNEL	46	40	35	41	48	38	51
		L_{eq}	47	43	37	44	60	37	61
		L_{max}	60	56	50	55	68	37	68
R6	Belcarra Court	CNEL	41	37	32	41	35	35	46
		L_{eq}	42	40	34	44	48	34	51
		L_{max}	55	53	47	56	56	34	56
R7	Second Row of homes along Central Parkway	CNEL	50	47	41	50	44	45	55
		L_{eq}	51	50	43	53	56	44	60
		L_{max}	64	63	56	64	64	44	64

Table 4 shows the calculated increase in traffic noise for the various roadways around the project. The increase in CNEL is based on the Weekday and Saturday peak hour traffic information provided in the project's traffic study.

Table 4: Traffic Noise Level Increases

Roadway	Segment	Increase in CNEL, dBA					
		Increase Due to Project		Increase Due to Project and 2035 Growth		Increase Due to Project over 2035 Growth	
		(Existing+Project re: Existing)		(2035+Project re: Existing)		(2035+Project re: 2035)	
		Sat	Wkday	Sat	Wkday	Sat	Wkday
Gleason Dr.	West of Creekview	0.1	0.1	2.3	2.0	0.0	0.0
	Creekview to Tassajara	0.1	0.1	2.3	2.0	0.1	0.1
	East of Tassajara	0.3	0.2	2.4	1.1	0.2	0.2
Central Parkway	West of Hacienda	0.0	0.0	3.9	4.1	0.0	0.0
	Hacienda to Killian	0.8	1.0	3.6	3.7	0.4	0.5
	Killian to Glynnis Rose	0.6	0.7	3.0	3.1	0.4	0.4
	Glynnis Rose to Tassajara	0.5	0.6	2.7	3.1	0.3	0.4
Tassajara Rd.	East of Tassajara	0.1	0.2	2.5	4.6	0.1	0.1
	North of Gleason	0.0	0.1	2.5	2.1	0.0	0.0
	Gleason to Central Pkwy	0.1	0.1	2.4	2.3	0.0	0.1
Creekview Dr.	Central Pkwy to Dublin Blvd	0.0	0.0	2.3	2.6	0.0	0.0
	North of Gleason	0.0	0.0	2.3	2.0	0.0	0.0
Killian Dr.	South of Central Parkway	0.1	0.1	1.1	2.0	0.1	0.1
Glynnis Rose Dr.	South of Central Parkway	0.2	0.2	2.5	2.5	0.1	0.1

6. Analysis

6.1. Will the project expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Project Generated Noise Affecting Existing Residences

The City's General Plan noise standard for residences is a CNEL of 60 dBA. Based on the project generated noise levels presented in Table 3, the CNEL from the project will be 58 dBA or less at the surrounding residences. Since the project generated CNEL is less than 60 dBA, it would be considered normally acceptable.

However, the calculated noise level includes a presumption that amplified sound from the amphitheater is limited. If there are no restrictions on amplified sound (whether from the amphitheater, aquatics park center or multi-purpose building) than a CNEL of 60 dBA could be exceeded and this would be a significant impact.

Mitigation 6.1: Require development and adoption of an amplified sound policy for the project that would include, at a minimum, the following:

- Noise level limits for the amplified sound system used at the amphitheater (e.g. 95 dBA at 20 feet)
- Noise level limits for the amplified sound systems at the pools, water slide and multi-purpose room (e.g. 55 dBA at the facility boundary).

Compatibility of Project with Ambient Noise Levels

The City's General Plan noise standard for neighborhood parks is a CNEL of 60 dBA. Based on the measurement of noise on the project site (see measurement Location ST-3 in Table 2), the ambient noise is within this level and the project will be exposed to "normally acceptable" noise levels. Therefore, this is a less than significant impact.

6.2. Will the project expose people to or generate excessive groundborne vibration or groundborne noise levels?

The project does not include ground vibration sources that would affect the neighboring residential land uses. Construction equipment, however, can generate potentially feelable ground vibration. The distance between the project site and the nearest homes is about 160 feet and ground vibration from sources such as bulldozers would attenuate to a level that is not noticeable nor represent a significant risk for damage to existing structures at that distance.

6.3. Will the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Table 4 shows the increase in traffic noise due to the project is less than 1 dBA at all locations. Table 5 shows the project generated increase in noise from traffic and operation of the aquatics center combined. The CNEL at R1, R2, R3 and R5 (existing plus project in Table 5) would fall within the 60 and 65 dBA range where the threshold for a significant increase is 3 dBA. The predicted increase at these receivers ranges from 0.6 to 2.5 dBA which is less than the 3 dBA threshold of significance.

The CNEL at R4, R6 and R7 (existing plus project in Table 5) will be less than 60 dBA, and therefore, the threshold for a significant increase is 5 dBA. The predicted increase at these receivers ranges from 0.8 to 4.5 dBA in the neighboring residential land uses and this is less than the 5 dBA threshold.

Table 5: Project Generated Noise Increase

Residential Receiver Location		CNEL, dBA			
		Existing	Existing + Project	Increase	Threshold for significant increase
R1	The Glen at Dublin Green	60.2	62.3	2.1	3
R2	Dublin Greene Townhomes	60.2	62.5	2.3	3
R3	Waterford Place	60.2	61.9	1.7	3
R4	Persimmon Drive Homes	58.2	58.7	0.5	5
R5	Gleason Drive Homes	62.6	63.0	0.4	3
R6	Belcarra Court	44.7	48.3	3.6	5
R7	Second Row of homes along Central Parkway	52.8	57.3	4.5	5

Based on the information in Table 5 as well as the traffic noise increases shown in Table 4, the increase in daily average noise levels (CNEL) would be considered a less than significant impact.

Although noise from the project would not exceed the thresholds for a significant increase, noise from operation of the project (e.g. children playing, whistles and amplified sound) would be clearly noticeable at residential areas near the project

6.4. Will the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

Many different types of construction equipment will be needed to build the pools, buildings and infrastructure. This equipment includes excavators, backhoes, cranes, graders, trenchers, dump trucks, loaders, compactors, bulldozers, pavers, concrete trucks, air compressors, pneumatic equipment, roller compaction equipment, hand compaction equipment and other heavy machinery. Construction is not expected to require pile driving.

Table 6 presents typical construction equipment noise levels at a reference distance of 50 feet. The noisier activities tend to occur during the grading and foundation phases of construction. After the building shells are constructed, the noise levels are significantly lessened as the construction activities begin to occur indoors.

Table 6: Typical Construction Equipment Noise Levels

Equipment Description	L_{max} (dBA) at 50 feet
Backhoe	78
Compactor	83
Compressor	78
Concrete Mixer Truck	79
Concrete Pump Truck	81
Crane	81
Bulldozer	82
Dump Truck	76
Excavator	81
Front End Loader	79
Generator	81
Grader	85
Hoe Ram	90
Jackhammer	89
Paver	77
Pneumatic Tools	85
Roller	80
Scraper	84
Tractor	84
Warning Horn	83
Welder/Torch	74

Source: FHWA Roadway Construction Noise Model, 2006

Most machinery used in the construction of the proposed project would produce maximum noise levels of up to 85 dBA at a distance of 50 feet. This includes concrete mixer trucks, cranes, bulldozers, dump trucks, graders, pavers, pneumatic tools, rollers and scrapers. Several of these machines may operate within a small area during the same time frame, and the additive effect of these noise sources must be considered. For example, if three of these machines operate for a length the maximum noise level produced may reach 90 dBA at a distance of 50 feet.

The nearest residences are about 350 from the center of the site. Based on a source level of 90 dBA at 50 feet, the maximum noise level will be reduced to 73 dBA at the nearest residences assuming a standard attenuation rate of 6 dBA per doubling of distance. Since this noise level is comparable a vehicle on Central Parkway or Gleason Drive, and the construction activities are temporary, this is a less than significant impact.

In order to minimize disruption and potential annoyance during construction, the following is recommended:

- Construction activities, including the maintenance and warming of equipment, shall be limited to Monday through Friday, and non-City holidays, between the hours of 7:30 AM and 5:30 PM except as otherwise approved by the City Engineer.
- All construction equipment shall be equipped with mufflers and sound control devices (e.g., intake silencers and noise shrouds) no less effective than those provided on the original equipment and no equipment shall have an un-muffled exhaust.
- The City shall require that the contractor maintain and tune-up all construction equipment to minimize noise emissions.
- Stationary equipment shall be placed so as to maintain the greatest possible distance to the sensitive receptors.
- All equipment servicing shall be performed so as to maintain the greatest possible distance to the sensitive receptors.
- The construction contractor shall provide an on-site name and telephone number of a contact person. In the event that construction noise is intrusive to an educational process, the construction liaison will revise the construction schedule to preserve the learning environment.

6.5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels.

The project is located outside the Livermore Airport CNEL 55 dBA noise contour. It is also outside the Airport Influence Area (Livermore Airport Land Use Compatibility Plan, 2012). Therefore, the project is considered compatible with the airport noise.

6.6. For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels.

Not applicable.

Attachment 2- Traffic Report

**Emerald Glen Recreation
And Aquatic Complex
Traffic Impact Analysis**

Final Report

Prepared For:

**The City of Dublin
Recreation and Parks District**

July 30, 2014

Prepared By:



**EMERALD GLEN
RECREATION AND AQUATIC COMPLEX
TRAFFIC IMPACT ANALYSIS**

FINAL REPORT

**PREPARED FOR:
THE CITY OF DUBLIN RECREATION AND PARKS DISTRICT**

**PREPARED BY:
OMNI-MEANS, LTD.
ENGINEERS & PLANNERS
1901 OLYMPIC BOULEVARD, SUITE 120
WALNUT CREEK, CA 94596
(925) 935-2230**

JULY 30, 2014

**35-3526-30
(R1828TIA002.DOC)**

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
INTRODUCTION	2
EXISTING STUDY CONDITIONS.....	4
Existing Roadways.....	4
Pedestrian and Bicycle Facilities.....	5
Transit Facilities.....	6
Existing Intersections	9
Intersection Level-of-Service (LOS) Concept/Methodologies	13
Existing Intersection Operation.....	16
NEAR-TERM (YEAR 2020) STUDY CONDITIONS	17
Near-Term Methodology.....	17
Near-Term No Project Conditions.....	17
PROJECT STUDY CONDITIONS	20
Project Description.....	20
Project Trip Generation.....	21
Project Trip Assignment.....	25
Existing Plus Project Intersection Operations	28
Near-Term Plus Project Intersection Operations	30
PROJECT ACCESS AND CIRCULATION.....	32
Vehicle Queuing Analysis.....	33
LONG-TERM CUMULATIVE (YEAR 2035) STUDY CONDITONS	35

LIST OF FIGURES

Figure 1 - Project Location and Vicinity Map.....	3
Figure 2 – Pedestrian and Bicycle Facilities Map.....	7
Figure 3 – Transit Routes Map	8
Figure 4 –Existing Geometries	10
Figure 5 –Existing Geometries	11
Figure 6 – Existing Volumes	12
Figure 7 – Near-Term (Year 2020) Volumes.....	19
Figure 8 – Project Trips Distribution.....	26
Figure 9 – Project Trips	27
Figure 10 – Existing Plus Project Volumes	29
Figure 11 – Near Term Plus Project Volumes	31
Figure 12 – Project Site Plan	34
Figure 13 – Cumulative (Year 2035) Geometries.....	38
Figure 14 – Cumulative (Year 2035) Volumes.....	39
Figure 15 – Cumulative (Year 2035) Plus Project Volumes.....	40

LIST OF TABLES

Table 1 Levels-Of-Service (LOS) Criteria For Intersections.....	15
Table 2 Existing Conditions: Peak Hour Intersection LOS	16
Table 3 Near-Term (Year 2020) Conditions: Peak Hour Intersection LOS	18
Table 4 Vehicle Trip Generation Rates.....	22
Table 5 Project Vehicle Trips	24
Table 6 Existing Plus Project Conditions: Peak Hour Intersection LOS	28
Table 7 Near-Term (Year 2020) Plus Project Conditions: Intersection LOS	30
Table 8 Cumulative (Year 2035) Plus Project Conditions: Peak Hour Intersection LOS	37

EXECUTIVE SUMMARY

The proposed Emerald Glen Park Recreational and Aquatic Complex was evaluated for intersection operating conditions and onsite traffic circulation. The analysis included the project access driveways and adjacent streets in the project vicinity.

The study evaluated existing, near-term (Year 2020), and long-term cumulative (Year 2035) traffic conditions for weekday mid-day, PM, and Saturday peak hours. The background traffic volumes were derived from previous studies in combination with new field counts conducted for this study. The project trips were calculated using published industry trip rates combined with collected data for similar facilities. Pedestrian and bicycle facilities were evaluated in context with the proposed project.

The analysis found that the project would not result in any significant transportation impacts based on the proposed design. The project was calculated to generate 182 new mid-day, 163 new PM, and 107 new Saturday peak hour trips. The access driveway intersections would continue to operate efficiently overall with the added project trips, operating at LOS C or better for existing and all future scenarios. The external intersections on Dublin Boulevard at Hacienda Drive and Tassajara Road would experience LOS E-F conditions under the cumulative scenarios based on the volume projections, but the number of project trips added to the intersections would remain below the significance thresholds and the delays would either remain unchanged or increase less than one second. A vehicle queuing analysis of the project driveways indicates the project vehicles would be accommodated within the available storage lane lengths.

No significant traffic impacts were associated with the project. Some internal circulation and signing recommendations intended to enhance vehicular and pedestrian flows at the project site have been provided.

As the project design details become finalized, the plans for vehicular, pedestrian, and bicycle facilities should be consistent with the appropriate City guidelines and standards and reviewed by the City for approval. This would reduce any potential design impacts to less than significant levels.

INTRODUCTION

This report presents the results of a traffic impact analysis performed by Omni-Means for the proposed Emerald Glen Recreation and Aquatic Complex project in the City of Dublin, CA. The proposed project would consist of several new land use components constructed within the existing Emerald Glen park boundary. These components (built in three phases) include the following uses:

1. Community Center With Natatorium: This facility would consist of a 28,506 square foot community center building and an attached indoor pool (natatorium) of 11,900 square feet with associated use areas (locker rooms, etc.).
2. Recreation Center: A 17,145 square feet recreation building including fitness area, gymnasium, and teen center.
3. Outdoor Sports Pool and Shallow Pool: Providing lessons, exercise, and recreational swimming.
4. Outdoor Waterslides: Five slides with run-out area.
5. Preschool Building: Consisting of 3,585 square feet with approximately 20 students.
6. Outdoor Amphitheater: For occasional performances and special events (such as farmers market, festivals, and concerts).

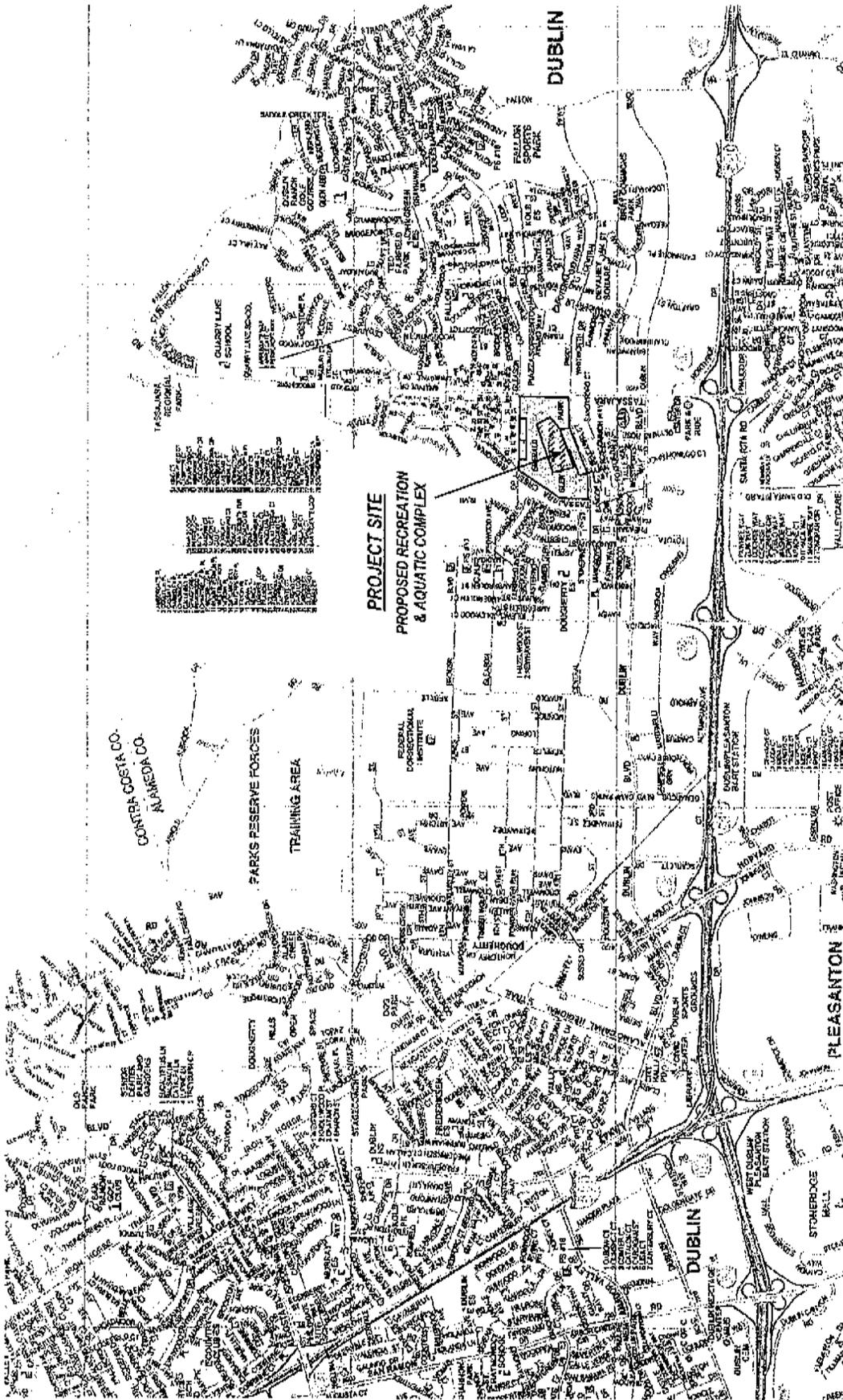
Based on input from City of Dublin Park District and Engineering staff, the traffic issues for this development relate to operations at key intersections, vehicle trip generation, and vehicle circulation at project access points. The primary components of the analysis are summarized as follows:

- Weekday (Mid-day and PM) and Weekend (Saturday) peak hour traffic operations at intersections in the project area;
- Vehicle circulation at the project access points on Central Parkway and Gleason Drive; including turning lanes and vehicle queuing.
- Near-term traffic and long-term cumulative growth in the project study area;

The following scenarios have been analyzed as part of the overall transportation and circulation analysis:

- Existing Traffic Conditions: Represents existing traffic flow conditions based on recent vehicle counts.
- Near-term Cumulative (Year 2020) Conditions: Represents Year 2020 conditions based on anticipated traffic growth derived from the City Traffic Model as described in traffic reports for approved/pending projects in the study area.
- Long term Cumulative (Year 2035) Conditions: Represents Year 2035 conditions with anticipated volumes and lane geometries derived from the traffic model as described in the traffic reports for pending/approved projects in the study area.
- Proposed project trips were added to the existing, near-term, and cumulative traffic volumes to determine project specific impacts.

Figure 1 illustrates the project vicinity and site location.



omni-means

Project Vicinity Map



figure 1

EXISTING STUDY CONDITIONS

Existing conditions describe the existing transportation and pedestrian/bicycle facilities serving the project site.

EXISTING ROADWAYS

Roadways that provide primary circulation in the vicinity of the project site are as follows:

Central Parkway extends in an east-west direction between Arnold Road and Fallon Road and travels along the southern boundary of Emerald Glen Park between Persimmon Drive and Tassajara Road. Central Parkway consists of two travel lanes with a raised center median and is classified as a collector street in the City's General Plan.¹ Direct access to the Emerald Glen Park parking areas are located at the Glynnis Rose Drive and Killian Street intersections. Residential units are located along the south side (no direct vehicle access). On-street parking is allowed on both sides of the street.

Gleason Drive is an east-west oriented collector street between Arnold Road and Fallon Road along the north side of the project site. In the project vicinity, Gleason Drive has four travel lanes with raised medians. Direct access to parking areas for the Emerald Glen Park are provided at the Creekview Drive intersection and two additional mid-block driveways between Creekview Drive and Tassajara Road. On-street parking is not allowed.

Tassajara Road is an arterial road extending in a north-south direction through Dublin between the northern City Limit (continuing as Camino Tassajara) and the City of Pleasanton to the south (continuing as Santa Rita Road.) Tassajara Road forms the eastern boundary of Emerald Glen Park between Central Parkway and Gleason Drive. In the project area Tassajara Road consists of four to six travel lanes with raised center medians and turn lanes at intersections. On-street parking is not allowed.

Hacienda Drive is a north-south oriented collector street located approximately one-half mile west of the project site that extends from Gleason Road south over I-580 and into Pleasanton. Hacienda Drive has five to six travel lanes south of Central Parkway, then three lanes (two northbound and one southbound) between Central Parkway and Gleason Drive. Hacienda Drive provides access primarily to commercial areas located between I-580 and Dublin Boulevard and offices and residential areas north of Dublin Boulevard.

Dublin Boulevard is a major east-west arterial street that extends through the entire City paralleling I-580 on the north side. In the vicinity of the project between Hacienda Drive and Tassajara Road, Dublin Boulevard has six travel lanes and raised landscaped medians. Dublin Boulevard provides access to residential, office, and commercial areas in the project vicinity as well as the East Dublin BART Station located west of the project site.

Glynnis Rose Drive extends south from Central Parkway (opposite a driveway for Emerald Glen Park) to Dublin Boulevard. It consists of two lanes with a center two-way left turn lane. It is a collector street serving adjacent residential complexes and a retail center located on the east side of the street.

Killian Street extends south from Central Parkway for approximately 350 feet to Roscommon Way. It is located directly south of an Emerald Glen Park driveway, but outbound vehicle travel from the Park driveway is limited to right-turns only onto Central Parkway (no left turns onto Central Parkway and no through trips onto Killian Street). Killian Street is a local road consisting of two lanes and is located in a residential area.

¹ City of Dublin, General Plan, Community Development Department, Amended as of June 2013.

Persimmon Drive extends north from Central Parkway west of Emerald Glen Park. It is a two lane local residential street that provides direct access to residential units on the west side. On the east side between Persimmon Drive and Emerald Glen Park there are two Class I trails on either side of the creek that are oriented in a north-south direction.

Creekview Drive extends north from Gleason Drive opposite an Emerald Glen Park driveway. It consists of two lanes and serves as a residential collector street serving the residential area north of Gleason Drive.

Regional access to the project site is provided by **Interstate 580 (I-580)**, which extends in an east-west direction south of the project site along the City's southern boundary. It is a multi-lane facility with full-access interchanges at Hacienda Drive and Tassajara Road. I-580 provides access east to the Cities of Pleasanton, Livermore and Tracy and west to Castro Valley, San Leandro, and Oakland.

PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian facilities are served by sidewalks located along the perimeters of the park on Central Parkway, Gleason Drive, and Tassajara Road. The west side of the park is bordered by a greenbelt with two Class I trails which extend the length of the park, including the Tassajara Creek Trail. Existing paved paths are located within the park boundaries with connections to the perimeter sidewalks providing access to each sector of the Park grounds. All of the signalized intersections around the perimeter have striped crosswalks and pedestrian "Walk/Don't Walk" crossing controls. The Gleason Drive/Tassajara Road intersection has yellow striped crosswalks (school zone) and a sign prohibiting eastbound right turns during the red phase when children are present. The unsignalized Central Parkway/Driveway-Killian Street intersection has striped crosswalks across the stopped approaches, but no striped crosswalks across Central Parkway.

The pedestrian sidewalks continue along the streets extending away from the park grounds. The Tassajara Creek Trail has a signalized pedestrian crossing control across Central Parkway. The parallel trail 300 feet to the west intersects the east side of the Central Parkway/Persimmon Drive intersection. The Tassajara Creek Trail and the parallel trail to the west also extend north and south away from the park grounds.

Designated bicycle facilities are typically classified into three categories as defined by the California Manual on Uniform Traffic Control Devices:²

Bike Path (Class 1): A dedicated off-road bicycle and/or pedestrian path (typically multi-use path) which provides for bicycle travel completely separated from any street or highway.

Bike Lane (Class 2): A striped lane on a roadway for the exclusive use of bicyclists in order to provide additional width for bicycle travel. (Class 2A: bicycle lane; Class 2B: buffered bicycle lane.)

Bike Route (Class 3): Bike Routes are roads that are signed as bikeways, but do not have separate bicycle lane striping. Typically, bike routes are used to provide continuity in the overall bikeway network or identify a route that is preferable to other nearby streets.

Bicycle travel is allowed on all of the streets in the project vicinity. Class 2 bike lanes are striped on each side of the park boundary streets of Gleason Drive, Central Parkway, and Tassajara Road. On Central Parkway the bike lanes are striped separately from striped shoulder parking lanes. Glynnis Rose Drive has shoulder lane striping with on-street parking allowed. Bike lanes and routes continue along the streets extending away from the park grounds, including the analyzed streets located away from the park such as Hacienda Drive and Dublin Boulevard.

² State of California, Department of Transportation, *California Manual on Uniform Traffic Control Devices*, 2012 edition.

The Dublin Bicycle & Pedestrian Master Plan is a City policy document intended to inventory bicycle and pedestrian facilities and recommend future improvements.³ In addition to the existing bicycle network, future facilities are proposed, including a Class 1 shared-use path on the north side of Central Parkway from Tassajara Road east to Brannigan Street, as well as a proposed westbound Class 2A lane. Similarly, a shared-use Class 1 path and Class 2A bicycle lanes are proposed for Gleason Drive between Tassajara Road and Brannigan Street. To facilitate the Tassajara Creek Trail crossing of Gleason Drive, widening the sidewalk to create a Class 1 sidepath is also proposed. Future pedestrian and bicycle facility improvements are also proposed for areas located outside of the immediate Emerald Glen Park vicinity, such as the East Dublin BART station and residential neighborhoods to the east near Fallon Road. Existing and proposed facilities are shown in Figure 2.

Bicycle parking spaces are provided in Emerald Glen Park. The Dublin Bicycle and Pedestrian Master Plan identified twelve spaces within the existing park grounds.

TRANSIT FACILITIES

Public transit service in the project area is provided by the Livermore -- Amador Valley Transit Authority (also referred to as "Wheels") via scheduled bus service. The buses also provide connections to regional transit services such as Bay Area Rapid Transit (BART). In addition to regular service, specialized transit services are also available such as regional oriented routes (Tri-Valley Rapid) and paratransit (Dial-A-Ride). Discount fares are available for seniors and disabled riders. Routes with scheduled service serving the project area are shown in Figure 3 and described as follows:

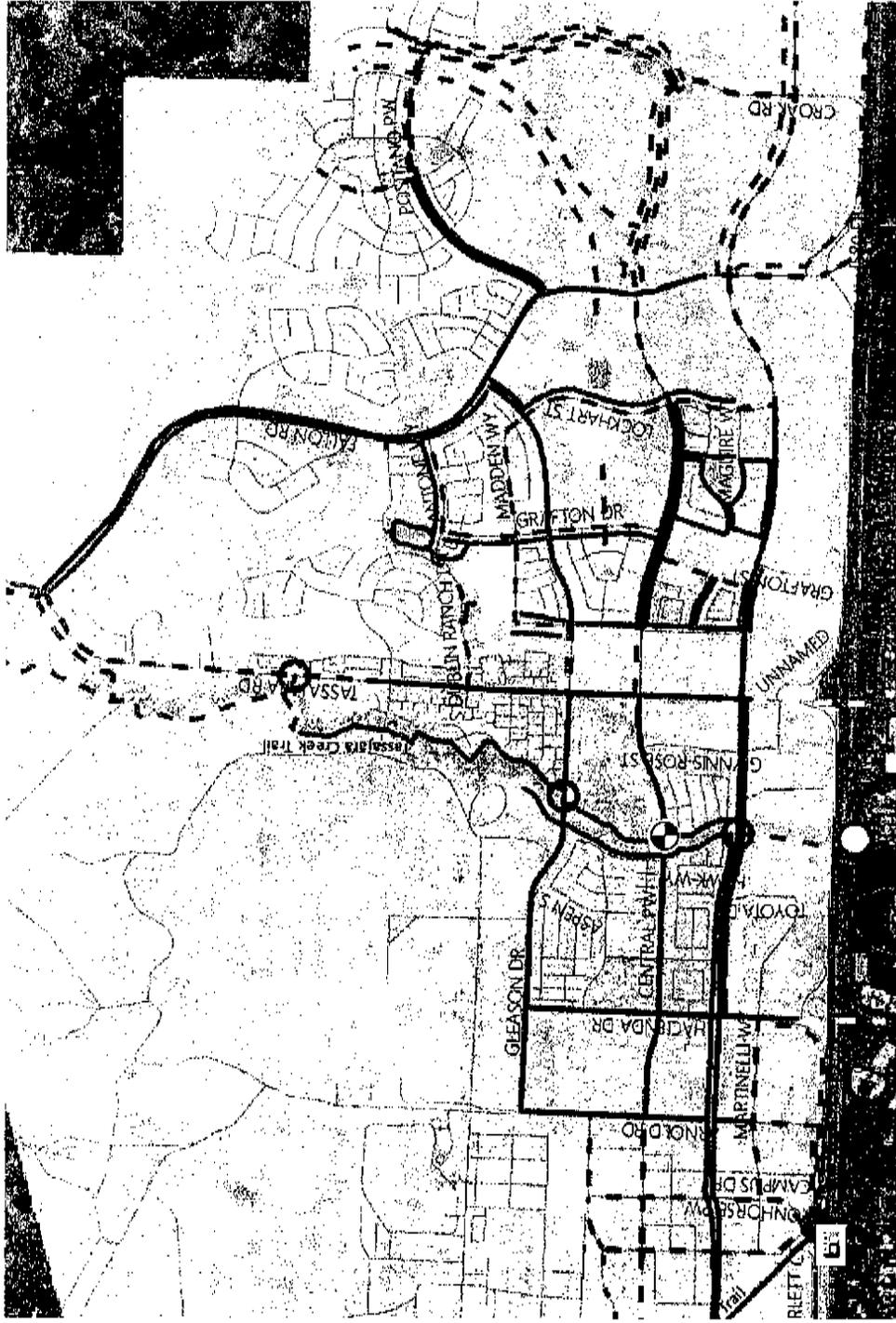
Route 1: This route extends from the East Dublin/Pleasanton BART station and circulates around the Hacienda Drive and Tassajara Road areas of Dublin. The route travels along Central Parkway, with bus stops near Emerald Glen Park located at the Killian Street and Glynnis Rose Drive intersections. On weekdays, Route 1 operates between 6:00 a.m. and 9:25 p.m. with 30 minute headways. On weekends, service is from 8:01 a.m. to 9:25 p.m. with 30 minute headways.

Route 2: This route extends from the East Dublin/Pleasanton BART station to the east Dublin areas of Tassajara Road and Fallon Road. The route travels along Central Parkway, with bus stops at the Killian Street and Glynnis Rose Drive intersections. This route has limited operating times. It provides weekday service in the morning and afternoon. There are four morning buses between 6:30 and 9:18 a.m. and four afternoon buses between 4:00 and 6:51 p.m. on weekdays. The route does not operate on weekends.

Route 501: This is a school focused route with one morning bus and one afternoon bus. The route extends from Dublin High School in west Dublin to Fallon Road in east Dublin. It provides service in the morning between 7:08 a.m. and 7:40 a.m., and afternoon service between 2:55 and 3:25 p.m.. Bus stops near the park are located on Central Parkway at the Killian Street and Glynnis Rose intersections, and on Tassajara Road north of Gleason Drive.

The BART rail system provides regional transit services throughout the greater Bay Area including airport service to Oakland and San Francisco Airports. BART is generally in service 4:00 a.m. to 1:00 a.m. on weekdays, 6:00 a.m. to 1:00 a.m. Saturdays, and 8:00 a.m. to 1:00 a.m. Sundays, with headways of 15-20 minutes. All of the bus routes near the project site connect with a BART station along their service route providing a transfer point to transit routes serving the greater region including Pleasanton and Livermore.

³ *City of Dublin, Bicycle and Pedestrian Master Plan, Draft June 2014.*



- | | | | |
|---|--|--|---|
| Existing Trail Crossings | Proposed Trail Crossings | Existing Bikeways | Proposed Bikeways |
| <ul style="list-style-type: none"> ● Signalized Trail Crossing ● Undercrossing ○ Existing Unsignalized Crossing ○ Crossing with Pedestrian Beacon | <ul style="list-style-type: none"> ○ Crossing Improvements ○ Over or Undercrossing ○ BART | <ul style="list-style-type: none"> — Class I Shared-Use Path — Class II Bicycle Lanes — Class III Bicycle Route | <ul style="list-style-type: none"> - - - Class I Shared-Use Path - - - Class IIIA Bicycle Lanes - - - Class IIIB Buffered Bicycle Lanes - - - Class IIIB Buffered Bicycle Lanes (Existing Class IIIB) |

Source: City of Dublin Bicycle and Pedestrian Master Plan, Draft June 2014



Existing and Proposed Bicycle & Pedestrian Networks In The Project Vicinity



omni-means

figure 2

EXISTING INTERSECTIONS

Based on discussions with City of Dublin Engineering staff, the following intersections were selected for analysis of operating conditions.

<u>Study Intersections</u>	<u>Control</u>
• Gleason Drive / Project Driveway - Creekview Drive	Signal Control
• Gleason Drive / Project Driveway (mid-block)	Minor-street Stop Control
• Gleason Drive / Project Driveway (east)	Minor-street Stop Control
• Gleason Drive / Tassajara Road	Signal Control
• Central Parkway / Hacienda Drive	Signal Control
• Central Parkway / Project Driveway - Killian Street	Two-way Stop Control
• Central Parkway / Project Driveway - Glynnis Rose Drive	Signal Control
• Central Parkway/Tassajara Road	Signal Control
• Dublin Boulevard/Hacienda Drive	Signal Control
• Dublin Boulevard/Tassajara Road	Signal Control

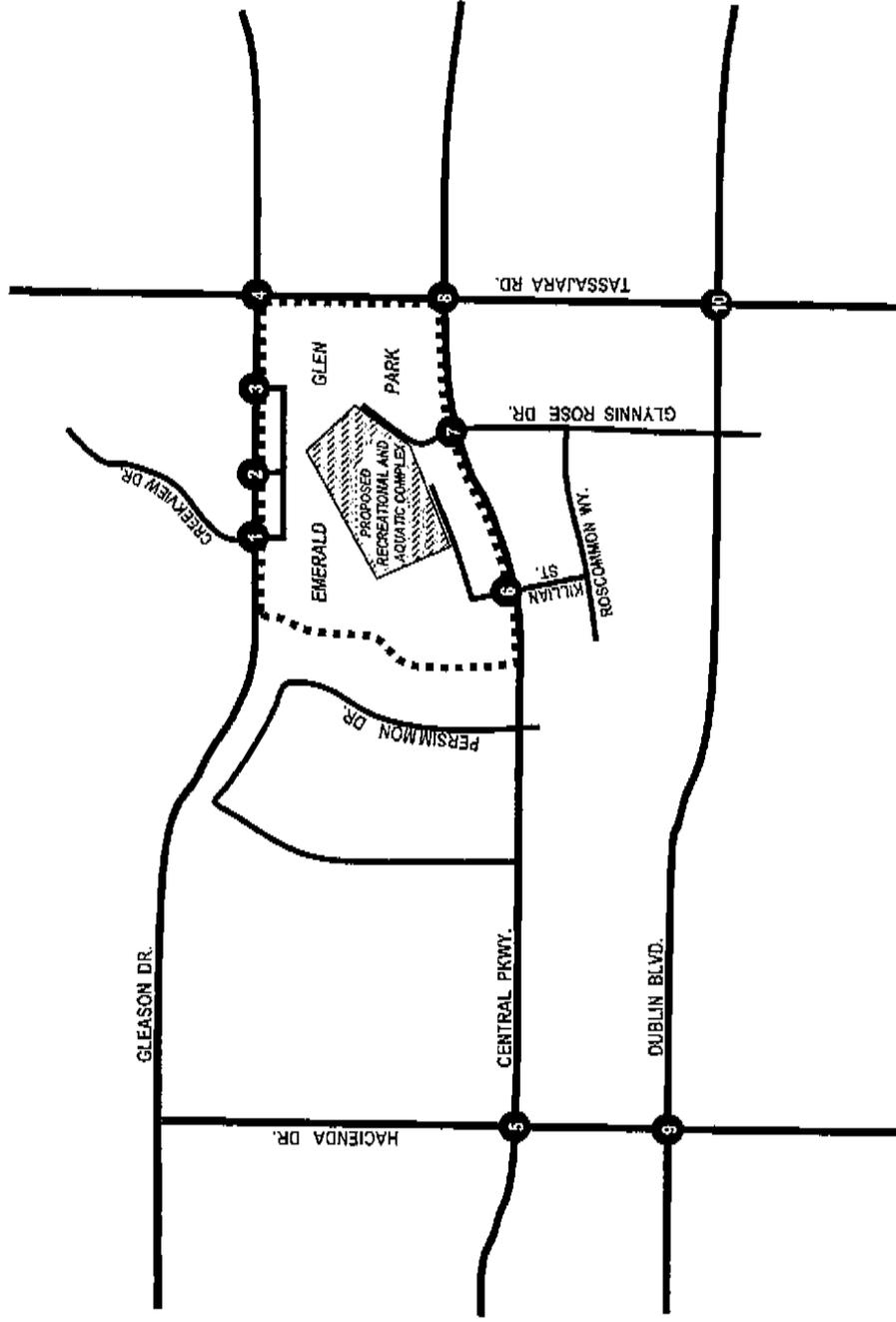
To assess vehicle traffic flows, weekday Mid-day (11:30 am – 1:30 pm), weekday PM (4:00 – 6:00 pm), and Saturday (1:00 – 3:00 pm) peak periods were evaluated. Existing intersection turning volumes from recent traffic studies and new counts conducted for this study were utilized to obtain the volumes. *The Village At Dublin Project Draft Supplemental EIR* evaluated intersections along Dublin Boulevard, including at Hacienda Drive and Tassajara Road for weekday AM and PM peak hour conditions.⁴ The *Program for Arterial System Synchronization Study* (PASS Study) evaluated intersections on Hacienda Drive and Tassajara Road, including at Central Parkway, Gleason Drive, and Dublin Boulevard for existing weekday mid-day and PM peak hour conditions.⁵ Where applicable, the volumes from those reports were used for this study. New turning movement counts were conducted at the project access intersections on Gleason Drive and Central Parkway for the weekday mid-day and PM peak periods. Saturday counts were conducted at all of the study intersections in order to obtain Saturday volumes for the study intersections.⁶

The study intersection locations, existing lane geometries, and existing peak hour traffic volumes are shown in Figures 4, 5, and 6, respectively.

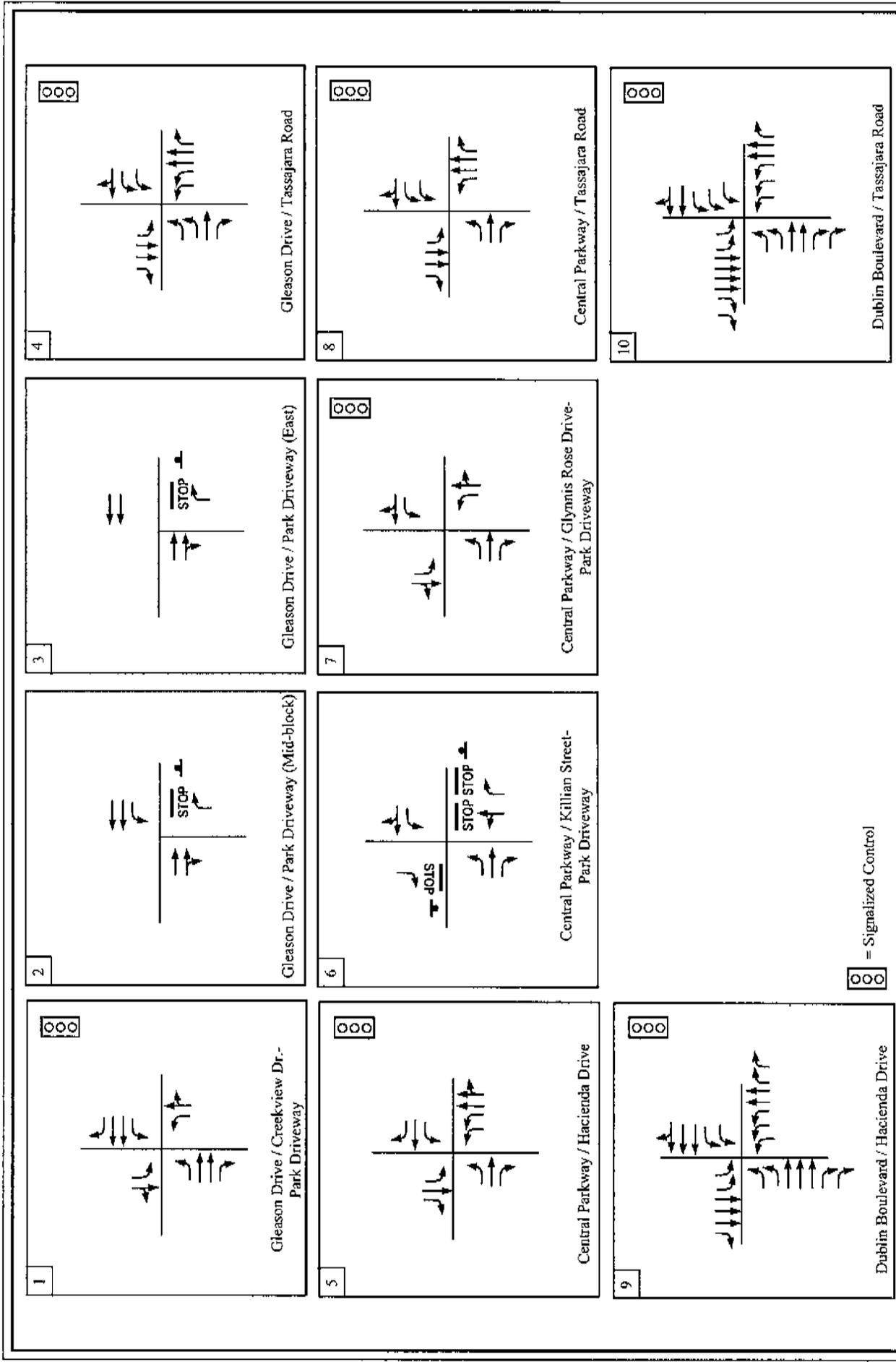
⁴ City of Dublin, *The Village At Dublin Draft Supplemental EIR*, August 2013.

⁵ City of Dublin, *Program for Arterial System Synchronization*, December 23, 2014.

⁶ *Omni-Means and Baymetrics*, Traffic counts conducted March 19 & 22, 2014.



Study Intersections Map

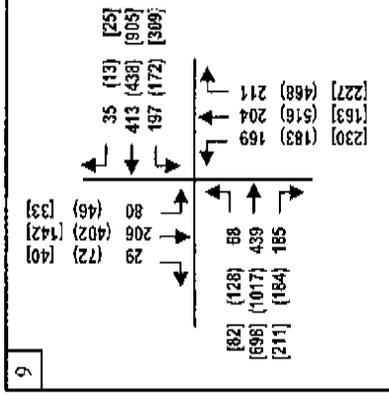
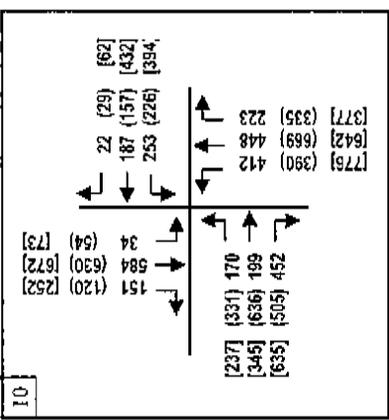
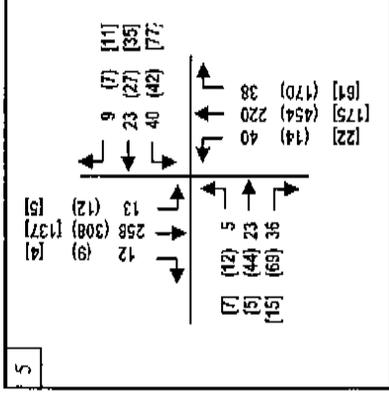
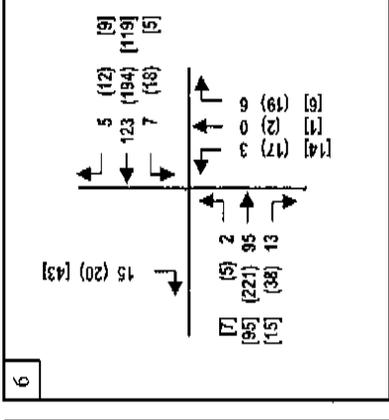
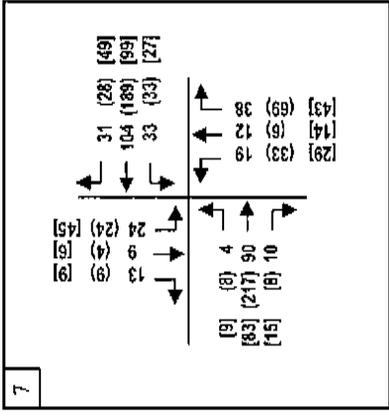
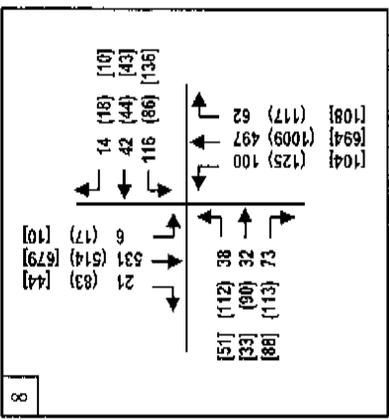
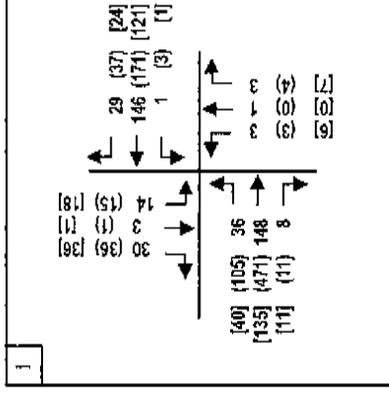
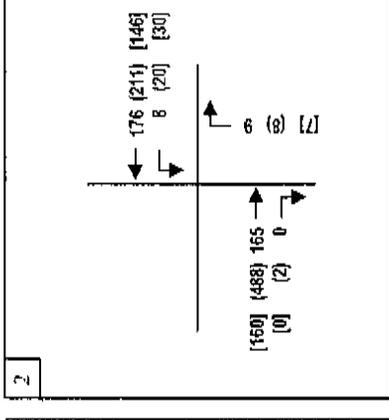
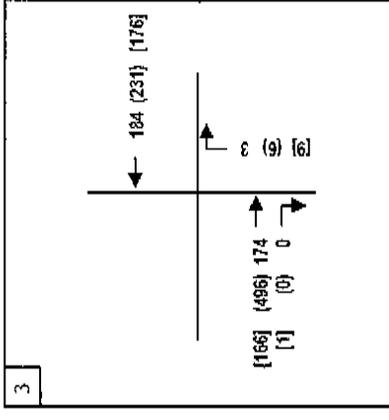
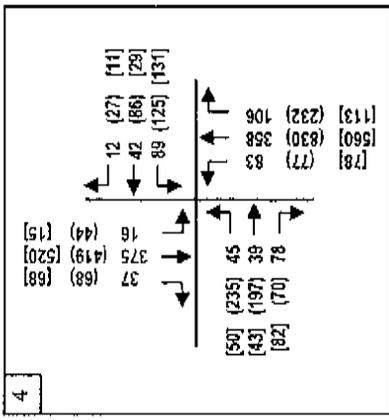


Existing Lane Geometries and Intersection Controls





Existing Peak Hour Volumes
Weekday Mid-day, (Weekday PM), & [Saturday]



INTERSECTION LEVEL-OF-SERVICE (LOS) CONCEPT / METHODOLOGIES

Intersection level of service (LOS) provides a measure of operational performance with a scale ranging from LOS A-F. These ratings correspond to vehicle delays (measured in seconds) or a volume-to-capacity (v/c) ratio. LOS A represents relatively free-flow conditions with little delay at intersections. LOS E represents unstable or unbalanced flow conditions with volumes at or near design capacity. LOS F represents a significantly congested condition where traffic flows can exceed design capacities resulting in long vehicle queues and delays from the minor-street driveway. At unsignalized intersections, stated intersection LOS usually refers to the minor street or stop-sign controlled driveway movements. For all-way stop-control intersections, intersection LOS refers to the average delay of all approaches. However, if volumes at one of the intersections' approach legs are substantially unbalanced, that specific leg may experience proportionately longer delays. LOS Definitions are provided in Table 1.

The intersection LOS calculations have been based on the Highway Capacity Manual (*HCM 2000*) methodology incorporating Synchro/SimTraffic software. This methodology yields an operational analysis with LOS and vehicle delay expressed in seconds.

SIGNIFICANCE CRITERIA

The City of Dublin has established intersection LOS significance criteria for both signalized and unsignalized intersections presented as follows:

The City shall strive to phase development and roadway improvements so that the operating Level of Service (LOS) for intersections in Dublin does not exceed LOS D. However, intersections within the Downtown Dublin Specific Plan area are excluded from this requirement and may operate at LOS E or worse.⁷

Therefore, for this study a project impact is considered significant as follows:

If the intersection operation degrades from LOS D or better under No Project conditions to LOS E or worse under project conditions.

Or if the intersection already operates below acceptable level of service under No Project conditions (LOS E-F) and the project adds 50 or more peak hour trips to the intersection under project conditions.

Pedestrian and Bicycle Circulation:

If the project conflicts with adopted policies and programs or plans that support pedestrian and/or bicycle circulation, including disruption of existing facilities or inadequately provides for designated pedestrian facilities and on-street &/or off-street bicycle facilities (such as identified in Pedestrian or Bicycle Master Plan). Or if the project conflicts with other adopted policies, standards, or guidelines as required by the City municipal codes.

⁷ City of Dublin, General Plan, Chapter 5 - Land Use & Circulation: Circulation & Scenic Highways Element, Roadway Standards, Updated March 23, 2012.

Public Transit Facilities:

If the project disrupts existing service routes, or increases demand above transit load capabilities, or conflicts with the policies, plans, and programs supporting public transit.

Complete Streets:

If the project would conflict with the City's complete streets policies for pedestrian, bicycle, and transit oriented circulation.

Traffic Safety:

If the project design contained a dangerous or hazardous element inconsistent with the City's design standards &/or industry accepted standards (such as Institute of Transportation Engineers or Caltrans.)

TABLE 1
LEVELS-OF-SERVICE (LOS) CRITERIA FOR INTERSECTIONS

LEVEL OF SERVICE	TYPE OF FLOW	DELAY	MANEUVERABILITY	CONTROL DELAY (SECONDS/VEHICLE)		
				SIGNALIZED	UNSIGNALIZED	ALL-WAY STOP
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10.0 secs. ≤ 0.60 v/c	≤ 10.0	≤ 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10 and ≤ 20.0 secs. 0.61 – 0.70 v/c	>10 and ≤ 15.0	>10 and ≤ 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20 and ≤ 35.0 secs. 0.71 – 0.80 v/c	>15 and ≤ 25.0	>15 and ≤ 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles of stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35 and ≤ 55.0 secs. 0.81 – 0.90 v/c	>25 and ≤ 35.0	>25 and ≤ 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55 and ≤ 80.0 secs. 0.91 – 1.00 v/c	>35 and ≤ 50.0	>35 and ≤ 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0 secs. > 1.00 v/c	> 50.0	> 50.0

References: 1. Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000. Contra Costa Transportation Authority (CCTA). Technical Procedures Update. Final. July 9, 2006

EXISTING INTERSECTION OPERATION

Existing intersection operating conditions are shown in Table 2. As calculated, all of the project study intersections are operating at acceptable levels during the peak hours. All study intersections operate at LOS C or better during all peak hours. The Park access driveway intersections all operate at LOS B or better during the peak hours.

**TABLE 2
EXISTING WITHOUT PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS**

#	Intersection	Control Type	Wkday. Mid-day		Wkday. PM		Saturday Peak	
			LOS	Delay	LOS	Delay	LOS	Delay
1	Gleason Drive / Driveway – Creekview Dr.	SIGNAL	A	8.5	B	7.6	A	8.1
2	Gleason Drive / Driveway (mid-block)	MSSC	nb rt: A wb lt: A	A 9.2 A 7.7	A A	9.7 8.5	A A	9.0 7.7
3	Gleason Drive / Driveway (east)	MSSC	nb rt: A	9.1	B	10.1	A	9.0
4	Gleason Drive / Tassajara Road	SIGNAL	B	14.0	C	21.3	B	14.2
5	Central Parkway / Hacienda Drive	SIGNAL	B	18.0	B	16.9	C	20.4
6	Central Parkway / Driveway – Killian St.	MSSC	sb: A nb: B wb lt: A cb lt: A	9.5 10.2 7.5 7.7	B B A A	10.0 12.6 7.9 7.9	A B A A	9.5 12.1 0.0 7.8
7	Central Parkway / Driveway – Glynnis Rose	SIGNAL	B	10.8	B	11.3	B	10.8
8	Central Parkway / Tassajara Road	SIGNAL	C	21.1	C	21.2	C	20.6
9	Dublin Boulevard / Hacienda Drive	SIGNAL	C	21.8	C	26.8	C	34.8
10	Dublin Boulevard / Tassajara Road	SIGNAL	C	25.1	C	28.9	C	33.6

Legend: MSSC = Minor-Street Stop Control.

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay in seconds.

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak hour signal warrants for the unsignalized project driveway intersections were evaluated. The term “signal warrant” refers to the established signal warrant methods described in the California Manual on Uniform Traffic Control Devices. None of the unsignalized intersections qualify for signalization under the peak hour warrant.

NEAR-TERM (YEAR 2020) STUDY CONDITIONS

NEAR-TERM METHODOLOGY

Near-term traffic conditions represent existing plus approved and pending development traffic anticipated to be generated in the short term horizon. Based on discussions with City of Dublin Engineering staff, the short term (and long term) cumulative volumes were developed from a recently completed traffic impact analysis for “The Village” retail project (*The Village at Dublin, Draft Supplemental EIR*, August 2013). That study identified near-term volumes at major signalized intersections in the Emerald Glen study area based on the Dublin Crossings Specific Plan Draft EIR and the City of Dublin’s Travel Demand Model. The City’s transportation model reflects the traffic growth associated with year 2020 (and year 2035) buildout of the City’s General Plan.

A more recent study completed for the Green Mixed-Use Project (*The Green Project Draft Supplemental EIR*) utilized The Village EIR findings as the base conditions and added The Green project trips for evaluation. The near term conditions for this study include the Year 2020 volumes derived from The Village study plus The Village project trips and The Green project trips.

The intersections evaluated in those studies applicable to the Emerald Glen Park study include the Dublin Boulevard/Hacienda Drive and Dublin Boulevard/Tassajara Road intersections. Turning volumes at the remaining study intersections were derived using the Furness method based on the volumes at the major intersections. Those studies evaluated the weekday AM and PM peak periods (not Mid-day or Saturday). Therefore the mid-day and Saturday volumes were derived by increasing the existing volumes at each intersection during those time periods in proportion to the increases in the existing PM peak hour volumes to the Year 2020 PM peak hour volumes.

The near-term projections include anticipated roadway improvements as listed in The Village and The Green reports. There are no near-term planned improvements to the intersections analyzed for this study, therefore the geometries used for the near-term scenario reflect existing geometries.

The City Model projections for the Emerald Glen parcel vehicle trips (Traffic Analysis Zone #991) were based on a “Park” land use with trips generated by fifteen employees for year 2020 (and year 2035) model runs. These trips are included in the model’s near term (and long term) cumulative volume projections (eleven PM peak hour trips). The calculated project trips for this study were added to the model volumes with no reduction taken for the parcel’s trips already included in the model in order to remain conservative.

The forecast Mid-day, PM, and Saturday peak hour near-term traffic volumes are provided in Figure 7.

NEAR-TERM (NO PROJECT) CONDITIONS

The near-term intersection LOS have been calculated and are shown in Table 3. With near-term (no project) volumes, eight of the ten study intersections would operate at LOS D or better during all three evaluated periods. This includes all of the Park’s driveway access intersections, which would operate at LOS B or better. The Dublin Boulevard/Hacienda Drive intersection would operate at LOS E conditions during the weekday PM and Saturday peak hours, while the Dublin Boulevard/Tassajara Road intersection would operate at LOS E conditions during the weekday PM peak hour.

With near-term (no project) volumes none of the stop sign controlled study intersections would qualify for signalization based on MUTCD’s peak hour warrant criteria.

**TABLE 3
YEAR 2020 NEAR-TERM WITHOUT PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS**

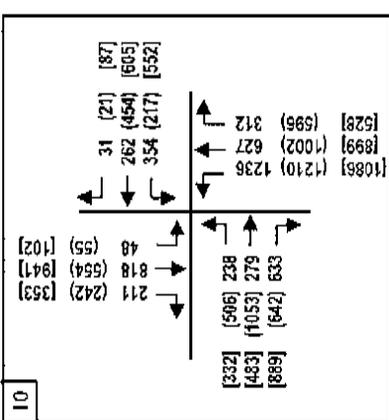
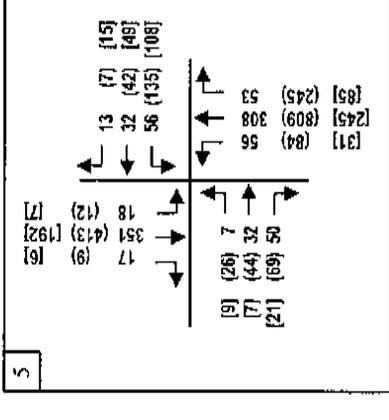
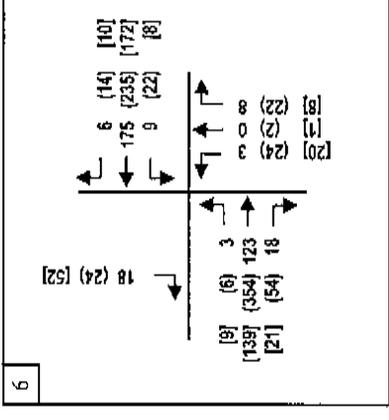
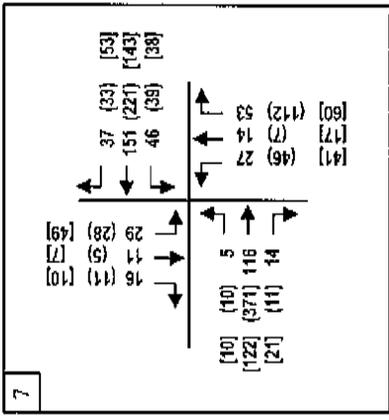
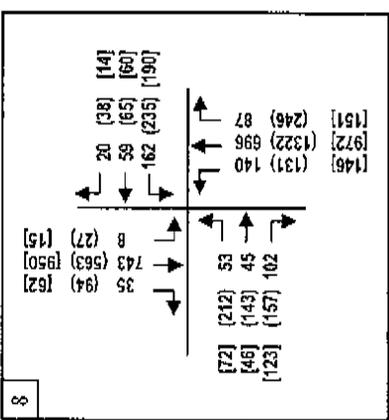
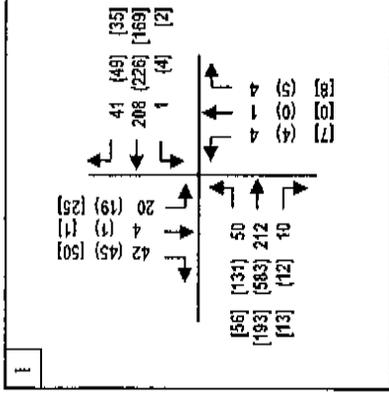
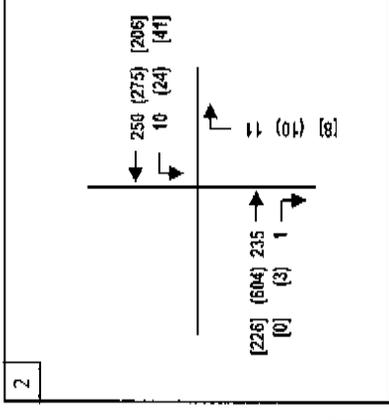
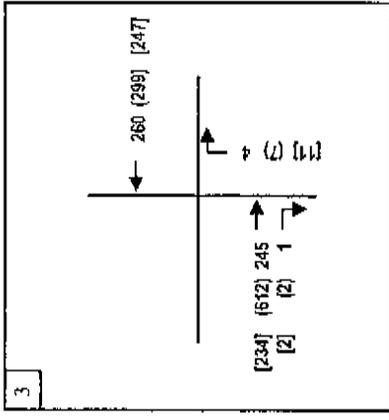
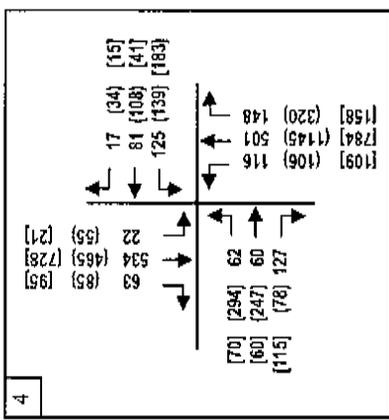
#	Intersection	Control Type	Wkday, Mid-day		Wkday, PM		Saturday Peak	
			LOS	Delay-V/C	LOS	Delay-V/C	LOS	Delay-V/C
1	Gleason Drive / Driveway – Creeview Dr.	SIGNAL	B	10.0	A	8.6	A	8.1
2	Gleason Drive / Driveway (mid-block)	MSSC	nb rt: A	A 9.4	A	9.8	A	9.1
			wb lt: A	A 7.8	A	9.0	A	7.8
3	Gleason Drive / Driveway (east)	MSSC	nb rt: A	9.4	B	10.5	A	9.2
4	Gleason Drive / Tassajara Road	SIGNAL	B	17.9	C	27.2	B	18.8
5	Central Parkway / Hacienda Drive	SIGNAL	B	19.6	C	26.5	C	20.5
6	Central Parkway / Driveway – Killian St.	MSSC	sb: A	10.0	B	10.5	B	10.2
			nb: B	10.4	B	14.9	B	13.5
			wb lt: A	7.6	A	8.3	A	0.0
			eb lt: A	7.9	A	8.0	A	7.8
7	Central Parkway / Driveway – Glynnis Rose	SIGNAL	B	11.2	B	12.5	B	11.2
8	Central Parkway / Tassajara Road	SIGNAL	C	27.6	C	33.7	C	23.2
9	Dublin Boulevard / Hacienda Drive	SIGNAL	C	30.5	E	69.1	E	56.3
10	Dublin Boulevard / Tassajara Road	SIGNAL	D	52.8	E	59.1	D	50.6

Legend: MSSC = Minor-Street Stop Control.

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay (in seconds) or volume/capacity (v/c) ratio.



Year 2020 Peak Hour Volumes
Weekday Mid-day, (Weekday PM), & [Saturday]



PROJECT STUDY CONDITIONS

PROJECT DESCRIPTION

The proposed Emerald Glen Recreation and Aquatic Complex is intended to provide water recreation, fitness facilities, and multi-purpose facilities for Dublin residents. The facility would be built in three phases, outlined as follows:

Phase I:

- Construction of a 28,506 square feet multi-purpose building containing an indoor pool (natatorium) of 11,960 square feet, a community room (1,810 square feet), and other associated areas (pool lockers, administrative offices, storage space);
- Construction of outdoor pools consisting of a sport pool (for seasonal recreational swimming, exercise, and lessons); a seasonal outdoor shallow pool for play; and an outdoor water slide area (five slides);

Phase II:

- Construction of a 17,145 square feet multi-purpose building consisting of a fitness room, gymnasium, teen center, and other associated areas (restroom, maintenance);

Phase III:

- Construction of a 3,585 square feet pre-school building with anticipated attendance of 20 students and four staff members (hours 7:00 a.m. – 6:00 p.m.).

Phase I construction would also consist of an outdoor amphitheater in the northeast corner of the complex (1,314 person seating capacity) for occasional afternoon/evening performances. Other occasional events anticipated to be held in the complex include farmers markets (six weekdays per year 6:00-8:00 pm April through September), Splatter Festival (two days per year in September); Movie Night (three Saturdays per year in summer); and Summer Concert Series (six Saturdays summer to fall 6:00-8:00 pm). These special events are distinct from the everyday traffic generating components of the project in that they occur infrequently and typically outside peak hours and therefore do not constitute evaluating at a design level.

The project would also include construction of a parking lot for 320 vehicles and pedestrian walkways.

Vehicle access to the complex would be gained by existing roadways and driveway access points adjacent to the park. Specifically, the primary parking areas would be accessed via the two existing intersections on Central Parkway at Glynnis Rose Drive and Killian Street. Access to the parking area on the north side of the park would be gained via the three existing driveways on Gleason Drive located at Creekview Drive and two mid-block driveway locations.

A multitude of pedestrian and bicycle access points are located around the current park grounds, including the Tassajara Creek Trail and walkways intersecting sidewalks around the park perimeter.

PROJECT TRIP GENERATION

Project trip generation was calculated based on full build-out of the proposed complex, reflecting the maximum activity that could occur on the project site. Each project component would have unique trip generation characteristics. However, some overlap of uses between the facilities is also anticipated, given the similarity of uses and proximity of the facilities to each other. The trips were generated using published industry-standard rates as well as specific traffic data collected by Omni-Means of similar use facilities where applicable. A brief summary of the proposed site's various trip generating components is provided as follows, with the project trip rates and vehicle trip generation presented in Tables 4 and 5.

Multi-Purpose Buildings with Natatorium and Outdoor Pools:

The multi-purpose building trips (45,651 total square feet) plus pools were generated using Institute of Transportation Engineers (ITE) trip rates for a Recreational Community Center (Land Use 495).⁸ These are described as facilities that include such uses as classes and clubs for adults and children, swimming pools, weightlifting equipment, and locker rooms. (Note: The sample size for the ITE Saturday Recreational Center rate is limited, therefore based on the anticipated use in combination with the other onsite facilities, the ITE rate for "Health & Fitness Club" (Land Use 492) was used for the Saturday daily trip generation.)

Waterslides:

The waterslides component of the project would consist of five slides with associated run-out pool area. ITE provides trip rates for outdoor waterslide parks based on the number of parking spaces. The number of spaces was determined by allocating the remaining number of spaces after deducting the parking demand for the other onsite facilities as calculated in the Emerald Glen Parking Study (*Community Center and Recreation & Aquatic Center Parking Study*).⁹ With a total of 320 parking spaces allocated to the project and a demand for 151 spaces for the multi-purpose buildings, natatorium, outdoor pools, and proposed pre-school, the remaining 169 spaces would be available for the waterslides from which to calculate the vehicle trips.

Pre-School Facility

Trip rates for the pre-school facility (20 students) were derived from published ITE rates for a Day Care center (Land Use 565) based on the number of students.

To corroborate the project trip calculations, vehicle counts were conducted at an existing similar facility in the City of Newark, California.¹⁰ The counts found similar maximum peak hour volumes. The surveyed weekday mid-day and PM peak hour volumes were lower, therefore the weekday calculated vehicle trips used for this study are likely conservatively high.

Discussions with City staff indicate that on weekdays the project activities are predominantly during the mid-day and PM periods (not AM period). The weekend peak is expected to occur during the Saturday mid-day period. Therefore, the weekday mid-day, weekday PM, and Saturday peak hours were evaluated.

Occasional Special Event activities would take place approximately 17 times per year (farmers market, music, festivals) which would generate trips independently of the other complex facilities. However, given the infrequent nature and typical hours of activity (evenings and weekends) outside of "adjacent street" peak hours, these events do not constitute a basis for evaluating trip generation on a design level.

⁸ Institute of Transportation Engineers, *Trip Generation Manual*, 9th Edition, 2012.

⁹ City of Dublin, *Emerald Glen Park Community Center and Recreation & Aquatic Center Parking Study*, Parks and Community Services Department, May 18, 2004.

¹⁰ Omni-Means, *Traffic counts conducted at Silliman Center Aquatic Facility in Newark, CA, June 14 & 16, 2014*.

**TABLE 4
EMERALD GLEN RECREATION AND AQUATIC COMPLEX
VEHICLE TRIP GENERATION RATES**

PROJECT TRIP RATES	
<p>Total of 45,651 sq. ft. Multi-Purpose: (28,506 sq. ft. Community Center / Natatorium + 17,145 sq. ft. Recreational Center with Pools) Institute of Transportation Engineers, <u>Trip Generation Manual, 9th Edition</u>, 2012. Average trip rates for a Recreational Community Center (Land Use 495) were used. An internal capture rate of 20% was applied to reflect shared use between the facilities.</p>	
<u>WEEKDAY</u>	
Daily Trip Generation: 33.82 trips/ksf, 20% internal capture = 27.06 trips/ksf (50% in, 50% out)	
Mid-day Peak Hour (Peak Hour of Generator): 3.35 trips/ksf, 20% internal capture = 2.68 trips/ksf (48% in, 52% out)	
PM Peak Hour (Adjacent Street Traffic): 2.74 trips/ksf, 20% internal capture = 2.19 trips/ksf (49% in, 51% out)	
<u>SATURDAY</u>	
Daily Trip Generation ¹ 20.87 trips/ksf, 20% internal capture = 16.70 (50% in, 50% out)	
¹ The sample size for the ITE Saturday Recreational Center rate is limited, therefore based on the anticipated use in combination with the other onsite facilities, the ITE rate for "Health & Fitness Club" (Land Use 492) was used for the Saturday daily trip generation.	
Mid-day Peak Hour (Peak Hour of Generator): 1.07 trips/ksf, 20% internal capture = 0.86 trips/ksf (54% in, 46% out)	
Waterslides:	
ITE trip rates based on number of parking spaces for Water Slide Park (<u>Trip Generation Manual, 9th Edition</u> , Land Use 414) were applied to the number of spaces available for the slides after allocating spaces for the other onsite facilities as calculated in the <i>Community Center and Recreation & Aquatic Center Parking Study – Emerald Glen Park</i> report, May 18, 2004, as follows:	
Community and Recreation & Aquatic Center:	320 spaces total
Comprised of:	
Community Center/Natatorium:	
28,506 sq. ft. x 3.20 peak space demand per 1,000 sq. ft. GFA =	91 spaces
Recreation Center: 17,145 sq. ft. x 3.20 peak space demand per 1,000 sq. ft. GFA =	55 spaces
Pre-School: 20 students x 0.24 peak space demand per student	= <u>5 spaces</u>
	= 151 spaces
Waterslide Spaces:	320 - 151 = 169 spaces

PROJECT TRIP RATES (Continued)

Waterslides (continued):

WEEKDAY

Daily Trip Generation 2.27 trips / parking space (50% in, 50% out)

Mid-day Peak Hour (Peak Hour of Generator) 0.25 trips / parking space (89% in, 11% out)

PM Peak Hour (Adjacent Street Traffic) 0.28 trips / parking space (21% in, 79% out)

SATURDAY

Daily Trip Generation 2.91 trips / parking space (50% in, 50% out)

Mid-day Peak Hour (Peak Hour of Generator) 0.39 trips / parking space (13% in, 87% out)

Pre-School Facility (20 Students)

Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012.

Average trip rates for a Day Care Center (Land Use 565).

WEEKDAY

Daily Trip Generation 4.38 trips/student (50% in, 50% out)

Mid-day Peak Hour 0.84 trips/student (47% in, 53% out)

PM Peak Hour 0.81 trips/student (47% in, 53% out)

SATURDAY

Daily Trip Generation 0.39 trips/student (50% in, 50% out)

Mid-day Peak Hour 0.11 trips/student (63% in, 37% out)

**TABLE 5
EMERALD GLEN RECREATION AND AQUATIC COMPLEX
PROPOSED VEHICLE TRIP GENERATION**

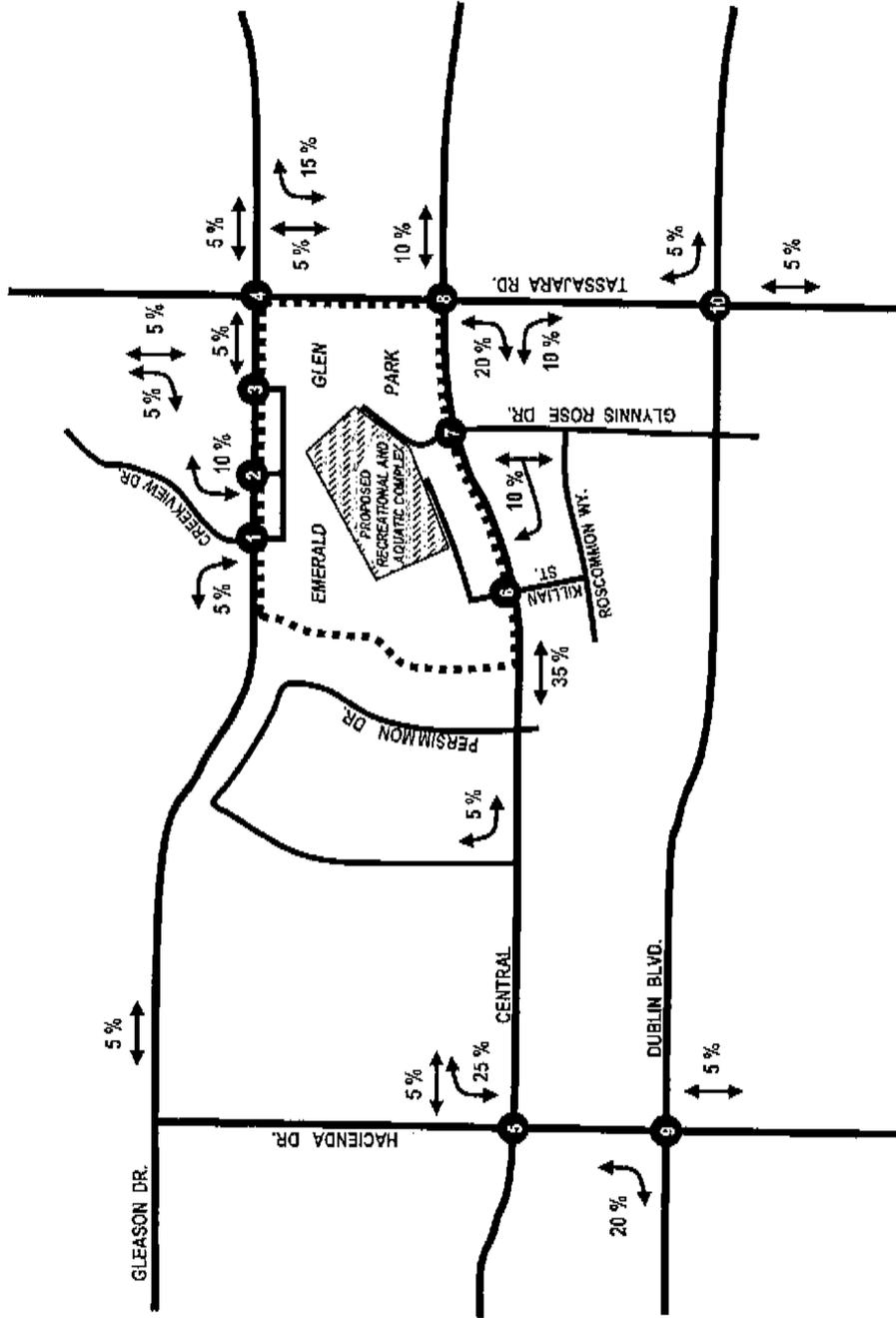
PROJECT TRIPS	
WEEKDAY	
Daily:	
• 28,506 sq. ft. community center/natorium @ 27.06/ksf =	772 daily trips (386 in, 386 out)
• 17,145 sq. ft. recreational center with pools @ 27.06/ksf =	464 daily trips (232 in, 232 out)
• 169 waterslide parking spaces @ 2.27/space =	384 daily trips (192 in, 192 out)
• 20 student pre-school @ 4.38/student =	<u>88 daily trips (44 in, 44 out)</u>
	1,708 daily trips (854 in, 854 out)
Mid-Day Peak Hour:	
• 28,506 sq. ft. community center/natorium @ 2.68/1,000 =	77 mid-day trips (37 in, 40 out)
• 17,145 sq.ft. recreational center with pools @ 2.68/1,000 =	46 mid-day trips (22 in, 24 out)
• 169 waterslide parking spaces @ 0.25/space =	42 mid-day trips (37 in, 5 out)
• 20 student pre-school @ 0.84/student =	<u>17 mid-day trips (8 in, 9 out)</u>
	182 mid-day trips (104 in, 78 out)
PM Peak Commute Hour:	
• 28,506 sq. ft. community center/natorium @ 2.19/1,000 =	62 PM trips (30 in, 32 out)
• 17,145 sq.ft. recreational center with pools @ 2.19/1,000 =	38 PM trips (19 in, 19 out)
• 169 waterslide parking spaces @ 0.28/space =	47 PM trips (9 in, 38 out)
• 20 student pre-school @ 0.81/student =	<u>16 PM trips (8 in, 8 out)</u>
	163 PM trips (66 in, 97 out)
SATURDAY	
Daily:	
• 28,506 sq. ft. community center/natorium @ 16.70/1,000 =	478 daily trips (239 in, 239 out)
• 17,145 sq.ft. recreational center with pools @ 16.70/1,000 =	286 daily trips (143 in, 143 out)
• 169 waterslide parking spaces @ 2.91/space =	492 daily trips (246 in, 246 out)
• 20 student pre-school @ 0.39/student =	<u>8 daily trips (4 in, 4 out)</u>
	1,264 daily trips (632 in, 632 out)
Saturday Peak Hour:	
• 28,506 sq. ft. community center/natorium @ 0.86/1,000 =	25 pk. hr. trips (14 in, 11 out)
• 17,145 sq.ft. recreational center with pools @ 0.86/1,000 =	14 pk. hr. trips (8 in, 6 out)
• 169 waterslide parking spaces @ 0.39/space =	66 pk. hr. trips (10 in, 56 out)
• 20 student pre-school @ 0.11/student =	<u>2 pk. hr. trips (1 in, 1 out)</u>
	107 pk. hr. trips (33 in, 74 out)

PROJECT VEHICLE TRIP ASSIGNMENT

The project trips were assigned onto the street network based on location of the project access driveways, background traffic volumes, proximity of principal roadways, and area demographics in the City of Dublin. Consideration was given to project driveway turning restrictions (i.e., locations with right-turn only access) and adjacent intersections. The City of Dublin anticipates almost all patrons (90%) would be Dublin residents with trips originating within the Dublin City limits (based on attendance data from another City pool facility and preferential admission pricing for Dublin residents). Only a small percentage of trips are expected to derive from outside of Dublin, such as Pleasanton or Livermore. Based on these factors, project trip assignment has been distributed as follows:

- 10% on Tassajara Road to/from north of Gleason Drive;
 - 5% on Tassajara Road to/from south of Dublin Boulevard;
 - 20% on Gleason Drive to/from east of Tassajara Road;
 - 5% on Gleason Drive to/from west of Creekview Drive;
 - 10% on Central Parkway to/from east of Tassajara Road;
 - 5% on Central Parkway to/from west of Hacienda Drive;
 - 5% on Central Parkway to/from neighborhoods west of Killian Street;
 - 10% on Glynnis Rose Drive & Killian Street to/from neighborhoods south of Central Parkway;
 - 20% on Dublin Boulevard to/from west of Hacienda Drive;
 - 5% on Dublin Boulevard to/from east of Tassajara Road;
 - 5% on Hacienda Drive to/from south of Dublin Boulevard.
- 100%

The project trips distribution and peak hour project trips are shown in Figures 8 and 9, respectively.



Project Trips Distribution

figure 8



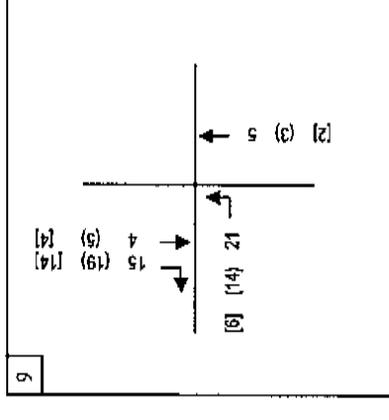
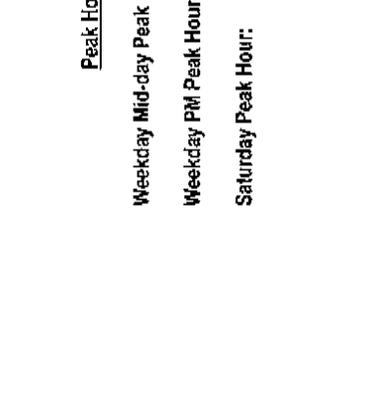
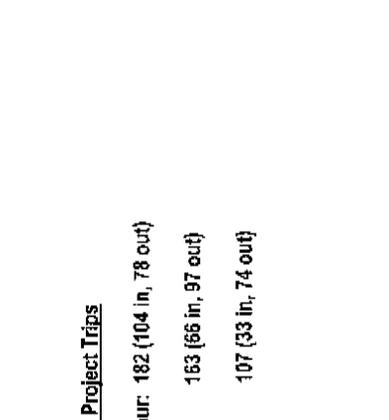
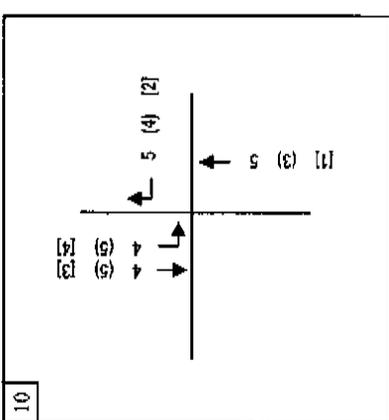
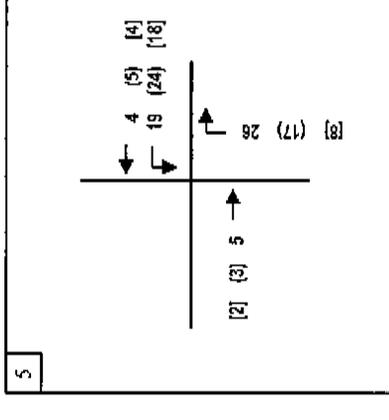
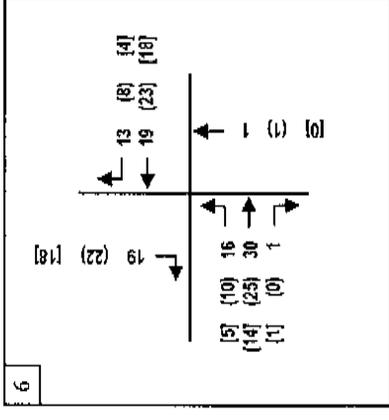
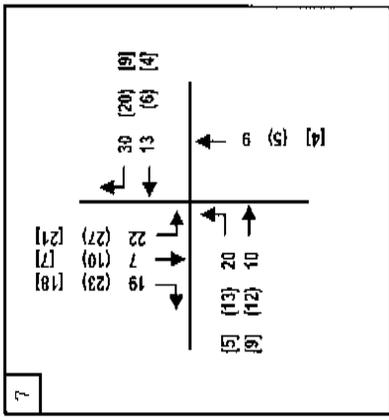
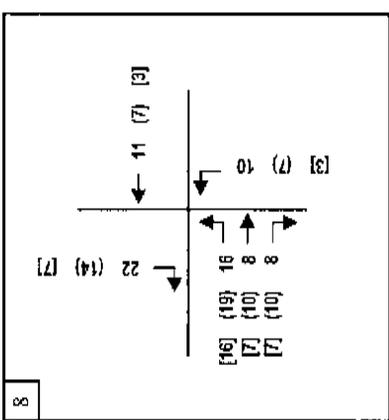
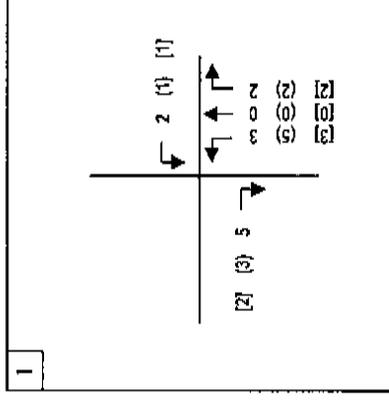
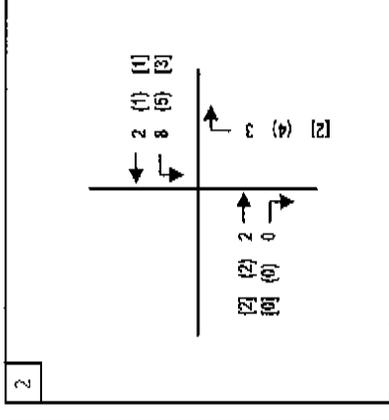
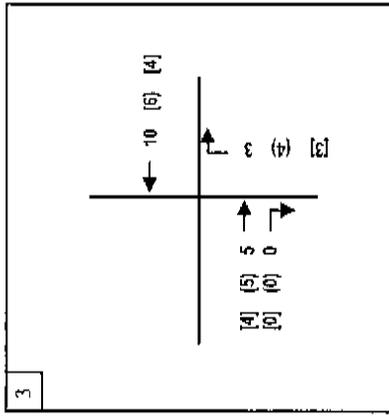
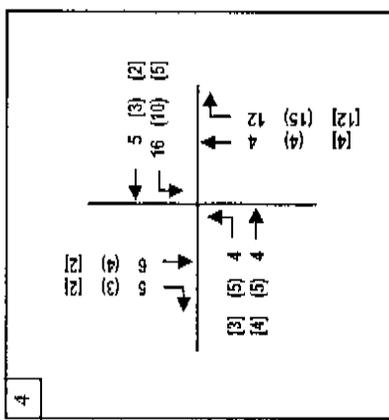
omni-means



Peak Hour Project Trips
 Weekday Mid-day, (Weekday PM), & [Saturday]

Peak Hour Project Trips

Weekday Mid-day Peak Hour: 182 (104 in, 78 out)
 Weekday PM Peak Hour: 163 (66 in, 97 out)
 Saturday Peak Hour: 107 (33 in, 74 out)



1

2

3

4

5

6

7

8

9

10

PROPOSED PROJECT IMPACTS

EXISTING PLUS PROJECT INTERSECTION OPERATIONS

With peak hour project trips added to existing (no project) traffic volumes, study intersection LOS have been calculated and are shown in Table 6. The existing plus project peak hour volumes are shown in Figure 10. With existing plus project volumes all ten project study intersections would operate at acceptable levels during all three peak hour periods with no change in levels of service and only small increases in vehicle delays at some intersections (five seconds or less at external intersections and three seconds or less at project driveway intersections).

The unsignalized driveway intersections would not qualify for signalization under MUTCD peak hour warrant criteria.

**TABLE 6
EXISTING PLUS PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS**

Intersection	Weekday Mid-day		Weekday PM		Saturday Peak	
	Existing	Existing + Proj.	Existing	Existing + Proj.	Existing	Existing + Proj.
Gleason Drive / Driveway – Creekview Dr.	A 8.5	A 8.5	B 7.6	B 7.6	A 8.1	A 8.1
Gleason Drive / Driveway (mid-block)	nb rt: A 9.2 wb lt: A 7.7	A 9.2 A 7.7	A 9.7 A 8.5	A 9.7 A 8.6	A 9.0 A 7.7	A 9.0 A 7.7
Gleason Drive / Driveway (east)	nb rt: A 9.1	A 9.2	B 10.1	B 10.2	A 9.0	A 9.1
Gleason Drive / Tassajara Road	B 14.0	B 14.2	C 21.3	C 21.6	B 14.2	B 14.3
Central Parkway / Hacienda Drive	B 18.0	C 20.6	B 16.9	B 19.1	C 20.4	C 20.9
Central Parkway / Driveway Killian St.	sb: A 9.5 nb: B 10.2 wb lt: A 7.5 cb lt: A 7.7	A 9.9 B 11.1 A 7.6 A 7.8	B 10.0 B 12.6 A 7.9 A 7.9	B 10.6 B 13.8 A 7.9 A 8.0	A 9.5 B 12.1 A 0.0 A 7.8	A 9.8 B 12.8 A 0.0 A 7.7
Central Parkway / Driveway – Glynnis Rose	B 10.8	B 11.3	B 11.3	B 11.7	B 10.8	B 11.0
Central Parkway / Tassajara Road	C 21.1	C 21.4	C 21.2	C 21.6	C 20.6	C 20.7
Dublin Boulevard / Hacienda Drive	C 21.8	C 21.8	C 26.8	C 26.8	C 34.8	C 34.9
Dublin Boulevard / Tassajara Road	C 25.1	C 25.1	C 28.9	C 29.1	C 33.6	C 33.6

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay in seconds.

NEAR-TERM PLUS PROJECT INTERSECTION OPERATIONS

The project trips were added to the Near-Term (no project) volumes and are shown in Figure 11. The study intersection LOS have been calculated and are shown in Table 7.

With near-term plus project volumes, conditions would remain similar to near-term no project conditions. Delay increases, if any, would be limited to three seconds or less, with most intersections experiencing delay increases of less than one second. The Central Parkway/Hacienda Drive intersection would change from LOS B to C during the mid-day peak hour, but the delay increase would be 2.5 seconds. Similarly, the Central Parkway/Killian Street intersection's northbound approach would change from LOS B to C during the PM peak hour, but the delay increase would be under three seconds. The Dublin Boulevard/Hacienda Drive and Dublin Boulevard/Tassajara Road intersections would experience no change in level of service, with delay increases, if any, of 0.1 seconds.

The project access driveways could continue to operate at LOS B or better conditions, except for the Killian Street northbound approach at LOS C during the PM peak hour, and delay increases, if any, would be under two seconds. There would be no significant impacts to intersection operation based on the significance criteria.

None of the stop sign controlled intersections would qualify for signalization based on MUTCD's peak hour volume warrant during the peak hours.

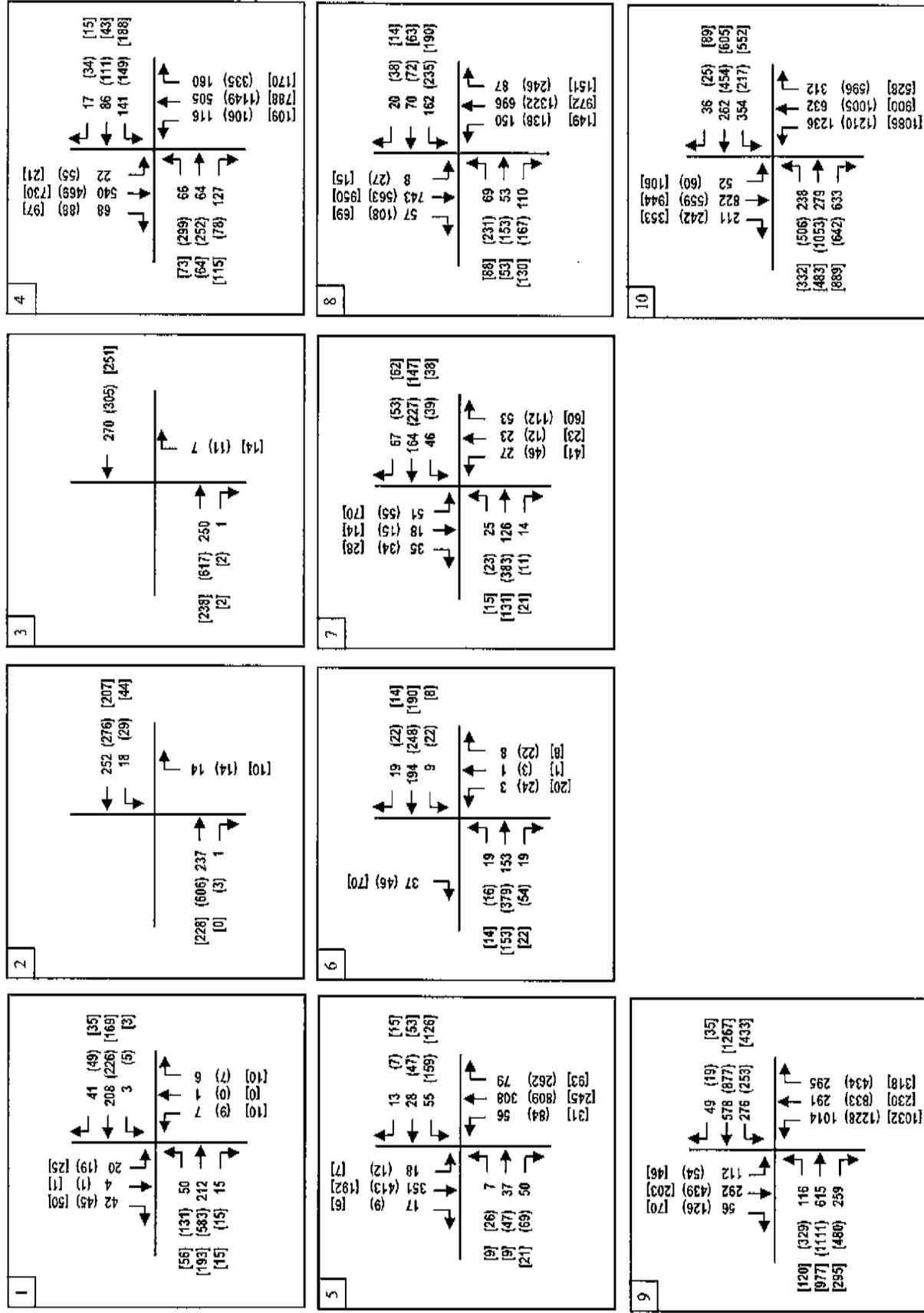
**TABLE 7
NEAR-TERM PLUS PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS**

Intersection	Weekday Mid-day		Weekday PM		Saturday Peak	
	Near-Term	N.T. +Proj.	Near-Term	N.T. + Proj.	Near-Term	N.T. +Proj.
Gleason Drive / Driveway – Creekview Dr.	B 10.0	B 10.1	A 8.6	A 8.6	A 8.1	A 8.1
Gleason Drive / Driveway (mid-block)	nb rt: A 9.4 wb lt: A 7.8	A 9.4 A 7.9	A 9.8 A 9.0	A 9.8 A 9.0	A 9.1 A 7.8	A 9.1 A 7.9
Gleason Drive / Driveway (east)	nb rt: A 9.4	A 9.4	B 10.5	B 10.6	A 9.2	A 9.2
Gleason Drive / Tassajara Road	B 17.9	B 18.1	C 27.2	C 29.1	B 18.8	B 19.1
Central Parkway / Hacienda Drive	B 19.6	C 22.1	C 26.5	C 27.2	C 20.5	C 20.8
Central Parkway / Driveway – Killian St.	sb: A 10.0 nb: B 10.4 wb lt: A 7.6 eb lt: A 7.9	B 10.4 B 10.9 A 7.7 A 8.0	B 10.5 B 14.9 A 8.3 A 8.0	B 11.1 C 16.5 A 8.4 A 8.2	B 10.2 B 13.5 A 0.0 A 7.8	B 10.6 B 14.5 A 0.0 A 7.9
Central Parkway / Driveway – Glynnis Rose	B 11.2	B 11.9	B 12.5	B 13.1	B 11.2	B 11.5
Central Parkway / Tassajara Road	C 27.6	C 27.4	C 33.7	D 35.1	C 23.2	C 23.8
Dublin Boulevard / Hacienda Drive	C 30.5	C 30.6	F 69.1	F 69.1	E 56.3	E 56.3
Dublin Boulevard / Tassajara Road	D 52.8	D 52.9	E 59.1	E 59.2	D 50.6	D 50.7

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay in seconds.



Year 2020 + Project Peak Hour Volumes
Weekday Mid-day, (Weekday PM), & [Saturday]



PROJECT ACCESS AND CIRCULATION

The proposed project would be constructed on the grounds of the existing Emerald Glen Park and accessed via the existing driveways currently serving the park. A project site plan is provided in Figure 12. Two driveways are located on Central Parkway (at Glynnis Rose Drive and Killian Street) and three are located on Gleason Drive (one at Creekview Drive and two mid-block driveways). The Central Parkway/Glynnis Rose driveway intersection is signalized with full access to/from all approaches. The Central Parkway/Killian Street driveway intersection's outbound driveway approach is restricted to right-turns only. The Gleason Drive/Creekview Drive driveway intersection is signalized with full access. The Gleason Drive western mid-block driveway allows for inbound left turns, while the eastern driveway is restricted to right turns in and out.

The Central Parkway and Gleason Drive driveways serve separate unconnected parking lots. The Central Parkway parking lot is larger and located closer to the project than the Gleason Drive parking lot and would experience most of the vehicle trips associated with the project. The Gleason Drive parking lot would remain unchanged from existing conditions. The Central Parkway parking lot would be reconstructed with a parking drive-aisle looping around the project complex between the two access driveways from Central Parkway.

At the Central Parkway/Killian Street driveway intersection, the existing outbound driveway volumes (right turns only allowed) were surveyed to be 15-40 trips. Future traffic growth from uses in the park plus the project's approximately 20 trips, indicates the future outbound volume could reach approximately 80 peak hour trips. All outbound vehicles from this driveway must turn right onto westbound Central Parkway. Motorists desiring to go east can make a U-turn at the Central Parkway/Persimmon Drive intersection located 700 feet to the west. Spot counts conducted at the Persimmon Drive intersection observed approximately 10 existing peak hour U-turns, which could increase to 20 U-turns without the project based on future traffic growth projections. Based on the trips distribution, 10-15 project trips would choose to make a U-turn at Persimmon Drive. The future traffic growth plus project trips could result in up to 30-40 peak hour U-turns during the peak hours.

An industry accepted design standard recommends providing "two minutes" of left-turn vehicle storage length for an unsignalized intersection. With 40 peak hour u-turns, approximately 50 feet of vehicle storage would accommodate the U-turn volumes (40 trips equals 1-2 vehicles every two minutes x 25 feet per vehicle – 50 feet storage). The westbound left turn pocket length at the Persimmon Drive intersection provides 50-60 feet of storage length. Therefore the existing storage length would be adequate. (A queuing analysis for this intersection was also included in an overall project access queuing analysis described below.)

Based on the forecast volumes (40-80 peak hour trips) out of the Killian Street intersection driveway, reconfiguring the driveway to allow outbound left turn and/or through movements would not appear to be necessary. Additionally, left turn and through movements are allowed at the Glynnis Rose intersection driveway, which would continue to be accessible from the western parking area via the drive aisle that loops around the project buildings.

PEDESTRIAN ACCESS

Signalized crossings (with pedestrian call buttons and flashing "walk/don't walk" indicators) are provided at the Gleason Drive/Creekview Drive, Central Parkway/Glynnis Rose Drive, and Central Parkway/Tassajara Road intersections, as well as a signalized crossing at the Tassajara Creek Trail crossing of Central Parkway.

PARKING

The anticipated parking demand for the project was evaluated in a previously conducted parking study (Community Center and Recreation & Aquatic Center Parking Study). The study recommended 278 spaces be provided for the project (in addition to the existing spaces serving other uses of the park). The current parking design plan for the project provides 320 spaces (307 general purpose plus 13 accessible spaces). This provides 42 additional spaces than recommended in the parking study. The proposed number is expected to provide adequate parking supply for typical demand. Additional spaces are also available along Central Parkway.

SPECIAL EVENTS

Special Event activities are anticipated to take place occasionally (approximately 17 times) during the year. These would consist of farmers markets, music events, and festivals, which would generate trips in addition to the recreational center facilities. However, given the infrequent nature and typical hours of activity (evenings and weekends) outside of "adjacent street" peak hours, these events do not constitute a basis for evaluating trip generation on a design level.

Recommendation: If pedestrian volumes crossing Central Parkway (or other adjacent streets) are sufficiently high during these events, consideration could be given to placing temporary "pedestrian crossing" warning signs at crossing locations in order to alert motorists to the increased pedestrian crossing activity.

VEHICLE QUEUING ANALYSIS

With turning volumes in and out of the project site increasing at the access driveways as a result of the project, a separate vehicle queuing analysis was conducted for the park access intersections in order to assess the potential for excessive vehicle queuing. Vehicular queuing projections were derived utilizing *SimTraffic* micro-simulation software developed by *TrafficWare*. Vehicle queuing projections are provided in terms of the 95th percentile queue lengths with the distance expressed in feet. The available storage lengths are based on measurements from aerial photographs and field measurements.

It is noted that the queue length simulations are approximations and incorporate algorithms of vehicle approach patterns that result in somewhat different queue lengths each time a simulation is run for the same conditions. A standard measure for vehicle spacing is 25 feet. Variations in queue lengths less than 25 feet represent differences of less than one vehicle. Therefore the queue lengths should be considered a general measuring tool (not a precise number) to help identify conditions. Substantial changes in queue lengths denote a higher probability that a genuine queuing problem exists.

Vehicle queue lengths at all of the project driveway intersections would remain within the lane storage lengths with the added project trips during all peak periods for existing and all future conditions (queue length calculation worksheets are provided in the Appendix). Cumulative projections without the project at the external intersections on Dublin Boulevard at Hacienda Drive and Tassajara Road indicate vehicle queue lengths would exceed the existing storage lengths for some turning movements during some peak hours. The project would contribute zero trips to several of these turning movements and, at the turning movements that would experience project trips, the calculated vehicle queue length increases would be 0-2 vehicles. These increases would not be discernible within typical fluctuations in daily traffic.

The final project design is under ongoing review for onsite vehicular, pedestrian, and bicycle facility designs. In order to ensure the project design components do not result in a significant impact based on City guidelines, including the City's Complete Streets policy, safety hazard design features, and temporary construction impacts, the project design plans should be consistent with the appropriate City standards and reviewed by the City for approval. This will reduce potential impacts to less than significant.



1000 Grand Ave.
Berkeley, CA 94710
415.841.1100

CITY OF
DUBLIN
EMERALD GLEN
AQUATIC CENTER

DUBLIN, CA

SITE LINE PROTECTION NOTES

- 1. ALL EXISTING AND PROPOSED SITE LINE PROTECTION SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- 2. ALL EXISTING AND PROPOSED SITE LINE PROTECTION SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- 3. ALL EXISTING AND PROPOSED SITE LINE PROTECTION SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- 4. ALL EXISTING AND PROPOSED SITE LINE PROTECTION SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- 5. ALL EXISTING AND PROPOSED SITE LINE PROTECTION SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

SITE PLAN SYMBOLS

- 1. EXISTING PAVEMENT
- 2. PROPOSED PAVEMENT
- 3. EXISTING CURB
- 4. PROPOSED CURB
- 5. EXISTING SIDEWALK
- 6. PROPOSED SIDEWALK
- 7. EXISTING DRIVE
- 8. PROPOSED DRIVE
- 9. EXISTING ROAD
- 10. PROPOSED ROAD
- 11. EXISTING STREET
- 12. PROPOSED STREET
- 13. EXISTING HIGHWAY
- 14. PROPOSED HIGHWAY
- 15. EXISTING AIRWAY
- 16. PROPOSED AIRWAY
- 17. EXISTING FENCE
- 18. PROPOSED FENCE
- 19. EXISTING WALL
- 20. PROPOSED WALL
- 21. EXISTING TOWER
- 22. PROPOSED TOWER
- 23. EXISTING SIGN
- 24. PROPOSED SIGN
- 25. EXISTING LIGHT
- 26. PROPOSED LIGHT
- 27. EXISTING UTILITY
- 28. PROPOSED UTILITY
- 29. EXISTING TREE
- 30. PROPOSED TREE
- 31. EXISTING PLANT
- 32. PROPOSED PLANT
- 33. EXISTING LANDSCAPE
- 34. PROPOSED LANDSCAPE
- 35. EXISTING FURNITURE
- 36. PROPOSED FURNITURE
- 37. EXISTING STRUCTURE
- 38. PROPOSED STRUCTURE
- 39. EXISTING EQUIPMENT
- 40. PROPOSED EQUIPMENT
- 41. EXISTING OBSTACLE
- 42. PROPOSED OBSTACLE
- 43. EXISTING HAZARD
- 44. PROPOSED HAZARD
- 45. EXISTING DANGER
- 46. PROPOSED DANGER
- 47. EXISTING WARNING
- 48. PROPOSED WARNING
- 49. EXISTING INFORMATION
- 50. PROPOSED INFORMATION
- 51. EXISTING SIGNAGE
- 52. PROPOSED SIGNAGE
- 53. EXISTING LIGHTING
- 54. PROPOSED LIGHTING
- 55. EXISTING SECURITY
- 56. PROPOSED SECURITY
- 57. EXISTING ACCESS
- 58. PROPOSED ACCESS
- 59. EXISTING EGRESS
- 60. PROPOSED EGRESS
- 61. EXISTING ENTRANCE
- 62. PROPOSED ENTRANCE
- 63. EXISTING EXIT
- 64. PROPOSED EXIT
- 65. EXISTING DOOR
- 66. PROPOSED DOOR
- 67. EXISTING WINDOW
- 68. PROPOSED WINDOW
- 69. EXISTING ROOF
- 70. PROPOSED ROOF
- 71. EXISTING FLOOR
- 72. PROPOSED FLOOR
- 73. EXISTING CEILING
- 74. PROPOSED CEILING
- 75. EXISTING WALL
- 76. PROPOSED WALL
- 77. EXISTING COLUMN
- 78. PROPOSED COLUMN
- 79. EXISTING BEAM
- 80. PROPOSED BEAM
- 81. EXISTING JOIST
- 82. PROPOSED JOIST
- 83. EXISTING TRUSS
- 84. PROPOSED TRUSS
- 85. EXISTING RAFTER
- 86. PROPOSED RAFTER
- 87. EXISTING GIRD
- 88. PROPOSED GIRD
- 89. EXISTING BRACE
- 90. PROPOSED BRACE
- 91. EXISTING HANGAR
- 92. PROPOSED HANGAR
- 93. EXISTING TRUSS
- 94. PROPOSED TRUSS
- 95. EXISTING RAFTER
- 96. PROPOSED RAFTER
- 97. EXISTING GIRD
- 98. PROPOSED GIRD
- 99. EXISTING BRACE
- 100. PROPOSED BRACE

PARKING COUNT

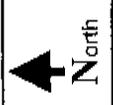
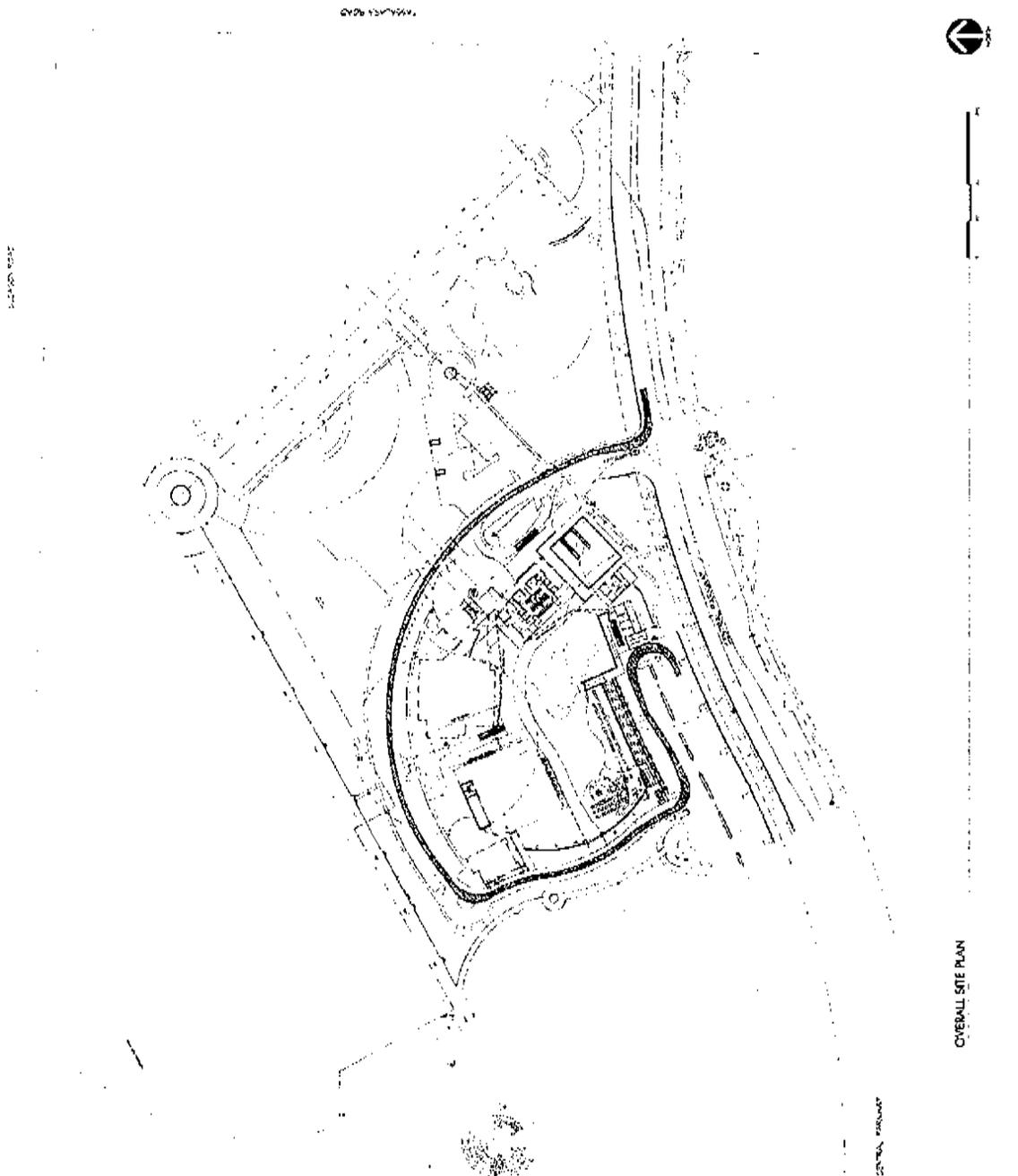
TYPE	LOCATION	AREA	TYPE	AREA	TYPE	AREA
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9
10	10	10	10	10	10	10
11	11	11	11	11	11	11
12	12	12	12	12	12	12
13	13	13	13	13	13	13
14	14	14	14	14	14	14
15	15	15	15	15	15	15
16	16	16	16	16	16	16
17	17	17	17	17	17	17
18	18	18	18	18	18	18
19	19	19	19	19	19	19
20	20	20	20	20	20	20
21	21	21	21	21	21	21
22	22	22	22	22	22	22
23	23	23	23	23	23	23
24	24	24	24	24	24	24
25	25	25	25	25	25	25
26	26	26	26	26	26	26
27	27	27	27	27	27	27
28	28	28	28	28	28	28
29	29	29	29	29	29	29
30	30	30	30	30	30	30
31	31	31	31	31	31	31
32	32	32	32	32	32	32
33	33	33	33	33	33	33
34	34	34	34	34	34	34
35	35	35	35	35	35	35
36	36	36	36	36	36	36
37	37	37	37	37	37	37
38	38	38	38	38	38	38
39	39	39	39	39	39	39
40	40	40	40	40	40	40
41	41	41	41	41	41	41
42	42	42	42	42	42	42
43	43	43	43	43	43	43
44	44	44	44	44	44	44
45	45	45	45	45	45	45
46	46	46	46	46	46	46
47	47	47	47	47	47	47
48	48	48	48	48	48	48
49	49	49	49	49	49	49
50	50	50	50	50	50	50
51	51	51	51	51	51	51
52	52	52	52	52	52	52
53	53	53	53	53	53	53
54	54	54	54	54	54	54
55	55	55	55	55	55	55
56	56	56	56	56	56	56
57	57	57	57	57	57	57
58	58	58	58	58	58	58
59	59	59	59	59	59	59
60	60	60	60	60	60	60
61	61	61	61	61	61	61
62	62	62	62	62	62	62
63	63	63	63	63	63	63
64	64	64	64	64	64	64
65	65	65	65	65	65	65
66	66	66	66	66	66	66
67	67	67	67	67	67	67
68	68	68	68	68	68	68
69	69	69	69	69	69	69
70	70	70	70	70	70	70
71	71	71	71	71	71	71
72	72	72	72	72	72	72
73	73	73	73	73	73	73
74	74	74	74	74	74	74
75	75	75	75	75	75	75
76	76	76	76	76	76	76
77	77	77	77	77	77	77
78	78	78	78	78	78	78
79	79	79	79	79	79	79
80	80	80	80	80	80	80
81	81	81	81	81	81	81
82	82	82	82	82	82	82
83	83	83	83	83	83	83
84	84	84	84	84	84	84
85	85	85	85	85	85	85
86	86	86	86	86	86	86
87	87	87	87	87	87	87
88	88	88	88	88	88	88
89	89	89	89	89	89	89
90	90	90	90	90	90	90
91	91	91	91	91	91	91
92	92	92	92	92	92	92
93	93	93	93	93	93	93
94	94	94	94	94	94	94
95	95	95	95	95	95	95
96	96	96	96	96	96	96
97	97	97	97	97	97	97
98	98	98	98	98	98	98
99	99	99	99	99	99	99
100	100	100	100	100	100	100

REVISIONS

NO.	DATE	DESCRIPTION
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

OVERALL SITE PLAN

DATE: 08/08/00
DRAWN: J. J. JENSEN
CHECKED: J. J. JENSEN
DATE: 08/08/00



Project Site Plan

figure 12



omni-means

LONG-TERM CUMULATIVE (YEAR 2035) STUDY CONDITIONS

LONG-TERM CUMULATIVE METHODOLOGY

The long-term cumulative year 2035 conditions were derived from The Village At Dublin report cumulative projections. As with the near-term methodology, the Year 2035 volumes were generated using the City of Dublin's Transportation Model. The model reflects projected traffic growth with Year 2035 buildout of the City's General Plan. The Year 2035 conditions for this study include the Year 2035 volumes derived from The Village study, plus The Village project trips, and The Green project trips. Those studies evaluated the AM and PM peak time periods. The mid-day and Saturday volumes were generated for this study by increasing the volumes at each intersection in proportion to the increases in the PM peak hour from existing to Year 2035 volumes.

The transportation model forecasted trips for the Emerald Glen Park were based on a "Park" land use with trips generated by fifteen employees. The vehicle trips calculated for this project were added to the model volumes without deducting for the trips already included in the model in order to remain conservative.

The Year 2035 projections include anticipated roadway and intersection improvements as described in The Village and The Green reports (in addition to the near-term improvements). The improvements to the locations evaluated for this study include the following:

Tassajara Road: Widening of Tassajara Road to six lanes between Fallon Road and Dublin Boulevard.
Widening of Tassajara Road to eight lanes between Dublin Boulevard and the I-580 Ramps.

Hacienda Drive: Widening of Hacienda Drive to four lanes between Gleason Drive and Central Parkway.
Widening of Hacienda Drive to six lanes between Central Parkway and Dublin Boulevard.

Dublin Boulevard/Tassajara Road Intersection: Addition of two northbound through lanes on Tassajara Road; addition of an eastbound through lane on Dublin Boulevard; converting the existing westbound through/right turn lane on Dublin Boulevard to separate through and right turn lanes.

Dublin Boulevard/Hacienda Drive Intersection: Conversion of the existing westbound through/right turn lane on Dublin Boulevard to separate through and right turn lanes. Conversion of an existing northbound right turn lane on Hacienda Drive to a through lane.

Hacienda Drive/Central Parkway Intersection: Addition of a southbound through lane on Hacienda Drive. Conversion of the existing northbound through/right turn lane to a through lane and addition of a northbound right turn lane extending from the Dublin Boulevard intersection.

The cumulative Year 2035 intersection lane geometries are shown in Figure 13. The Year 2035 (no project) peak hour volumes are shown in Figure 14.

CUMULATIVE YEAR 2035 (NO PROJECT) CONDITIONS

Cumulative year 2035 (no project) peak hour intersection LOS are shown in Table 8. As calculated, the two Dublin Boulevard intersections would operate at LOS E-F during the peak hour periods. All other project study intersections would operate at LOS D or better during each peak hour period.

The project access driveway intersections would operate at LOS B or better during all periods, except the Central Parkway/Killian Street driveway intersection northbound approach which would operate at LOS C during the PM peak hour.

The LOS operating conditions at the intersections on Dublin Boulevard are primarily due to significant increases in traffic along Dublin Boulevard corresponding with high turning volumes emanating south of Dublin Boulevard. This is likely due to the large projects proposed for East Dublin (Dublin Crossings/Camp Parks) and the transportation model's tendency to load traffic onto parallel alternative routes to I-580 when freeway volumes increase.

CUMULATIVE YEAR 2035 PLUS PROJECT CONDITIONS

The Year 2035 plus project volumes are presented in Figure 15 and the calculated intersection LOS are listed in Table 8. The eight intersections operating at LOS D or better without the project would continue to operate acceptably at LOS D or better with the project. Delays at these intersections would increase by three seconds or less, with several experiencing no change in delays.

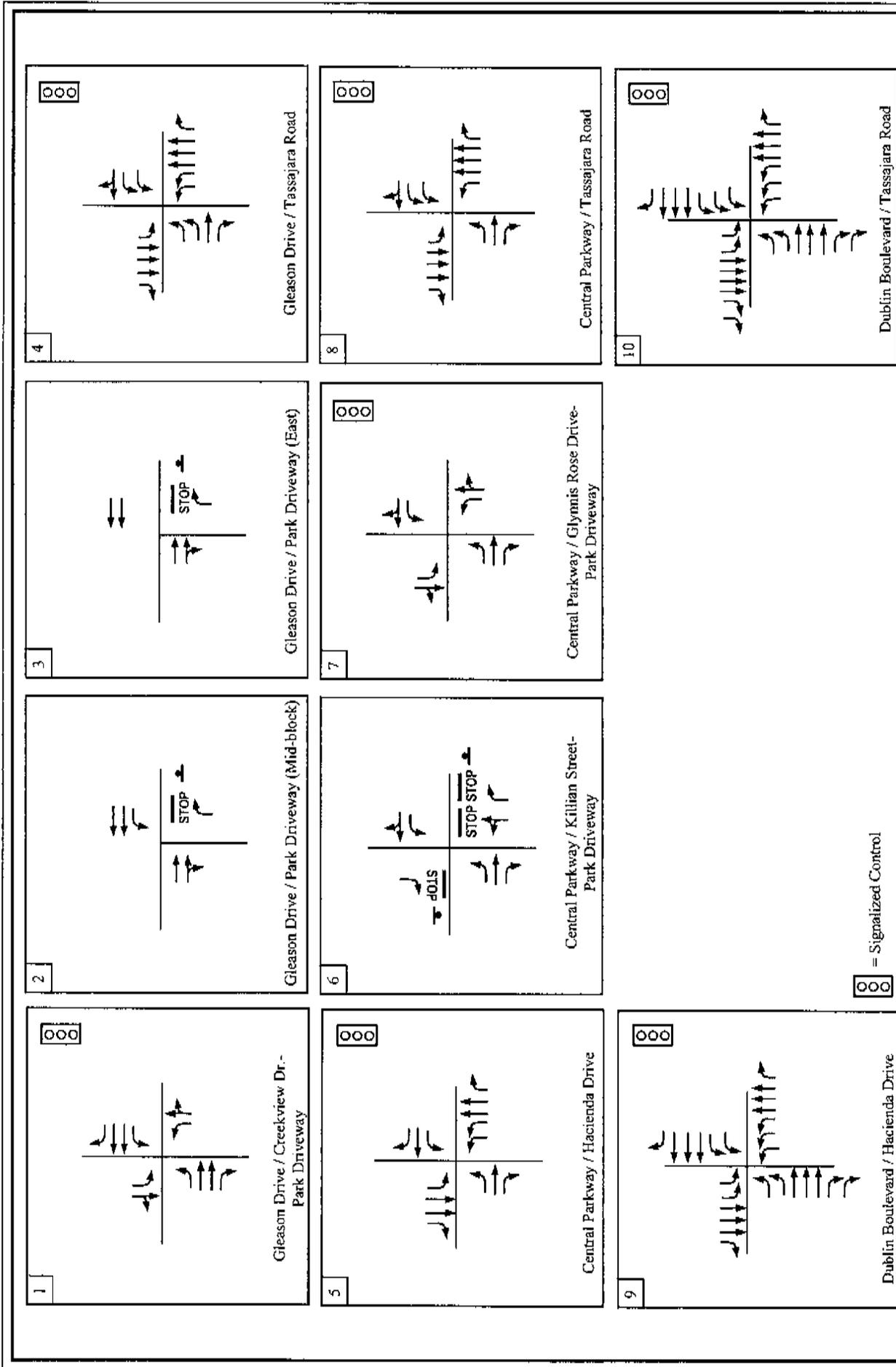
The two Dublin Boulevard intersections would continue to operate at LOS E-F with the same LOS conditions as "no project" conditions, with no delay increases at the Dublin Boulevard/Hacienda Drive intersection and a small (0.1 second) increase at the Dublin Boulevard/Tassajara Road intersection. The project would add less than 50 trips to either intersection during any peak hour. Therefore the project impact is not considered significant.

The unsignalized intersections were analyzed for peak hour signal warrants. The intersections would not qualify for signalization under MUTCD peak hour warrant criteria.

**TABLE 8
CUMULATIVE YEAR 2035 CONDITIONS: PEAK HOUR INTERSECTION LOS**

Intersection	Weekday Mid-day		Weekday PM		Saturday Peak	
	Year 2035	Year 2035 +Proj.	Year 2035	Year 2035 + Proj.	Year 2035	Year 2035 +Proj.
Gleason Drive / Driveway – Creckview Dr.	B 10.9	B 10.9	A 9.0	A 9.1	A 8.7	A 8.7
Gleason Drive / Driveway (mid-block)	nb rt: A 9.6 wb lt: A 8.0	A 9.6 A 8.0	B 10.2 B 9.5	B 10.2 B 9.6	A 9.3 A 8.0	A 9.3 A 8.0
Gleason Drive / Driveway (east)	nb rt: A 9.6	A 9.6	B 10.7	B 10.8	A 9.3	A 9.4
Gleason Drive / Tassajara Road	B 17.9	B 18.1	C 27.5	C 28.9	B 19.3	B 19.5
Central Parkway / Hacienda Drive	C 26.0	C 27.9	C 25.6	C 28.9	C 23.1	C 25.4
Central Parkway / Driveway – Killian St.	sb: B 10.4 nb: B 11.1 wb lt: A 7.7 eb lt: A 8.0	B 10.9 B 12.1 A 7.8 A 8.2	B 11.2 C 18.8 A 8.9 A 8.3	B 12.0 C 21.2 A 9.0 A 8.4	B 11.0 B 15.0 A 7.7 A 8.0	B 11.5 C 16.3 A 7.7 A 8.1
Central Parkway / Driveway – Glynnis Rose	B 11.8	B 12.7	B 14.3	B 15.3	B 11.8	B 12.1
Central Parkway / Tassajara Road	C 31.1	C 31.8	D 38.9	D 40.9	C 27.5	C 27.5
Dublin Boulevard / Hacienda Drive	D 52.4	D 52.2	F 148.5	F 148.5 45 trips	F 136.3	F 136.3 26 trips
Dublin Boulevard / Tassajara Road	F 133.9	F 134.1 18 trips	F 182.7	F 182.5 17 trips	E 59.8	E 59.9 10 trips

Intersection LOS based on HCM 2000 methodology and yields a vehicle delay in seconds.



Year 2035 Lane Geometries and Intersection Controls

