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March 12, 2012

Ms. Jing Yeo, AICP
Special Projects Manager
City Planning Division
1685 Main Street, Room 212
Santa Monica, CA 90401

Re: Bergamot Transit Village Draft Environmental Impact Report

Dear Ms. Yeo:

The Santa Monica Coalition for a Livable City (SMCLC) submits the following comments on the Draft Environmental Impact Report (DEIR) for the Bergamot Transit Village, through the law firm of Strumwasser & Woocher LLP. SMCLC is a nonprofit, entirely volunteer group of Santa Monica residents concerned about unsustainable commercial development in the City and its effects on traffic and quality of life. SMCLC has serious concerns regarding the size of the proposed project — which appears to be one of the largest in Santa Monica's history — and its significant, negative impacts in an already gridlocked area, the cumulative effect of the proposed project and the numerous other large projects already under consideration or in development for the area around the proposed project, and the failure of the DEIR to adequately assess the proposed project's conformity with the currently-in-progress Bergamot Area Plan for the 140 acres surrounding and including the proposed project's seven-acre site, or in light of a regional plan that addresses appropriate development in the City of Santa Monica and nearby areas of Los Angeles.

The DEIR's list of significant, unmitigable traffic impacts confirms that the proposed project at 26th and Olympic is simply too massive for the City's existing infrastructure. The DEIR fails to adequately analyze the proposed project's impacts on traffic, land use, hazardous waste, climate change, and cumulative impacts, among others. Indeed, as to climate change, if the City were to certify the standards set forth in this DEIR for greenhouse gas (GHG) emissions, and apply the same standard to other projects, it could not meet its stated goal of its Sustainable City Plan. In addition, the DEIR defers consideration of key mitigation measures to later approvals, in violation of CEQA's requirement that the entirety of a proposed project's impacts be evaluated and mitigated, if necessary. What's more, the DEIR's alternatives analysis fails to consider an appropriate range of reduced project alternatives that would achieve the majority of the proposed project's objectives, without the massive, unmitigable impacts that will

result from the construction of the present proposal. Finally, the DEIR is seriously lacking as an informational document, failing to present information in meaningful form so that it can be readily understood by decisionmakers and the public alike. These deficiencies prevent the DEIR from serving the purpose that CEQA intends: fully informing decisionmakers and the public about the impacts that the project will have on the environment, and the ways in which alternative proposals may avoid those impacts while achieving the same objectives. The DEIR must be substantially revised to meet CEQA's requirements as a matter of law.

The DEIR should be revised and recirculated, but not until the City has completed the Bergamot Area Plan and prepared a program EIR for the Bergamot Area Plan that addresses the full regional impacts of all of the planned development in this critically congested neighborhood (one that also includes a substantive, verifiable traffic mitigation strategy). The City's Land Use and Circulation Element (LUCE) of the General Plan requires not only full development of the Bergamot Area Plan, but also *regional collaboration* on large projects with significant impacts. (LUCE, p. 4.0-55, Goals T15, Policies T15.5 & T15.8.) The City itself has insisted on such collaboration and significant traffic mitigation when commenting upon large projects adjacent to the City. It is only by awaiting the preparation of the Area Plan, and the regional collaboration that preparation of such a plan would entail, that the project's conformity with this important planning document can be accurately measured.

I. THE DEIR DOES NOT ADEQUATELY ANALYZE THE IMPACTS OF THE PROPOSED PROJECT

It needs almost no mention that an accurate analysis of the environmental impacts of a proposed project is a *sine qua non* of an adequate environmental impact report (EIR). The DEIR fails this basic requirement, offering analysis that overlooks serious potential impacts from the project. Such shoddy analysis defeats the objectives of CEQA. A fundamental purpose of CEQA is for decisionmakers and the public to be made aware of the significant environmental impacts of a proposed project before any action is taken on that project. (*Laurel Heights Improvement Association of San Francisco, Inc. v. Regents of the University of California (Laurel Heights I)* (1988) 47 Cal.3d 376, 390-391; Pub. Resources Code, § 21100.) "The purpose of requiring public review is to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action Public review permits accountability and informed self-government." (*Schoen v. Department of Forestry and Fire Protection* (1997) 58 Cal.App.4th 556, 573.) "Because the EIR must be certified or rejected by public officials, it is a document of accountability. If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees." (*Laurel Heights I*, 47 Cal.3d at p. 392.)

The DEIR must be revised to accurately address the impacts that the proposed project is likely to have on the environment, or else the public and decisionmakers will not be provided with the information necessary to reach an informed decision on the implications of approving this massive project. The DEIR does not come close to "scrupulously follow[ing]" CEQA as

required by law.

A. *Traffic and Transportation Impacts Are Not Properly Analyzed*

The proposed project, after taking “credits” for reductions in traffic due to the supposed implementation of “aggressive” transportation demand management measures, will generate over 7,700 vehicle trips per day as measured in 2012. In 2030, with credit in place for the Expo line, the project will still generate nearly 7,600 trips per day according to the DEIR’s own traffic calculations. Moreover, the City has either approved or is in the process of reviewing numerous additional development agreements for projects in this area of Santa Monica. As shown in Exhibit 1, the combined square footage that has been approved or is currently under consideration is over 2,000,000 square feet, leading to a resulting 24,000 daily trips into and out of this small area. And, of course, this is only the beginning, with additional projects anticipated in this area. Already the I-10 ramps are operating at failing conditions at peak hours. And this congestion contributes to a regional problem, as the City’s Land Use and Circulation Element (LUCE) notes:

“[C]ongestion on the Westside is among the worst in the nation, limiting the amount of people our streets and highways can move.”

The DEIR does not appear to fully take into account the impact of an additional 24,000 trips in this area, or region-wide. According to the DEIR, this project and all of the related projects will have impacts on traffic and the transportation grid over a wide-ranging area, including as far away as Montana Avenue and Barrington Avenue to the north, and Centinela Avenue and Venice Boulevard to the south. Of the 97 intersections evaluated in the DEIR’s traffic study, 25 are forecasted to be significantly impacted by traffic from the proposed project under current (year 2012) conditions. The map of impacted intersections — conspicuously absent from the DEIR — shows impacts far to the north and south of the project site. (See Exh. 2.)

Even worse, the DEIR identifies mitigation measures for less than half of the impacted intersections — the remainder are classified as significant, unmitigable impacts resulting from the project’s approval. In an area that is already choked with traffic, the approval of a project with such significant and widespread impacts to traffic, which the DEIR states are “unmitigable,” must be approached with the greatest of care. The DEIR’s analysis does not sufficiently reveal the magnitude of the potential traffic impacts, nor does it adequately evaluate the ways in which those impacts might be mitigated.

The errors and omissions in the analysis of the proposed project’s cumulative impacts to traffic is especially concerning to SMCLC. CEQA requires that an EIR discuss the “cumulative impacts” of a project, meaning that those impacts “created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” (Cal. Code Regs., tit. 14 (Guidelines), § 15130, subd. (a)(1).) “Proper cumulative impact analysis is vital ‘because the full environmental impact of a proposed project cannot be gauged in a vacuum. One

of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.” (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1214 (*BCLC*) [quoting *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 114].)

“[C]onsideration of the effects of a project or projects as if no others existed would encourage the piecemeal approval of several projects that, taken together, could overwhelm the natural environment and disastrously overburden the man-made infrastructure and vital community services. This would effectively defeat CEQA’s mandate to review the actual effect of the projects upon the environment.” (*Las Virgenes Homeowners Federation, Inc. v. County of Los Angeles* (1986) 177 Cal.App.3d 300, 306.) The proposed project itself is no small source of traffic. Its effect, combined with the effects of numerous other planned projects, must be assessed together to properly and fully state the likely impacts of construction and operation. Yet the DEIR contains inconsistent information regarding the projects considered in the cumulative analysis of traffic and appears to have omitted nearby large projects from consideration, failing to satisfy CEQA’s requirements for cumulative impact analysis.

The analysis of Tom Brohard, P.E., is enclosed with these comments as Exhibit 3, and should be responded to along with SMCLC’s other comments in the Final EIR. Mr. Brohard is a Professional Traffic Engineer with over 40 years of engineering experience, including extensive work in the areas of traffic engineering and transportation planning. Mr. Brohard analyzed the DEIR’s traffic analysis and found it lacking in several critical regards.

Significantly, it is not possible to determine whether the DEIR adequately analyzed the cumulative impacts of the proposed project and the numerous other developments in the area. The DEIR states that the list of cumulative projects considered in the traffic impact analysis is in Appendix G to “the traffic study.” (DEIR, p. 4.16-36.) Appendix G contains only 45 projects. At the same time, Table 3-2 of the DEIR contains 110 projects, 42 of which are on the list in Appendix G. Which is the correct list of cumulative projects? Which list of projects was included in the traffic study’s assessment of cumulative impacts? Without answers to these questions, the public reviewing the DEIR cannot know whether the project’s cumulative impacts were correctly analyzed. This is a serious failure in the informational value of the DEIR to the public and decisionmakers. If an incomplete list was utilized as it appears from the face of these Appendices and Tables, the DEIR must be revised and recirculated. If a different list was used than is stated, the DEIR also must be revised to show the specified cumulative projects and be recirculated.

Moreover, the list of cumulative projects in Table 3-2 (the longer of the lists), is itself incomplete. The DEIR fails to include relevant projects within the study area in the City of Los Angeles, including other large commercial projects that are likely to generate traffic on the same streets that are the subject of the traffic study. These projects include the Green Hollow Square project in Brentwood and other large projects in Marina del Rey. Likewise, there are new projects in Santa Monica that are not included on the list, including a project at Pico and 34th

Street, which will include nearly 200,000 square feet of development, including 300 apartments and 554 parking spaces. These projects will likely generate traffic within Santa Monica and nearby areas of Los Angeles, in the vicinity of the traffic generated by the proposed project.¹ The analysis of cumulative traffic impacts must be revised comprehensively to include *all* foreseeable projects in both Santa Monica and nearby parts of Los Angeles, in order to ensure that the EIR accurately identifies all potentially significant impacts on the transportation grid.

The DEIR also omits analysis of other critical infrastructure elements that will impact the flow of traffic nearest the project. For instance, the DEIR fails to address the impact of surface level operations of the Expo line on key intersections in the vicinity of the project, particularly at 26th Street and Stewart Street.² Mr. Brohard explains that the failure to account for the delays associated with at-grade crossings incorrectly inflate the capacity of these intersections to accommodate additional vehicles. A proper analysis may reveal that the reduced capacity of key intersections leads to additional impacts attributable to the project.

As to parking, the draft Development Agreement, excerpts of which are attached as Exhibit 4, allows the developer, in its sole discretion, to build the parking spaces (1,800 according to the DEIR; 2,000 according to the draft Development Agreement) on-site or none on-site, or a figure in between, with any parking not on-site to be provided “long term” in the nearby area — all undefined. The different impacts on traffic based on these different scenarios is not analyzed in the DEIR as it must be.

Mr. Brohard also notes that the traffic study errs in failing to rely upon an appropriately conservative trip generation scenario. The study takes a reduction in trip generation for “creative” office space, an undefined and unenforceable category of use. According to the DEIR,

¹The list in Table 3-2 also omits the following projects, some of which are several years old:

- 2020 Virginia Avenue (21-unit condo)
- 1047 Ninth Street (3-unit condo)
- 1533 Eleventh Street (5-unit condo)
- 1218 Lincoln (24-unit residential, 1,600 sq. ft. retail)
- 1318-1324 2nd Street (28,103 sq. ft. mixed use, 56 units, 6,840 sq. ft. retail)
- Fourth & Colorado (56 units, 4,159 sq. ft. retail)
- 1447 Lincoln (addition of 4,333 retail)
- 819-829 Broadway (addition of 3,000 sq. ft. retail)

²While the DEIR frequently references reductions in traffic due to Expo, and contends that the City’s Future Year 2030 model includes “traffic shifts due to planned street modifications” for Expo (DEIR, p. 4.16-36), as well as street reductions on Colorado (*id.*, p. 4.16-37), the DEIR nowhere indicates that the effects of grade level street crossings in the eastern portion of the City have been included in the traffic analysis, nor that the DEIR has addressed increased traffic in the vicinity of the planned Expo stations.

“creative” office space generates less traffic because such employees have less typical hours than those at general office buildings. The DEIR contains no information as to how the “creative” office designation will be enforced, nor whether there will be any real assurance that such “creative” users actually do intend to employ individuals on a non-typical schedule. It is noteworthy that in the draft Development Agreement the definition of “creative office” is so broad as to encompass any number of ancillary uses. For instance, “creative office” uses include “entertainment related professional services,” “creation/manufacturing/distribution of biotechnology,” “software production or distribution and other computer-related or technology facilities,” “research and development activities for medical testing, technology industries, clean energy, ‘green’ technologies or industries, and other emerging technologies or industries,” “child care centers, health clubs, and gymnasiums,” and “all uses relating to, ancillary to and supportive of,” all the listed uses. (See Exh. 4, at Exh. L.) Additionally, the draft Development Agreement terminates at its Term. From a traffic generation standpoint, the DEIR provides little support that each of the uses (or the myriad others listed in the draft Development Agreement) would have a reduced trip generation profile that the traffic study credits to the “creative office” use that occupies the lion’s share of the proposed project. Mr. Brohard’s analysis demonstrates that applying the more conservative “office” trip generation factor would result in a six to seven percent increase in trip generation, which could have an impact on the cumulative impacts analysis. Moreover, it is not clear whether this “creative” office trip generation factor is applied to other projects in the Bergamot area considered in the cumulative analysis. The traffic analysis may significantly understate the traffic generation potential of the various new projects by reliance on trip reductions that depend upon unenforceable restrictions on use.

The DEIR’s traffic analysis also errs in its reliance upon criteria of significance for the superceded street designations used in the old General Plan for the street segment analysis. Because criteria for significance have not yet been established under the LUCE, the DEIR relies upon the criteria of significance based upon the street designations for the superceded General Plan. As an example, Olympic Boulevard is designated a Parkway in the LUCE (from Lincoln Boulevard to the eastern border). The LUCE requires that streets designated as Parkway “prioritize landscape character and continuous bikeway and pedestrian paths over vehicle capacity or vehicle delay.” (LUCE, p. 4.0-21.) However, the DEIR utilizes the threshold of significance for “Arterial” streets for street segment analysis of Olympic. As Mr. Brohard explains, this approach makes it impossible to determine if the street segments are appropriately analyzed under the LUCE, because the street designations in the LUCE do not correspond to any of the significance thresholds used in the DEIR. The City must adopt thresholds of significance that conform to the LUCE’s street designations, and then reconsider the street segment analysis. Only this approach will ensure that the considerations that underlay the designation of streets in the LUCE are appropriately weighed when determining the proposed project’s impact on the City’s streets.

An additional defect in the DEIR that pervades the project description, the traffic study, and the development of mitigation measures is the reliance upon entirely unspecified “TDM” measures. The DEIR’s project description includes as an “ancillary” project feature the “preparation and implementation of a Transportation Demand Management plan, which would

provide trip reduction strategies to be implemented by the applicant.” (DEIR, p. 3-9.) The DEIR provides a list of various TDM strategies that could, in theory, be incorporated into the plan. The reliance upon this vague list of measures as a project description fails to meet the legal standard required by CEQA. “An accurate, stable and finite description of a project is basic to an informative and legally sufficient EIR. A curtailed or distorted description of the project may ‘stultify the objectives of the reporting process.’” (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 738 [citation omitted].) What exactly is comprised in the TDM plan that is supposedly part of the project and how long must this Plan be in effect? The DEIR entirely fails to specify.

The draft Development Agreement provides some guidance as to what these TDM measures may consist of (see Exh. 4 at Exh. K), although since the draft Development Agreement is not part of the DEIR, this document is no substitute for an accurate and complete project description. Moreover, the draft Development Agreement reveals that the measures are mere aspirational goals, with little to no enforceability and they end at the Term of the Development Agreement. What’s worse, the draft Development Agreement permits construction to be delayed for as long as 18 to 20 years from the date of approval. Thus, even this traffic analysis may be entirely irrelevant by the time the project is completed. It is impossible to state with any certainty what the traffic implications of the project will be so far in the future, and thus the open-ended Development Agreement is particularly inappropriate.

The reliance on the non-specific TDM measures compromises the traffic study as well. By reducing the project’s trip generation potential as a result of the unspecified TDM plan (a clear indication that the TDM plan is part of the project itself), the traffic analysis appears to understate the true trip generation potential, in the absence of an analysis that considers *specific* TDM measures and the calculable reductions in trip generation from such measures. Moreover, given the lack of teeth in the measures set forth in the draft Development Agreement, as discussed above, there is little to no evidentiary basis for the DEIR to take such significant reductions in traffic generation on the basis of these measures. Finally, reliance upon the TDM measures to mitigate the project’s impacts on traffic inappropriately defers the development of mitigation measures to a later date, in contrast to CEQA’s requirements, as discussed in detail below.

B. *Climate Change Impacts Are Not Addressed Due to Use of an Inappropriate Threshold of Significance*

In order to meet state and local objectives to halt the trend of global warming, we must reduce the production of greenhouse gases (GHGs) to a small fraction of the present levels. The City’s policy regarding climate change reflects this aspiration, requiring, among other things, to plan development to reduce the need for vehicle trips, to reduce the City’s greenhouse gas emissions and climate change impacts, and specifically to reduce greenhouse gas emissions from land use and transportation decisions. (See, e.g., LUCE Goals LU 2, S1, & S2.) The Santa Monica Sustainable City Plan has set a Citywide target for reducing GHG emissions to 785,649 metric tons of carbon dioxide by 2015, for a goal of 15 percent below 1990 levels. Yet the DEIR

inexplicably applies the most relaxed impact threshold for GHGs and erroneously concludes that the proposed project's impacts are insignificant. The DEIR fails to fully disclose the proposed project's GHG impacts and does not adequately mitigate them.

Potential thresholds of significance for GHG emissions have been developed by the California Air Pollution Control Officers Association (CAPCOA), California Air Resources Board (CARB), the State Office of Planning and Research (OPR) and air district resources, as the DEIR acknowledges. (See DEIR, p. 4.7-23.) The range of thresholds of significance is as low as zero tons, to a 900-ton threshold, and then up to a 10,000-ton threshold. The DEIR elects the very highest threshold, the 10,000-ton threshold, as its threshold of significance, reasoning that the lower thresholds are inappropriate for projects located in a highly urbanized area. Given that the effects of global climate change are not in any way localized, this reasoning is suspect. Under this rationale, all new development in Santa Monica can continue to emit up to 10,000 metric tons of carbon dioxide equivalent GHGs each year, rendering it literally impossible for the City to achieve its goals under AB 32 and the objectives of the Sustainable City Plan of reducing GHG emissions to below 1990 levels. This cannot be the approach the City intends to adopt when dealing with climate change. Nor does CEQA Guidelines section 15130 (a) authorize this approach, as the DEIR misleadingly implies. That section simply states that "where an agency is examining a project with an incremental effect that is not cumulatively considerable, a lead agency need not consider that effect significant." The provision is not specific to climate change and does not provide support for the use of a non-zero threshold where the incremental effect of continually increasing GHG emissions is, in fact, significant.

Moreover, the DEIR's calculations of the climate change impacts of the proposed project are unclear at best. The DEIR states that the proposed project will add an unmitigated 12,342.15 metric tons per year of carbon dioxide equivalent GHGs in its operational phase. (DEIR, p. 4.7-27.) Conceding that this sum would exceed even the highly conservative threshold of significance chosen in the DEIR, it applies "mitigation measures" that it claims will reduce the emissions to 9,991.82 metric tons of carbon dioxide equivalent GHGs. It then concludes that the project's impact on climate change will be less than significant. However, the DEIR's projection falls below the threshold of significance by the minuscule amount of 8/10,000th, or 0.0008. The DEIR relies entirely upon the fact that the climate change impact is only 99.9 percent of 10,000, not 100 percent, in concluding that the project will not present a significant impact to climate change.

It would be deficient, highly inappropriate, and embarrassing for the City to ever certify an EIR that claims that a project's impacts as to GHGs is "insignificant" based on the use of the highest standard which, if applied, would cause the City to be unable to meet its own Sustainable City Standard — and which is also based on an emission reduction that is not only impossible to verify but also so minuscule as to be meaningless (0.08 percent).

Further, it is difficult to discern from the DEIR how exactly the reductions in greenhouse gas emissions were calculated. A number of statutory obligations are listed. Are the reductions due to compliance with these statutes (which is, of course, not optional) included in the

unmitigated 12,000 metric tons or are those emissions offset by the mandatory actions that the developer would be undertaking anyway? While the net result may be the same, as an informational document, the DEIR should not give the developer “credit” for mitigating GHGs when the actions it is taking would be required by state law. The DEIR also relies on the unspecified TDM measures to reduce the GHG emissions associated with mobile sources. The DEIR does not fairly disclose how the proposed project will reduce GHG emissions from any baseline and understates the impact of the increased GHG emissions from the proposed project by employing the highest possible threshold of significance. Given that the proposed project, even as mitigated, is a mere 0.08 percent from a significant impact under this most highly permissive threshold (and one that if applied will not permit the City to meet its goals of being a Sustainable City), the analysis of climate change reductions should be more transparent so that the decisionmakers and the public may evaluate the accuracy of the claimed emissions reductions.

C. *Land Use Conflicts Must Be Assessed Against an Appropriate Baseline: The Bergamot Area Master Plan*

CEQA requires that an EIR discuss “any inconsistencies between the proposed project and the applicable general plans and regional plans.” (CEQA Guidelines, § 15125, subd. (d).) An impact on land use is significant if the proposed project will “[c]onflict with any applicable land use plan, policy, or regulation . . . adopted for the purposes of avoiding or mitigating an environmental effect.” (CEQA Guidelines, App. G.) The DEIR does not — and cannot, at the present time — properly evaluate the impacts of the proposed project on the City’s plans. The proposed project is located in an area in which the City, funded in significant part by the U.S. Department of Housing and Urban Development (HUD), is developing the Bergamot Area Plan called for by the General Plan’s Land Use and Circulation Element (LUCE). As a legal matter — and as a matter of sound public policy and urban planning — the DEIR puts the cart way before the horse when it makes a finding that the proposal will not have a significant impact on land use plans. The answer to that question is simply impossible to know at this time. Moreover, because the seven-acre parcel on which the project is planned is the largest in the entire Bergamot Village area, the approval here may have profound negative impacts on the City’s ability to prepare an Area Plan that achieves the City’s stated goals for the area and which can feasibly be implemented.

The Bergamot Area Plan arose as a result of the revision of the Land Use and Circulation Element (LUCE) of the City’s 1984 General Plan, a process which began in 2004 and took six years to complete. As of 2010, basic city planning for special districts, including the largest special district in the City — 140 acres of industrial land known as the Bergamot Area — was in the very preliminary stages. Comprehensive planning needed to develop a master plan for the area includes, but is not limited to, utilities and infrastructure, an appropriate street grid; urban design standards such as building heights and setbacks, locations of various uses, including office, arts, affordable housing, and open space; the development of shared parking, transit access and linkages; a vehicle trip reduction program; and environmental review. In June 2010, the City adopted the LUCE without approving a Master Plan for the Bergamot Area. LUCE

itself contains very little in the way of land-use planning, except as to requiring 60/40 commercial to residential in the Bergamot Transit Village District where this project is located, and three tiers of building heights, dependent on the level of community benefits proposed.

In August 2010, the City submitted an application to HUD for a Tiger II/HUD grant to “complete a master plan for the Bergamot Station area.” (Exh. 5.) The City was awarded a Community Challenge Planning Grant in November, and work is ongoing under the grant with a timetable of 2014 for completion of the plan, related zoning, and environmental review. In announcing the Grant, HUD recognized that “[t]he Master Plan is a critical component of the citywide vision to integrate land use and transportation to achieve reduced greenhouse gas emissions, reduce per capita vehicle miles traveled, and create a sustainable local community.” The Master Plan “will connect Santa Monica to the densely populated Los Angeles Westside.” (HUD FY2010 Community Challenge Planning Grants Summary.) The Master Plan divides the Bergamot Area into three subareas: Bergamot Station Arts Center, Bergamot Transit Village District, and Mixed-Use Creative District. The proposed project is located in the area designated as the Bergamot Transit Village District.

The City’s application for the grant disclosed as an existing condition and “barrier[] to overcome” that “the project area contains very little residential housing stock. To transform to a truly mixed-use transit village, it is imperative that a *variety of housing choices* are made available to people of all income levels and ages.” (See *id.*, Narrative at p. 2.) The application also noted as a challenge in the area: “Disconnected redevelopment. Numerous proposals for redevelopment have been made for properties in the project area but are not coordinated to ensure the housing and commercial use mix, connectivity, reuse of existing facilities, and amenities necessary to create a liveable community.” (*Id.* at p. 3.) The application then sets specific, numeric standards for the provision of housing in order to achieve its goal of promoting “equitable, affordable housing.” “The plan will provide a 60/40 commercial to residential ratio in the Bergamot Transit Village, and a 50/50 commercial to residential ratio (allowing a 5 percent deviation) in the Mixed-Use Creative District.” (*Id.*, p. 4.) The proposal includes concrete means of evaluating compliance with this goal.

The City has begun its efforts to develop the Bergamot Area Plan, selecting and retaining numerous consultants and holding community meetings. But at the same time, the City has already approved two Development Agreements for properties in the Mixed-Use Creative District, for the Agensys and Colorado Creative Studio/Lionsgate projects. The proposed project at issue here is just one among six or seven proposed projects in the area seeking Development Agreements. (See Exh. 6.) In internal memoranda, the City has expressed concern over the large number of Development Agreements planned for this area *in the absence of specific planning guidelines*. On November 9, 2010, then-Planning Director Eileen Fogarty wrote: “The Planning for the Bergamot Area Plan is happening concurrently with the processing of a series of Development Agreements. Therefore, *it is important* that the city accelerate portions of the planning so that *the planning guides the review of the DAs rather than the DAs directing the Area Plan.*” (Exh. 7, p. 1.) Among the critical planning issues that Ms. Fogarty identified as needing resolution to guide the review of future Development Agreements are the street scape

format, setbacks of buildings from streets, permissible height limits in this area, the permissible length limits of buildings along street fronts, what design characteristics are desirable for buildings fronting the newly created internal roadways, how to create a “village” identity in the district, and what if any structural or non-structural elements should be preserved in the area to establish an “industrial and creative arts” context. (See *id.* pp. 2-3.) In spite of the City’s clear recognition that planning standards are necessary in order to guide the review of projects like the one proposed in the DEIR, the City is considering the approval of this project and several others without any such planning guidelines in place.

It is not acceptable under CEQA, nor is it sound policy, to continue the aggressive pace of reviewing new development proposals while simultaneously attempting to develop an important planning document that is designed to create a specifically envisioned community in a limited geographic area. With the proposed project in particular, the seven-acre parcel is by far the largest available in the Bergamot Transit Village district for development in the foreseeable future (as well as in the entire 140-acre area subject to the City’s current planning efforts).

The fact that this is the largest parcel that is likely to be developed in the Bergamot Transit Village district is critical when LUCE housing standards and the goals of the HUD grant are considered. Among other goals set forth, the City has clearly described the Bergamot Transit Village as “[a] LUCE district directly north of Bergamot Station, currently industrial and envisioned as a walkable transit-oriented village with target for 60 percent commercial and **40 percent residential development.**” (Exh. 5, at p. 2 of the Application Narrative [emphasis added].) The City noted in its application narrative that the provision of sufficient housing is critical for the area: “With the exception of some forms of artist housing, the project area contains very little residential housing stock. To transform to a truly mixed-use transit village, it is imperative that a variety of housing choices are made available to people of all income levels and ages.” (*Ibid.*) Moreover, the City committed to “promote equitable, affordable housing: in the plan area, including a specific commitment to the 60/40 commercial to residential ratio.” (*Id.* at p.4.) “The desired outcome is the construction of new mixed-use developments in the master plan area that significantly increase the number of affordable, workforce, and market-rate housing units” (*Ibid.*) These commitments in the HUD application underscore the importance of the provision of sufficient housing — and in particular, affordable housing — in this area of the City.

The project proposes only 29 percent housing on the site, not 40 percent. (See discussion at Section II, *infra.*) It is a village only in the sense that a series of large office buildings that add over 550,000 square feet would constitute a “village.”

This makes the need for a Master Area Plan even more critical. Without having prepared the area plan prior to assessing the project’s impacts, it is not possible for the City to know whether it can achieve its goals as established in the HUD application. Given the relative size of this parcel to others in the Bergamot Transit Village district, it would be foolish for the City to commit to a project that will lock into place a housing deficient commercial office building and

prevent the development of the true “village” that the City aspires to locate in this area.³ The DEIR cannot be said to adequately evaluate the project’s consistency with land use plans while the Area Plan remains a series of commitments without meaningful standards. The approval of this project must await a final Area Plan.

Furthermore, the proposed project is inconsistent with numerous policies in the Land Use and Circulation Element (LUCE). The LUCE has a number of laudable and aspirational goals and policies. The DEIR does not contain sufficient information to assess whether the proposed project meets those goals. It is therefore not possible on the basis of the information contained in the DEIR to determine whether the approval of the project will conflict with the environmentally beneficial goals as established in the LUCE. This is evident in a review of LUCE policies regarding traffic reduction, parking, and regional collaboration. It is also unclear the extent to which the project’s design is consistent with the LUCE’s standards for the Bergamot Transit Village.

The LUCE establishes, as it puts it, “a bold goal” of no net new evening peak hour trips. (LUCE, p. 4.10-11.) The LUCE promises that the City will “[m]eet our own regional responsibility by reducing our own vehicle trips to the greatest extent practical, with the goal of No Net New Evening Peak Period Vehicle Trips.” (*Id.*, at p. 4.0-10.) To achieve this, the LUCE promises that “[f]or every new vehicle trip generated in Santa Monica — either as an origin or destination — the City commits to eliminating an existing trip by providing current residents and employees with better transportation choices.” (*Id.*, at p. 4.0-11.) The LUCE states that the City will require strong TDM requirements and “keep[] closer track of program results,” to generate the trip reductions it requires in order to permit new development to take place while meeting the “no net new trip” goal. (*Ibid.*) The LUCE specifically states that the Bergamot Transit Village area “offer[s] significant potential for further trip reduction,” and thus the LUCE has “a higher goal for demand management.” (*Id.*, at p. 4.0-58.) The LUCE has specific policies designed to achieve this goal, including the imposition of TDM requirements (T19.2), the encouragement of local-serving retail uses (T19.5), and the use of LUCE performance standards to govern TDM programs (T21.3). (See LUCE, pp. 4.0-63-64.)

The DEIR’s flaccid discussion of the TDM measures hardly lives up to the LUCE’s heavy reliance upon such measures to achieve considerable traffic reductions in the City and alleviate congestion without use of physical street improvements. The DEIR does not identify with any specificity what TDM measures will be required of the project, and therefore cannot possibly assess the traffic reductions that will be generated by the use of the to-date-unknown measures. How can the DEIR possibly state the project’s implementation will be consistent with

³Moreover, the proposed project plans to begin the development of streets that will break up its large parcel. In the absence of a master plan for the area, it is unclear at this time whether the placement of streets is in line with the future plans for other properties and for other streets. A much more appropriate course would be for the City to identify its preferred street plan and require the developer to accommodate that plan with its project.

the LUCE's goal of no net new evening peak hour trips?

The LUCE also requires a new approach to parking, viewing parking as scarce resources that must be allocated carefully. To that end, the LUCE encourages the use of shared parking. For example, the LUCE calls upon property owners of commercial parking to share that parking when it is vacant (for instance, at night) with nearby residents. (LUCE, p. 4.0-69.) The LUCE also provides that the Bergamot Transit Village will serve as a model for shared parking facilities. (*Id.*, at p. 2.6-36, Goal D23.) Other LUCE policies generally encourage shared parking that is "open to all motorists, regardless of whether they are customers, employees or tenants of a building, with the same parking prices, restrictions, and privileges as building occupants." (*Id.* at pp. 4.0-72-73, Policy T26.1.) Yet the draft Development Agreement and the DEIR are silent on whether the proposed project would provide shared parking. Since the draft Development Agreement permits the developer to provide some or all of its parking off-site, those scenarios, and their impact on shared parking would also have to be analyzed in the DEIR, but are not. Shared parking may have different demands on the transportation grid. For instance, would patrons of the future Expo line use shared parking provided in the facility? The DEIR must analyze whether the project intends to provide the type of shared parking encouraged by the LUCE and whether doing so would have any additional impacts on the surrounding area.

Very significantly, the LUCE recognizes that the congestion problems in Santa Monica cannot be addressed in a vacuum; regional collaboration is required and is repeatedly invoked as a goal in the LUCE. "Ultimately, the elimination of congestion in Santa Monica is outside of the City's control and requires a regional strategy." (LUCE, p. 4.0-13.) Thus, the LUCE promises to "[c]ollaborate with surrounding jurisdictions to seek appropriate mitigation measures to minimize the potential negative impacts on Santa Monica from projects in surrounding jurisdictions." (*Id.*, at p. 4.0-55.) Indeed, in 2009, the City commented upon the proposed project in the City of Los Angeles known as Bundy Village, expressing grave concern over the traffic impacts of that project on Santa Monica and seeking assurances that the City would be compensated by the developer for its fair share of the burden of the increased congestion caused by the project. (See Exh. 8.) Yet the City will impose the same impacts on Los Angeles that it so decried in 2009 by approving the proposed project and the others in the pipeline for this area so near the border of the City. The City is not living up to the goals it set for itself in the LUCE, nor is it acting towards its neighbor as it has asked to be treated in the past. The City must work with Los Angeles towards the development of a regional plan that addresses development and traffic management measures in order to achieve the LUCE's objectives and reduce the congestion in Santa Monica's neighborhoods.

Finally, even in the absence of an appropriate specific plan for the Bergamot Village Transit Area, the DEIR does not determine whether the project conforms to the LUCE's standards. The LUCE requires that the ratio of residential to nonresidential uses in this area be 40 to 60. (LUCE, p. 2.1-42.) The DEIR does not analyze how the project would meet this objective or how it would fit into a plan to meet this objective. The design requirements in the LUCE are aimed at improving the pedestrian experience, requiring a scale that "create[s] an enhanced sidewalk or walking environment" and that new development be "built to the sidewalk

with minimal or zero setback.” (*Ibid.*) The DEIR does not analyze the specifics of the proposed project’s design because it is at this time merely conceptual. To determine compliance with these objectives, a more final design must be analyzed and addressed in the DEIR.

D. *Hazardous Waste and Water Quality Impacts from Past Uses of the Site Must Be Fully Remediated Prior to the Commencement of Construction*

The DEIR’s discussion of hazardous materials and water quality acknowledges the significant contamination that has already been identified at the site in the form of PCE and VOC contaminated soil and groundwater. The DEIR explains that VOC contaminated groundwater and soil are already under treatment via soil vapor extraction techniques. (DEIR, p. 4.8-7-9.) The DEIR also notes that off-site sources of VOC contamination appear to have contributed to on-site contamination, although it appears from the DEIR that the off-site source of the VOC contamination remains unknown. (*Id.* at p. 4.8-9.) It is unclear from the DEIR the extent to which current treatment efforts are remediating the VOC contamination that is of off-site origin. The DEIR does not discuss the status of PCE or TCE remediation at the site, and should be updated to indicate what, if anything, has been done to address this significant source of groundwater and soil contamination. Moreover, the DEIR does not appear to discuss whether there is any potential impact on the City drinking water wells that are less than 1,000 feet from the proposed project. Will any mitigation measures be in place to ensure that drinking water quality is not affected by any of the on-site construction activities? The DEIR should be revised to address this issue and recirculated for comment.

The DEIR appears to require, in Mitigation Measure 4.8-2, that all investigation *and* remediation be completed prior to the issuance of a grading permit. (DEIR, p. 4.8-23.) Because remediation is currently being conducted under the supervision of the Los Angeles Regional Water Quality Control Board, a complete closure report from that agency is necessary to demonstrate that the remedial efforts have adequately addressed the contamination at the site. SMCLC supports such an approach, which would ensure the protection of nearby residents, students at nearby schools and construction workers on the site during construction activities, as well as the future residents of the proposed project.

Whatever the intent of Mitigation Measure 4.8-2 may be, the wording of the measure itself requires clarification to ensure that the protective approach requiring full compliance and site closure prior to any construction is actually implemented by the applicant. The mitigation measure states that, prior to the issuance of grading permits, the developer shall conclude “all investigation and/or remediation activities.” The language should be phrased to require the completion of “all investigation *and* remediation activities,” as the developer should not be permitted to obtain a grading permit while remediation activities are ongoing. The measure goes on to note that “[i]t shall be the responsibility of the site developer(s) to complete such investigation and/or remediation prior to construction of the project.” This language should be modified to require the completion of investigation *and* remediation prior to *the commencement* of construction, to clarify that no construction activities may begin (particularly those activities involving the disturbance of soil and groundwater) until all remedial work is complete. The

mitigation measure then states that remediation “shall be completed prior to the issuance of any *occupancy* permits.” The reference to “occupancy” permits appears to be incorrect. The DEIR should require that remediation be completed prior to the issuance of *grading* permits, or prior to the commencement of construction. Only this approach will ensure that nearby residents, students at nearby schools, and construction workers are adequately protected from the sources of contamination in site soils and groundwater. This approach is also consistent with the final two sentences of the mitigation measure, which require closure reports to be submitted to the Santa Monica Fire Department and the City of Santa Monica Water Resources Division “*prior to the issuance of grading permits*” and state that “[n]o construction shall occur in the affected area” until the reports are submitted. This mitigation measure must be written so as to prevent the significant disturbance of soil and groundwater through construction activities until remedial activities at the site are concluded to the satisfaction of the agency that oversees such work. Without such assurances, the DEIR cannot state that the impacts of the project on hazardous water and water quality will be less than significant.

Significantly, the DEIR has no discussion of the timeline for required environmental remediation efforts on the site, including whether unanticipated or anticipated problems develop in the process, and no range of dates when the process will be complete so that a grading permit can be obtained. Without this, key information is not available to analyze when the project could be built.⁴

E. *Other Impacts Are Also Inadequately Analyzed*

The DEIR’s analysis of numerous other impacts is flawed. These include Air Quality, Public Services, and Housing and Population.

1. *Air Quality and Noise*

The DEIR fails to adequately analyze whether “sensitive receptors” — such as children age 14 and under — will be exposed “to substantial pollution concentrations” either during construction or operations of the proposed project. In addition to the residents along Colorado Avenue, there are sensitive receptors at nearby school and daycare facilities, including several that are closer to the project site than nearby residences. These facilities include Bright Horizons in the Water Gardens, Evergreen Community School, Hill & Dale Family Learning Center, and New Roads School. The DEIR must consider the exposure of the children at these facilities to

⁴ Similarly, as a general matter, there is no discussion and analysis as to when the developer is committed to begin to build any phase of the project, or in what sequence, or complete any phase. Indeed, the draft Development Agreement permits the developer to begin any time in the next 18-20 years, and build or not build the project, in its sole discretion, in whole or in part. The developer could, thus, not build the housing component of the project, or could build that portion years after the commercial part.

the noise and emissions from construction and operation and determine whether a significant impact may occur on this sensitive population.

2. Housing and Population

The DEIR fails to properly analyze the cumulative impact of population growth due to the project and other pending proposals in the City. The DEIR notes that the project will account for **53 percent** of the anticipated population growth in the City under Southern California Association of Governments (SCAG) projections for the City. (DEIR, p. 4.13-11.) Yet in its analysis of cumulative impacts, while conceding that the project together with all of the related projects on Table 3-2 would significantly exceed the SCAG projections, the DEIR concludes that the project will not have a cumulative impact on population growth because the sum total of all of these projects is within the expected development foreseen in the LUCE. The analysis in the DEIR concludes that because the cumulative development in Table 3-2 will not exceed the LUCE-anticipated 3,079 housing units, the cumulative population increase will not be significant.

This analysis is lacking in several respects. First, the DEIR included no summation of the total housing units called for in Table 3-2, which lists over 100 projects. The burden is inappropriately shifted to the public to “double check” the assertion that the total units already in the pipeline is below LUCE thresholds. Table 3-2, as discussed above, is already out of date because it lacks newly proposed large developments. Moreover, the degree to which currently planned projects approach the LUCE threshold is relevant as well. If the City is already at 80 percent of 2030 development on the basis of planned projects in 2012, that fact should be known to the public and decisionmakers. This analysis must be revisited and a more detailed inquiry undertaken. Finally, the DEIR mentions only the LUCE threshold for housing units, not the LUCE anticipated population increase. Are the additional 5,850 residents estimated to be brought into the City by these combined projects also within the LUCE threshold?

In addition, the analysis of Housing and Population fails to provide sufficient information regarding the provision of affordable housing. The City has already stated an intention to provide affordable and workforce housing in the Bergamot Transit Village area. (See, e.g., Exh, 5, pp. 2, 4; LUCE, p. 2.6-34, Policy D.20.4.) The DEIR simply states that the project “would be subject to the City’s Affordable Housing Production Program” and lists the various means available for compliance. However, in order for the City to achieve its land use planning goals for this area, it is essential that affordable housing be provided on-site, not merely constructed elsewhere or excused by payment of a fee. The DEIR does not state whether *any* of the units will be for very-low-income, low-income, or moderate income households. Even more notable, considering the square footage devoted to residential use in the proposed project, the 224,272 square feet divided into 325 units will translate to units with an average square footage of approximately 690 square feet. This is the size of a large studio or an average one-bedroom

apartment.⁵ If the City truly wishes to provide workforce housing in this area, the sizes of the units and the types of units offered must be specified so that decisionmakers are aware whether sufficient units will be made available to families and various socioeconomic levels.

As to workforce housing, the draft Development Agreement does not provide for a single unit to be set aside for workforce housing, any reduction in rent for city workers or even a period of time where housing is only available to city workers. All that is proposed is an unspecified marketing plan (which one would expect in any event), and apartments generally sized apparently not for families. None of this is analyzed in the DEIR.

Only with sufficient information can the City determine whether its planning goals will be met. Because the provision of affordable and workforce housing are among the City's land use planning objectives for the area, the project's compliance with this goal must be evaluated under CEQA.

3. Public Services

While the DEIR's traffic analysis acknowledges the significant congestion that the project will cause at many of the intersections and street segments studied in the traffic analysis, the discussion of traffic conditions is largely confined to the traffic impact analysis. Unfortunately, for the residents of the City, traffic impacts are not so neatly cabined. Heavy traffic has an effect on all facets of life for those forced to endure it, but the effect is nowhere more devastating than when congestion delays the delivery of emergency response services. Yet the DEIR ignores this potential impact to emergency response services when analyzing the proposed project's impact on emergency response capacity.

II. THE DEIR DOES NOT ANALYZE AN ADEQUATE RANGE OF ALTERNATIVES TO THE PROPOSED PROJECT

An analysis of alternatives to a proposed project is a critical component of an EIR. Yet the analysis of alternatives in the DEIR is lacking, particularly of alternatives that would mitigate the significant traffic impacts of the proposal, or which would better meet the planning objectives espoused by the City in the LUCE as well as the Bergamot Area Plan process. "One of

⁵The Supplemental Traffic study provides further breakdown of the units, stating a planned 88 two- to three- bedroom units and 237 studio or one-bedroom units. This information does not appear in the discussion of housing impacts or in the body of the DEIR. Given this breakdown of units, applying an assumption of 1,200 square feet for the larger units, one is left with an average unit size of 500 square feet for the studio and one-bedroom units. These calculations do not include space for hallways and other common areas, so the units would likely be even smaller. The DEIR should include discussion of the effect of the unit sizes on the ability of the project to meet the City's objectives in providing workforce and affordable housing to all segments of the population.

[CEQA's] major functions . . . is to ensure that all reasonable alternatives to the proposed projects are thoroughly assessed by the responsible official." (*Wildlife Alive v. Chickering* (1976) 18 Cal.3d 190.197.) CEQA requires an analysis of a reasonable range of alternatives to a proposed project, "which could feasibly attain the basic objectives of the project. . . ." (Guidelines, § 15126, subd. (d).) Additionally, the EIR's discussion of alternatives must focus on alternatives that are capable of avoiding or substantially lessening any significant environmental impacts, even if those alternatives would be more costly. (*Id.*, § 15126.6, subd. (b).) As one court explained:

"The [alternatives] discussion must 'focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.' A major function of the EIR is to ensure thorough assessment of all reasonable alternatives to proposed projects by those responsible for the decision." (*Kings County, supra*, 221 Cal.App.3d at p. 733 (quoting Guidelines, § 15126, subd. (d)(3)).)

The alternatives analysis is particularly important where it may demonstrate that a feasible alternative has fewer impacts than a proposed project. Where there is a better alternative environmentally, the developer must present "evidence" that costs and profits lost are "so severe as to make the project impractical." As the *Kings County* court stated:

"An environmentally superior alternative cannot be deemed infeasible absent evidence the additional costs or lost profits are so severe the project would become impractical." (*Id., supra*, 221 Cal.App.3d at p. 736.)

The alternatives analysis serves an important purpose in providing the reviewing agency adequate information about feasible means to avoid impacts and gives the public a clear window into governmental decisionmaking about environmental impacts. "An EIR which does not produce adequate information regarding alternatives cannot achieve the dual purpose served by the EIR, which is to enable the reviewing agency to make an informed decision and to make the decisionmaker's reasoning accessible to the public, thereby protecting informed self-government." (*Id.* at p. 733.)

Courts have consistently concluded that discussion of an inadequate range of alternatives invalidates an EIR. (See, e.g., *Flanders Foundation v. City of Carmel-by-the-Sea* (2012) 135 Cal.App.4th 603, 615-617 [failure to respond to comment requesting study of alternative to proposed project that considers sale of historic property on smaller parcel of parkland invalidates EIR for failure to respond to comment addressing environmental issue]; *Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-603 [conclusion that alternatives to demolition of historic residence are not economically or legally feasible not supported by evidence]; *Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1355-1358 [analysis of reduced size alternative inadequate because record contains no evidence supporting conclusion that reduced size alternative is not feasible]; *Laurel Heights I, supra*, 47

Cal.3d at pp. 399-403 [EIR without sufficient discussion of alternatives is inadequate under CEQA.] The CEQA Guidelines require that the DEIR’s “discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” (Guidelines, § 15126.6.)

Surprisingly, the DEIR lacks a matrix comparing the proposed project and the various alternatives, a component that the CEQA Guidelines recommend. (*Id.*, § 15126.6, subd. (d).) SMCLC has prepared such a matrix. (See Table 1, below.) As can be seen when the alternatives are looked at in this manner, the range of alternatives studied is rather narrow. Excepting the

Table 1. Matrix of Project and Alternatives

	Proposed Project	Alternative 1 (No Project)	Alternative 2 (Existing Zoning)	Alternative 3 (Residential)	Alternative 4 (Reduced)
Total Square Feet	766,094	206,000	310,504	762,976	621,000
Residential Units	325	-	-	498	241
Residential Square Feet	224,272	-	-	358,000	166,000
% Residential	29%	0%	0%	47%	27%
Per Unit Square Feet	690.07	NA	NA	718.88	688.80
“Creative Office”⁶	494,927	-	93,000	375,585	430,000
Office	-	-	217,000	-	-
Retail	30,395	-	-	13,891	8,500
Restaurant	16,500	-	-	15,500	16,500
Open Space	83,978	-	-	83,978	83,978
Parking	1,800	-	not specified	1,800	1,581
Traffic Impact	25 HCM/ 12 CMA		17 HCM/4 CMA	24 HCM/ 11 CMA	24 HCM/ 11 CMA

⁶ Quotes are placed around “creative office” because the definition of it in the draft Development Agreement is so broad as to be able to include an extremely broad range of office and ancillary uses; the concept appears to be unenforceable, and in any event, expires at the term of the Development Agreement.

existing zoning alternative, the two “realistic” alternatives to the proposal are similar in scale to the proposed development. Alternative 3, the “Residential” alternative, is only 4,000 square feet smaller than the proposed project. Alternative 4, the “Reduced” alternative, is only 145,000 square feet smaller. Given the size and severe impacts of the project before the City, the alternatives set forth in the DEIR do not adequately evaluate the feasibility or environmental impacts of a truly reduced alternative. A genuinely scaled down proposal must be considered.

The alternatives also do not correspond with the Tiers 1 – 3 of the LUCE, so it is not possible to determine whether they meet the criteria or whether they are inconsistent with it. For example, as to Alternative 2 (Existing Zoning), LUCE specifies that if the project does not exceed two stories (32 feet with a 1.75 FAR), it does not have to build housing; but if the project proposes 39 feet or three stories under Tier 1, the additional third floor must be housing. (LUCE, p. 2.1-42.) In Alternative 2, the project would increase from 206,000 square feet vertically, to 310,504 square feet. The increase in mass would seem to require three stories and affordable housing, yet no housing is included in the analysis of Alternative 2. The DEIR appears to erroneously rely on prior zoning — not the current LUCE and updates to zoning which will follow LUCE — to avoid a housing component required under LUCE for Alternative 2. The DEIR thus fails to analyze the development of this alternative consistent with the requirements of LUCE.

Significantly, the descriptions of Alternatives 3 and 4 reveal the degree to which the DEIR fails to consider a reasonable range of alternatives to the proposed project. Both Alternative 3 and 4 are described as having the same footprint and orientation of buildings as the proposed project. (See DEIR 6-16, 6-35.) The two alternatives even have the same height as the proposed project, in spite of the supposed “reduced” nature of Alternative 4. Each of these alternatives has an identical impact on traffic, with 24 HCM and 11 CMA impacts measured against a 2012 baseline. (See DEIR 6-28, 6-46.) The proposed project will have 25 HCM and 12 CMA impacts, so the traffic impacts of all three are very nearly identical. Thus, these two “alternatives” fail to provide any true alternatives on this major negative environmental impact of the project. Unfortunately, they are not alternatives at all.

There is no genuinely reduced alternative to the project before the City, except perhaps Alternative 2, which may well require housing under LUCE because of its height. This is a failing of the DEIR. Would a smaller alternative that significantly reduced the traffic impacts associated with these mega-developments also meet the project objectives? Without this analysis, the City unfairly stacks the deck in favor of this large-scale construction, which has led the City to the point where further large projects all trigger a cascade of traffic impacts throughout the Westside. In fairness to its own citizens and to its neighbors, and to satisfy its requirement to consider a reasonable range of alternatives that would lessen or eliminate the unmitigable impacts of the proposed project, the City must consider a truly reduced alternative with different square footage, and height, and intensity of use. Anything less than such an analysis does a disservice to the informational objectives of CEQA and not meet the legal requirements.

The Alternatives analysis also lacks any discussion of the way in which the project or its alternatives might better satisfy the City's goal in the Bergamot Area Plan (as best as it can be surmised without the Plan itself or a regional plan). The discussion of Alternative 3, consistent with the DEIR's failure to address the City's housing goals for the Bergamot Transit Village, also ignores the potential benefits of an increased residential alternative, failing to note the extent which the greater amount of residential better satisfied the LUCE than the proposed project.⁷ As to Alternative 4, Table 1 illustrates, both the proposed project and the reduced alternative (4) fail to provide even close to the 40 percent residential ratio that LUCE requires and the City committed to in securing the HUD Grant and embarking on the Master Area Plan.

The analysis of the residential proposal and alternatives would be improved by a discussion of the potential unit sizes in the various developments. As Table 1 shows, the per unit size in each of the alternatives is not much greater than 700 square feet, with 718 square feet as an average unit size in the residential alternative (3). The City needs to revisit the discussion of the various residential components of the project and its alternatives to better frame what exactly would be provided as far as the types of units and whether any affordable housing is to be a part of the plans for this site.

It is important to remember the law here. As the *Kings County* court found, “[a]n environmentally superior alternative cannot be deemed infeasible *absent evidence*” that it is *impractical* even if it “would be *more costly*.” (*Id.*, *supra*, 221 Cal.App.3d at p. 733 [emphasis added].) **The DEIR fails to meet this standard, or provide any such evidence.** Indeed, the evidence is to the contrary, by the developer's own admission. After purchasing the property in 2007, news articles reported that Hines and its financial partner, Buchanan Street Partners, announced that it planned to replace the existing buildings with two- to four-story buildings for entertainment industry tenants within existing zoning. These plans were in keeping with the Lantana South and East projects that Hines developed just across the street on Olympic, and strongly suggest that even the developer initially believed that a smaller project would be feasible and appropriate at this location.

Finally, the alternatives lack any consideration of adaptive reuse of the existing structure. The “No Project” Alternative assumes that the facility will remain vacant, and the Existing Zoning alternative assumes that the facility will be reused as office space, with an additional story. The proposed project is located in an area of the City where old industrial structures may theoretically be re-purposed either as office or residential space (or a combination of both). The LUCE supports a City policy of adaptive reuse of City buildings, which also can conserve

⁷ Although Alternative 3 provides 47 percent residential, it is not possible to determine whether this alternative would permit the City to meet its overall goal of providing 60/40 commercial to residential in the 35-acre Bergamot Transit Village District as a whole, in light of existing built projects and the lack of any other identified development opportunity in this District.

environmental resources. Yet the DEIR fails to even consider whether such an approach is worthy of further analysis as an alternative. The DEIR should pay at least lip service to the potential for adaptive reuse of the existing structure, rather than entirely ignoring the concept as the DEIR currently does.

The DEIR needs to be revised to consider at least one appropriate alternative that is both reduced in size sufficient to avoid the unmitigable traffic and other environmental impacts from the project, and increased in its emphasis on residential. With that or those new alternatives, a proper analysis can be made to determine whether such a project would reduce or eliminate the project's significant, unmitigable impacts while meeting the objectives to a significant degree.

III. THE USE OF THE FLOAT-UP PROCESS INAPPROPRIATELY CONSTRAINED ANALYSIS IN THE DEIR AND CONSTITUTED INAPPROPRIATE PREDETERMINATION IN ADVANCE OF ENVIRONMENTAL REVIEW UNDER CEQA

A basic premise of CEQA is that environmental review begin at the earliest possible time, and well in advance of any project approvals. (CEQA Guidelines, § 15004.) The float-up process conducted for the proposed project in August 2011 lead to the City giving this large-scale version of the project its stamp of approval, without the benefit of environmental review under CEQA. This approach is contrary to the dictates of CEQA, and resulted in the inappropriately narrow DEIR that has been circulated for public review.

The Supreme Court has been clear regarding the need for early environmental review. In *Save Tara v. City of West Hollywood* (2008) 45 Cal.4th 116, 131, the Court explained that the timing of environmental review must not be "so late that such review loses its power to influence key public decisions." A significant city action in furtherance of a project with potentially significant environmental impacts may commit an agency to a project "as a practical matter," *even if* the agreement is specifically conditioned on subsequent CEQA review and other contingencies. (*Id.* at p. 132.) Nor may environmental analysis occur at the point at which "bureaucratic and financial momentum render it practically moot." (*Id.*, p. 130, fn. 9.) Nor should CEQA review be delayed to the point where it would "call for a burdensome reconsideration of decisions already made." (*Citizens for Responsible Government v. City of Albany* (1997) 56 Cal.App.4th 1199, 1221.) Otherwise, the risk is the drafting of an EIR "whose result will be largely to generate paper, to produce an EIR that describes a journey whose destination is already predetermined." (*Natural Resources Defense Council v. City of Los Angeles* (2002) 103 Cal.App.4th 268, 271.) The DEIR in this case is an illustration of a document that achieves this pointless and wasteful objective.

By signaling its approval of the large-scale project analyzed in the DEIR, the City created "bureaucratic and financial momentum" behind the proposal. Of course, the City has taken the public position that environmental review will be conducted and that the float-up process does not represent a final commitment to the proposed project. The courts recognize that agencies will make such statements and look to all of the factual circumstances surrounding an agency's

action to determine whether a premature approval took place. In fact, the San Diego Superior Court recently concluded that the approval of an MOU in advance of environmental review was inappropriate predetermination under CEQA, in spite of public comments by officials and statements in documents that the MOU was subject to CEQA compliance. (See *Save Our Heritage Organisation v. City of San Diego* (S.D. Sup. Ct. # 37-2011-00095579-CU-WM-CTL).) The DEIR is evidence of how the momentum behind the project has solidified plans at this early stage — the alternatives analysis does not genuinely consider a reduced alternative, and most obviously does not consider a reduced alternative that would provide an appropriate quantity of housing. The City's approving statements in the float-up process provided the necessary cover to generate an EIR that does not review genuine alternatives that would mitigate the significant impacts of the proposed project while satisfying the majority of the objectives set forth in the DEIR.

IV . THE DEIR INAPPROPRIATELY DEFERS DEVELOPMENT AND IMPLEMENTATION OF MITIGATION MEASURES

The DEIR fails in several respects to either develop appropriate mitigation measures or to ensure that mitigation is implemented in a timely fashion. This is most notable with regard to mitigation measures that address the significant impacts this project will have, on a local and regional level, on traffic.

A fundamental requirement of an EIR is that the proposed mitigation measures be made available for public review and comment before the EIR is certified. (*Gentry v. City of Murietta* (1995) 36 Cal.App.4th 1359, 1393.) The CEQA Guidelines explain that “[f]ormulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.” (Guidelines, § 15126.4, subd. (a)(1)(B).) However, mitigation measures may not rely upon unspecified plans, the results of future studies, or other analyses or assessments not included in the DEIR made available for public review without running afoul of CEQA. (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 306-307.)

The DEIR's reliance upon unspecified TDM measures to reduce the project's traffic impacts appears to be a disguised, and inappropriately deferred, mitigation measure. Although the project description includes the implementation of a TDM plan as a component of the project, the program would more appropriately be described as a means to mitigate the considerable traffic impacts of the project. The DEIR contains little to no information about the proposed TDM plan, other than a list of potential strategies. In order to properly determine the true extent to which these “robust” TDM measures will actually reduce the project's traffic generation, the measures must be specifically identified, and their effectiveness at reducing traffic actually quantified (including for how long the measures would continue and how they would be enforced). The wait-and-see approach utilized in the DEIR does not provide the level of disclosure required by CEQA. Rather, the DEIR provides the public with no assurance that the measures will actually be implemented, continued if initially implemented, or produce the traffic

reductions that the DEIR's entire traffic analysis is premised upon.

The draft Development Agreement (Exh. 4) contains a theoretical list of TDM measures. It is notable that the document contains little ability for the City to enforce these measures, particularly where the City has, in the past, done little to enforce the terms of other development agreements. While recently, in 2010, the City finally has begun to undertake some such compliance efforts, they are not a substitute for specifically identifying the TDM requirements as mitigation measures in the EIR. Such mitigation measures must be included in the mitigation monitoring program that is "designed to ensure compliance during project implementation." (Pub. Resources Code, § 21081.6.) The DEIR should be revised to specifically identify the required TDM measures, the length of time they would be required to continue, and include the measures as mitigation measures along with any penalties or other "robust" enforcement measures. The traffic analysis should be restructured to appropriately account for the performance of each of the required mitigation measures in reducing traffic, rather than applying a global reduction to the trip generation of the project without specific consideration of the traffic reduction that may realistically be achieved by each of the measures.

The DEIR also fails to ensure that the few traffic mitigation measures it does require will be implemented in a timely fashion. The DEIR notes that the project will be constructed in five separate phases, possibly over a 20-year timeline. The development of the project, according to the draft Development Agreement, may not even *begin* until 2030. The traffic analysis fails to consider the impact of this phased approach. (See Exh. 3, p. 3.) This is particularly critical when determining the implementation of the mitigation measures. At what point in this phased construction process will there be a significant impact at a given location? How many occupants are required before the traffic increase is great enough to require mitigation? The DEIR does not tell us. Will residents of the City and nearby neighborhoods in Los Angeles be required to await the completion of the whole project before the mitigation measures are in place? The DEIR and traffic study should be revised to analyze the impacts of each phase of construction and determine when and where mitigation is required as a result of each of the phases.

The evaluation and implementation of mitigation measures in the DEIR is also lacking. As Mr. Brohard explains, the DEIR inappropriately rejects mitigation measures that could address the traffic impacts of the project without sufficient analysis. For instance, the DEIR rejects without any explanation any mitigation that would require the narrowing of a sidewalk. As Mr. Brohard explains, it is possible to analyze whether narrowing a given sidewalk would significantly impact the pedestrian experience. The City should employ such analysis rather than consistently rejecting the mitigation measures that might improve the congestion caused by the large projects it approves. What's more, the DEIR rejects mitigation measures that would narrow the sidewalks in *Los Angeles*, a city that may have a different balance of competing needs. This is not a legitimate basis to reject appropriate mitigation measures and the DEIR should be revised with additional analysis as to the propriety of implementing measures that would reduce the traffic impacts at these congested intersections.

V. THE DEIR IS CONFUSING, POORLY ORGANIZED, AND CONTAINS AN UNCLEAR PROJECT DESCRIPTION

In addition to the analytic deficiencies described, the DEIR also fails to meet CEQA's objectives because it does not convey information in a manner that makes readily apparent the environmental impacts of the proposed project. The organization of the document leaves much to be desired, utilizing a confusing nomenclature for the DEIR's various Appendices. The DEIR itself has Appendices A-J (including an Appendix I1 and I2). Appendix I1 then itself has Appendices *also* labeled A through J. This is quite confusing for the reader, as references in the body of the DEIR to the various appendices are not always clear whether they are to the Appendices for the DEIR or for the Appendices to Appendix I1. It appears that the staff assembling the DEIR were also confused by the duplicative appendices, because the content included as Appendix J to Appendix I1, "Santa Monica Travel Demand Forecasting Model Trip Generation Rates," was also included, entirely duplicatively, as Appendix J to the DEIR. When the DEIR was first made available to the public, Appendix J to the DEIR did not include what it purported to contain, a "Water Treatment Permit Amendment Approval Letter." Although City staff remedied this problem when they were notified about it, the fact that the staff assembling the DEIR were themselves confused enough about the various labels for the appendices should be an indication that the document's organization suffers from the poor choice of labeling.

The constant references in the Project Description and elsewhere in the DEIR to an earlier project that is no longer before the City are likewise confusing. Moreover, the inclusion of the previous traffic study and thousands of pages of now-irrelevant information regarding the traffic impacts of a project that is no longer before the City makes public comment more difficult. Constant cross-reference between the two traffic studies was required for Mr. Brohard to conduct his analysis. (See Exh. 3.)

Finally, the DEIR lacks graphical and summary charts that would usefully present the impacts of the project as well as the analysis of the alternatives. Notably, there is no graphical representation of the significantly impacted intersections or street segments, although such maps were produced for the November traffic study. A map showing the sheer breadth and number of such intersections would convey far more than a mere list. Similarly, as mentioned in the discussion above of the alternatives analysis, that section lacks a summary chart of the various dimensions and impacts of the alternatives considered. Such a chart, as SMCLC discovered by preparing its own version, facilitates ready comparison and reveals the extent to which the alternatives studied do not depart in a meaningful way from the proposal that is currently before the City. The DEIR also fails to include meaningful metrics regarding the volume of traffic that will be generated by the proposed project, and other similar projects in the area. The DEIR should be revised to present information in a manner that is readily accessible to, and easy to understand, by decisionmakers and the public alike. Only then will the document satisfy the informational and disclosure goals of CEQA.

Ms. Jing Yeo, AICP

March 12, 2012

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VI. CONCLUSION

The DEIR is deficient in a number of critical ways. It does not accurately state the proposed project's impacts on the environment, fails to require mitigation for the project's serious impacts on the street grid and traffic, and fails to consider a reasonable range of alternatives that might avoid or significantly lessen those impacts, while better achieving the City's planning objectives for the Bergamot Area. The DEIR should be revised to address these material deficiencies, and recirculated for an additional period of public comment.

Respectfully,

A handwritten signature in cursive script, appearing to read "Beverly G. Palmer".

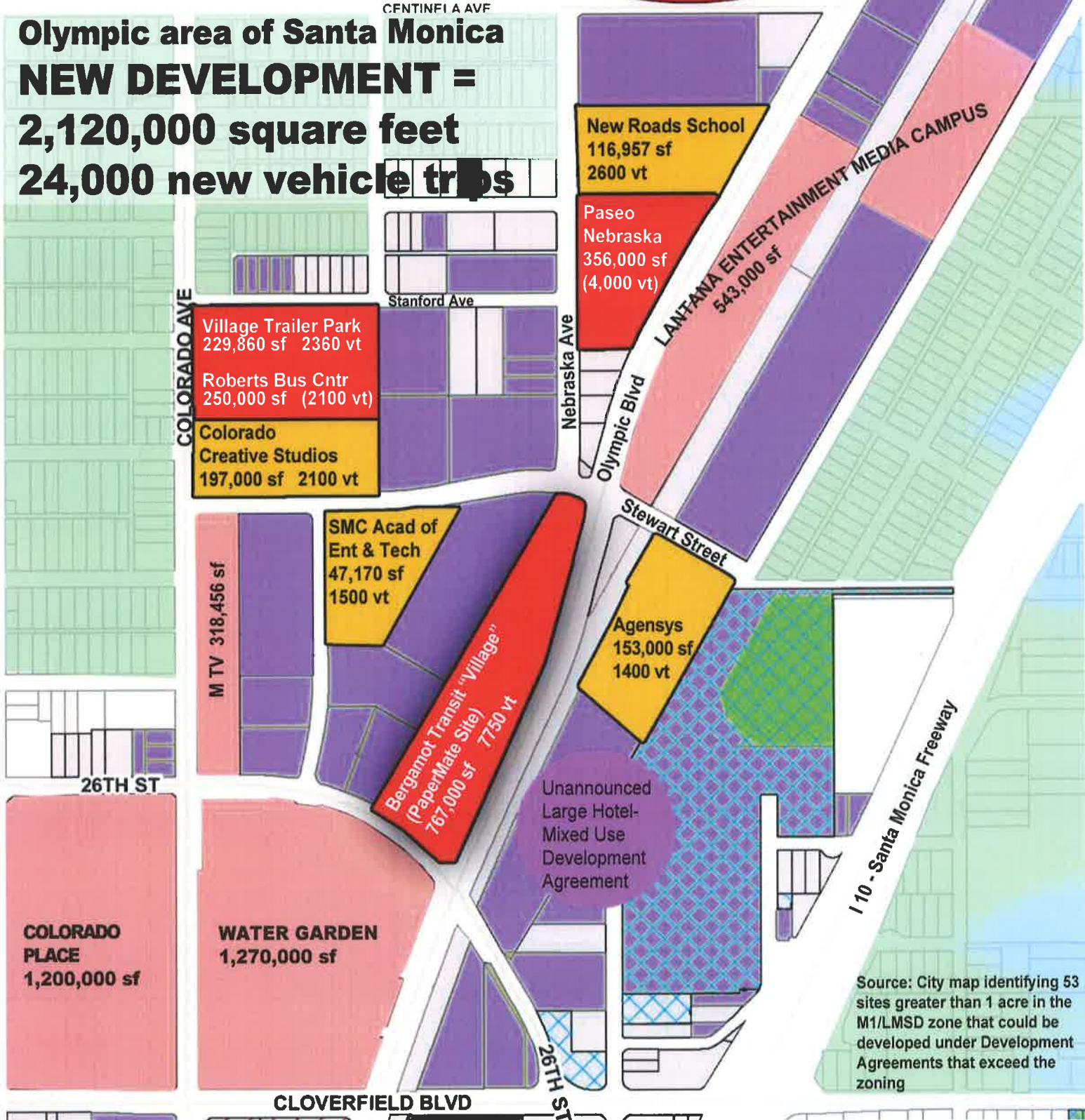
Beverly G. Palmer

EXHIBIT 1

- PENDING DEVELOPMENT AGREEMENTS
- APPROVED DEVELOPER AGREEMENTS
- BUILT WITH DEVELOPMENT AGREEMENTS
- CITY IDENTIFIED AS FUTURE DEV. AGREEMENTS
- RESIDENTIAL AREAS

LA: Olympic and Centinela/Bundy Project
 1,300,000 sf 20,000 vt (on hold)

Olympic area of Santa Monica
NEW DEVELOPMENT =
2,120,000 square feet
24,000 new vehicle trips



Source: City map identifying 53 sites greater than 1 acre in the M1/LMSD zone that could be developed under Development Agreements that exceed the zoning

EXHIBIT 2

2012 Plus Project Impacts (Santa Monica Method)

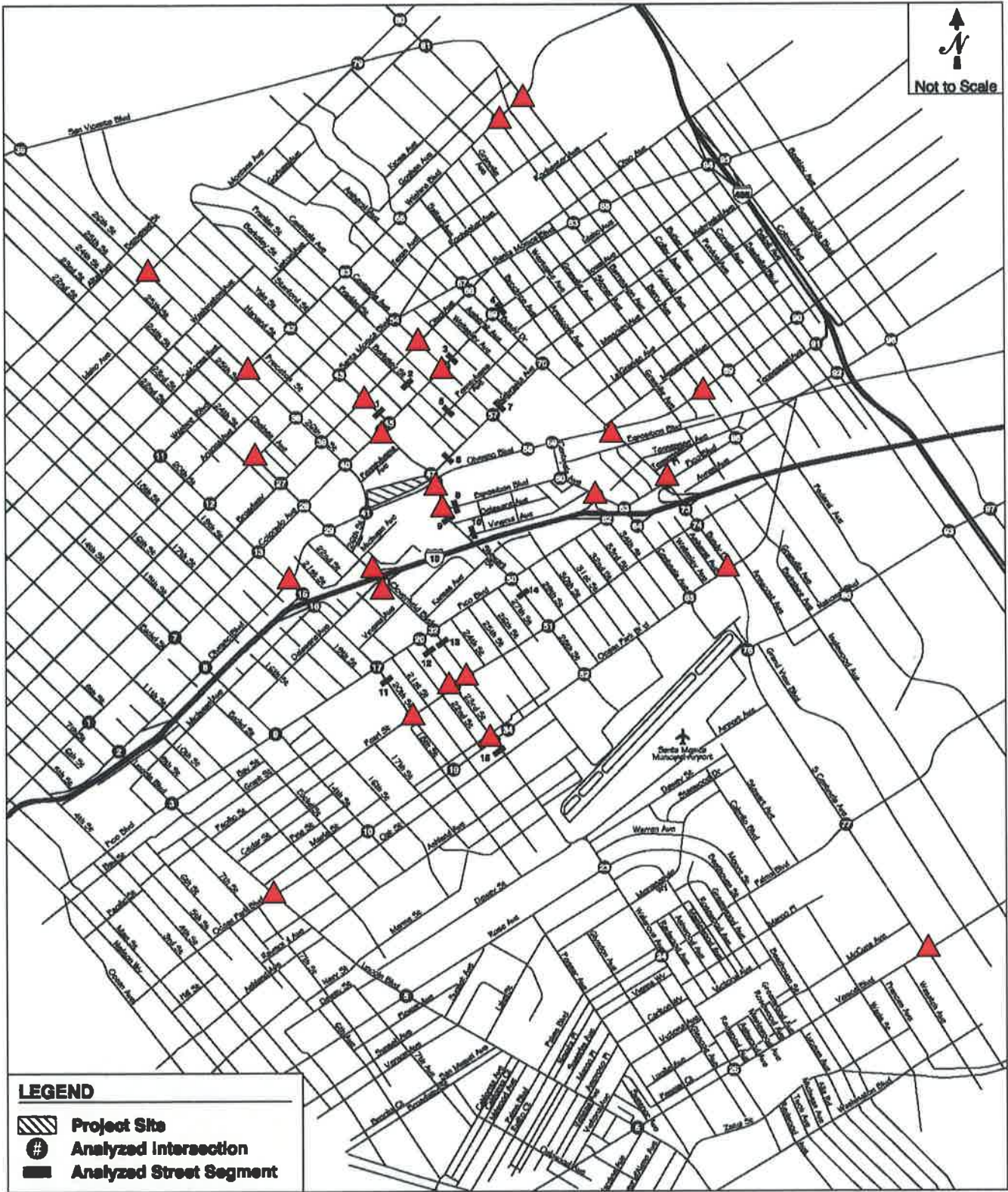


EXHIBIT 3

Tom Brohard and Associates

March 6, 2012

Beverly G. Palmer, Attorney at Law
Strumwasser & Woocher, LLP
10940 Wilshire Boulevard, Suite 2000
Los Angeles, California 90024

SUBJECT: Bergamot Transit Village Center Draft Environmental Impact Report (DEIR) in the City of Santa Monica – Transportation Issues

Dear Ms. Palmer:

I, Tom Brohard, P.E., have reviewed the various portions of the January 2012 Draft Environmental Impact Report (DEIR) prepared by Atkins for the Bergamot Transit Village Center (Proposed Project) in the City of Santa Monica including the Project Description (Chapter 3) and Transportation/Traffic (Chapter 4.16). My review focused on the technical documents prepared by Fehr & Peers including Appendix I1, the November 2011 Transportation Study for the previous project (November Study) and its appendices as well as Appendix I2, the January 2012 Supplemental Transportation Study (January Study) for the currently proposed project. In addition, I have also reviewed various comment letters in response to the City's Notice of Preparation (NOP) for the DEIR.

According to Page 7 of the January Study, the revised Project is expected to generate 7,755 daily trips in the near term. According to Page 4.0-8 of LUCE, the I-10 Freeway carries about 12,000 vehicles per hour when all six lanes are operating at 50 MPH. To put these numbers in perspective, it would take nearly 40 minutes for the forecast daily volume of the revised Project to pass by on I-10. Together with the other four projects already approved in the adjacent area, more than 15,000 new daily trips will result. Other projects in the immediate area, if approved in the future, could increase the number of new daily trips to 24,000, equal to two hours of traffic volume on the I-10 Freeway traveling at 50 MPH.

Further study must be undertaken to properly identify the transportation impacts of the Proposed Project. Unnecessary complexities within the DEIR must be eliminated and inconsistencies between the DEIR and the transportation analyses must be reconciled and corrected. Faulty methodology has been used to forecast the vehicle trips that will be generated and to identify the significant traffic impacts that will be created by the Proposed Project. In addition, mitigation measures are defective and/or improperly deferred, potentially feasible mitigation measures have been improperly dismissed as "infeasible" without proper analyses, and several critical transportation issues have been omitted from analyses in the DEIR.

Until the various issues and concerns raised in this letter are addressed, the environmental impacts of the Proposed Project will not have been properly

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disclosed, analyzed, and mitigated. Accordingly, the Bergamot Transit Village Center DEIR must be revised and recirculated.

Education and Experience

Since receiving a Bachelor of Science in Engineering from Duke University in Durham, North Carolina in 1969, I have gained over 40 years of professional engineering experience. I am licensed as a Professional Civil Engineer both in California and Hawaii and as a Professional Traffic Engineer in California. I formed Tom Brohard and Associates in 2000 and now serve as the City Traffic Engineer for the City of Indio and as Consulting Transportation Engineer for the Cities of Big Bear Lake and San Fernando. I have extensive experience in traffic engineering and transportation planning. During my career in both the public and private sectors, I have reviewed numerous environmental documents and traffic studies for various projects. Several recent assignments are highlighted in the enclosed resume.

Transportation Issues

Based on the information provided in the DEIR for the Bergamot Transit Village Center, my review indicates the following concerns and flaws in the transportation analysis, which must be corrected to properly disclose, analyze, and mitigate all of the transportation impacts of the Proposed Project:

- 1) DEIR Complexities and Inconsistencies – The transportation analyses presented in the DEIR, the November Study, and the January Study are unnecessarily complex and confusing. Without addressing the following items, the transportation analyses in the DEIR do not properly disclose, analyze, and mitigate the transportation impacts of the Proposed Project:
 - a) Unnecessary Complexities – During my career, I have reviewed hundreds of environmental documents and traffic studies for a variety of projects. In comparison to others, the Bergamot Transit Village Center DEIR and the supporting technical transportation materials are unnecessarily complex and confusing. The November Study focused on two land use options that are no longer being considered (957,521 square feet and 946,476 square feet) together with four different access scenarios, a total of eight different analyses. In the January Study, the current Project of 776,094 square feet was compared to the November Study. As a result, the DEIR includes thousands of pages of calculations that are no longer applicable to the current Project. By providing all these extraneous materials, the DEIR is overly complex and confusing, particularly for members of the public who have not been educated and professionally trained in transportation planning and traffic engineering. Review of the January Study also requires going back and forth to the November Study to fully understand

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the transportation analyses. In addition, the January Study does not provide even a simple map that clearly identifies those intersections that will be significantly impacted by the Project.

The California Environmental Quality Act, CEQA, requires that a DEIR must be able to be understood by members of the public. The Bergamot Transit Village Center DEIR is unnecessarily complex and confusing and by its nature inhibits meaningful comment from members of the public.

- b) Project Phasing - Page 3-11 of the DEIR indicates the project will be built in five phases over 20 years. The transportation analyses with project traffic added were done for the 2012 approval year and for the 2030 horizon year for eight different development options, seven of which are no longer being considered. This approach is unnecessarily complex and confusing, and does not properly address the Proposed Project.

CEQA requires mitigation measures to offset significant impacts resulting from a proposed project. Implementation of mitigation measures must be timely to offset the significant impacts as they occur. Based on the number of phases and the 20 years for buildout of the entire project, separate analyses must be conducted for each of the five major project phases so that impacts of each phase would be determined and appropriate mitigation measures would be installed in a timely manner as they are needed.

- c) Cumulative Development Projects - The lists of cumulative projects considered (Appendix G of the November Study and Table 3.2 in the DEIR) conflict with each other and are incomplete as follows:
- i) Appendix G – Page 4.16-38 of the DEIR refers to Appendix G of the November Study as the list of cumulative projects. This list has 45 projects (mostly small) and 42 of those are in the list in Table 3.2. The three that are not in Table 3.2 in the DEIR are:
- #4 – 5 condos at 1032 3rd Street
 - #27 – 5 condos at 839 9th Street
 - #126 – Mixed use at 2012-2024 Main Street (no quantities given)
- ii) Table 3-2 – This table beginning on Page 3-13 of the DEIR identifies cumulative projects including 110 additional projects in the City of Santa Monica (beyond those listed in Appendix G) and only two projects in the City of Los Angeles including:
- 11122 Pico – 54,000 SF supermarket; 212,000 SF Target; 538 apartments
 - 100 Sunset – 10,000 SF retail

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Table 3-2 has a footnote referring to the City of Santa Monica Cumulative Project List dated November 9, 2011 and states “The list of related projects includes completed, approved, and pending projects since 2007 (when traffic counts were last taken)”.

The DEIR must provide one list with descriptions, addresses and land uses of the completed projects that were added to the 2007 traffic counts as well as a similar list of projects that are included in the City’s traffic model for the 2030 analysis. Without this information, then the transportation analyses are incorrect as follows:

- If the transportation analyses used only trips to and from the projects in Appendix G, then the cumulative analyses does not include traffic to and from all the other approved and reasonably foreseeable projects.
 - The DEIR fails to identify completed projects in Table 3.2. If all 100 projects in Table 3.2 were not completed, then the trips to and from them may or may not be in the City’s traffic model. Evidence has not been provided in the DEIR to determine if trips generated by either approved or reasonably foreseeable projects have been properly included in the 2012 and 2030 traffic volume baselines.
 - There are likely more than two approved or reasonably foreseeable projects in the City of Los Angeles that will generate traffic in the City of Santa Monica. For instance, the large retail project known as Green Hollow Square is not on either list of related projects. Again, the DEIR provides no evidence that trips generated by either approved or reasonably foreseeable projects nearby in the City of Los Angeles have been properly included in the 2012 and 2030 traffic volume baselines.
- 2) Faulty Methodology – There are several errors in the methodology used in the November Study and in the January Study that are then carried forward in Chapter 4.16 of the DEIR. Without correcting these flaws, the DEIR fails to properly disclose, analyze, and mitigate the transportation impacts of the Proposed Project as follows:
- a) Baseline Traffic Counts – While most counts were done in 2007, a number of intersections were counted during different seasons and over the years between 2007 and 2011 (see Pages 14 and following in the November Study). There is no evidence that the newer counts made after 2007 were properly adjusted and calibrated to account for seasonal variations or for annual ambient growth to provide a consistent baseline in 2012.

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- b) Trip Generation Rates – Tables 1 and 2 on Pages 8 and 9 of the January Study identify the trip generation rates and trip forecasts assumed for the Proposed Project in Year 2012 and in Year 2030. Lower trip rates from Appendix J to the November Study, the City's Trip Generation Rates, for the 495,000 square feet of Creative Office space have been used, rather than the higher trip rates for Office space. No limitations are in place to ensure that the 495,000 square feet will be restricted to only Creative Office. The DEIR has not analyzed the reasonably foreseeable "worst case" trip generation forecasts for Office use for this space.

Trip rates per thousand square feet with TDM reduction and without Expo Reduction in Table 14 of Appendix J for Year 2020 are compared below for Creative Office and for Office space:

<u>Land Use</u>	<u>Daily</u>	<u>AM Peak</u>	<u>PM Peak</u>
Office	9.70	0.73	0.82
Creative Office	8.73	0.65	0.74
Difference	0.97	0.08	0.08

With 495,000 square feet, the use of Office trip rates results in 480 more daily trips to and from the Proposed Project, including 40 more AM peak hour and 40 more PM peak hour trips. The forecasts in Table 1 of the January Study for Year 2012 will grow from 7,755 to 8,235 daily trips (6 percent increase), from 499 to 539 AM Peak hour trips (8 percent increase), and from 597 to 637 PM peak hour trips (7 percent increase).

Trip rates per thousand square feet with TDM reduction and with Expo Reduction in Table 18 of Appendix J for Year 2030 are compared below for Creative Office and for Office space:

<u>Land Use</u>	<u>Daily</u>	<u>AM Peak</u>	<u>PM Peak</u>
Office	9.50	0.70	0.79
Creative Office	8.55	0.63	0.71
Difference	0.95	0.07	0.08

With 495,000 square feet, the use of Office trip rates results in 470 more daily trips to and from the Proposed Project, including 35 more AM peak hour and 40 more PM peak hour trips than has been analyzed in the DEIR. The forecasts in Table 2 of the January Study for Year 2030 will grow from 7,585 to 8,055 daily trips (6 percent increase), from 480 to 515 AM Peak hour trips (7 percent increase), and from 579 to 619 PM peak hour trips (7 percent increase).

Lower trip generation rates for Creative Office space were used in the Year 2012 and Year 2030 traffic analyses and relied upon by the DEIR.

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Higher trip generation rates for Office must be used to properly disclose, analyze, and mitigate significant traffic impacts caused by the Proposed Project. The additional AM and PM peak hour trips for the Proposed Project as calculated above may create significant traffic impacts at several other intersections and may also render some of the proposed mitigation measures ineffective.

In addition to the faulty traffic analyses, the additional daily trips generated by the Proposed Project as calculated above may result in significant impacts in other sections of the DEIR such as air quality. The higher number of new trips must be used in the other analyses in the DEIR to properly disclose, analyze, and mitigate all of the significant impacts caused by the Proposed Project.

Page 4.16-46 provides tables for trip generation of the project. Some of the numbers do not add across for Year 2012 and the last two categories are transposed for Year 2030.

- c) TDM Plan – Page 3-9 of the DEIR lists potential strategies but the actual plan is to be negotiated and developed at a later time. The traffic analyses assume trip reductions based on a “robust” TDM Plan.

Pages 4.16-30 through 4.16-33 identify potential TDM strategies (see also Pages 38 to 42 of the November Study) but the plan has not been developed, negotiated, or approved. Before adopting a “Statement of Overriding Considerations” for the “Significant and Unavoidable Impacts”, all potentially feasible mitigation measures including all potential components of the TDM Plan must be studied, evaluated, and included. The TDM Plan must also include specific monitoring requirements and penalties for non-compliance. Adopting the actual TDM Plan at some future time as proposed in the DEIR is deferred mitigation, and deferred mitigation is not permitted under CEQA.

- d) Improvement Projects – Pages 4.16-36 and 37 identify 13 improvement projects in the City of Santa Monica that have been “assumed”, with one to be completed in Year 2012 and 12 to be completed by Year 2030. Each of these projects must be included in an approved Capital Improvement Program and must be programmed and fully funded to be included in the “assumed” street network. The DEIR must provide the appropriate supporting evidence in order to include each of these projects in the respective Year 2012 and Year 2030 roadway networks.

The list of roadway improvements does not include any street projects in the City of Los Angeles. Any programmed and funded projects in the City of Los Angeles that would change the existing intersection and roadway

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capacities in the study area must also be added to the listing and the corresponding capacity calculations must be revised accordingly.

The Metro Wilshire BRT Project has not been properly considered in the Draft EIR. The approved Revised FEIR for this Metro project indicates the outside vehicle travel lanes in each direction on Wilshire Boulevard from Centinela Avenue to Barrington Avenue will be converted to “Bus Only” lanes during peak traffic hours from 7 to 9 AM and from 4 to 7 PM. Removal of the two outside vehicle lanes on Wilshire Boulevard during peak hours and the resulting loss of vehicle capacity has not been properly reflected in the intersection capacity calculations for Year 2030 for any intersections on Wilshire Boulevard from Centinela Avenue to Barrington Avenue in Appendix F to the November Study. These errors result in more vehicle capacity in the Year 2030 than will exist at these intersections after completion of the programmed Metro Project. The 2030 traffic analyses must be revised to incorporate the reduced capacity at these Wilshire Boulevard intersections in order to properly determine if this results in additional significant traffic impacts created by peak hour traffic to and from the Proposed Project.

While the Metro Expo Line extension adjacent to the Proposed Project has been assumed to be operational in 2017 by the DEIR, significant lost time caused by light rail vehicles blocking crossing streets and traffic signals while stopped at transit stations has not been properly reflected in the intersection capacity calculations in Appendix F to the November Study. It is also unclear if the DEIR has properly accounted for the additional vehicle trips generated at the Bergamot Transit Station that will occur on the streets in the vicinity of the Project.

By not considering the light rail vehicle lost time at intersections such as Olympic Boulevard at 26th Street and Olympic Boulevard at Stewart Street as well as the additional trips to and from the Bergamot Transit Station, the DEIR calculations overstate the amount of capacity that will actually be available for vehicles after the LRT is operational. These errors result in more vehicle capacity in the Year 2030 than will exist at intersections at and near the Project after completion of the programmed Metro Expo Line. The 2030 traffic analyses must be revised to incorporate the reduced capacity at these intersections in order to properly determine if this results in additional significant traffic impacts created by peak hour traffic to and from the Proposed Project.

- e) Significant Impact Criteria – With the adoption of LUCE, Page 13 of the November Study indicates the City’s street system was redefined according to usage by various modes including walking, biking, transit, and automobiles. Page 13 states “These street types include Boulevard,

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Special Streets, Downtown Commercial, Neighborhood Commercial, Major Avenue, Secondary Avenue, Minor Avenue, Industrial Avenue, Neighborhood Street, Shared Street, Parkway, Pathway, Bikeway, Highway, and Alley.” Page 13 then relates City streets in the vicinity of the Project to the LUCE nomenclature.

Table 8 on Page 51 of the November Study outlines the City of Santa Monica Impact Criteria for Arterial and Collector Intersections. The table identifies the significant impact criteria for arterial intersections and for collector street intersections, nomenclature formerly used in the City’s Circulation Element before the adoption of LUCE. It is impossible to relate the LUCE nomenclature and potentially significant traffic impacts to the arterial and collector criteria from the City’s former Circulation Element. For example, Olympic Boulevard was formerly classified as an “arterial” street and is now classified as “Parkway” from Lincoln Boulevard easterly serving as a “linear park incorporating continuous landscaping, recreational bikeways, and pedestrian paths.”

Page 4.16-48 of the DEIR refers to Page 50 of the November Study which states that significant impact criteria for LUCE have not yet been developed or adopted. Without adopted significant impact criteria for LUCE, the Traffic Study used the significance criteria associated with the City’s former Circulation Element which has been replaced by LUCE. It is not appropriate to rely on new policies in LUCE and then use the significant impact criteria from the City’s superseded Circulation Element. As required by CEQA, the City of Santa Monica must formally adopt significant impact thresholds and evaluation criteria corresponding to the policies of LUCE before considering the Bergamot Transit Village Center or other development projects.

- 3) Defective Mitigation Measures – Based on the Year 2012 analyses in the January Study and as indicated on Page 4.16-55 in the DEIR, 25 of the 97 study intersections are forecast to be significantly impacted by traffic to and from the Proposed Project. Of these 25 impacted intersections, only five are located in the City of Santa Monica and could reasonably be expected to be mitigated by the Project to a “less than significant” impact level. Mitigation measures are proposed at four other intersections that are either totally within or shared with the City of Los Angeles, but cannot be implemented until approval is received from the City of Los Angeles. The DEIR indicates that potential mitigation measures were considered at the other 16 impacted intersections but were rejected as “infeasible”.

Based on the Year 2030 analyses in the January Study and as indicated on Page 4.16-61 in the DEIR, 29 of the 97 study intersections are forecast to be significantly impacted by traffic to and from the Proposed Project. Of these 29

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impacted intersections, only five are located in the City of Santa Monica and could reasonably be expected to be mitigated by the Project to a “less than significant” impact level. Mitigation measures are proposed at four other intersections that are either totally within or shared with the City of Los Angeles, but cannot be implemented until approval is received from the City of Los Angeles. The DEIR indicates that potential mitigation measures were considered at the other 20 impacted intersections but were rejected as “infeasible”.

For both the Year 2012 and Year 2030 analyses, Pages 4.16-55 and 4.16-61 of the DEIR respectively state “The infeasibility of mitigation is due primarily to impacted intersections being fully built out and would therefore require the acquisition of public or private property for public ROW to implement the proposed physical mitigations and could negatively impact the built environment and existing pedestrian network.”

I have carefully reviewed the intersections that will be significantly impacted in Year 2012 and in Year 2030 as well as the discussions of “infeasibility” presented in Chapter 5 of the November Study. The implementation of mitigation measures at several of the significantly impacted intersections were determined to be “infeasible” without providing sufficient evidence and justification in support of these conclusions as follows:

a) Narrowing Sidewalks – Measures that would mitigate several of the significant project traffic impacts in the City of Santa Monica by narrowing the existing sidewalk are considered to be infeasible by the DEIR. For example, while a northbound right turn lane would mitigate the significant traffic impact at 20th Street and Olympic Boulevard, Page 115 of the November Study states “The proposed mitigation measure would create a negative impact to the area because it could require narrowing or eliminating sidewalks or encroaching on private property. This would adversely affect the pedestrian environment by reducing the walking area.” Other intersections where narrowing the existing sidewalk to install measures to mitigate significant traffic impacts that are also considered “infeasible” include:

- 23rd Street and Pearl Street
- Cloverfield Boulevard and Pearl Street
- Yale Street and Broadway
- Centinela Avenue (West) and Olympic Boulevard
- Centinela Avenue and I-10 Westbound Ramps

At each of these intersections, the November Study states that narrowing sidewalks “could” impact the pedestrian environment. Further study and analysis is needed to determine the widths of the existing sidewalks, the

sidewalk widths that would result after street widening, and the number of pedestrians that use the existing sidewalk.

Without using any criteria that have been available since the 1970's, the DEIR is speculating as to the negative effects on the pedestrian environment at these locations where measures would otherwise mitigate the traffic impacts. To properly evaluate these effects, the existing and resulting sidewalk level of service must be analyzed using standards such as shown in the enclosed articles published by the Institute of Transportation Engineers in ITE Journal including "Characteristics and Service Requirements of Pedestrians and Pedestrian Facilities" in May 1976 and "Levels of Service for Pedestrians" in September 2000.

- b) Traffic Signals - Measures that would mitigate several of the significant project traffic impacts in the City of Santa Monica by installing traffic signals are considered to be "infeasible". For example, while a traffic signal would mitigate the significant traffic impact at 20th Street and Pearl Street, Page 116 of the November Study states "Signalization of the intersection would conflict with the existing characteristics of the road by inducing more traffic to use 20th Street and Pearl Street." Other intersections where installing traffic signals to mitigate significant traffic impacts that are also considered "infeasible" include:

- 23rd Street and Pearl Street
- Cloverfield Boulevard and Pearl Street
- Yale Street and Broadway

At each of these intersections, the November Study states that traffic signals "could result in secondary impacts" by inducing more traffic to use the streets in the adjoining residential neighborhoods and "could" encourage higher speeds. The DEIR has failed to analyze these residential streets to forecast the volume of the "induced" traffic and if the traffic signals would in fact cause significant secondary traffic impacts on these streets. Without further analysis, the DEIR is speculating.

Page 131 of the November Study indicates that modification of the traffic signal phasing at 20th Street and Pico Boulevard would mitigate the significant project traffic impact. However, this mitigation measure is then deemed to be "infeasible" as it "could induce more traffic south of Pico Boulevard, resulting in secondary impacts to the residential neighborhood south of Pico Boulevard." The DEIR has failed to forecast and analyze the volume of the "induced" traffic and to determine if the traffic signal modification would in fact cause significant secondary traffic impacts on the streets. Without further analysis, the DEIR is speculating.

- c) Bicycle Facilities - Measures that would mitigate several of the significant project traffic impacts in the City of Santa Monica by restriping existing vehicle lanes are considered to be “infeasible”. For example, while shifting the vehicle lanes through restriping would mitigate the significant traffic impact at 26th Street and Montana Avenue, Page 119 of the November Study states “This mitigation would conflict with the implementation of the bicycle network on Montana Avenue outlined in LUCE.” While shifting vehicle lanes by restriping would also mitigate the significant traffic impact at Stewart Street and Exposition Boulevard, Page 121 of the November Study cites a conflict with the implementation of the bicycle network on Stewart Street outlined in LUCE.

One of the LUCE goals is the development and subsequent adoption of a new Bicycle Master Plan. At this time, this goal has not been achieved.

Conflicts with proposed bicycle facilities may be resolved in many different ways such as “Share the Road” signing with sharrows rather than simply dismissing restriping of vehicle lanes that are necessary to mitigate the significant traffic impacts of the Proposed Project. The DEIR does not provide any analyses to demonstrate that the restriping of vehicle lanes conflicts with the planned bicycle facilities on Montana Avenue and on Stewart Street.

- d) Dual Left Turn Lanes – Page 133 of the November Study indicates that a second left turn lane on the eastbound approach with protected left turn phasing would mitigate the significant traffic impact at 26th Street and Olympic Boulevard. However, this mitigation measure is then deemed to be “infeasible” as the forecast peak hour left turn volume is only 175 vehicles and that does “not warrant an additional left turn lane.” While dual left turn lanes are usually used when left turn volumes exceed 300 in a peak hour, dual left turn lanes may be used with lower volumes to increase intersection capacity or to address other issues such as excessive queuing in a single left turn lane. The DEIR has incorrectly deemed this mitigation measure to be “infeasible”.
- e) City of Los Angeles Intersections - Mitigation of each of the intersections shared with or totally within the City of Los Angeles is the decision of the City of Los Angeles, and City of Santa Monica policies in LUCE do not apply. The DEIR incorrectly dismisses the following potential mitigation measures in the City of Los Angeles as “infeasible”:
- Narrowing sidewalks at Walgrove Avenue and Venice Boulevard
 - Narrowing sidewalks at Bundy Drive and Olympic Boulevard
 - Narrowing sidewalks at Bundy Drive and I-10 Eastbound On Ramp
 - Crosswalk removal at Bundy Drive and National Boulevard

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- Narrowing sidewalks at Barrington Avenue and Santa Monica Blvd.
 - Narrowing sidewalks at Barrington Avenue and Montana Avenue
 - Narrowing sidewalks at Sawtelle Boulevard and Pico Boulevard
- f) Bus Stops – In conjunction with the mitigation measure involving the addition of an eastbound right turn lane at Bundy Drive and Pico Boulevard, Page 125 of the November Study indicates the nearside bus stop must be relocated to the far side of Pico Boulevard, creating secondary impacts. A bus stop in a “Right Turn Only” lane occurs frequently, with the bus exempted from the right turn restriction. It is not necessary to move the bus stop to the far side and create other impacts. The DEIR has incorrectly deemed this mitigation measure as “infeasible.”
- g) Caltrans Jurisdiction – Page 125 of the November Study indicates a right turn lane at the eastbound approach at Bundy Drive and Pico Boulevard would mitigate the significant traffic impact at this intersection. This measure is then determined to be “infeasible” as it would “encroach into Caltrans ROW”. Page 138 of the November Study also determined that a potential mitigation measure at Sawtelle Boulevard and Pico Boulevard would be “infeasible” as it would “encroach into Caltrans ROW”. The DEIR provides no evidence that Caltrans has been consulted on these possible mitigation measures or that Caltrans would not review an encroachment permit application for these improvements.

Each of the potential mitigation measures at the significantly impacted I-10 ramp intersections requires review and concurrence from Caltrans, as well as encroachment permits for any improvements. Discussions with Caltrans must occur before the DEIR dismisses possible mitigation measures at locations including Bundy Drive and Eastbound I-10 On-Ramp as well as at Sawtelle Boulevard and Pico Boulevard.

- h) ATCS Traffic Signal Enhancements - The DEIR did not consider the City of Los Angeles ATCS System as mitigation at any of the impacted traffic signals. This effectively increases capacity by 3% (using their CMA methodology) and could mitigate some of the significant impacts at traffic signals in the City of Los Angeles. Implementation of the ATCS Traffic Signal System must also be considered by the DEIR.

CEQA requires that all feasible mitigation measures be studied before concluding that the traffic impacts are “significant and unavoidable.” The DEIR has failed to properly evaluate mitigation measures that are clearly feasible, would reduce or eliminate significant traffic impacts, and would result in few if any secondary impacts as discussed above.

4) Omissions from Transportation Analyses - Several omissions were found in the November Study, the January Study, and in Chapter 4.16 of the DEIR. Without further analyses, the DEIR fails to properly disclose, analyze, and mitigate the transportation impacts of the Proposed Project as follows:

- a) Area of Traffic Study – While the traffic study area was expanded to address LADOT concerns, some of the added intersections around the perimeter of the study area will experience significant Project traffic impacts. These intersections include Barrington Avenue and Montana Avenue, Federal Avenue and Wilshire Boulevard, Centinela Avenue and Venice Boulevard, and Walgrove Avenue and Venice Boulevard. Additional intersections beyond those already studied must also be added so that all significant traffic impacts of the Project are identified, disclosed, and analyzed.
- b) Queuing – Intersections experience congestion when the vehicle demand exceeds the capacity of the intersection ahead. Under these conditions, vehicles are not able to clear the intersection ahead and queues of vehicles form as they must wait until receiving a subsequent green light. Queued vehicles waiting to turn left frequently overflow the amount of storage space provided in the left turn lane and block the adjacent through lane. Queued vehicles in the through and right turn lanes also block adjacent intersections. When conditions are already very congested as is the case here, then vehicle queuing must also be evaluated. Significant queuing on major roadways will also result in further increases in traffic in residential neighborhoods as motorists seek to avoid congestion.

All intersections in the DEIR have been analyzed using the City of Santa Monica HCM Methodology. While each of these calculations provides the number of queued vehicles, the transportation analyses have not evaluated any of the queue lengths to see if they will overflow the left turn storage areas or if queuing in the other lanes will block adjacent intersections. In addition to the queues within the Project site, the DEIR must also evaluate queues at all other study intersections to determine if additional significant traffic impacts will occur with the addition of traffic generated by the Proposed Project. The added Project traffic is likely to result in more overflows of available left turn storage areas, blockage of adjacent intersections, more congestion, and increased traffic in the residential areas. Each of these additional significant traffic impacts must be disclosed, analyzed, and mitigated.

- c) Traffic Signal Warrants – The transportation analyses do not provide any justification (warrants) of the need for any of the traffic signals proposed at the Project access points on Olympic Boulevard or at those intersections where traffic signals are deemed as “infeasible” as possible mitigation.

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- d) Site Access – Two new traffic signals are proposed on Olympic Boulevard at the site. Traffic signal warrants were not included in the transportation analyses to justify and support their installation. The signals are very closely spaced (only 350 feet from 26th Street and then only 400 feet apart between the two new signals). There is no analysis of the Level of Service at these two new traffic signals or the queuing that will occur on Olympic Boulevard between them. The proposed access via new Nebraska Avenue at Stewart Street will be restricted to only right turns (a raised median is needed to do this) but this intersection is only 90 feet away from the significantly impacted intersection of Olympic Boulevard and Stewart Street. Queuing on Stewart Street from Olympic Boulevard has not been evaluated and it may further restrict vehicle movements at Nebraska Avenue and Stewart Street.

As discussed in this letter, the Proposed Project will have additional significant environmental impacts that have not been properly disclosed, analyzed, and mitigated in the DEIR. A revised DEIR must be prepared and recirculated to address these issues and concerns. If you have questions regarding these comments, please call me at your convenience.

Respectfully submitted,

Tom Brohard and Associates



Tom Brohard, PE
Principal

Enclosures



Tom Brohard, PE

Licenses: 1975 / Professional Engineer / California – Civil, No. 24577
1977 / Professional Engineer / California – Traffic, No. 724
2006 / Professional Engineer / Hawaii – Civil, No. 12321

Education: 1969 / BSE / Civil Engineering / Duke University

Experience: 40+ Years

Memberships: 1977 / Institute of Transportation Engineers – Fellow, Life
1978 / Orange County Traffic Engineers Council - Chair 1982-1983
1981 / American Public Works Association – Life Member

Tom is a recognized expert in the field of traffic engineering and transportation planning. His background also includes responsibility for leading and managing the delivery of various contract services to numerous cities in Southern California.

Tom has extensive experience in providing transportation planning and traffic engineering services to public agencies. Since May 2005, he has served as Consulting City Traffic Engineer for the City of Indio. He also currently provides "on call" Traffic and Transportation Engineer services to the Cities of Big Bear Lake, Mission Viejo, and San Fernando. In addition to conducting traffic engineering investigations for Los Angeles County from 1972 to 1978, he has previously served as City Traffic Engineer in the following communities:

- Bellflower..... 1997 - 1998
- Bell Gardens..... 1982 - 1995
- Huntington Beach..... 1998 - 2004
- Lawndale..... 1973 - 1978
- Los Alamitos..... 1981 - 1982
- Oceanside..... 1981 - 1982
- Paramount..... 1982 - 1988
- Rancho Palos Verdes..... 1973 - 1978
- Rolling Hills..... 1973 - 1978, 1985 - 1993
- Rolling Hills Estates..... 1973 - 1978, 1984 - 1991
- San Marcos..... 1981
- Santa Ana..... 1978 - 1981
- Westlake Village..... 1983 - 1994

During these assignments, Tom has supervised City staff and directed other consultants including traffic engineers and transportation planners, traffic signal and street lighting personnel, and signing, striping, and marking crews. He has secured over \$5 million in grant funding for various improvements. He has managed and directed many traffic and transportation studies and projects. While serving these communities, he has personally conducted investigations of hundreds of citizen requests for various traffic control devices. Tom has also successfully presented numerous engineering reports at City Council, Planning Commission, and Traffic Commission meetings in these and other municipalities.

In his service to the City of Indio since May 2005, Tom has accomplished the following:

- ❖ Oversaw preparation and adoption of the Circulation Element Update of the General Plan including development of Year 2035 buildout traffic volumes, revised and simplified arterial roadway cross sections, and reduction in acceptable Level of Service criteria under certain constraints. Reviewed Riverside County's updated traffic model for consistency with the adopted City of Indio Circulation Plan.
- ❖ Oversaw preparation of fact sheets/design exceptions to reduce shoulder widths on Jackson Street over I-10 as well as justifications for protected-permissive left turn phasing at I-10 on-ramps, the first such installation in Caltrans District 8 in Riverside County; reviewed plans and provided assistance during construction of a \$1.5 million project to install traffic signals and widen three of four ramps at the I-10/Jackson Street Interchange under a Caltrans encroachment permit.
- ❖ Oversaw preparation of fact sheets/design exceptions to reduce shoulder widths on Monroe Street over I-10 as well as striping plans to install left turn lanes on Monroe Street at the I-10 Interchange under a Caltrans encroachment permit; reviewed plans to install traffic signals and widen three of four ramps at the I-10/Monroe Street Interchange.
- ❖ Reviewed traffic impact analyses for Project Study Reports evaluating different alternatives for buildout improvement of the I-10 Interchanges at Jefferson Street, Monroe Street, Jackson Street and Golf Center Parkway.
- ❖ Oversaw preparation of plans, specifications, and contract documents and provided construction assistance for over 40 traffic signal installations and modifications.
- ❖ Reviewed and approved over 600 work area traffic control plans as well as signing and striping plans for all City and developer funded roadway improvement projects.
- ❖ Oversaw preparation of a City wide traffic safety study of conditions at all schools.
- ❖ Prepared over 500 work orders directing City forces to install, modify, and/or remove traffic signs, pavement and curb markings, and roadway striping.
- ❖ Oversaw preparation of engineering and traffic surveys to establish enforceable speed limits on over 200 street segments.
- ❖ Reviewed and approved traffic impact studies for more than 25 major developments.
- ❖ Developed the Golf Cart Transportation Program and administrative procedures; implemented routes forming the initial baseline system.

Since forming Tom Brohard and Associates in 2000, Tom has reviewed many traffic impact reports and environmental documents for various development projects. He has provided expert witness services and also prepared traffic studies for public agencies and private sector clients.

Characteristics and Service Requirements of Pedestrians and Pedestrian Facilities

By ITE Technical Council Committee 5-R

The objectives of Committee 5-R were to prepare an informational report relating to the characteristics and service requirements of the movement of people in concentrated areas such as passageways, stairways, plazas, sidewalks, etc., and to investigate the flow characteristics of pedestrians, including speed, volume and density or its equivalent. However, these aspects must be considered in terms of total planning, design and control. Since the objectives of the committee did not cover this total viewpoint, planning, design and control are discussed only briefly.

Two committees have preceded the present: 8-F ('64) and 5-R-T ('68). Committee 8-F produced the report "Pedestrian Characteristics and Space Requirements," which has never been published. However, material from it is included in the present report. Members of Committee 8-F included Richard I. Strickland (F), Chairman; Norman C. Barrett (F); Herman Botzow (M); John P. Cavallero Jr. (M); Ronald J. Fisher (A); Bernard C. Johnson (F); Eugene J. Lessieu (F); Walter S. Rainville Jr.; and David W. Schoppert (M).

A report produced by Committee 5-R-T has been extensively revised. This committee included James E. Watt Jr. (F), Chairman; Robert L. Bleyl (F); Ralph N. Brescia (M); John P. Cavallero Jr. (M); John J. Fruin (M); Jack M. Greenspan (M); Roe P. Hendrick (F); Bernard C. Johnson (F); Eugene J. Lessieu (F); Donald W. Loutzenheiser (F); Littleton C. MacDorman (M); William Marconi (F); Robert H. Murphy (M); Francis P.

D. Navin (M); Steven C. Provost (A); Vukan R. Vuchic (M); and Frederick J. Wegmann (A).

The present report was prepared with the aid of John J. Fruin, material from whose book, Pedestrian Planning and Design, has been used extensively with his permission. Additional comments and suggestions from Scott Rutherford of Northwestern University are gratefully acknowledged.

Committee 5-R, as organized in March 1973, included Donald S. Berry (F); Robert L. Bleyl (F); John J. Fruin (M); Bernard C. Johnson (F); Littleton C. MacDorman (M); Francis P. D. Navin (M); Steven C. Provost (A); James E. Watt Jr. (F); and Frederick J. Wegmann (A).

Edmund J. Cantilli (F)
Chairman

Walking is such a fundamental means of travel that it is often taken for granted and overlooked. Virtually all modes of travel require some pedestrian trip linkages. Circulation within major activity centers, modal transfers made through terminal facilities and access to urban public transportation systems are all examples of pedestrian activities that require the increased attention of traffic engineers and transportation planners.

This report deals only with the most basic approach to overall pedestrian system planning: the collection and consolidation of known *characteristics* concerning both pedestrians and their facilities; and those parameters which might be called *service requirements* or design criteria. With consolidation of such material, the development of a systematic methodology for pedestrian planning, design and control is possible.

A Caution. To a great extent, Committee 5-R has adopted Dr. John J. Fruin's concepts and methodology in the identification of pedestrian levels of service. While it is felt that these are applicable throughout the United States, there may be regional differences which only local practitioners could affirm or deny. There will also be national differences based on the differing reactions in various ethnic groups to the concept of "personal space." Fruin's work, however, represents a breakthrough, and the ITE must recognize this work for its value and utility to the profession.

Utility of the Report. The relationships between the adequacy of walkways and the adequacy of roadways are clear in the urban context. In the city, inadequate sidewalk space spills pedestrians into the road, and inadequate crossing time at crosswalks affects traffic movement as well as creating safety problems.

Planners and engineers have not always seen themselves in the role of designers of sidewalks. They should, however, be more cognizant of the basic mode of transport: walking. This is not only because walking is basic, but also because it constantly interacts with, and in many respects conflicts with, other modes of transportation.

The adequacy of walkways, hallways and stairways in and around terminals and trip generators affects the entering and exiting capacity of other traffic. In-

SYSTEM ELEMENTS	Points to Be Considered in:		
	PLANNING	DESIGN	OPERATION & CONTROL
Human	<ul style="list-style-type: none"> • physical • medical limitations, handicaps • user mix: sex, age • physical limits 	<ul style="list-style-type: none"> • physical scale and dimensions • human body dimensions • locomotion characteristics • psychological preferences 	<ul style="list-style-type: none"> • perception • reaction • comprehension • safety
Pathway	<ul style="list-style-type: none"> • relationship to total trip • trip purpose • pedestrian densities • desire lines • impedances 	<ul style="list-style-type: none"> • alignment • width • surface • grade 	<ul style="list-style-type: none"> • direction • guidance • control
Environment	<ul style="list-style-type: none"> • comfort • convenience • esthetics • efficiency 	<ul style="list-style-type: none"> • protection from elements; cover and shade • pleasant visual/audio environs • temperature, humidity control • lighting 	<ul style="list-style-type: none"> • maintenance and control for an interesting, pleasing, efficient safe environment
Interface with a) other travel modes • at rest • in motion b) other pedestrians	<ul style="list-style-type: none"> • need for continuous flow • pedestrian work measures • pedestrian densities • applicability of demand-actuated systems • new technology 	<ul style="list-style-type: none"> • transitions involving other modes • terminal design, including platforms, holding areas, ticket and baggage queues • design of, and transition with ramps and vertical lift mechanisms • entrance and exit design • physical obstructions 	<ul style="list-style-type: none"> • interference with vehicle • pedestrian transition on continuous systems • crowding • interference with other pedestrian flows • pedestrian-vehicle separation
Total Travel System	<ul style="list-style-type: none"> • efficiency • continuity • flexibility • connectivity 	<ul style="list-style-type: none"> • cost effectiveness • economic feasibility 	<ul style="list-style-type: none"> • regulations • enforcement • hardware
Total Plan	<ul style="list-style-type: none"> • spatial and temporal arrangements of activities • zoning 	<ul style="list-style-type: none"> • financial considerations 	<ul style="list-style-type: none"> • esthetics • social considerations

Figure 1. Considerations for pedestrian facility development.

deed, pedestrian capacities and characteristics of movement may determine the characteristics of transport peaking.

The peaking characteristics of traffic exiting from arenas, stadiums and airports, for instance, are both caused by, and a cause of, related movements of pedestrians leaving the facilities. Placement and design of pedestrian facilities will have obvious effects on proper placing and design of the vehicular traffic exit facilities.

This report represents a step in providing the professional with basic knowledge that will help in understanding the nature of pedestrian movement and in providing adequate design features for that movement. Designing walkways for a proper level of service is as important as designing roadways to a proper level of service.

While this report relates only to characteristics and service requirements, planning, design and control must be given consideration.

In planning for pedestrian facilities, consideration must not only be given to the elements of the system but also to their relationship to any given complete pedestrian circulation system of which they make up a part, and their impact on a total transportation plan and travel system (or, indeed, on a given city plan). For example, the failure to attract patrons to a public transportation system may be due, in part, to inefficient or highly impeded pedestrian access systems. The successful planning and operation of major activity centers is contingent on the spatial arrangement of activities and the ease of movement between all activity modes.

The design of pedestrian facilities must take into consideration the interrelationships of three fundamental elements of the system: the human, the pathway, and the environment. The designer must consider physical scale, the surface and character of the pathway, physical and topographic impedances, the need for adequate protection from adverse weather conditions and the general utility and convenience of the sys-

tem. He must design adequate queuing spaces, walkways and escalators. He should also evaluate the level of service, and he may need to check the cost-effectiveness of alternative designs within given financial constraints.

Controlling pedestrian movement may be considered in the context of controlling mechanical modes. People can be controlled through channelization, proper regulatory mechanisms and their enforcement, proper informational signing and control devices and pedestrian education programs. However, pedestrians are considerably more flexible and unpredictable in their movements than automobiles or other modes, where disobeying certain rules could impair the safety and welfare of human life; i.e., the patterns of people in the walk mode are much more irregular.

Figure 1 summarizes pedestrian facility development considerations, divided

Table 1. Subdivision of Average Pedestrian Speed.

	Average			Standard Deviation		
	Feet per Minute	Feet per Second	Meters per Minute	Feet per Minute	Feet per Second	Meters per Minute
Men	270	4.5	82	48	0.8	15
Women	240	4.0	73	42	0.7	13
Combined	260	4.3	79	48	0.8	15

Table 2. Speeds Crossing a Roadway.

	Average Speed for All Observations			Number of Observations
	Feet per Minute	Feet per Second	Meters per Minute	
Men	230	3.8	70	602
Women	200	3.3	61	138
Combined	220	3.7	67	740

Table 3. Speeds Observed, Based on the Horizontal Distance, in Ascending and Descending.

	Ascending			Descending		
	Feet per Minute	Feet per Second	Meters per Minute	Feet per Minute	Feet per Second	Meters per Minute
7-Inch Riser and 11½-Inch Tread	96	1.6	29	121	2.0	37
6-Inch Riser and 12-Inch Tread	108	1.8	33	144	2.4	44

Table 4. Width Observations of 11 Stairs in New York City.

Width of Stair Center-to-Center of Hand Rail		Nominal Number of Lanes	For Pedestrians with Few Hand Packages, This Was:
Inches	Centimeters		
44	122	2	<i>Inadequate</i> (Seldom Two Abreast under One-Way Use)
45	114	2	<i>Same</i>
49 to 51	124 to 130	2	<i>Satisfactory</i>
59	150	2	<i>Satisfactory</i> (Some Three-Lane Use When Pedestrians Are Not Exactly Abreast)
63 to 64	160-163	3	<i>Inadequate</i> (Except When Pedestrians Are Not Exactly Abreast)
67	170	3	<i>Adequate</i> (Normally Only Two Abreast, But Some Three-Lane Use)
69 to 76	175 to 193	3	<i>Satisfactory</i>

among the three major elements of pedestrian systems. Each cell of the framework presents aspects and examples of the pedestrian problem that must be recognized and considered. It also illustrates the interrelationship of all pedestrian facility development considerations.

Characteristics

1. Walking Speeds. Walking speeds are affected by a variety of factors, including:

- personal (human) characteristics
- pathway characteristics
- environment
- trip purpose
- traffic density
- personal comfort and safety.

Level Pathways. A wide range of walking speeds may be found among pedestrians. Many of the differences in speed can be attributed to personal characteristics, such as age and sex. For example, one survey (MacDorman) shows walking speeds of 150 to 280 feet per minute (46 to 85 meters per minute) or 2.5 to 4.7 feet per second (0.76 to 1.43 meters per second) for elderly women, and 250 to 385 feet per minute (76 to 117 meters per minute) for young men.*

The average free-flow walking speed for any particular population depends on the mix and composition of pedestrians but can normally be expected to be about 270 fpm (82 mpm) or 4.5 fps (1.4 mpm).

Walking speed is increased or decreased by the length of the stride and by alteration of the center of gravity, which occurs when one takes a forward stance, like leaning into the wind. A linear relationship has been found between walking speed and pace length. This would indicate that space is an important element in human locomotion. Pedestrians not only need sufficient space for normal pacing but also to sense obstacles ahead, or to avoid conflicts with other pedestrians. In dense crowds, normal human locomotion is significantly restricted, forcing people into an uncomfortable, shuffling gait.

The usual travel speed for persons in passageways or on level, unobstructed (free-flowing) sidewalks is conservatively estimated at 240 fpm (73 mpm) or 4.0 fps (1.2 mpm) for most design purposes. This represents the average speed at a "comfortable" design vol-

* Walking speeds as given in this report are for distances of 500 to 1,500 feet (152 to 456m). It is expected that, for longer distances, walking speed declines.

ume. This average pedestrian speed can be subdivided as shown in Table 1.*

The distribution of walking speeds seems to follow a normal pattern; thus, the range of speeds (designed by \pm one standard deviation about the average) includes about 68 percent of all persons.

Women walk more slowly than men when crossing a roadway. The data shown in Table 2 was recorded by DiPietro for a 29-foot (8.8m) wide street.

As expected, pedestrian walking speed varies as a function of the time before the arrival of the next vehicle. Research completed by the Road Research Laboratory (England) indicates that the nearer the vehicle, the greater the walking speed.

Grades. On pathways with under 10 percent of grade, there appears to be very little increase or decrease in walking speed due to slope. A controlled experiment of soldiers walking on a variable-grade treadmill (Wayne) for the purpose of developing fatigue factors showed that an increase in positive treadmill grade, from 5 to 10 percent, decreased walking speed by only 11.5 percent, and increasing the grade to +20 percent (which is not too common) decreased speeds by 25 percent.

Slopes of 10 percent or more will affect speed and volume. At 12 percent, average speed drops from 260 to 240 fpm (79 to 73 mpm), or 4.3 to 4.0 fps (1.3 to 1.2 mps). The maximum pedestrian volume goes from about 10 persons per foot width per minute (PFM) to 7.5 PFM (33 persons per meter width per minute [PMM] to 25 PMM).

However, these decreases are less than what can be expected just on the basis of age, sex or traffic density.

2. Stairs. Movement on stairs is more structured and restricted than walking because of the restraints imposed by the stair steps and the need to overcome gravity in ascending or to control it safely in descending.

The use of stairs in the circulation pattern must be balanced against the real or potential needs of the handicapped, the need to minimize travel distances and the geometric limitations of the site.

Energy. The total energy expended in ascending stairs is 10 to 15 times greater than that used in walking a horizontal distance equal to the height of the stairs.

* Unless specified, figures given are for one-way flow.

The energy expended in descending stairs is only one-third greater than that used in walking a horizontal distance equal to the height of the stairs.

Speed. Table 3 shows some speeds observed (based on the horizontal distance) in ascending and descending. Riser heights have a significant effect on speed. Slightly lower riser heights tend to produce faster pedestrian speeds, but extreme variations reduce efficiency.

The approximate average speed to traverse a horizontal distance is 100 fpm (30m) or 1.7 fps (0.5 mps) when climbing, and 120 fpm (37 mpm) or 2.0 fps (0.6 mps) when descending.

Length. There is no available information on the effect of the length of stairs on the rate of flow, but extremely long stairs evidently slow traffic further.

Width. Observations of 11 stairs in New York City are shown in Table 4.

Volumes. Volumes of 30 to 40 persons per 22-inch (56 centimeter) lane per minute have been reported. Descending rates are slightly greater than ascending rates.

Observations from a study of a 5-foot wide (1.5m) stair under forced flow (after a train had discharged) are shown in Table 5. This study was made at the Union Turnpike station of the IND line of the New York City subway system. Counts were made only while the stairway was in use.

3. Speed-Density Relationships. Figure 2 compares level walks and stairs, in relating the size of the pedestrian "module" (area kept clear of intrusion by most walkers) to walking speed. Figure 3 relates the same module to volumes. In both instances, it is apparent that stairs have a lesser capacity than equivalent level walkways (upstairs movement is taken as the "worst case").

Level Walks. Maximum flow volumes of 26 pedestrians per minute per foot (85 per meter) of walkway have been measured (Figure 2). The reciprocal of pedestrian density (square feet per person) is used for convenience in visualizing relative levels of pedestrian freedom. This curve confirms that normal human walking speeds require significant amounts of pedestrian area, and that crowding causes restricted human locomotion.

This capacity value occurs near the critical region of pedestrian area occupancy, which is shown to be approximately 5 square feet per person (0.5m²). Use of such a value for design would give a very poor standard of pedestrian traffic flow.

Stairs. Because of the limitations imposed by stair tread and riser restrictions and considerations of personal safety, average pedestrian area has a less significant effect on pedestrian speeds on stairs than during level walking. Stair speeds,

both ascending and descending, remain relatively normal, down to an average pedestrian area occupancy of 10 square feet (0.9m²) and then are reduced due to traffic density.

The volume and density curves in Figures 2 and 3 illustrate the relationship of volume and average pedestrian area occupancy. The *up* direction is generally used for design purposes because of its lower capacity value.

Maximum flow volumes—15 persons per minute per foot of stair width (50 persons per minute per meter) ascending and 20 (66 per meter) descending—were developed.

The critical areas derived, of 2.9 and 3.2 square feet (about 0.3m²) come very close to a two stair-tread, shoulder-width area. The zero-movement area, of 1.5 and 1.6 feet (about 0.15m²) is equivalent to occupancy of one tread.

At 10 square feet (0.9m²), the pedestrian zone is about four to five treads long and 2½ feet (0.8m) wide. This gives sufficient room for reasonably normal stair location, but not enough area to by-pass slower walkers. Using the two shoulder width-spacing criterion for by-passing, lateral spacing would have to expand to 4 or more feet, giving a required area for by-passing of about 20 square feet (1.8m²) per person.

4. Sidewalks. Volume. A wide range of volumes has been reported during counts ranging in length from five minutes to 12 hours. In most cases, only the total sidewalk width, not the effective width, was reported. Table 6 shows the variations summarized by pedestrians per foot width per hour (PFH). The maximum flow reported was in San Francisco, with a pre-Christmas count of 13,338 persons per hour on a 22-foot (6.7m) wide sidewalk, having an effective width of 16.5 feet (5.0m).

Effective Widths. Reported widths vary from 10 to 25 feet (3.0 to 7.6m) for total width of sidewalk. The effective width, which is more meaningful, was reported by only two out of 10 cities in the survey and are shown in Table 7.

The common obstructions reported are poles, signs, flower stands and mail boxes. Supplementary studies of volume versus density for various sidewalk widths did not show significant variations; an 8-foot (2.4m) effective width had about the same rate per foot as a 16-foot (4.9m) effective width.

5. Arrival Processes and Queuing. Fruin has identified two arrival processes: *bulk* and *intermittent*. The bulk process is illustrated by the kind of mass

Table 5. Observation of a 5-Foot Stair under Forced Flow.*

Time Interval (Minutes)	Volume	Persons per Minute	Persons per Foot Width per Minute	Persons per Meter Width per Minute
1.75	122	70	14	46
1.5	102	68	13.6	45
1.5	106	71	14.2	47
0.8	38	46	9.2	30
0.9	67	73	14.5	48

*Traffic in one direction, moving up the stairs at a rate of 110 steps per minute.

Table 6. Pedestrian Volumes

City	Total Width		Effective Width	
	Pedestrians per Foot per Hour	Pedestrians per Meter per Hour	Pedestrians per Foot per Hour	Pedestrians per Meter per Hour
Chicago, CTA	289	950	----	----
Chicago, CTA	299	980	----	----
Chicago, CTA	309	1,010	----	----
Seattle	396	1,300	576	1,890
St. Paul	137	450	----	----
San Francisco	304	1,000	650	2,130
San Francisco	606	1,991	608	1,990

Table 7. Effective Sidewalk Widths.

City	Total Width		Effective Width		Width of Obstruction	
	Feet	Meters	Feet	Meters	Feet	Meters
Seattle	16	4.9	11	3.4	5.0	1.5
San Francisco	22	6.7	16.5	5.0	5.5	1.7
San Francisco	15	4.6	9.0	2.7	6.0	1.8
San Francisco	15	4.6	7.0	2.1	8.0	2.4
Average					6.1	1.8

Table 8. Summary of Levels of Service Standards for Walkways.

Level of Service	Average Area Module per Person		Average Traffic Volume per Minute		Normal Walking Speed	Reverse Flow	Cross Flow
	Sq. Ft.	M ²	Per Foot	Per Meter			
A	35	3.2	7	23	F	F	F
B	(or greater)		(or less)				
C	30	2.8	8	26	F	F	R
D	20	1.9	12	39	F	R	R
E	15	1.4	17	56	F	R	S
F	10	0.9	22	72	R	S	S
	5	0.5	Variable up to		S	S	S
	(or less)		25	82			

F = Relatively free, minimum of restrictions or inconvenience.
 R = Restricted, higher probabilities of conflict and inconvenience.
 S = Severely restricted.

exodus that occurs after a sporting event, or at a railroad platform when a loaded passenger train discharges. The intermittent process is the common arrival process seen at transportation terminals and office buildings, where there are multiple sources of demand with short-term surges called "micropeaks." These are illustrated in Figure 4.

As Fruin notes, "the distinction in arrival processes can be important to the designer, since the assumption of an 'average' design period, which is not truly representative of the actual pattern, may produce an inadequate and inconvenient facility."

Queues can develop in two ways: as *lineal* or *ordered*, with the conventional first-come, first-served priority system (an example is a ticket line); or as *bulk*, which is unordered and lacking in any discipline. Bulk queues can be further considered in two ways: those which contain persons who stand and wait, with limited movement within the queuing area (such as at the foot of a motor stair); or those with people who combine waiting with some reasonably free internal circulation through the queuing area (such as on a subway platform).

No standards are available for the design of queuing spaces, but standards can be suggested that are based on human body dimensions and personal space preferences.

6. Signalized Crossings. At signalized intersections, pedestrian crossing opportunities are created by the signal phasing. A high percentage of pedestrian violations may be an indication that the signal does not adequately reflect pedestrian needs. (It may simply reflect minimal enforcement, or local custom, but this must be the judgment of the engineer/planner.) Good signal timing includes a minimum green time, allowing pedestrians to cross the roadway. In most cases, the pedestrians usurp priority over right-turning vehicles because the latter do not have adequate time to start the turn before pedestrians have started to walk with a green signal.

Mayer has studied "de-individualization" of pedestrians observing a traffic signal. His hypothesis is that a pedestrian acting individually may conscientiously observe a DON'T WALK signal indication, but when the same pedestrian is in a group observing the same signal, and another pedestrian begins to cross, the entire group will follow. Based upon a study of one site, Mayer concluded that the de-individualized behavior

is at a rate of 9.8 percent. Individual violators accounted for 60 percent of the violations. Men had a greater propensity toward being violators than women. In a separate study, Manning has concluded that children show a higher proportion of observance than adults. The results of such studies must be accepted with care, however, since pedestrian discipline will vary from region to region in the U.S., just as it most certainly varies from country to country.

7. Mechanical Stairs, Walks and Ramps. Moving stairs, walks and ramps offer convenience to pedestrians and tend to move them in an orderly manner. Except for variable-speed moving walks, they are not currently designed to save time because they typically move at rates which are slower than normal walking. Their initial and maintenance costs limit their use to special design problems, or to high-service and high-convenience installations. By definition, these conveyances are power-driven and are arranged like endless belts, with two moving handrails within closed balustrades. Information has not been found to develop practical capacities of moving walks as compared to rated capacities, but queuing characteristics in advance of the facility will usually determine volumes. A stationary walk is usually provided adjacent to a moving walk; short overloads will naturally divert to the stationary walk.

Pedestrians entering and exiting moving ramps may experience some discomfort and difficulty because of the abrupt change in plane as they step from a level surface to an inclined moving surface, or vice versa. Manufacturers are developing moving ramps that will start out horizontally before climbing and level off to a horizontal position, allowing pedestrians to step off.

Rated capacities of motor stairs assume that each step is occupied. Peak five-minute actual flows were only 63 percent of rated capacity for stair operation at 90 feet (27.4m) per minute, and only 53 percent for stairs operating at 120 feet (36.6m) per minute. As a corollary, it was found that increasing the speed of the motor stair from 90 feet (27.4m) per minute to 120 feet (36.6m) per minute (a 33 percent increase) raised the capacity of the stair by only 12 percent (see Service Requirements, Section 4, Peaking).

Service Requirements

1. Levels of Service. Fruin has developed levels of service for pedestrian flow and queuing, similar to those described in the *Highway Capacity Manual* for vehicular traffic. These establish standards that allow a predetermination of traffic characteristics resulting from different allocations of pedestrian space. In areas where some freedom of design is allowed, such as shopping malls, high levels of service can be provided, resulting in improvement in the pedestrian environment. In restricted areas with extreme limitations, such as commuter terminals, problems can be anticipated and perhaps offset by alternative designs or operating procedures.

Walkways. A level of service standard for walkways and ramps provides a means of determining the qualitative aspects of respective designs. However, it does not eliminate the need for designer judgment. Designers should carefully examine all aspects of prospective walkways, including such traffic characteristics as projected magnitude and duration of peaks, as well as all the ramifications of space use and cost. When designing for peak demands of short duration, lower levels of service standards may be tolerated to provide the basis for more economical design. Added consideration must be given to the selection of design standards near maximum capacity levels, since the critical pedestrian density is likely to be exceeded intermittently. When critical density is exceeded, flow volumes fall below the specified design level and pedestrian delay and backups are likely to occur, requiring determination of the adequacy of holding or queuing space at the approaches to the critical section.

These levels of service standards are based on a range of area occupancies per person. Design volumes are presented as a range of pedestrians per foot of walkway width per minute (PFM). If unidirectional traffic is comprised of commuters or workers, then the higher design volumes in a given range may be safely assumed. The lower range of design volumes would be recommended if traffic is comprised largely of shoppers or persons carrying baggage, or if the traffic pattern involves cross movements, reverse flows and other conflicts.

The following conclusions have been reached:

- The critical pedestrian area occupancy in pedestrian traffic flow is about 5 square feet (0.5m²) per person; below this area occupancy, walking speeds fall within the shuffling range.

- Normal mean walking speed may be attained at an approximate pedestrian area occupancy of 25 square feet (2.3m²) per person.

- The probability of crossing conflicts remains at 100 percent virtually up to an average area occupancy of about 15 square feet (1.4m²) per person. It remains at about the 50-percent level between 20 to 35 square feet (1.9 to 3.2m²) per person, beyond which it drops to zero.

Level of service standards for walkways are described below and summarized in Table 8. Pedestrian volume and area relationships are shown in Figure 5.

Level of Service A.

Average pedestrian area occupancy: 35 square feet (3.2m²) per person or greater.

Average flow volume: 7 PFM (23 PMM) or less.

Sufficient area is provided for pedestrians to freely select their own walking speed, to by-pass slower pedestrians and to avoid crossing conflicts with others.

Application: Public buildings or plazas without severe peaking characteristics or space restrictions.

Level of Service B.

Average pedestrian area occupancy: 25 to 35 square feet (2.3 to 3.2m²) per person.

Average flow volume: 7 to 10 PFM (23 to 33 PMM).

Sufficient space is available to select normal walking speed and to by-pass other pedestrians in primarily one-directional flows. Where reverse direction or pedestrian crossing movements exist, minor conflict will occur, slightly lowering mean pedestrian speeds and potential volumes.

Application: Reasonably high-type design for transportation terminals and buildings in which recurrent, but not severe, peaks are likely.

Level of Service C.

Average pedestrian area occupancy: 15 to 25 square feet (1.4 to 2.3m²) per person.

Average flow volume: 10 to 15 PFM (33 to 49 PMM).

Freedom to select individual walking speed and freely pass other pedestrians is restricted. Where pedestrian cross movements and reverse flows exist, there is a high probability of conflict requiring fre-

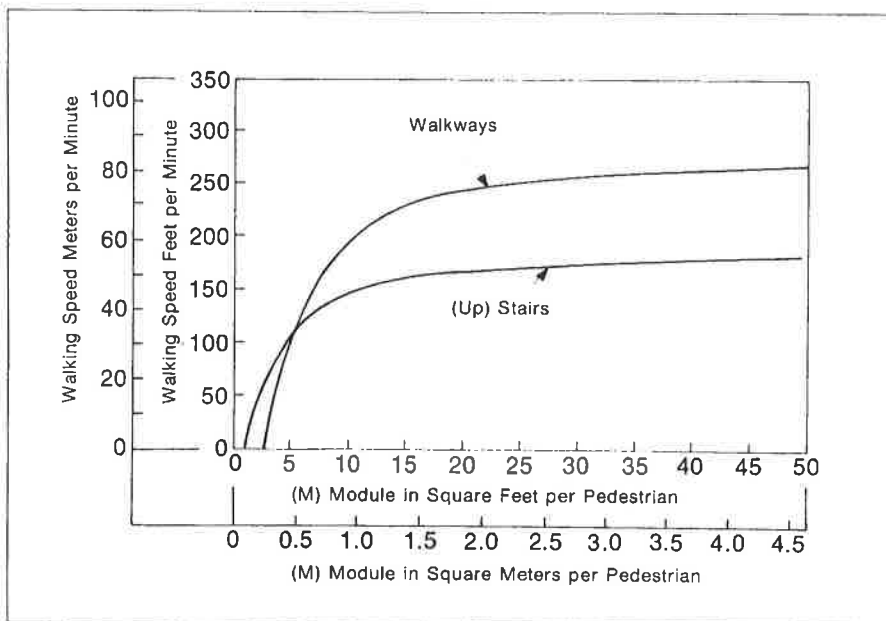


Figure 2. Speed versus module.

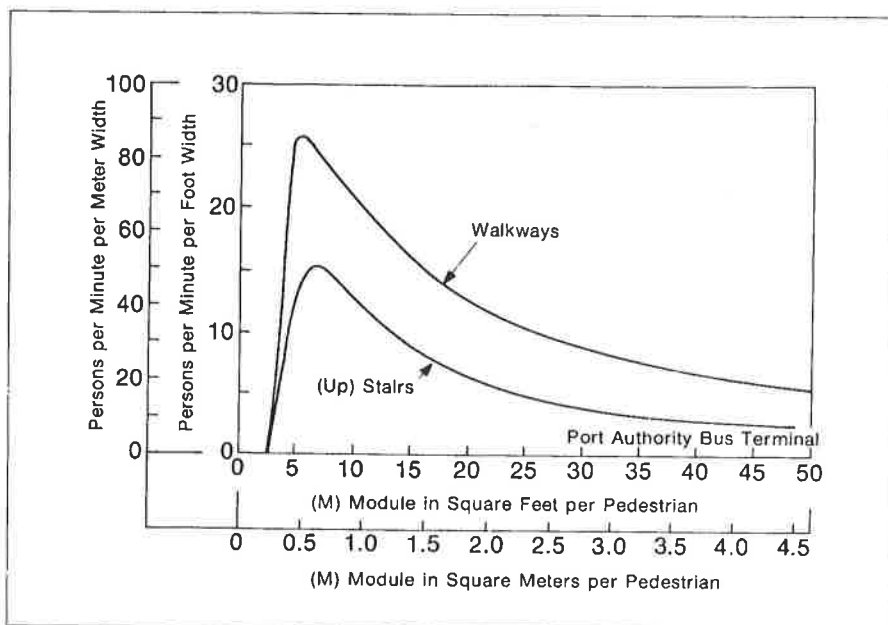


Figure 3. Persons versus module.

quent adjustment of speed and direction to avoid contact. Reasonably fluid flow, but considerable friction and interaction among pedestrians.

Application: Heavily used transportation terminals, public buildings, open spaces where severe peaking plus space restrictions limit design flexibility.

Level of Service D.

Average pedestrian area occupancy: 10 to 15 square feet (0.9 to 1.4m²) per person.

Average flow volume: 15 to 20 PFM (49 to 66 PMM).

Majority have normal walking speeds restricted and have difficulty in by-passing slower pedestrians and avoiding conflicts. Pedestrians in reverse flow and crossing are severely restricted. Multiple conflicts.

Application: Only for the most crowded public areas where forward progress for individuals is not the most important movement.

Level of Service E.

Average pedestrian occupancy: 5 to 10 square feet (0.5 to 0.9m²) per person.

Average flow volume: 20 to 25 PFM (66 to 82 PMM).

Virtually all pedestrians have normal walking speeds restricted, requiring frequent change of gait. At lower end of range, forward progress is only by shuffling. Area is insufficient to by-pass slower-moving pedestrians. Extreme difficulty is experienced in reversing flow or cross-flow movements. Volume approaches maximum capacity of walkway. Frequent stoppages and interruptions.

Application: Only for short peaks in most crowded area. Occurs naturally with bulk arrival traffic pattern. Recommended only for sport stadium design and rail transit facilities. Adequacy of pedestrian holding areas must be considered.

Level of Service F.

Average peak area occupancy: 5 square feet (0.5m²) per person or less.

Average flow volume: variable up to 25 PFM (82 PMM).

All pedestrian walking speeds are restricted. Forward progress is only by shuffling. Unavoidable contact with others are frequent. Reverse or crossing movements are impossible. Traffic flow is sporadic, movement is based on those in front. Represents loss of control, complete breakdown in traffic flow.

Application: Not recommended.

Stairs. In designing stairways, increased consideration should be given to the role of human factors because of the

greater safety hazards and energy expenditure required in stair locomotion. In addition to the exercise of designer judgment in evaluating traffic patterns and peak characteristics recommended in using walkways standards, the following factors should be considered in design:

- Stairs should be well lighted, provided with sufficient head room, and with properly designed and maintained riser and tread configurations and railings.
- Stairs should be located so as to be readily visible and identifiable as a means of direct access to the levels they are designed to interconnect.
- Moderate riser heights reduce human energy expenditures and increase traffic efficiency. Six inches (15 cm) may be a desirable standard.
- Stairways should be offset from mainstream corridor traffic to avoid pedestrian conflict.
- Clear areas, sufficiently large to allow for queuing pedestrians, should be provided at the top and bottom of all stairways.
- When a stairway is placed directly within a corridor, the lower capacity of the stairway is the controlling factor in the design of the section.

Level of service standards for stairways are described below and summarized in Table 9. Pedestrian volume and area relationships are shown in Figure 6.

Level of Service A.

Average pedestrian area occupancy: 20 square feet (1.9m²) per person or greater.

Average flow volume: 5 PFM (16 PMM) or less.

Sufficient area provided to freely select locomotion speed and to by-pass others. No serious difficulties with reverse traffic flow.

Application: Public buildings, plazas with no severe traffic peaks or space limitations.

Level of Service B.

Average pedestrian area occupancy: 15 to 20 square feet (1.4 to 1.9m²) per person.

Average flow volume: 5 to 7 PFM (16 to 23 PMM).

This level of service represents a space about 5 treads long and 3 to 4 feet (0.9 to 1.2m) wide. Almost all persons can freely select locomotion speed. In lower range of area occupancy some difficulties are experienced in passing slower-

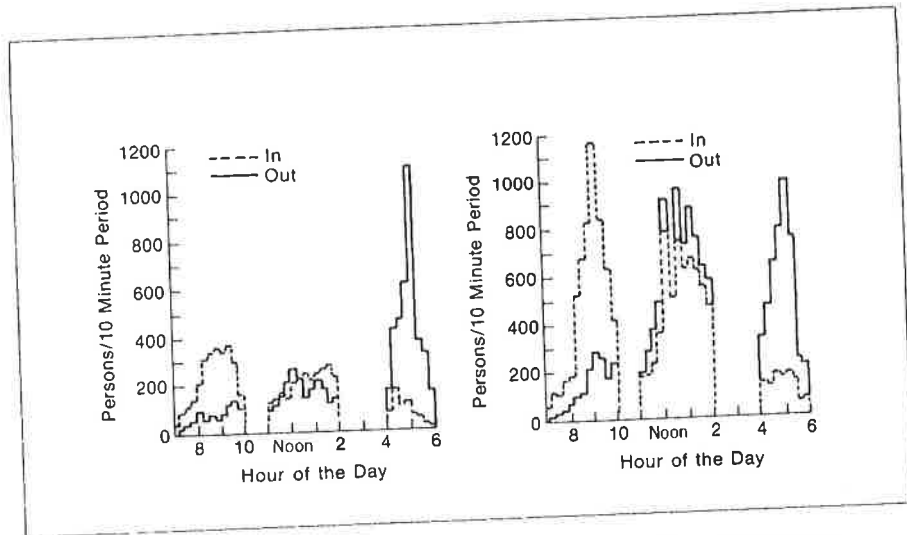


Figure 4. Pedestrian door counts (source: Lower Manhattan Plan, Figure 2-34).

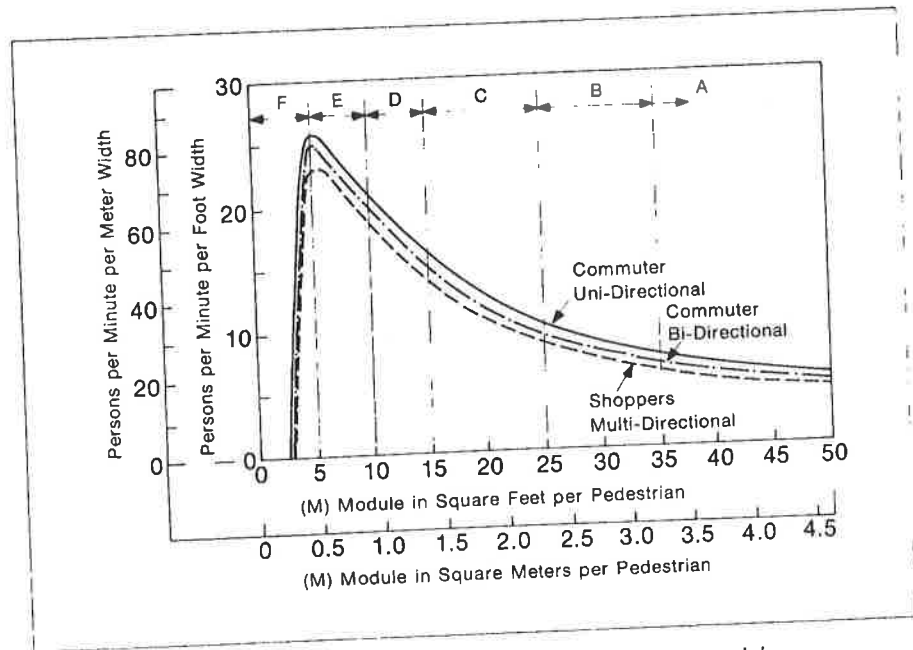


Figure 5. Level of service standards for walkways volume versus module.

Table 9. Summary of Levels of Service Standards for Stairways.

Level of Service	Average Area Module per Person		Average Traffic Volume per Minute		Normal Stair Locomotion Speed	Reverse Flow
	Sq. Ft.	M ²	Per Foot	Per Meter		
A	20	1.9	5	16	F	F
B	17	1.6	6	20	F	F
C	12	1.1	8	26	F	R
D	8	0.7	11	36	R	R
E	5	0.5	15	49	R	S
F	4	0.4	Intermittent up to 17	56	S	S

F = Relatively free, minimum of restrictions or inconvenience.
 R = Restricted, higher probabilities of conflict and inconvenience.
 S = Severely restricted.

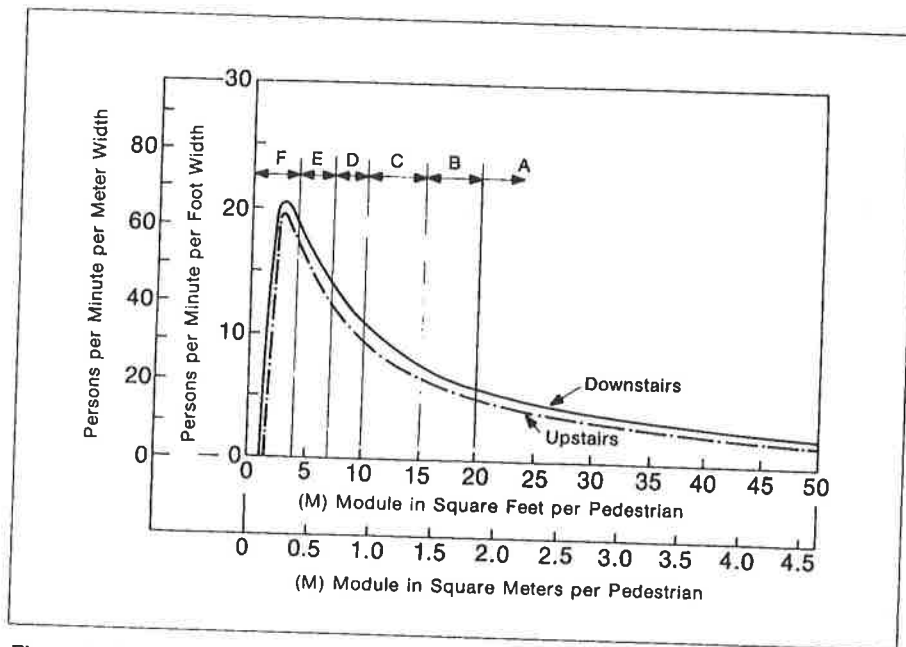


Figure 6. Level of service standards for stairways volume versus module.

moving persons. Reverse flows would cause minor traffic conflicts.

Application: Transportation terminals, public buildings with recurrent peak demands and no serious space limitations.

Level of Service C.

Average pedestrian area occupancy: 10 to 15 square feet (0.9 to 1.4m²) per person.

Average flow volume: 7 to 10 PFM (23 to 33 PMM).

This level of service represents a space about 4 to 5 treads long and 3 feet (0.9m) wide. Locomotion speeds are slightly restricted. Slower-moving persons cannot be passed. Minor reverse traffic flows encounter difficulties.

Application: Transportation terminals, public buildings with recurrent peak demands and some space limitations.

Level of Service D.

Average pedestrian area occupancy: 7 to 10 square feet (0.7 to 0.9m²) per person.

Average flow volume: 10 to 13 PFM (33 to 43 PMM).

This represents a space about 3 to 4 treads long and 2 to 3 feet (0.6 to 0.9m) wide. Locomotion speeds are restricted for the majority due to limited open tread space and inability to by-pass. Reverse flow encounters significant difficulty and traffic conflict.

Application: More crowded public buildings and transportation terminals subjected to relatively severe peak demands.

Level of Service E.

Average pedestrian occupancy: 4 to 7 square feet (0.4 to 0.7m²) per person.

Average flow volume: 13 to 17 PFM (43 to 56 PMM).

This represents a space about 2 to 4 treads long and 2 feet (0.6m) wide, the minimum possible area for locomotion on stairs. Almost all have normal speed reduced because of minimum tread length space and inability to by-pass others. Intermittent stoppages occur as critical pedestrian density is exceeded. Reverse flows have serious conflicts.

Application: Occurs naturally with bulk arrival traffic pattern that immediately exceeds available capacity. This is the only situation for which it is recommended: sports stadiums and transit facilities with large, uncontrolled, short-term exodus of people.

Level of Service F.

Average pedestrian area occupancy: 4 square feet (0.4m) per person or less.

Average flow volume: Variable to 17 PFM (56 PMM).

This represents a space about 1 to 2 treads long and 2 feet (0.6m) wide. Complete breakdown occurs in traffic flow; many stoppages; forward progress depends on those in front.

Application: Not recommended.

Queues.

Level of Service A (Free Circulation Zone).

Average pedestrian area occupancy: 13 square feet (1.2m²) per person, or more.

Average interperson spacing: 4 feet (1.2m) or more.

Space is provided for standing and free circulation through the queuing area without disturbing others.

Application: Passenger concourse areas; baggage claim areas.

Level of Service B (Restricted Circulation Zone).

Average pedestrian area occupancy: 10 to 13 square feet (0.9 to 1.2 m²) per person.

Average interperson spacing: 3½ to 4 feet (1.1 to 1.2m).

Space is provided for standing and restricted circulation through the queue without disturbing others.

Application: Railroad platforms; passenger concourse areas.

Level of Service C (Personal Comfort Zone).

Average pedestrian area occupancy: 7 to 10 square feet (0.7 to 0.9m²) per person.

Average interperson spacing: 3 to 3½ feet (0.9 to 1.1m).

Space is provided for standing and restricted circulation through the queuing area by disturbing others. Within the range of personal comfort.

Application: Ordered-queue ticket-selling areas; elevator lobbies.

Level of Service D (No-Touch Zone).

Average pedestrian area occupancy: 3 to 7 square feet (0.3 to 0.7m²) per person.

Average interperson spacing: 2 to 3 feet (0.6 to 0.9m).

Space is provided for standing without personal contact with others, but circulation through the queuing area is severely restricted and forward movement is only possible as a group.

Application: Motor-stair queuing areas; pedestrian safety islands; holding areas at crosswalks. Not recommended for long-term periods of waiting.

Levels of Service E (Touch Zone).

Average pedestrian area occupancy: 2 to 3 square feet (0.2 to 0.3m²) per person.

Average interperson spacing: 2 feet (0.6m) or less.

Space is provided for standing, but personal contact with others is unavoidable. Circulation within the queuing area is not possible. Space can only be sustained for short periods of time without physical and psychological discomfort.

Application: Recommended only for elevators.

Level of Service F (the Body Ellipse).

Average pedestrian area occupancy: 2 square feet (0.2m²) per person or less.

Average interperson spacing: Close contact with surrounding persons.

Space is approximately equivalent to the area of the human body. Standing is possible, but close unavoidable contact with surrounding persons causes physical and psychological discomfort. No movement is possible. In large crowds, the potential for panic exists.

Application: Not recommended.

2. Design of Sidewalks, Passageways and Ramps. These facilities should be available to all persons. The design should not be such as to preclude use by the handicapped. Therefore, where possible, sidewalks should be constructed to allow the easy passage of wheelchairs. Such provision will often be a requirement of law, regulation and building codes. The height of the sidewalk should provide sufficient definition between the street and the roadway to insure the safety of pedestrians.

The minimum width of any facility (where not excluded by law) should probably be the width of a wheelchair plus a person, with allowances made for clearance. This design also allows for the passing of the slower pedestrians by the faster, and gives a total walk width of 6 feet (1.8m): 2.5 feet (0.8m) for a person and 2.5 feet (0.8m) for the wheelchair, plus 1 foot (0.3m) for clearance for the wheelchair. The old standard was a 22-inch (56cm) lane, but this was found to be too narrow for free-flow pedestrian use. Some authors suggest 24 inches (61cm) but others, using field observations, have found 30 inches (76cm) to be a more accurate description of what humans require.

If the facility is to be enclosed, then the same minimum width should apply. Larger facilities should be designed so that each anticipated lane of pedestrians is 2.5 feet (0.8m) in width.

The design of ramps must consider the influence of slope on pedestrian volumes, as well as climatic and geometric constraints. Slopes of 1:6 and 1:8 appear to be the most frequent used outdoors.

The National Board of Underwriters recommends a slope of 1:10 for ramps within buildings. The major departure of ramps from the other facilities in this subgroup is that hand railings should be provided at slopes greater than 1:12. Slopes less than 1:15 and 1:10 appear to have very little influence on speed and volume, respectively.

3. Design of Stairs. Stairs require considerably less space than ramps, but they impede the flow of people. Stairs may reduce the flow through a passageway by as much as 50 percent. Thus, a sidewalk with one person per 10 square feet (0.9m²) has a conservative capacity of 20 PFM (66 PMM).* The "maximum forced" flow for stairs is 20 PFM (66 PMM), at concentrations of one person per 3 square feet (0.3m²) of stairs. To maintain a comparable density of persons on the stairs, the capacity of the sidewalk would have to be approximately 10 PFM (33 PMM). It is apparent, therefore, that stairs have a smaller capacity than comparable walkways. This means that the stair width must be widened if volume is critical. A good design value for the average stair is 12 PFM (40 PMM) going up. Minor flows opposite the main traffic should be given a separate traffic lane of 30 inches (76cm).

The minimum width of stairs for the most part is regulated by codes, but where it is not, the minimum should not be less than about 5 feet (1.5m). Otherwise, stairways should be designated with 2 ½-foot-width (0.8m) modules, and used as the control point in a corridor-stair linkage.

Values of 19 and 21 PFM (62 and 69 PMM) have been recommended by Hankin and Wright as design criteria for the London subways. The New York City Transit Authority uses a design capacity of 1,000 PFH (3,281 PMH) for stairs, or 16.7 PFM (55 PMM), and the Massachusetts Bay Transit Authority uses a design value of 20 PFM (66 PMM).

All of these values, with the exception of the New York Transit Authority's, occur at the critical region of stair locomotion flow. Pedestrian area occupancies are about 3 square feet (0.3m) at this volume level, at the borderline of the "touch zone" established in queuing studies. Use of design values for pedestrian traffic flow at this level of pedestrian area occupancy shows little regard for the human requirements of stair locomotion, which are considered to be a minimum of 3 stair treads in length and

* This is the flow at which queues will start to form at the bottom of stairs.

Table 10. Maximum Theoretical and Nominal Motorstair Capacities.

Nominal Size Inches (Measured at Hip)	Width at Tread		Speed		Steps per Minute	Maximum Theoretical Capacity Persons/Hour	Nominal Capacity (75 Percent Persons/Hour)
	Inches	Meter	FPM	MPM			
1.25 Persons/Step	24	0.6	90	27	68	5,000	3,750
			120	37	89	6,700	5,025
2 Persons/Step	40	1.0	90	27	68	8,000	6,000
			120	37	89	10,700	8,025

Source: Strakosch, G. R., Vertical Transportation, Elevators and Escalators, New York City: John Wiley and Sons, 1967.

Table 11. Turnstile Capacity.

Turnstile	Capacity Persons per Minute
Registering	
Free Admission	40-60
A Ticket Collector	25-35
Cashier Operated	12-18
Coin-Operated Low	
Single Coin Slot	25-50
Multiple Fare	15-25
Coin-Operated 7 Feet High	10-15
Nonregistering	
Low Traffic Controller	40-60
7-Foot High Traffic Controller	25-40

Source: *Traffic Engineering Handbook*, 3rd Ed., John E. Baerwald, Ed. Washington, D.C.: Institute of Traffic Engineers, 1965.

a human shoulder breadth in width, or approximately 5 to 6 square feet (0.5 to 0.6m²).

4. Arrival Processes, Queuing and Peaking. The pedestrian holding capacity of public spaces is related to the approximate limits of human occupancy of confined spaces:

All females: 1.5 square feet (0.14m²) per person.

Mixed: 1.8 square feet (0.17m²).

Contact with others: 2.75 square feet (0.26m²).

Uncrowded: 3.5 square feet (0.33m²).

Dense bulk queues (escalators or crosswalks): 5 square feet (0.5m²) average.

Current literature gives little recognition to peaking within short periods of the peak hour. Often, the peak-flow rate experienced during a five-minute rate flow is one-and-one-half times greater than the hourly flow rate. Thus, a 1,200-person hourly flow would probably include flow at an 1,800-person rate during the peak five minutes.

Peaking of pedestrian traffic is dependent on the types of pedestrians composing the traffic. Facilities which serve a single pedestrian group, such as commuters, are likely to have higher peaking than those which serve multipurpose trips.

Employee characteristics must be considered in the design of pedestrian facilities for employment centers. The peaking of the arrival rate about the starting time, for white-collar workers, is such that approximately 20 percent of the employees enter about five minutes early. The 15-minute arrival time, from 10 minutes before to five minutes after the official starting time, includes 60 percent of the arriving employees. A building that does not have all persons of the same employment group may have only 20 to 25 percent of all arrivals before 10 A.M. in a single 15-minute period.

The departure rate is even more peaked, with 40 to 50 percent leaving at the nominal quitting time. Eighty percent of all departing employees leave within six minutes (early or late) of the nominal quitting time. These values may be reduced to 30 to 40 percent at the exit, depending on the size of the building

and the efficiency of the internal circulation system. Examples of the peaking and direction of flows for two major building in New York City are shown in Figure 4.

5. Motor Stairs and Moving Walks. Motor stairs manufacturers rate the theoretical capacity of their units on the basis of speed, assumed occupancy per step and 100 percent step utilization. Since the latter is never obtained, even under the heaviest traffic pressure with use by pedestrian commuters, nominal or actual design capacity has been recommended by the *Traffic Engineering Handbook* as 80 percent of manufacturer's capacity for 90 fpm (28 mpm) motor stairs, and 75 percent for 120 fpm (37 mpm) motor stairs. Strakosch recommends the use of 75 percent of theoretical capacity, as shown in Table 10.

Based on his studies, Fruin was able to draw the following conclusions about the design of motor stairs and moving walks:

- Manufacturers' recommended capacities of motor stairs and moving walks are based on the mechanical capacity of these units, and are unrelated to the human capabilities and traffic patterns which determine actual use and capacity.
- Human characteristics, traffic density and the presence of baggage have all been found to have an effect on motor stair use.
- Computer simulation of the use of motor stairs and moving walks, based on observed boarding characteristics and traffic demand, produced a more meaningful and logical approach to design.
- Based on the computer simulation, a clear queuing space for 98 persons, or about 500 square feet (47m²) is needed for a 90 fpm (27.4 mpm), 48-inch (122cm) wide motor stair at the practical working capacity of the unit; if this capacity is exceeded, a larger space is required.

Moving ramps are generally used on 15-degree slopes or less, at a maximum speed of 140 fpm (43 mpm) for short distances, and on 7- to 8-degree slopes or less with a maximum speed of 180 fpm (55 mpm). The width of the walkway depends on the slope; the steeper slopes require passengers to have access to at least one handrail. The width is limited to 48 inches (122cm) for a slope greater than 8 degrees, or a speed greater than 140 fpm. For a slope of 5 to 8 degrees, and speeds less than 140 fpm (43 mpm) the width may be up to 70 inches (178cm). For a slope of 3 to 5 degrees, the width may be 100 inches (254cm), and for a slope of 0 to 3 degrees, the width is unlimited if the speed is less than 140 fpm.

6. Turnstiles and Revolving Doors. The capacity of turnstiles depends on the type of turnstile, and if and how money or fares are collected. The capacities of various turnstile designs are given in Table 11. The range of capacity values reflects such elements as commuter versus noncommuter traffic, age of the users and other physical differences. The maximum value should only be used for groups, such as commuters, who are familiar with the operation of most of the equipment.

Truly noncommuter, or casual, traffic should probably be assigned the lower value. Facilities used for sporting events and other forms of entertainment should probably be given an average between the two extremes, since the patrons probably represent a mixing of those familiar with all the details of such equipment and those unfamiliar with their operation.

Revolving doors have a theoretical capacity of 60 persons per minute each way.* The actual efficiency (based on the maximum 15 revolutions per minute) is approximately 80 to 85 percent, and represents a capacity of about 50 persons per minute each way. The more usual observed value, for relatively busy revolving doors, is about 25 persons per minute, which is the suggested lower design capacity, and a maximum of 30 persons per minute.

* Based on constant traffic demand and a door having 15 revolutions per minute.

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Levels of Service for Pedestrians

**THE AUTHOR DISCUSSES
THE LATEST RESEARCH ON
LOS FOR PEDESTRIANS,
ESPECIALLY SINCE
IMPROVED LOS AND
CAPACITY FOR VEHICLES
ON HIGHWAYS HAVE
AFFECTED LAND
USE PATTERNS
AND PENALIZED
NON-MOTORIZED
TRAVEL.**

MANY WESTERN SOCIETIES ARE rediscovering walking. Until the 20th century, all cities were defined by their walkable scale. Nowadays, most aspects of our daily lives are not exclusively walkable. Walking is sometimes treated as a trivial case in transport studies, often dismissed as a "soft mode." However, as is increasingly evident from the media and professional discussions,¹ in practice, it is the technological measures that need to be described as "soft" while changing travel behavior is most definitely "hard."

A key determinant of the amount of travel by any mode is the utility or Level of Service (LOS) offered by that mode. The concept of a traveler's LOS is defined in more detail in the *Highway Capacity Manual* (HCM),² which remains a definitive work in the consideration of highway LOS, but covers pedestrian design capacity mainly where pedestrians interact with street traffic.

Unfortunately, externalities mean that many of the actions that have led to improved LOS and capacity for vehicles on highways have also affected land use patterns and have penalized non-motorized travel. This feature considers the other wider aspects of LOS for pedestrians.

DEFINITIONS AND CONCEPTS

The seminal pedestrian work by Fruin³ used many of the HCM ideas, and provides an enduring lesson on most aspects of planning for the pedestrian. The HCM used LOS based on a number of key definitions such as *interrupted flow*

and *capacity* and *LOS*. The LOS concept is a qualitative measure

describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. The LOS definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and conve-

nience, and safety. Six LOS are defined for each type of facility for which analysis procedures are available. They are given letter designations, from A to F, with LOS F being the worst.

For each type of facility, LOS are defined based on one or more operational parameters that best describes operating quality for the subject facility type. While the concept of LOS attempts to address a wide range of operating conditions, limitations on data collection and availability make it impractical to treat the full range of operational parameters for every type of facility. The parameters selected to define LOS for each facility type are called "measures of effectiveness" and represent those available measures that best describe the quality of operation on subject facility type. Table 1² gives the measures of effectiveness used to define LOS for each facility type. Figure 1 shows pedestrian LOS based on ranges of space and speed.

PEDESTRIAN CHARACTERISTICS

Pedestrian characteristics are comprehensively described in Fruin.³ Traditional characteristics in HCM terms are:

- Observed volumes and flow rates for different facilities;
- Transport variation (seasonal, daily, hourly, sub-hourly);
- Spatial distribution (directional split, composition, e.g., percentage disabled or mobility impaired);
- Speed (trends, variation by time and trip purpose, which might include "just walking about");
- Density (relationships with speed, flow or both); and
- Spacing and headway characteristics.

The principles of pedestrian flow analysis are similar but subtly different to those used for vehicular flow. The fundamental relationships among speed, volume and density are similar. As the volume and density of a pedestrian stream increases from free-flow to more crowded

BY COLIN HENSON

conditions, speed and ease of movement decrease. When the pedestrian density exceeds a critical level, volume and speed become erratic and rapidly decline.

The qualitative measures of pedestrian flow similar to those used for vehicular flow are the freedom to choose desired speeds and to bypass others. Other measures more specially related to pedestrian flow include the ability to cross a pedestrian traffic stream, to walk in the reverse direction of a major pedestrian flow and to generally maneuver without conflicts and changes in walking speed or gait. Additional environmental factors that contribute to the walking experience and, therefore, to perceived LOS are:

- *Comfort* factors include weather protection, climate control, arcades, transit shelters and other pedestrian amenities;
- *Convenience* factors include walking distances, pathway directness, grades, sidewalk ramps, directional signing, directory maps and other features making pedestrian travel easy and uncomplicated;
- *Safety* is provided by separation of pedestrians from vehicular traffic, horizontally in malls and other vehicle-free areas, and vertically using overpasses and underpasses. Traffic control devices can provide for time separation of pedestrian and vehicular traffic;
- *Security* features include lighting, open lines of sight, and the degree and type of street activity; and
- *Economy* aspects relate to the user costs associated with travel delays and inconvenience, and to the rental value and retail development as influenced by pedestrian environment.

These supplemental factors can have an important effect on the pedestrian perception of the overall quality of the street environment. While auto users have reasonable control over most of these factors, the pedestrian has virtually no control over them. The HCM notes that although the HCM method emphasizes LOS analysis, which relates primarily to pedestrian flow measures, such as speed and space, these environmental factors should always be considered because they greatly influence pedestrian activity.

Table 1. LOS for facility types.

Type of facility	Measure of effectiveness
Freeways	
Basic freeway segments	Density (pc/mi/ln)
Weaving areas	Average travel speed (mph)
Ramp junctions	Flow rates (pcph)
Multi-lane highways	Density (pc/mi/ln)
Two-lane highways	Percent time delay (%) Average travel speed (mph)
Signalized intersections	Average individual stopped delay (sec/veh)
Unsignalized intersections	Reserve capacity (pcph)
Arterials	Average travel speed (mph)
Transit	Load factor (pers/seat)
Pedestrians	Space (sq ft/ped)

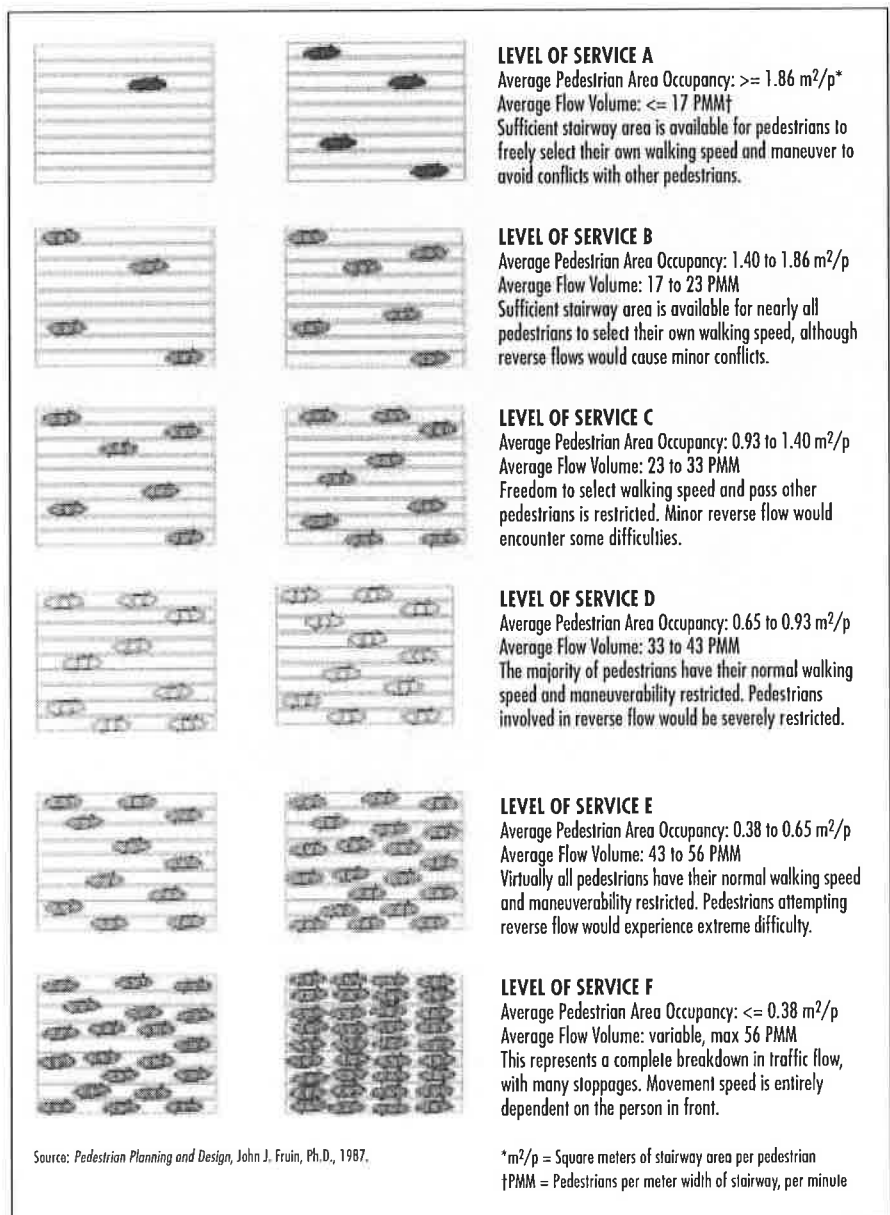


Figure 1. Key to walkway LOS.

OTHER PEDESTRIAN CHARACTERISTICS—LOS OR WALKABILITY INDEX?

Because the pedestrian environment is multi-dimensional, it will take a set of several numbers to properly describe LOS.⁴ Any attempt to distill pedestrian LOS into a single letter or number will inherently remove any useful information from the measurements. Wetmore⁴ does not find it useful to distinguish between LOS and Quality of Service (QOS). Because QOS is considered to be an integral part of LOS, so each of these numbers is an aspect of LOS. Wetmore would break down pedestrian LOS into three broad areas, with a separate index for each:

1. Walking along the street

- a) Continuity: Are there any gaps or obstacles in the sidewalk or path?
- b) Capacity: Is the sidewalk wide enough? (See the HCM.)
- c) Comfort: Is the walk pleasant? (See Florida research.)

2. Crossing the street

- a) Safety, comfort and convenience. (See Walking Security Index by Barry Weller, University of Ottawa.)
- b) Is there sufficient queuing space? (See the HCM.)
- c) Delay: Total crossing time, including how long a pedestrian has to wait for a gap in traffic or a green signal.
- d) Deviation: How far does a pedestrian have to detour to reach a safe crossing point? (Overlaps with Section 3 by making destinations effectively farther away.)

3. Some place to walk to

- a) How well do sidewalks and crossings work as a system?
 - Travel time along a route (including crossing delay) compared to walking a hypothetical straight line route.
 - The “ped shed” concept: How much of an area within a given radius [e.g., 1 kilometer (km)] of a destination can be reached with a 1-km walk along existing sidewalks (expressed as a percent or a ratio)? This can be adjusted to include delay at lights and crossings (delay

equals lost distance at the average walking speed).

- b) Do destinations exist? Most likely taken as a measure of mixed land use.

- c) More involved analysis of the mix of destinations within a given walking time or distance. The measures can get quite sophisticated. For example, one might include:

- The effect of signal timing on platoons of pedestrians reaching the next intersection;
- The negative aspects of various bridge and tunnel designs when evaluating their “perceived” safety, convenience for crossing the street (i.e., why don’t pedestrians voluntarily use them?);
- Related to the above, the perception pedestrians have of delays and detours;
- Intersection density, providing a variety of routes to a given destination;
- The effect of building locations and characteristics on pedestrians; and
- The importance of amenities, such as benches and drinking fountains.

THE LITERATURE

What are those other pedestrian characteristics? Material supplied by Wetmore summarized work as a result of a pedestrian LOS online project through PedNet (www.pednet.org) in November 1995. Following are brief descriptions of other recent attempts to define a pedestrian LOS. What Wetmore found, in general, was a common perception of the need to improve on the HCM Chapter 13 pedestrian LOS definition, but widely divergent and somewhat narrow conceptions of what that might mean.

1. Linda Dixon’s paper, “Adopting Corridor-Specific Performance Measures for Bicycle & Pedestrian Level of Service,” appeared in *Transportation Planning*, Summer 1995. Dixon’s pedestrian LOS is based on a point system. Criteria fall under six categories: pedestrian facilities provided (maximum 10 points), path

conflicts (4), amenities (2), motor vehicle LOS (2), maintenance problems (2) and provision for multiple modes (1). LOS A is defined as 21 to 17 points.

2. *Land Use Transportation Air Quality Connection* (LUTRAQ) was a study done by Parsons Brinckerhoff Quade and Douglas Inc. in December 1993. The nearest definition to a pedestrian LOS it contains is called a Pedestrian Environment Factor (PEF), which defines only four factors: ease of street crossing, sidewalk continuity (Is there a sidewalk?), street (and therefore sidewalk) connectivity and challenging topography (a fancy way of saying hills).

3. North Central Texas Council of Governments (NCTCOG) material for Dallas/Ft. Worth and the surrounding 18 counties or so is available on the Internet. In terms of pedestrian LOS, this document largely refers to the LUTRAQ PEF material. It is more interesting, though, because it attempts to answer the question, “Where do we put our sidewalks?” with some very complicated mathematics.

4. Steven Kaiser’s paper, “Urban Intersections that Work for Pedestrians: A New Definition for Level of Service,” was presented at the 73rd meeting of the Transportation Research Board (TRB) in 1994. He proposes that a pedestrian LOS be delay-based, rather than congestion-based, and then defines a pedestrian LOS based only on delay at signals.

5. Chris Bradshaw’s paper, “Creating and Using a Rating System for Neighborhood Walkability: Towards an Agenda for Local Heroes,” is available at www.ottawalk.org/pednet/oldftp/Other/walkability.paper. The walkability index lays out 10 aspects of neighborhoods (density, off-street parking places, number of sitting spots on benches, chances of meeting someone you know while walking, age at which a child is allowed to walk alone, women’s perception of safety in the neighborhood, responsiveness of transit service, the number of neighborhood places of significance, size and proximity of parkland, and sidewalk characteristics) to be scored. It was noted that this addressed the traditionally less measurable aspects of the walking environment.

6. C. Jotin Khisty’s paper, “Evaluation of Pedestrian Facilities: Beyond the Level-of-

Service Concept," was published in *Transportation Research Record 1438*. Khisty proposes that the flow/speed measurement currently in the HCM should be preserved and used as the sole quantitative measurement of pedestrian environments. But he identifies seven other qualitative environmental factors that can be measured by survey to augment Fruin's approach. His seven are: attractiveness, comfort, convenience, safety (from other traffic), security (from crime), system coherence and system continuity. As part of the paper, Khisty does show a sensitivity for the paradigm shift from car-thinking to ped-thinking.

7. Other material consulted included: The 10-page public section of the Americans with Disabilities Act (ADA) in draft form. Some ADA material can be found in the ADA Web site (www.usdoj.gov/crt/ada/adahom1.htm); Richard Untermaun's book *Accommodating the Pedestrian: Adapting Towns and Neighborhoods for Walking and Bicycling* (1984); also William Whyte's book, *City: Rediscovering the Center*; Michael Replogle of the Environmental Defense Fund and John Holtzclaw of the Sierra Club; the City of Ft. Collins, CO, USA, recently completed a Pedestrian Plan, which included a LOS computation and comparison between different modes of travel; and the City of Seattle has made a start on identifying and measuring the percentage of "pedestrian-friendly" streets.

In summary, Wetmore contends that pedestrian LOS is not the number of pedestrians present. A low pedestrian count may be caused by a poor pedestrian LOS, but would not use that as part of the index. Pedestrian LOS inherently must focus on the physical environment. Wetmore would not include policies (e.g., free parking) that affect the relative attractiveness of walking vs. other modes, nor try to measure social attitudes toward walking as part of pedestrian LOS, nor include the real or perceived threat of crime. These are important, but LOS is not a measure of everything. Wetmore would stick with features of the right of way and adjacent property, and land use patterns.

OTHER ISSUES

The following cultural issues should be considered in estimating an acceptable LOS:

- Ethnic or cultural attitudes to walking;

- Urban/suburban/non-urban/rural;
- Adult/child/elderly persons; and
- Disabled or mobility impaired persons (including prams, strollers, shopping trolleys, etc.).

In many cases, key decisions regarding walking are not rational ones. Surveys undertaken by the author (Castle Towers, Sydney, 1991 to 1997) indicate that walk time within the car park in the shopping center often exceeds the alternative walk time to the local shop. Surveys suggested that people walk 10 minutes within the center to their primary shopping destination and more than a kilometer within the shopping center. In this private environment, the center designers and managers make the walking experience as pleasant as possible in terms of ambience, escalators, etc. Research behind Bluewater Park in Kent, one of the United Kingdom's last massive out-of-town shopping centers, geared its design around clients and customers. The Target Group Index analysis of 22,000 respondents and focus groups indicated seven core lifestyle groups that could be expected to use the center: young survivors, budget optimists, county classics, home comfortables, sporting thirties, young fashionables and club executives.

APPLICATION OF LOS IN AUSTRALIA

Studies undertaken by the author and others^{5,6} suggest that pedestrian walking speeds in Sydney are among the highest in the world. While the results are certainly not definitive, they do suggest that free walking speeds at high LOS are at least comparable to those in cities such as London and New York. Tables 2 and 3 show a comparison of walking speeds with various other cities around the world. It should be noted that it is unlikely that the speeds quoted are able to be compared directly against each other due to the disparity in survey conditions such as pedestrian density and methodology.

Over a dozen Pedestrian Access and Mobility Plans (PAMPs) have been undertaken in Australia. The first⁸ was undertaken by Arup in 1998 for the City of Marrickville and Roads and Traffic Authority, New South Wales. This study identified and prioritized actions for improving networks for pedestrians and the mobility

Table 2. International comparison of walking speeds.

City	Mean walking speed (m/minute)
Hong Kong ⁷	72
Singapore	74
New York	81
Calgary	84
London	88
Sydney	89

impaired, but treated the issue of LOS implicitly by judgment and a site audit by a disability expert. The work has subsequently won an Institute of Public Works Engineering Australia award for excellence.

The new Olympic Railway Station, Homebush Bay, Sydney, has provided an opportunity to apply LOS methods (Figure 2). Arup was commissioned by the Olympic Coordination Authority to model pedestrian movement in the new station built specifically for the Olympics in Homebush Bay. Pedroute was used to develop a basic station design capable of handling 50,000 passengers per hour.

Pedroute is a suite of pedestrian modeling software that simulates the movement of passengers around stations. It can also be applied to other pedestrian spaces where significant and varied horizontal and vertical movements occur. The model includes an integral dynamic assignment algorithm that assigns passengers along routes through the station taking into account bottlenecks and congestion effects. Thus, pedestrians avoid congested areas (if possible) and may choose to use a slightly more distant, but less utilized, route instead. This feedback of "cost" into the pedestrian route choice routine mimics the actual decisions made by pedestrians as they pass through a system. Pedroute is complemented by a graphics package that allows the layout of the modeled environment to be displayed in three dimensions (Figure 3).

CONCLUSIONS

The original work by Fruin remains a broad description of behavior for planning for pedestrians. The HCM approach to estimating LOS based on

Table 3. International comparison of stairway speeds.

City	Ascending slope speed (m/minute)	Descending slope speed (m/minute)	Riser height (mm)
Bangkok	29.8	35.9	150
Hong Kong	38.7	48.2	148
London	35.4	40.2	n/a
New York	34.4	46.3	152
Sydney	48.2 *	56.6 *	145

**Note: unimpeded free-flow speed.*



Figure 2. Olympic Park Railway Station.

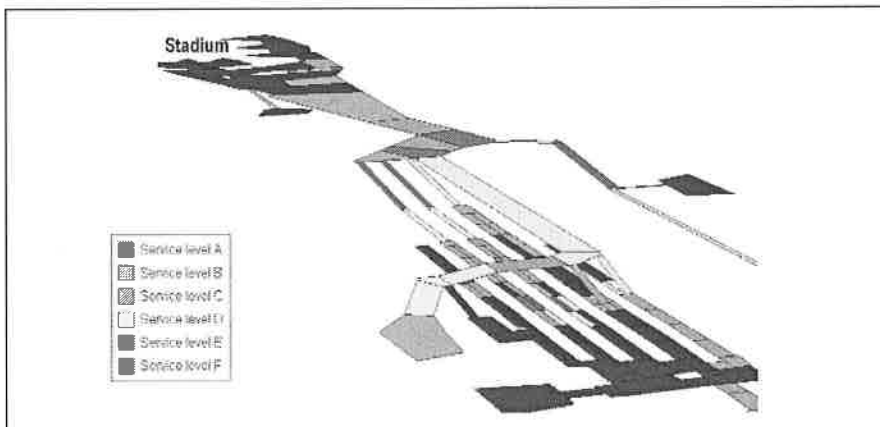


Figure 3. Typical Pedroute output.

densities and flow speeds remains a robust design tool and measure for areas where local capacity is the key design issue. However, the full consideration of all factors determining a LOS for pedestrians is far broader and includes consideration of at least five broad environmental factors: comfort, convenience, safety, security and economy. While measures of effectiveness can be developed for these, in many cases the

data collection, analysis and interpretation process would be too onerous for the designer or manager. On balance, the next best single measure for basing pedestrian LOS is considered to be average delay per pedestrian along a link or through a node. The quantitative relationship between delay and pedestrian LOS requires further research.

The community interest in walking is a wide one, if not universal. Even more so

than driving vehicles, walking has a very broad range of participants, environments and behaviors. A great deal of work has already been done on pedestrian LOS, partly acknowledged and referenced in this feature, which is primarily for an Institute of Transportation Engineers (ITE) audience, but ITE members could clearly advance this issue with a very wide range of designers and decision makers in society.

ACKNOWLEDGEMENTS

The author acknowledges the considerable assistance from John Z. Wetmore in providing background literature for this feature. ■

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is a Principal of Ove Arup & Partners and manages the Transportation Group for New South Wales, Australia. He has undertaken projects in France, New Zealand, Singapore, Thailand, Indonesia, Philippines and Hong Kong. Recent projects he has directed include the Marrickville Pedestrian Access and Mobility Plan (a first for Australia) and pedestrian modeling for the Olympic Railway Station, Homebush Bay, Sydney. Henson is a Member of ITE.

EXHIBIT 4

DRAFT

Recording Requested By:

City of Santa Monica

When Recorded Mail To:

City of Santa Monica
City Planning Division
1685 Main Street, Room 212
Santa Monica, CA 90401
Attention: Senior Land Use Attorney

RECEIVED

MAY 20 2010

CITY PLANNING

Space Above Line For Recorders Use
No Recording Fee Required
California Government Code Section 27383

DEVELOPMENT AGREEMENT

BY AND BETWEEN

CITY OF SANTA MONICA

AND

HINES 26TH STREET, LLC

FOR

BERGAMOT TRANSIT VILLAGE CENTER

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Exhibits

Exhibit "A" Legal Description of Project Land

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Exhibit "K" Transportation Demand Management Program

Exhibit "L" Permitted Uses

Exhibit "M" Required Minimum Parking
Exhibit "N" Definition of Floor Area

Plans and this Agreement which approvals, consents or permits shall not be subject to any discretionary review. Technical City Permits include, without limitation (a) building permits, including foundation-only permits, (b) related mechanical, electrical, plumbing and other technical permits, (c) demolition, excavation, shoring and grading permits, and (d) certificates of occupancy.

1.54 "Technical Codes" means the Administrative and Technical Construction Codes of the City (Article VIII of the Code).

1.55 "Technical Permit Applications" means any applications required to be filed by Developer for any Technical City Permits.

1.56 "Term" shall have the meaning given that term in Section 9.2(a) below.

1.57 "Transferee" shall have the meaning given that term in Article 13 below.

1.58 "TDM" means the transportation demand management program discussed in Exhibits "C" and "K" attached hereto.

1.59 "Vesting Period" means the period described in Section 3.1(b) below, as it may be extended pursuant to the provisions of this Agreement.

1.60 "Workforce Housing" means housing which is targeted (via marketing programs) toward users in specified job types **[the specific job types will be agreed to with the City, but initially, the Developer is planning to target first responders, including police officers, firefighters, nurses, EMT's as well as teachers and social workers]** and those working within close proximity of the Project Land. Workforce Housing shall have no limit, control or restriction on price or income-levels of occupants.

1.61 "Zoning Code" means Chapter 9 of the Code as in effect on the Effective Date and which is included in the Existing Regulations.

Article 2 THE PROJECT

2.1 General Description. The Project includes all aspects of the proposed development of the Project Land as more particularly described in this Agreement and on the Project Plans. In the event of a conflict or inconsistency between the text of this Agreement and the Project Plans, the Project Plans will prevail.

2.2 Principal Components Of The Project. The Project consists of the following elements, all of which are hereby approved by the City subject to the other provisions of this Agreement:

(a) Demolition of the Existing Buildings that currently provide for approximately 206,000 square feet of Floor Area.

(b) The proposed use of the Project Land as further defined in the Project Plans, attached hereto as **Exhibit "D"**. The Project Plans generally contemplate the construction of five new buildings totaling 957,521 square feet of Floor Area. The Project will include up to a maximum of 351,254 square feet of Floor Area of Residential Uses, up to a maximum of 606,267 square feet of Floor Area of Creative Arts Uses and up to a maximum of 85,000 square feet of Floor Area of Retail Uses, including:

- i. Three (3) Creative Arts Buildings with varying heights, including;
 - a. a Creative Arts Building totaling a maximum of 279,146 square feet of Floor Area, hereinafter referred to as ("**Building 1**") to be constructed on Parcel 1 (as shown on **Exhibit "B"**),
 - b. a Creative Arts Building totaling a maximum of 172,096 square feet of Floor Area, hereinafter referred to as ("**Building 2**") to be constructed on Parcel 2 (as shown on **Exhibit "B"**),
 - c. a Creative Arts Building totaling a maximum of 154,185 square feet of Floor Area, hereinafter referred to as ("**Building 3**") to be constructed on Parcel 3 (as shown on **Exhibit "B"**), and
- ii. two (2) Residential Buildings (for lease or sale) with varying heights, including;
 - a. a Residential Building totaling a maximum of 220,052 square feet of Floor Area, hereinafter referred to as ("**Building 4**") to be constructed on Parcel 4 (as shown on **Exhibit "B"**), and
 - b. a Residential Building totaling a maximum of 131,202 square feet, hereinafter referred to as ("**Building 5**") to be constructed on Parcel 5 (as shown on **Exhibit "B"**).
- iii. Up to a maximum of 85,000 square feet of Floor Area of the ground floors of Buildings 1-5 shall be used for Retail Uses. The location of the Retail Uses within the ground floors of these buildings shall remain in developer's sole and absolute discretion.
- iv. The buildings will be constructed atop a parking garage that will accommodate approximately 2,000 parking spaces, with the actual number of spaces and levels to be determined based upon a final parking demand analysis to be prepared by a qualified parking consultant retained by Developer. As an alternative, Developer may provide permanent or long-term off-site parking that is within reasonable proximity of the Project. The consultant and the parking demand analysis are subject to approval of the City's Planning Director; such approval will not be withheld unreasonably. In no event shall Developer have the ability to construct any of the

buildings in the Project without first building (or making available on a permanent or long-term basis) the minimum number of parking spaces associated with each building (the "Required Minimum Parking"), as defined in Exhibit "M" attached hereto. Developer shall retain the right to build the parking in whole or in part in its sole and absolute discretion, provided however, that Developer shall not be permitted to obtain building permits for any of the buildings contemplated herein without previously or concurrently obtaining building permits for (or making available on a permanent or long-term basis) the Required Minimum Parking associated with such buildings.

2.3 Uses.

(a) Prior to Development of the Project. Until Developer commences development of the Project, all existing uses and all other uses permitted in the Code for the Project Land, shall be applicable.

(b) Permitted Uses. Permitted Uses generally include Creative Arts Uses, Residential Uses (including rental and for sale condominiums) and Retail Uses ("Permitted Uses") as more particularly defined in Exhibit "L" attached hereto.

2.4 Public Benefits. The Project shall provide the benefits to the public set forth in Exhibit "C" attached hereto, all of which are referred to herein as the "Public Benefits".

2.5 Alcoholic Beverage Permits.

(a) No alcohol will be sold or otherwise made available in any portion of the Project devoted to neighborhood and visitor-serving commercial uses, including Retail Uses and restaurant uses, including bar areas ancillary to restaurant uses, unless one or more Conditional Use Permits have been issued. Upon the application by Developer or the operator or operators of any restaurant or retail store designated as such in the Project Plans, up to a maximum of [X] square feet of interior Floor Area and an additional [X] square feet of adjacent outdoor dining area, the City agrees to issue Conditional Use Permits for the sale of alcohol therein subject, in all cases, to reasonable terms and conditions. The applications subject to this provision shall include all information typically required by the City for similar operations and shall be processed pursuant to the City's standard procedures for issuing Conditional Use Permits.

(b) Notwithstanding the provisions of Section 2.5(a) above, nothing in this Agreement shall authorize the issuance of a Conditional Use Permit for the sale of alcoholic beverages for a nightclub or other use in the Project not specifically permitted under Section 2.3 above. In the event Developer or any operator or operators should seek a Conditional Use Permit for any such purpose, an application shall be filed under the City's then-current regulations and the City shall approve, deny or condition such application under its standards in effect at that time applicable to similar uses.

2.6 **Design.**

(a) **Setbacks.** Developer shall maintain the setbacks for the Project as set forth on the Project Plans. In the event that any inconsistencies exist between the Zoning Code and the setbacks required by this Agreement, the setbacks established by this Agreement shall prevail.

(b) **Building Height.** The height of the buildings shall be as set forth on the Project Plans and shall be measured from the Natural Grade on the site to the top of the structural deck not including Permitted Projections. In the event that any inconsistencies exist between the Zoning Code and the building height allowed by this Agreement, then the building height allowed by this Agreement shall prevail.

(c) **Stepbacks.** Developer shall maintain the stepbacks for the Project as set forth on the Project Plans. In the event that any inconsistencies exist between the Zoning Code and the stepbacks required by this Agreement, the stepbacks established by this Agreement shall prevail.

(d) **Permitted Projections.** Projections shall be permitted as reflected on the Project Plans.

(e) **Signage.** Signs in the areas reflected on the Project Plans shall be permitted without review by the ARB.

2.7 **Subdivision Map.** [Developer intends to obtain approval of a subdivision map concurrent with DA approval to facilitate the possibility of separate financing of the five buildings contemplated. Developer also intends to process an air-rights subdivision for any condominiums included in the Project.]

Article 3 DEVELOPMENT OF THE PROJECT

3.1 **Vested Rights.**

(a) **Approval of Project Plans.** The City hereby approves the Project Plans. The City shall maintain a complete copy of the Project Plans, stamped "Approved" by the City, in the Office of the City Clerk, and Developer shall maintain a complete copy of the Project Plans, stamped "Approved" by the City, in its offices or at the Project site. The Project Plans to be maintained by the City and Developer shall be in an 11 x 17 format. Further detailed plans for the construction of the Project, including, without limitation, structural plans and working drawings, shall be developed by Developer subsequent to the Effective Date based upon the Project Plans.

(b) **Right to Develop.** Developer shall have the vested right to develop and construct the Project in accordance with this Agreement, the Project Plans, any Minor Modifications thereto which are approved in accordance with Section 3.2(a) below, and any Major Modifications which are approved pursuant to Section 3.2(b) below; provided, however, that the Right to Develop provided by this Agreement shall

automatically terminate if Developer has not obtained a building permit by the date which is fifteen (15) years after the Effective Date (the "**Vesting Period**") subject to any properly noticed Excusable Delays. The Vesting Period may be extended by the Planning Director, in his or her sole discretion, in an amount of time not to exceed three years, for a maximum Vesting Period of eighteen years subject to any properly noticed Excusable Delays.

(c) **Potential Phased Development.** Developer may, in its sole and absolute discretion, develop the project in phases. Developer may obtain a series of building permits for the project, with individual building permits for one or more buildings or other improvements (such as the subterranean parking). In such event, the Vesting Period will apply to each building permit individually and will expire as to any of the improvements for which no building permit is issued prior to or upon the expiration of the Vesting Period.

(d) **Limits on City Discretion.** Except as expressly set forth in this Agreement, the City shall have no further discretion over the elements of the Project which have been delineated in the Project Plans or described in this Agreement and to the extent of any inconsistencies between this Agreement and the Existing Regulations (except for the General Plan), this Agreement shall control. A change to the Existing Regulations after the Effective Date shall not constitute a basis for revoking any approval given or deemed to be given pursuant to this Agreement.

3.2 **Modifications**

(a) **Minor Modifications to Project.** Developer may make minor changes to the Project or Project Plans without amending this Agreement upon approval of the Planning Director, provided that he or she makes the specific findings that the proposed changes: (1) are consistent with the provisions, purposes and goals of this Agreement; and (2) are not detrimental to the public health, safety, convenience or general welfare ("**Minor Modifications**"). An increase in the amount of Floor Area for Residential Uses constitutes a Minor Modification. A reduction in the number of floors in any building constitutes a Minor Modification. Field changes caused by site conditions and made pursuant to the City's standard construction revisions procedure are specifically exempted and do not require any City approvals or amendment of this Agreement.

(b) **Major Modifications.** Any modifications to the Project Plans not expressly set forth as major modifications in this paragraph (b) shall be deemed Minor Modifications for purposes of this Agreement. Any of the following types of modifications to the Project Plans ("**Major Modifications**") shall not constitute a Minor Modification and shall require an amendment of this Agreement:

- i. An increase in the total Floor Area of the project;
- ii. An increase in the maximum height;

iii. A decrease in the performance targets set forth in the TDM.
iv. A material reduction (5% or more) in the amount of publicly-accessible open space.

v. A material change in the Public Benefits as specified in **Exhibit "C"**.

vi. An increase in Floor Area of Creative Arts Uses, over and above the maximum specified in Section 2.2.

vii. Any increase in Floor Area of Retail Uses, over and above the maximum specified in Section 2.2.

viii. A reduction in the number of parking spaces below the amount required by the City approved demand analysis described in Section 2.2.

ix. Any significant change in the location and siting of any building which is a part of the Project, as depicted on the Project Plans.

(c) **Approvals.** The City shall not unreasonably withhold, condition or delay its approval of a request for a Minor Modification. The City may impose fees, exactions, conditions, and mitigation measures in connection with its approval of a Major Modification, subject to Article 6 below provided that all fees, exactions, conditions and mitigation measures are in accordance with this Agreement and applicable law. Notwithstanding anything to the contrary herein or in the Existing Regulations, if the City approves a Minor Modification or amendment to this Agreement for a Major Modification, as the case may be, Developer shall not be required to obtain any other Discretionary Approvals for such modification.

(d) **Modifications Necessitated by New Technical Requirements or LEED Requirement.** Notwithstanding Section 3.2(b), if the Planning Director determines that it is reasonably necessary to adjust the allowable Building Height, setbacks, parcel coverage, or overall building square footage established in this Agreement for the Project to achieve compliance with any Technical Code Requirements or LEED Requirement, then the Planning Director is hereby authorized, subject to completion of all necessary environmental review and findings of consistency with the General Plan, in the case of Building Height, setbacks, parcel coverage, or overall building square footage, to grant Developer limited relief (up to ten percent (10%)) from the Building Height, setbacks, parcel coverage, or overall building square footage otherwise allowable under this Agreement without amending this Agreement. Any such approvals shall be granted only after the Planning Director's receipt of a written request for such relief from Developer. Developer is required to supply the Planning Director with written documentation of the fact that compliance with the New Technical Requirements or LEED Requirement cannot be achieved by some other reasonable method. Any such relief shall only be granted to the extent necessary in the

Planning Director's determination for Developer to comply with the New Technical Requirements or LEED Requirement.

3.3 No Obligation to Develop.

(a) Nothing in this Agreement shall be construed to require Developer to proceed with the construction or any other implementation of the Project or any portion thereof;

(b) The decision to proceed or to forbear or delay in proceeding with implementation or construction of the Project or any portion thereof shall be in Developer's sole discretion;

(c) Failure by Developer to proceed with construction or implementation of the Project or any portion thereof shall not give rise to any liability, claim for damages or cause of action against Developer, except as may arise pursuant to a nuisance abatement proceeding under Chapter 8.96 of the Code, or any successor legislation;

(d) Failure by Developer to proceed with construction or implementation of the Project or any portion thereof shall not result in any loss or diminution of development rights, except upon expiration of the Vesting Period; and

(e) Developer shall have the right, but not the obligation, to construct the Project in multiple phases.

3.4 Damage or Destruction of the Project. If the Project, or any part thereof, is damaged or destroyed during the Vesting Period, Developer shall continue to be entitled to reconstruct the Project in accordance with this Agreement. If the Project, or any part thereof, is damaged or destroyed at any time after the end of the Vesting Period but to such an extent that reconstruction would not be permitted under the Code, Developer shall be permitted, but not obligated, to reconstruct the Project in a manner consistent with this Agreement and the Project Plans. Developer's right to reconstruct this project in accordance with this Section 3.4 shall survive the term of the Agreement.

Article 4 CONSTRUCTION

4.1 Construction Mitigation Plans. During the construction phases of the Project, Developer shall prepare for review and approval by the City's Planning and Community Development Department one or more Construction Mitigation Plans as necessary to comply with the construction mitigation requirements of the Final Environmental Impact Report as referenced in the Mitigation Monitoring Program (Exhibit "I") and the conditions of approval and Environmental Mitigation Measures as referenced in Exhibit "J". The City will not issue a building permit for construction of the Project or a phase thereof until developer has obtained approval of the applicable Construction Mitigation Plan(s).

Exhibit "K"

TRANSPORTATION DEMAND MANAGEMENT PROGRAM

The preliminary program elements (which are provided for convenience only) related to the TDM plan for the Bergamot Transit Village Center are as follows.

A. Measures Applicable to Entire Project (Commercial and Residential Elements)

1. *Transportation Information Center.* The Developer (or Developer's successors and assigns) shall provide on-site information for employees, visitors and residents about local public transit services (including bus lines, light rail lines [future], bus fare programs, ride share programs, shuttles) and bicycle facilities (including routes, rental and sales locations, on-site bicycle racks and showers for the commercial tenants of the Project only). The Developer (or Developer's successors and assigns) shall also provide walking and biking maps for employees, visitors and residents, which shall include but not be limited to information about convenient local services and restaurants within walking distance of the Project. The Developer (or Developer's successors and assigns) shall provide information to tenants and employees of the Project site regarding local rental housing agencies. Such transportation information may be provided through a computer terminal with access to the Internet or, via a website.
2. *TDM Web Site Information.* The Developer (or Developer's successors and assigns) and tenants shall be required to make available transportation information such as the items noted in No. A.1 above, including links to local transit providers, area walking, bicycling maps, etc., to inform employees, visitors and residents of available alternative transportation modes to access the Project site and travel in the area.
3. *Employee Transportation Coordinator.* An Employee Transportation Coordinator (ETC) shall be designated for this Project by the Developer (or Developer's successors and assigns) as required by the City of Santa Monica's Transportation Management Division in accordance with Ordinance 1604 (SMMC Section 9.16). The ETC shall manage all aspects of this TDM program and participate in City-sponsored workshops and information roundtables. As the Project is expected to be occupied by multiple users, the Developer shall establish a site-specific TMA (as defined in SMMC 9.16.030), or participate in the Bergamot Station area TMA, to encourage the implementation of TDM strategies for the occupants of the Project, including the residential component of the Project. The ETC shall be responsible for making available information materials on options for alternative transportation modes and opportunities. In addition, transit fare media and day/month passes will be made available through the ETC to employees, visitors and residents during typical business hours.
4. *Parking Reconfiguration After Occupancy.* Reconfiguration of the parking spaces and operations in order to facilitate partial unbundling of parking and/or flexibility of use shall be considered a Minor Modification.

5. *Public Transit Stop Enhancements.* The Developer shall improve the immediately adjacent existing bus stop with a shelter and transit information. These improvements would be intended to make riding the bus a safer and more attractive alternative.
6. *Pedestrian Wayfinding.* The Developer (or Developer's successors and assigns) shall provide and maintain a pedestrian wayfinding program directing employees, visitors, and residents to/from the project site and public bus transit and (future) rail transit lines, as well as the future light rail station to be located directly across from the Project site.
7. *Preferred Drop-off/Pick-up Loading Zone.* The Developer (or Developer's successors and assigns) shall designate a preferred drop-off/pick-up loading zone that will provide direct access to the Project site so as to discourage on-street double parking. Parking time limits in this designated zone shall be enforced by the Developer (or Developer's successors and assigns) to facilitate adequate availability of the loading area.

B. Measures Applicable to Project Commercial Component Only

1. *Transportation Demand Management Association.* The Developer and building tenants shall be required to participate in a Transportation Demand Management Association (TMA). The TMA shall consist of either a project specific TMA or a geographic-based TMA that may be established by the City. As part of the LUCE Update process, the City has identified that a TMA should be established for the Bergamot Station area. TMAs would provide employees, businesses, visitors and residents of an area with resources to increase the amount of trips taken by transit, walking, bicycling, and ridesharing. If the City adopts a requirement that a TMA be formed for this geographic area, the property owner shall attend organizational meetings, provide traffic demand data to the TMA, and make available information to its tenants relative to the services provided by the TMA.
2. *Van Pool Program.* The Developer (or Developer's successors and assigns) shall require in all leases (with tenants, as defined in SCAQMD Rule 2202) it executes as landlord for space within the Project that such tenants shall provide eligible employees with a vanpool program designed to encourage the use of existing vanpools or the development of new vanpools. The program shall use vehicles owned/leased, insured, and fueled/maintained by employer. Subsidized van transportation (minimum subsidy of 50% of cost) shall be provided by the employer (which may be through the TMA or Transportation Management District) whenever at least six employees of that employer at the Project opt into the program who are geographically serviceable together.
3. *Carpool Program.* The Developer (or Developer's successors and assigns) shall provide preferential parking within the parking garage for Project employees who commute to work in employer registered carpools. An employee who drives to work with at least one other employee in the Project or adjacent facilities may register as a carpool entitled to preferential parking within the meaning of this provision.
4. *Employer Cash-Out Program.* The Developer (or Developer's successors and assigns) shall require in all leases that each employer offer in-lieu of any parking subsidy to the extent provided on a general basis by such employer to its employees a transit subsidy equal to 50% of the monthly cost of the MTA TAP Pass or cash allowance equal to the value of such transit subsidy (for use of alternative modes such as walking and bicycling).

5. *Parking Availability for Non-Building Users.* Consistent with providing sufficient on-site parking for building users, the Developer (or Developer's successors and assigns) will make any unused on-site commercial parking available for monthly lease at market rates to third parties in the surrounding area in need of parking.
6. *Parking Pricing.* Hourly parking pricing shall be market-based and adjusted periodically in an effort to ensure parking availability for commercial tenants and their employees and visitors during peak parking hours.
7. *Public Transit Subsidy (one-time).* The Developer (or Developer's successors and assigns) shall require in all leases it executes as landlord for space within the Project that tenants must provide all newly-hired employees that will work within the Project a free public transit pass valid everyday for at least the first month of their employment.
8. *Public Transit Subsidy In-Lieu of Parking (on-going).* The Developer (or Developer's successors and assigns) shall require in all leases it executes as landlord for space within the Project that tenants must offer all of its employees who work within the Project a subsidy program whereby the fares for employees using public transit (e.g., Santa Monica Big Blue Bus, or Metro Bus Service or future Metro Light Rail Service) shall be subsidized by at least 50 percent.
9. *Convenient Parking for Bicycle Commuters.* The Developer shall provide location(s) within the garage or other convenient location relative to the commercial component of the Project for secure parking for bicycle commuters for employees working at the site and visitors to the site for a minimum of 65 bicycles, which is equivalent to approximately five percent (5%) of the total vehicle parking spaces proposed to be provided for the commercial component of the Project. The secure bicycle parking will be located within the Project site and/or in the public right-of-way adjacent to the commercial uses such that long-term and short-term parkers can be accommodated. For purposes of this requirement, bicycle parking may mean bicycle racks, a locked cage, or other secure parking area.
10. *On-Site Showers and Lockers.* Shower and clothing locker facilities shall be provided for on-site employees who bicycle or use another active means, powered by human propulsion, of getting to work or who exercise during the day.
11. *Compressed Work Week Schedule.* The Developer shall require in all leases it executes as landlord for space within the Project that, when commercially feasible, a Compressed Work Week schedule shall be offered to employees whereby their hours of employment may be scheduled in a manner which reduces trips to/from the worksite during peak hours for the surrounding streets.
12. *Flex-Time Schedule.* The Developer shall require in all leases it executes as landlord for space within the Project that, when commercially feasible, employers shall permit employees within the Project to adjust their work hours in order to accommodate public transit schedules, rideshare arrangements, or off-peak hour commuting.

13. *Guaranteed Return Trip.* The Developer (or Developer's successors and assigns) shall require in all leases it executes as landlord for space within the Project that tenants provide employees who vanpool or carpool, with a return trip to their point of commute origin at no additional cost to the employee, when a Personal Emergency Situation requires it.

C. Measures Applicable to Project Residential Component Only

1. *Transit Welcome Package for Residents.* The Developer (or Developer's successors and assigns) shall provide all new residents of the residential component of the Project site with a Resident Transit Welcome Package (RTWP) on a per-unit basis. The RTWP at a minimum will include a voucher good for either a Big Blue Bus EZ Transit Pass, or a Metro TAP card valid for at least the first month of their residency, as well as area bus/rail transit route information.
2. *Partial Unbundling and Lease of Parking Spaces for the Residential Land Use.* The Developer (or Developer's successors and assigns) may, but shall not be obligated to, offer options for buyers and/or renters of the residential dwelling units to separately purchase or lease additional parking spaces (beyond the first space per unit) at market rates established from time to time by the Developer.
3. *Jobs/Housing Balance/Workforce.* In furtherance of the City's objective to improve the jobs/housing balance and to reduce total trip generation in the immediate area, the Developer shall implement a workforce housing program wherein preferential sales and/or leasing of residential units shall be made available to employees within a reasonable walking distance of the Project, with further preferences given to first responders, such as firemen, policemen, EMT's, nurses and other hospital workers, as well as teachers and other community serving employees.
4. *Convenient Parking for Bicycle Riders.* The Developer shall provide location(s) within the garage or other convenient location relative to the residential component of the Project for secure parking for bicycle commuters for residents for a minimum of 26 bicycles, which is equivalent to approximately five percent (5%) of the total vehicle parking spaces proposed to be provided for the residential component of the Project. The secure bicycle parking will be located within the Project site and/or in the public right-of-way adjacent to the residential uses such that long-term and short-term parkers can be accommodated. For purposes of this requirement, bicycle parking may mean bicycle racks, a locked cage, or other secure parking area.

TDM Plan Monitoring and Modifications

1. *Peak Period Trip Reduction Target Monitoring.* The City shall contract with a third party independent consultant to monitor compliance with the peak period trip reduction targets every two years, beginning in the first full calendar year following the second anniversary of the Certificate of Occupancy, and to prepare a report on compliance for the City's Transportation Management Division. In the event that the targets are not reached in a two year period, the Planning Director, after consultation with the Developer (or Developer's successors and assigns), may make Minor Modifications to the TDM

conditions to more effectively achieve, through reasonable and feasible measures that will not substantially increase the cost of mitigation, the performance target herein. To cover the costs of preparing the bi-annual monitoring reports, Developer shall pay the City a one-time lump sum of \$10,000.00 prior to issuance of the first certificate of occupancy for the Project.

2. *Changes to TDM Program.* Subject to approval by the City's Planning Director, the Developer can modify this TDM program provided the TDM program, as modified, can be demonstrated as equal or superior in its effectiveness at mitigating the traffic-generating effects of this Project.

Exhibit "L"

PERMITTED USES

Permitted Uses consist of Creative Arts Uses, Residential Uses (including rental housing and for sale condominiums) and Retail Uses as defined herein.

Definition
Creative Arts Uses consist of all uses relating to, ancillary to and supportive of the creation, production, post-production, distribution, marketing and support for products or content stemming from or relating to the entertainment, music, arts, sports, R&D, technology, biotechnology, clean energy and "green" industries, and may include office space directly related to, ancillary to or supportive of any primary use. Creative Arts Uses include, without limitation:

- Art studios, art galleries, dance studios, music studios and/or recording facilities, photography studios and any other applied or creative arts display, creation, sales or distribution facilities
- Broadcasting/communications, telecommunications facilities, and ancillary facilities customarily associated with and incidental to such production facilities, including, without limitation, facilities for broadcasting, transmitting, distributing, recording, receiving, editing, and creating broadcast/communications and telecommunications
- Entertainment-related facilities including, theaters, movie studios and production facilities, distribution facilities, editing facilities, catering facilities, printing facilities, post-production facilities, set construction facilities, sound studios, special effects facilities and other entertainment-related production operations
- Entertainment related professional services
- Design studios and offices for architects, designers and/or artists
- Internet content creation and support facilities
- Software production or distribution and other computer-related or technology facilities
- Creation/manufacturing/distribution of biotechnology
- Sports entertainment (including marketing and distribution) facilities
- Advertising facilities
- Publishing facilities
- Drafting, printing, blueprinting services and reproduction services
- Education facilities
- Studios and offices for graphic designers
- Research and Development activities for medical testing , technology industries, clean energy, "green" technologies or industries, and other emerging technologies or industries

- Associations or entities representing artists, performers, actors and other professionals in any of the above industries
- Other activities related to emerging technologies or industries
- All uses customary or incidental to the production or distribution of motion pictures and other forms of audio/visual products, including, but not limited to, education and entertainment films or tapes
- Child care centers, health clubs, gymnasiums
- Restaurants
- Uses which are determined by the Zoning Administrator to be similar to those listed above and which are consistent with, and not more disturbing or disruptive than, permitted uses

Retail Uses include, without limitation:

- Arts and crafts Shop
- Art galleries
- Appliance store
- Appliance or electronic repair shop
- Barber Shop
- Bicycle Shop
- Book and Stationery Store
- Cell phone store
- Clothing/Apparel Store
- Coffee shops / breakfast diner
- Community meeting space
- Computer / electronics service center
- Convenience store
- Cultural uses and facilities
- Dance Studios
- Day care center
- Dress Shop
- Dry Cleaners
- Exercise facilities
- Financial Planning Retail Center
- Flower Shop
- Furniture shops
- Game arcade
- Gift Shop
- Grocery store
- Hair / nail / beauty salon
- Hardware store
- Laundromat
- Liquor store
- Medical Including, Optometrist, Dentist, Orthodontist, Medical walk-in Center, Counseling Services (including psychological or psychiatric services), General Practitioner
- Museums
- Music store
- Non-profit organization office, meeting and related space

- Other food service (including bakery, ice cream store, yogurt store, candy store, cookie store, juice/smoothie store, etc.)
- Outdoor newsstand
- Package drop-off / copy center
- Pet Store
- Pharmacy/Drug Store
- Photography or Camera Store
- Print/publishing shops
- Real Estate Offices
- Rental Shops (including cars, bicycles, clothing, music, etc.)
- Restaurant
- Retail Bank / ATM
- Shoe Shine
- Shoe Store (sale, rental or repair)
- Snack Shop
- Sidewalk café / Deli
- Spa
- Specialty service food shops
- Sporting goods store
- Take-out or fast food restaurants
- Tailor/ Dress maker
- Travel Agency
- US Post Office/Air Freight/Private Mail Service Center
- Weight Loss Center
- Wine shops
- Uses which are determined by the Zoning Administrator to be similar to those listed above and which are consistent with, and not more disturbing or disruptive than, permitted uses

Residential Uses include, without limitation:

- Market rate, Workforce Housing and Affordable Housing, which may include both rental and ownership;
- Rental housing including single room occupancy units;
- Condominium units available for separate ownership;
- Artist studios.

EXHIBIT 5



Rod Gould
City Manager

Office of the City Manager
1685 Main Street
PO Box 2200
Santa Monica, CA 90407-2200

August 19, 2010

To Whom It May Concern:

RE: City Commitment for TIGER II/HUD Grant Application

The City of Santa Monica is pleased to submit an application for a Tiger II/HUD grant to complete a master plan for the Bergamot Station area. The master plan is key to integrating the future Expo Light Rail station (estimated completion in 2015) with future land use changes to create a mixed-use transit village with affordable and market rate housing, jobs, open space, retail and services as envisioned in the City's recently adopted Land Use & Circulation Element (LUCE).

The master plan is a high priority for Santa Monica to achieve City-wide goals to reduce greenhouse gas emissions, reduce per capital vehicle miles traveled, increase affordable housing, and stimulate job sectors that complement local skills and industries. The City's FY2010/2011 Adopted Budget includes an allocation of \$250,000 to begin this master planning effort. If the City is awarded the HUD/TIGER II grant, the master planning process can be accomplished in a reduced timeframe and cover an expanded geographic area consistent with the LUCE framework.

The City staff would lead the project with assistance from technical consultants. In-kind staff time dedicated to this project will constitute an additional matching contribution, with an annual amount estimated as follows:

Title	Hourly Cost*	Total Hours	Total
Senior Planner	\$64.78	1000	\$64,780
Principal Planner	\$76.74	420	\$32,230
Planning Manager	\$87.49	200	\$17,498
Total Staff Time (annual)			\$114,508

**Rates provided are effective July 1, 2010, inclusive of benefits and overhead calculated at 30% of hourly rate*

In addition, the City has set aside Redevelopment Funds and other Rail Reserve funding to support related station area enhancements supportive of transit-oriented area development. The City is able to commit staff to undertake and complete this project within the proposed schedule.

I conclude by reiterating that this project has my support and the support of our City Council as a very high priority. We appreciate your consideration of Santa Monica's proposal for this grant.

Sincerely,

Rod Gould
City Manager

CITY OF SANTA MONICA

Planning and Community Development Dept./Community and Strategic Planning Division

Application Narrative for Tiger II/Community Challenge Grant Program 2010

[Docket FR-5415-N-12]

1. PURPOSE AND OUTCOMES

The City of Santa Monica seeks support for a master plan to transform 140 acres of industrial land into a transit-oriented, mixed-use neighborhood that features affordable, workforce and market-rate housing, creative arts employment, exhibition, performance and incubator space, strong linkages to light rail and bus transit, bicycle and pedestrian connections, new parks and public space and upgraded and expanded infrastructure. The master plan is a critical component of the recently-adopted citywide vision to integrate land use and transportation to achieve reduced greenhouse gas emissions, reduce per capita vehicle miles traveled, and create a sustainable local community.

The proposed Bergamot Station, Transit Village and Mixed-Use Creative District Master Plan will connect the new Exposition Light Rail station at Bergamot with a revitalization of land to stimulate infill housing, jobs and expansion of creative arts employment in the area. The Exposition Light Rail is the first fixed-rail transit link to the densely populated Los Angeles Westside, and a significant addition to the regional public transit system. It will connect the City of Santa Monica with Culver City, West Los Angeles, and Downtown Los Angeles.

Public participation in setting the framework for the project area has been unusually extensive. High attendance levels have accompanied the focused Bergamot Station workshops that were held during the development of the recently adopted, award-winning General Plan Land Use & Circulation Element (LUCE). Neighborhood workshops, opinion surveys, youth programs, and walking surveys were all part of the robust LUCE outreach program.

As the framework for this effort, the LUCE directly responds to the HUD/DOT/EPA "Partnership for Sustainable Communities" by directing new housing and employment to occur along transit-rich boulevards and in districts like the Bergamot Station Transit Village and Mixed-Use Creative District, supporting transit-oriented development, aggressively reducing vehicle trips, and preserving the character-defining features of the City. The LUCE addresses the critical need for reduction of greenhouse gas emissions and vehicle miles traveled by managing transportation resources and achieving "no net new trips." These outcomes were tested and confirmed through citywide travel demand model that will be used for ongoing validation of outcomes.

With Expo Light Rail due to arrive in about five years, developing a master plan to guide the transformation of the City's industrial areas is a high priority. The Bergamot Station, Bergamot Transit Village and Mixed-Use Creative District Master Plan will stand out among other mixed-use, intensive activity centers being planned and developed around new light-rail stations in Southern California in that it will preserve the identity of a creative arts community providing new services, infrastructure, economic stability and housing while providing specific implementation tools to nurture the development of a unique, accessible urban place.

The City's FY2010/2011 Adopted Budget (excerpted in Section 3 below) includes \$250,000 allocated for this project. Together with the City's commitment of staff time to this project (approximately \$114,000 annually over two years), this represents a 35% matching contribution to the total \$1,380,000 project budget. In addition, the City has allocated Redevelopment Agency funds for station area improvements that would include the Bergamot Station. Using a combination of City funds and Tiger II/Community Planning Challenge grant money, the City plans to assemble a consultant team to create a comprehensive master plan with specific strategies to address the following components:

- Transit Oriented Development (including Mixed-Use Infill) and Urban Design
- Affordable and Workforce Housing
- Transit Access, Linkages and Facilities

- Community Economic Development - with emphasis on integration of Creative Arts and Employment
- Vehicle Trip Reduction - including Bicycle and Pedestrian planning and Shared Parking strategies
- Sustainability Objectives
- Artist Live/Work and Creative Facilities
- Urban Design analysis and open space programming
- Identification of specific public/private partnership opportunities
- Utilities and infrastructure – analysis of facilities and improvement strategies
- Environmental Review

In addition to general fund resources for the Bergamot Transit Village and Mixed-Use Creative District Master Plan, the City has set aside Redevelopment Funds and other Rail Reserve funding to ensure that the station itself is integrated into the community's arts, housing and transit enhancements. This project is a high priority for the City, and included in the FY 10-11 and FY 11-12 work plan. The master planning process will be managed by the City's Community & Strategic Planning Division staff, including an accompanying outreach effort that will involve community arts partners, property owners, residents, developers and members of the business community. Staff is available to start the project immediately, and to be dedicated to the project through to completion. The master planning activities can be initiated within 120 days of the grant being awarded.

Existing Conditions and Barriers to Overcome

The Master Plan includes three distinct, contiguous planning areas:

- Bergamot Station: The Bergamot Station Arts Complex, which is owned by the City and directly adjacent to the Expo Light Rail right of way, which will contain the tracks and platform for the new rail station.
- Bergamot Transit Village: A LUCE district directly north of Bergamot Station, currently industrial and envisioned as a walkable transit-oriented village with targets for 60% commercial and 40% residential redevelopment.
- Mixed-Use Creative District: A LUCE district directly east of the Transit Village, envisioned as part of the transit-oriented village with transitions to adjacent existing neighborhoods, with targets for 50% commercial and 50% residential redevelopment.

Between them, these areas constitute about 140 acres of once industrially-zoned property. At the center of the two districts, the Bergamot Station Art Complex is made up of industrial buildings that have been adaptively redeveloped into a successful art center with an art museum and a lively gallery scene that has become a regional and international destination. The Mixed-Use Creative District attracts a variety of creative arts and entertainment industry uses, including traditional arts, graphic arts, and film, music and animation production and post-production facilities. Overall, the districts are characterized by industrial-style buildings and one- and two-story warehouse or loft type structures, some of which have been converted to creative office space and educational facilities.

Despite some recent redevelopment in this area, the districts still suffer from a number of deficiencies that must be addressed in an extensive master planning process.

- Lack of housing units. With the exception of some forms of artist housing, the project area contains very little residential housing stock. To transform to a truly mixed-use transit village, it is imperative that a variety of housing choices are made available to people of all income levels and ages. The City has long-standing and well-known commitment to affordable housing in

market-rate projects, and the LUCE has identified the project area as primary locations for residential development.

- Lack of transportation connectivity and choices. Although this area is next to an area of very high employment concentration, with a number of business parks and creative offices, the light rail will not achieve its potential ridership unless the station is integrated with its surroundings to foster walkability and connections with buses, shuttles, bike paths and comfortable pedestrian pathways. In order to reduce vehicle miles traveled (VMT) to achieve the LUCE and SCP goals, the master plan must include tangible physical elements and programs that will encourage public transit ridership, and create an active 17 hour day, 7 days a week.
- Lack of daily services. The previous industrial zoning did not permit retail, restaurant or commercial uses within the district. To create an economically balanced and “complete neighborhood,” it is essential that residents’ daily needs are located within walking or biking distance of their homes.
- Lack of open space needed for future residents. Open space is necessary to support recreation and exercise, plant bio-diversity and reduced carbon emissions.
- Disconnected redevelopment. Numerous proposals for redevelopment have been made for properties in the project area but are not coordinated to ensure the housing and commercial use mix, connectivity, reuse of existing facilities, and amenities necessary to create a livable community.
- Lack of a modern infrastructure network. As a former industrial zone, the project area is not outfitted with sufficient water, sewer and utilities services to support a high-density urban neighborhood, as is planned in the LUCE.
- Lack of connectivity to the street grid system. The large parcel land pattern from the City’s early development lacks the urban-scaled, street grid pattern that is prevalent in Santa Monica. In order to successfully incorporate the project area into the urban fabric and encourage walking and bicycling, it is critical that linkages are created, strengthened and supported.
- Inefficient parking. This area is characterized by an abundance of surface parking lots, which cater solely to the private businesses that occupy the district. New residential, retail and open space uses will require some parking, and the master plan should identify the best locations for potential district-wide parking that would consolidate existing on-grade parking and future parking needs within efficient parking structures integrated into the urban design of the district.

In coordination with other City policies governing green building requirements, resource conservation, multi-modal transportation incentives, and community benefit requirements, our master plan will promote a sustainable future for Santa Monica.

Responsiveness of the Project to the Six Livability Principles

The Bergamot Station, Bergamot Transit Village and Mixed-Use Creative District Master Plan is intended to create the framework for the development and programming of a new mixed-use urban neighborhood that is transit-oriented, affordable to all incomes, sensitive to surrounding neighborhoods, and environmentally, economically and socially sustainable. The following is submitted to address how the project is aligned with HUD’s six “Livability Principles” articulated by the Notice of Funding Availability.

1) Provide More Transportation Choices

The vision for the Bergamot Transit Village and Mixed-Use Creative District is based on a model of high-density, transit-oriented development that is supported by a wide array of services and amenities located within walking or biking distance of work and home. The planned Exposition Light Rail Bergamot Station will be a primary organizing element of the master plan, providing a competitive alternative to driving a car on the highly congested Santa Monica Freeway. Trains will run as frequently

as every five minutes, and will connect to the larger regional system of urban and commuter rail. Locally, the City's Big Blue Bus system (one of the most extensive public bus systems of any city of similar size in the nation) plans to add higher frequency bus and shuttle lines that will intersect with Bergamot Station, providing a viable alternative to park and ride and a convenient connection to nearby employment centers. The master plan will be instrumental in locating the new bus/shuttle stops and providing connectivity for them. It will also address opportunities for higher level bicycle facilities for both riding and storing bicycles at or near the light rail station.

New affordable and market rate housing and commercial development in the master plan area will contribute to the City's goal to increase transit ridership and provide for the City's growth without increasing vehicle miles traveled. Transportation Demand Management programs will engage major employers and mixed-use residential developments. Other projects will be required to contribute "community benefits" in the form of new streets and pathways to reduce the scale of large industrial parcels, and to provide high-quality pedestrian and bicycle environments to make those modes of transit more attractive. Modified parking standards, which can add as much as 20% to the cost of a unit, will also be considered to reduce housing costs and promote affordability for a workforce that is less auto-dependent.

Performance Measurement: The desired outcome is a significant shift in travel modes. To monitor and measure this outcome, staff will employ three data sources:

- **The City's proprietary Travel Demand Model, which will monitor modal split and vehicle miles traveled on a district-wide per capita basis.**
- **Annual Employer Emission Reduction Plan Survey, which includes yearly reporting on employee mode split, and average vehicle ratio.**
- **Ridership numbers. The City's Big Blue Bus system maintains ridership numbers for each of its bus lines, and collects data on bus stop volumes. Once the Expo Light Rail is operational, ridership numbers will also be monitored.**

2) Promote Equitable, Affordable Housing

The City of Santa Monica is an acknowledged leader in providing affordable housing, both through directly funding non-profit affordable housing projects and through progressive zoning policies that require inclusionary housing development or in-lieu fees and permit transitional housing and homeless shelters in most commercial and multi-family districts. The 2008-2014 Housing Element was awarded a Compass Blueprint Excellence Award by the Southern California Association of Governments (SCAG), which cited its consistency with regional policies to promote sustainability by providing affordable housing opportunities, including housing for special needs populations such as seniors and homeless people, within a context of transit-oriented development. The proposed Master Plan is intended to build upon this long-standing commitment by identifying the specific opportunities in the area and strategies for realizing them. The plan will provide a 60/40 commercial to residential ratio in the Bergamot Transit Village, and a 50/50 commercial to residential ratio (allowing a 5% deviation) in the Mixed-Use Creative District. The plan will also identify feasible developer incentives that will enable the creation of this affordable and workforce housing.

Performance Measurement: The desired outcome is the construction of new, mixed-use developments in the master plan area that significantly increase the number of affordable, workforce and market-rate housing units that are associated with public open space and supportive retail and service uses within walking distance. To monitor and measure this outcome, staff will employ:

- **The City’s existing annual Proposition R reporting that assesses affordable housing production during each fiscal year period.**
- **Performance monitoring as outlined in the LUCE implementation plan, including tracking building permits to assess development of market rate and affordable housing.**
- **Compliance with the Regional Housing Needs Assessment for the City of Santa Monica included in the mandatory Housing Element updates in California approximately every 4-5 years.**

3) Enhance Economic Competitiveness

The master plan will provide specific strategies to enhance the economic competitiveness of Bergamot Station, Bergamot Transit Village and the Mixed-Use Creative District by supporting a distinctive creative arts identity and an attractive urban design, and by identifying and encouraging the services and amenities desired by residents, employees and visitors. The master plan is intended to create the conditions that will attract residents who desire a lifestyle with choices for commuting, recreation and retail opportunities. Additionally, it is intended to create an environment that will attract employees, particularly those in the nearby creative offices, to stay and visit Bergamot Station Arts Complex and other creative art offerings located in and around Bergamot Station. This may be achieved through public-private partnership ventures whose potential will be explored in the master planning process.

Performance Measurement: The desired outcome is a vibrant business and arts community centered in the master plan area. Using the City’s GIS system, staff will measure success through business license applications and tax receipts within the plan area.

4) Support Existing Communities

There are two existing communities of significance for this master plan effort. The Pico Neighborhood, which has a lower economic profile than other more affluent parts of the City, is a long-established residential neighborhood with historic ties to the project area. The master plan will support the Pico Neighborhood by providing proximity to new services, open space and retail choices. Connectivity to the neighborhood is essential. Also significant is Santa Monica’s arts community, for which Bergamot Station is a center. The focus on creative arts outlined in the LUCE will be central to the plan. In order to support these two communities, the plan will identify via a public process valuable “community benefits” that will be required from new development that meets the criteria for discretionary project review.

Performance Measurement: The desired outcome is the participation of the Pico Neighborhood and the arts community in the master planning process to identify specific implementation measures or “community benefits” that meet their needs. To measure the success of the planning effort in achieving these objectives, staff will:

- **Monitor the number of participants throughout the process.**
- **Monitor the performance of discretionary Development Agreements to ensure compliance with negotiated “community benefits” identified by the master plan.**
- **Conduct yearly assessments of the walkability of the new neighborhoods using services such as www.walkscore.com.**

5) Coordinate Policies and Leverage Investment

One of the main goals of the master planning process is to identify opportunities for public/private partnerships in order to promote collaboration between the City and private developers and to leverage available funding sources. Any new or adaptively reused development will adhere to the recently adopted LUCE policies, which are aligned with Federal and State regulations governing the reduction of greenhouse gas emissions and vehicle miles traveled.

6) Value Communities and Neighborhoods

As stated in #4 above, the master plan will support and enhance long-standing communities in the Bergamot Station area. Additionally, a principal component of the Bergamot Transit Village and Mixed-Use Creative vision is to create new neighborhood environments that are healthy, safe, walkable and accessible to bicyclists and users of public transit. Street design will follow a “complete streets” model that recognizes the roles of streets as public open spaces that are multi-modal, landscaped to provide shade and canopy, and which infiltrate storm water run-off. The planned distribution of land uses will ensure that daily services and amenities are located close to residential and/or employment centers, thereby reducing the need for automobile transit.

Performance Measurement: The desired outcome is the support of current neighborhoods and the creation of new one that feature multi-modal streets, open space, housing and local services. Staff will measure success using a variety of data-based indicators and techniques:

- **Measure modal split using the City’s proprietary Travel Demand Model to improve the performance of streets for all modes within the master plan area.**
- **Monitor the performance of Development Agreements executed as a result of the master plan to ensure compliance with negotiated “community benefits” such as open space, new streets and pedestrian pathways.**
- **Conduct yearly assessments of the walkability of the new neighborhoods.**

2. WORK PLAN

With the HUD Community Challenge/TIGER II grant, the City of Santa Monica will be able to complete a master plan to transform 140 acres of industrial land into a transit-oriented, mixed-use neighborhood. The master plan will outline the public and private steps necessary to implement the framework in the adopted LUCE. The proposed Bergamot Station, Transit Village and Mixed-Use Creative District Master Plan will integrate the new regional Exposition Light Rail station at Bergamot Station (complete 2015) with a revitalization of land to stimulate:

- Transit Oriented Development (including Mixed-Use Infill) and Urban Design
- Affordable and Workforce Housing
- Increased transit use, and improved access/linkages
- Creative Arts employment and Community Economic Development
- Vehicle Trip Reduction
- Bicycle and Pedestrian use
- Community Sustainability
- Artist Live/Work and Creative Facilities
- Pedestrian and Transit-oriented Urban Design
- Identification of specific public/private partnership opportunities
- Utilities upgrades
- Environmental clearance

The master plan includes the following steps and budget:

Project Step	Approximate Dates	Responsibility
1. Post RFP for qualified consultants	Mid-October 2010	City Staff
2. Begin data gathering	Mid October 2010	City Staff

3. Select Consultant(s)	Mid-December 2010	City Staff/Council contract approval
4. Baseline data analysis	January-February 2011	Consultants/ City Staff
5. Confirm Desired Outcomes and Indicators to be Measured	January 2011	City Staff
6. Public Outreach: Develop Outreach Plan and Initiate First Phase	February–July 2011	City Staff
7. Urban Form Analysis and TOD Conceptual Massing Plan <ul style="list-style-type: none"> • Design guidelines 	March –June 2011	Consultants/City Staff
8. Transit Access and Connectivity Plan <ul style="list-style-type: none"> • LRT station connections • Pedestrian priorities • Bicycle connections and facilities • Big Blue Bus, Metro Bus access 	March –May 2011	Consultants/City Staff
9. Community Livability Priorities <ul style="list-style-type: none"> • Neighborhood Community Benefits 	April 2011-May 2011	City Staff
10. Transportation Demand Management Implementation Plan <ul style="list-style-type: none"> • Develop “menu” of TDMs • Process for formation of TDM Associations • Shared Parking District 	June-October 2011	Consultants/City Staff
11. Integrated Affordable Housing Strategy <ul style="list-style-type: none"> • Community Benefit Requirements • Inclusionary Housing • Workforce Housing Opportunities • Live/Work and Artist Studios 	June-October 2011	Consultants/City Staff
12. Economic and Employment Strategy <ul style="list-style-type: none"> • Pro-forma feasibility testing • Market sector strategies • Employment priorities 	June-October 2011	Consultants/City Staff
13. Infrastructure Priorities <ul style="list-style-type: none"> • Utility upgrades • Sidewalks, Roadways, Lighting, Landscaping • Funding and phasing strategies 	June-October 2011	Consultants/CSP Staff

14. Public Outreach: Second Phase	October-December 2011	City Staff
15. Draft Integrated Master Plan	October-December 2011	Consultants/City Staff
16. CEQA Review & Determination (may be tiered from LUCE FEIR)	October 2011 – June 2012	CSP Staff
17. Public Hearings: <ul style="list-style-type: none"> • Planning Commission • Council 	June 2012 – September 2012	CSP Staff
18. Plan finalization	By November 2012	CSP Staff/consultants

Performance Measures

As described in the responses to Rating Factor #1, the City will use a variety of data-driven indicators and tools to assess how successfully the master plan’s objectives are being met. The following sources of information are proposed:

1. The City’s proprietary Travel Demand Model. The TDM will monitor
 - Modal split on a district-wide per capita basis.
 - Vehicle miles traveled on a district-wide per capita basis.
2. Annual Employer Emission Reduction Plan Survey. The EERPS will monitor
 - Number of employees
 - Modal split
 - Average vehicle ratio
 - Number of jobs within ¼ mile of transit
3. Geographic Information Systems. Using GIS staff will monitor
 - Building permits for affordable and market rate housing
 - Business license applications within the plan area
 - Tax receipts within the plan area
 - Number of housing units within ¼ mile of transit
 - Acres by type of open space
4. Ridership numbers. Staff will monitor ridership numbers for
 - The City’s Big Blue Bus system, including data on bus stop volumes
 - The Expo Light Rail
5. Annual Proposition R Report. This report assesses affordable housing production during each fiscal year period, and provides data on number of units.
6. RHNA Compliance Data. In compliance with the Regional Housing Needs Assessment for the City of Santa Monica included in the mandatory Housing Element updates in California approximately every 4-5 years, staff will monitor and report on the number of housing units produced within that time period.
7. Development Agreement Monitoring. Staff will monitor the performance of Development Agreements executed as a result of the master plan to ensure compliance with negotiated “community benefits” such as open space, new streets and pedestrian pathways.
8. Outreach Performance. Staff will monitor the number of participants throughout the process. Walkability Index. Staff will conduct yearly assessments of the walkability of the new neighborhoods using services such as www.walkscore.com.

Budget

Project Component	Cost	City contribution	HUD/TIGER II
Master Plan consultant (transit-oriented development planning and design)	\$250,000	\$120,000*	\$150,000
Transportation Planning Consultant – Transit Access & Connections, Transportation Management (trip reduction, shared parking, multi-modal development)	\$350,000	\$120,000	\$250,000
Consultant, utilities study	\$75,000	\$30,000*	\$75,000
Consultant, Economic Development Action Plan	\$50,000	\$20,000*	\$100,000
Consultant, Workforce & Affordable Housing Partnership Development & Action Plan	\$150,000	\$65,000*	\$100,000
Consultant, Arts integration	\$75,000	\$38,000*	\$75,000
Consultant, environmental planner (Sustainability and CEQA/NEPA clearance)	\$150,000	\$75,000*	\$100,000
Additional outreach materials, document printing	\$20,000	\$10,000	\$20,000
TOTALS	\$1,348,000	\$478,000 (35%)	\$870,000 (65%)

* Includes in-kind staff time as match funds. Annual in-kind staff project management is \$114,000/year over 2 years based on Senior Planner project manager (20 hrs./week), Principal Planner (8 hrs./week) and Planning Manager (4 hrs./week) involvement. Does not include additional time for Finance budget analyst Federal grant management.

3. LEVERAGING AND COLLABORATION

Bergamot Transit Village and Mixed-Use Creative District Master Plan will provide a framework for public, private and joint development to follow. The City's FY2010/2011 Adopted Budget includes \$500,000 that has been allocated for specific and master planning efforts related to LUCE implementation, including \$250,000 for this specific project (see excerpt from approved City budget,

below).

FY2010-11 through FY2014-15 Capital Improvement Program

Dept	Fund	Project Title	Proposed Funding Requests					
			FY2010-11 Funding Request	FY2010-11 Funding Recommendation	FY2011-12	FY2012-13	FY2013-14	FY2014-15
Fire	01	Fire Vehicle Replacement Program	\$640,518	\$640,518	\$736,754	\$747,235	\$751,060	\$750,243
Fire	01	New Fire Station #1	\$797,000	\$0	\$1,317,980	\$431,621	\$12,289,960	\$10,803,928
Fire	01	Design & Construction of Public Safety Storage Facility	\$559,083	\$0	\$160,833	\$6,282,834	\$0	\$0
Fire	01	Structural Evaluation - Fire Station #3	\$150,000	\$0	\$0	\$0	\$0	\$0
HED	01	Farmers Market Traffic Control Project	\$214,760	\$195,860	\$0	\$0	\$0	\$0
HED	01	SAFHUSD Planning and Design	\$1,084,423	\$1,084,423	\$0	\$0	\$0	\$0
PCD	01	Roadway Striping Upgrades	\$50,000	\$0	\$50,000	\$50,000	\$70,000	\$70,000
PCD	01	LUCE Implementation Specific Plans	\$500,000	\$500,000	\$500,000	\$0	\$0	\$0

Together with the City's commitment of staff time (approximately \$114,000 annually), this represents a 35% matching contribution to the total \$1,380,000 project budget. The following table illustrates staff's in-kind contribution of resources.

Title	Hourly Cost*	Total Hours	Total
Senior Planner	\$64.78	1000	\$64,780
Principal Planner	\$76.74	420	\$32,230
Planning Manager	\$87.49	200	\$17,498
Total Staff Time (annual)			\$114,508

To further leverage resources, the following scenarios are envisioned:

Private Investment

It is anticipated that the majority of the master plan's implementation will be carried out by the private market with oversight and guidance from the City to ensure that development is consistent with local, state and Federal goals for smart growth, transit-oriented development and urban sustainability. Private investment will be stimulated by height and floor area ratio incentives.

Public/Private Joint Development

Where the master plan identifies opportunities for public/private partnerships, such as on City-owned property, public streets or at transit stations, the City will contribute in-kind contributions in the form of staff time, on-going maintenance of landscaping and utilities in the public right-of-way, and in some cases land.

Public Investment

On City-owned land that is not appropriate for joint development opportunities with private entities, the City will pursue additional grant money, as well as financing structures (bonds, tax increments, etc) and General Funds to realize the objectives of the master plan.

Outreach to Property Owners, Businesses and Community Members

As with all planning efforts in our City, we are committed to leveraging the working partnerships we have established to increase the effectiveness of the proposed master planning effort. The City Planning Department employs a sophisticated public outreach component to major efforts through

interactive workshops, public meetings, use of our website and other tools. Recently, the City's experience in outreach, particularly in the LUCE development, has led to involvement from a diverse swath of the community, including neighborhood organizations and other civic groups, the school district, members of the business community, in addition to individual stakeholders and special interest groups. As part of the public outreach component for this master planning process, staff will provide focused outreach to the neighboring residents from the Pico neighborhood who is geographically isolated between I-10 and the industrial land uses within the master planning project area. On average, Pico neighborhood residents are less wealthy than the rest of the city (median household income in 1999 was \$39,821) and have lower educational levels. Leveraging existing relationships, staff will engage the Pico Neighborhood Association and Pico Improvement Organization. Staff will also work through the City's Arts Commission to outline and refine the arts community's desired outcomes. Staff will continue to work with the Exposition Light Rail Authority to provide guidance on integrating the light rail into the urban fabric.

Per Capita Income

Santa Monica's per capita income is \$42,874 as compared to the LA County per capita income of \$20,683.

4. CAPACITY

Team Experience

The City of Santa Monica's Planning and Community Development Department employs full-time professional urban and transportation planners who oversee development activities and long-range planning initiatives. Within this department, the Community and Strategic Planning Division (CSP) focuses on a variety of advance planning efforts intended to maintain Santa Monica's long-term health, sustainability and viability. Staff in this division has educational and professional backgrounds in urban planning and design, policy development and code studies, project management, environmental planning and public outreach. Recently, the team has completed: the State-Certified Housing Element in 2008 and the 500-page Land Use and Circulation Element (LUCE) in July 2010.

For a small jurisdiction, Santa Monica has a relatively large number of planners because the City has cultivated and maintained a well-deserved progressive reputation for its approach to urban design and the environment. The City's award winning planning efforts go back to the 1980's, when the now world-famous Third Street Promenade master plan revitalized the city's downtown into a lively, pedestrian-oriented shopping and entertainment district. Over time, planning efforts have built on the Promenade's success to include the Transit Mall Specific Plan on 2nd and 4th Streets, which was planned and constructed within the last five years.

The City has always focused its efforts in planning for projects that had identified funding sources to ensure the success of its efforts. A good example of this is the Civic Center Specific Plan, which was adopted in 1993 and updated in 2000 and again in 2005. Components of this plan that have been constructed include the Public Safety Facility, the Civic Center Parking Structure, a land swap with the RAND corporation resulting in their new headquarters, and streetscape improvements on Main Street and Olympic Drive. The City is currently designing a major City open space in the heart of the Civic Center (Palisades Garden Walk) and improvements to the Landmark Santa Monica Civic Auditorium, in addition to a cutting-edge study for capping sections of the I-10 Freeway. Another example of the City's successful planning and implementation is the Hospital Area Specific Plan, in which the City's two major hospitals (UCLA and St. John's) are surrounded by other supportive uses, such as medical clinics, services and retail in the geographic center of the city.

The CSP currently has a Principal Planner, two Senior Planners and an Associate Planner, in addition to the CSP Manager and staff support personnel. To facilitate implementation of the many upcoming planning challenges that the City faces, the FY2010/11 budget includes two additional senior

level planners in the CSP, who are expected to join the team by the end of the calendar year, one of which will specifically bring higher level environmental planning experience. Additional assistance is pulled from professionals and administrative assistants in the Department's Administrative Division. In this way, the division will ensure that it has the capacity to undertake the proposed master plan at Bergamot Station and the surrounding area.

For all of the projects listed above, and many others, City staff has management experience in all aspects from concept to construction, including supervising support staff and consultant teams, administering budgets and invoices, maintaining timelines and schedules, and coordinating outreach efforts to residents, stakeholders and members of the business community. City policy and general practice for hiring consultants requires a competitive bid process so that top talent from the planning, design, engineering and land economics sectors can be hired. Selected firms are typically chosen for their successful experience with similar projects, and for their ability to communicate effectively with staff and the Santa Monica community.

The project is expected to involve many of the City's Commissions, including the Arts Commission, Housing Commission, Planning Commission and the Task Force on the Environment. Other stakeholders, such as the City's Chamber of Commerce and Convention and Visitors Bureau, are likely to be involved, in addition to the Pico Neighborhood Association, Pico Improvement Organization and other resident organizations. PCD's outreach efforts have created a core of activist city residents, and nearly 4000 individual participants and over 50 local community groups participated in the multi-year LUCE planning effort. It is anticipated that outreach to those participants who live, work or represent an interest in the area surrounding Bergamot Station will bring in many members of the community to collaborate in the master planning process.

PCD will work with other City departments, as it typically does in its planning efforts. The Bergamot Station, Bergamot Transit Village and Mixed Use Creative District planning will have implications for many departments, including Public Works, Community & Cultural Services, Housing & Economic Development and the Big Blue Bus.

(a) Capacity Building and Knowledge Sharing

- (1) Over the course of the two year master planning process, staff intends to build upon previous experience in managing and administering Federal funds. In-house capacity will be expanded in several ways: 1) through in-service Federal fund administration training of PCD's Senior Administrative Analyst; 2) in-house collaboration with staff members within the Economic Development and Redevelopment Departments who possess the technical expertise in utilizing Federal funds and regularly perform program performance assessment; and 3) through oversight and guidance from consultant firms with proven track records in leveraging Federal funding for Specific Planning efforts.
- (2) The City of Santa Monica has numerous inter-departmental forums at which large scale projects and programs are shared and discussed. For the proposed master plan, an inter-departmental task force including the city's Cultural Affairs Division will be created to leverage these working relationships to define important criteria and refine concepts to meet realistic performance requirements. The task force will meet as needed (twice monthly is typical) to discuss the project and exchange ideas or concerns. To provide access and promote knowledge sharing in the community and beyond, a dedicated website or intranet site would be established to serve as a resource for updated information, document archives, and announcements associated with the project. In developing the LUCE, a dedicated team of staff met twice monthly for six years, and maintained a website for public information dissemination that received 18,000 unique user visits.

(b) Expand Cross Cutting Policy Knowledge

The proposed master plan will implement the LUCE vision of a transit-oriented district that centers on the Bergamot Arts Complex, with higher density mixed-use development within nearby walking distance. The City anticipates that this district, with its inclusion of a substantial number of

residential units, both affordable and market rate, as well as employment sources and cultural offerings, will become a model of interest to other communities. The City of Santa Monica already has a mechanism for monitoring plan achievement with measurable indicators in its Sustainable City Plan (SCP), which contains a range of sustainability principles and goals. Similarly, the Council has directed staff to monitor, measure and report on the achievement of LUCE policies.

The LUCE states the following in Chapter 5 (Measuring progress: implementing the plan): *“A good plan goes to waste if it is not implemented... A cornerstone of the LUCE approach is the commitment to monitoring the progress of the Plan, and managing the pace and type of change.”* To this end, there are five key strategies that the LUCE proposes. Staff will use the Performance Measures described earlier in this narrative in response to rating factor 1 to monitor success specifically in the Bergamot Transit Village and Mixed-Use Creative Districts as part of the general monitoring program that will be both City-wide and by sub-area or district.

Due to the high level of goal overlap with the SCP, the LUCE monitoring is to be done in conjunction with the City’s regularly-issued *Sustainable City Report Card* which already has a wide circulation through the City’s Office of Sustainability and the Environment website, Facebook and links from other environmental organizations and agencies that look to Santa Monica as a cutting-edge “green” community.

An exciting and innovative tool that the City has at its disposal to monitor transportation impacts is its proprietary multi-modal Transportation Demand Model developed as part of the recent LUCE effort. A key goal of the LUCE is to reduce Greenhouse Gas Emissions by limiting the number of new trips generated by development with a goal of achieving “No Net New Trips.” In addition to a base model for the entire City for AM and PM peak hours, the model includes the following additional model capabilities and features:

- A weekend mid-day assessment (Saturday model);
- Greenhouse gas emissions analysis capability;
- Walking and bicycling demand by street segment;
- The relationship between different levels of transit investment and how it affects how many people take transit;
- Trip generation rates by different types of land uses and geographic characteristics;
- Parking demand for existing or proposed parking districts;
- Performance measures such as relative travel time by mode, level of service by mode, and vehicle miles traveled;
- Information regarding regional pass-through versus locally-generated traffic on City streets;
- Additional “horizon year” model runs to address possible phasing scenarios; and
- Various graphical displays of the results.

The Transportation Demand Model will be used in many ways to continuously measure the impacts of proposed and actual development on traffic and circulation in the project area. The measurement of trip reduction achieved can be used to monitor Greenhouse Gas emissions reduction in compliance with both State and Federal GHG reduction targets.

EXHIBIT 6

**DEVELOPMENT AGREEMENT PROJECTS
WITHIN BERGAMOT TRANSIT VILLAGE AND MIXED USE CREATIVE DISTRICTS**

NO	Project Name	Project Location	Project Description
1	Lionsgate	2834 Colorado Ave	151,600 sf creative studio building with a 550 space garage, childcare-center and extension of Pennsylvania Ave
2	Roberts Center	2848-2912 Colorado Avenue	Mixed-use project with 170 residential units, 12,000 sf retail space and 135,000 sf creative studio space
3	Village Trailer Park	2930 Colorado Ave	399,581 sf project w/227 condos, 166 rental units, 105,334 sf creative office space, and 11,710 sf of retail.
4	Papermate	Olympic Blvd between 26th St and Stewart St	~400-500 residential units, 80,000 sf retail and 606,000 sf creative arts office space
5	Paseo Nebraska	3030 Nebraska Ave/ 3025 Olympic Blvd	545 residential units, 75,000 sf creative studio space, 5,000 sf retail space and associated parking
6	Agensys	Stewart St south of Olympic Blvd	Office/Lab/Manufacturing Complex - 153,000 sf building with 204 parking spaces
7	SMC Academy of Entertainment & Technology Campus Expansion	SEC Stewart St & Pennsylvania Ave	Add new 19,419 sf wing to AET building, 27,753 sf for KCRW radio station, and 450 space parking structure

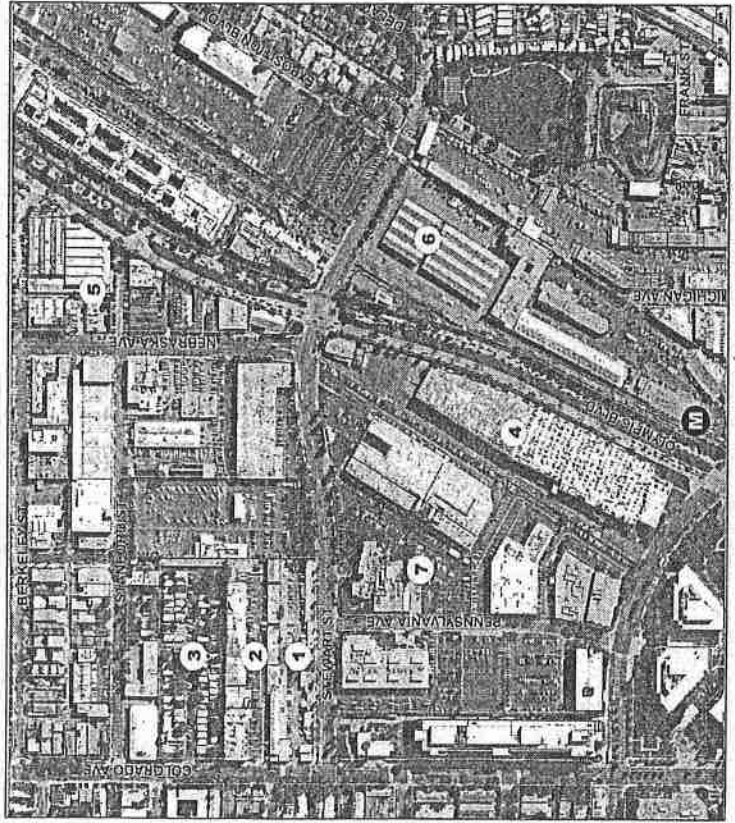


EXHIBIT 7



Planning and Community Development Department

MEMORANDUM

To: Planning Commissioners Jim Ries, Gwynne Pugh, Gerda Newbold;
Architectural Review Board Members Michael Folonis, Lynn Robb;
John Kaliski, AIA

CC: Francie Stefan, Steve Traeger, Peter James, Jing Yeo

From: Eileen Fogarty, Director, Planning & Community Development

Subject: Bergamot Transit Village – Area Plan

Date: November 9, 2010

As you may know, PCD has initiated the planning for the Bergamot Area Plan that will include the Bergamot Transit Village, which is divided into two elements, the Bergamot Transit Village (the area north of Olympic Boulevard) and the Bergamot Arts Center (the area south of Olympic Boulevard). In addition the Plan will include the Mixed-Use Creative Arts District as defined in the LUCE, which is located east of Bergamot.

The Planning for the Bergamot Area Plan is happening concurrently with the processing of a series of Development Agreements. Therefore, it is important that the city accelerate portions of the planning so that the planning guides the review of the DAs rather than the DAs directing the Area Plan. The first of these issues is preparing Design Guidelines for the large streetwalls and streetscapes, both internal to the planning districts and externally along the city's major corridors.

We are pleased that you have agreed to participate in a mini worksession on Thursday, November 11, 2010 from 11 AM to 2 PM at City Hall in PCD's Large Conference Room on the 2nd Floor, Room 212. We will provide lunch. As you can see from the list of people to whom this memo is directed, the participants include staff, members of the Planning Commission and Architectural Review Board and City design consultants. While we will briefly review most of the DA submittals to provide some context as to what is occurring in the area, the intent is to establish principles and a framework or a preferred direction for streetscape design guidelines with regard to form, building typologies, and skyline variation. In order to ensure that there is no pre-judgment of any particular project that may come forward for formal hearings we will not critique any of the DA designs.

The primary urban design challenge is to establish design principles and guidelines for new construction with little or no adjacent context for projects that may be as tall as 86' and as long as 1,250' or 3+ typical city blocks. While it is the intent of the LUCE and the City to reduce the

length of the streetwalls by extending the city grid through this former industrial area, there will be long uninterrupted streetwalls such as where the Expo maintenance facility is planned to be located. The issues for discussion may include:

- What is the appropriate format for the streetscape? Should the street/boulevard be modeled after a typical or traditional urban street/boulevard where buildings typically have common walls and the architecture is primarily a street façade? Or, a campus approach where buildings are standalone elements with four facades? Or, a combination? Or?
- How should the buildings address the street? Should the city require buildings, e.g. along Olympic to generally locate the building's streetwall along the street property line or the back side of the sidewalk, or at the edge of open space plazas or mini-parks? Should the typical building be allowed to be set back from the sidewalk? Importantly, along Olympic Boulevard, should there be a required continuity of active uses and building entries at the ground floor?
- While the development parameters in the Draft LUCE that shape form were generalized, what more specific standards or guidance could/should be developed in order to ensure that the desired character is achieved in the District? Should facades follow the current zoning requirements for setbacks from a given height of streetwall? What provisions should be incorporated for building articulation? Should there be a minimum ground floor height based upon building height, e.g. taller buildings have taller ground floors? Should there be provisions for variation in the height of buildings as called for in the LUCE (or portions of buildings) to create an interesting skyline/streetwall within the maximum allowed development parameters?
- At what locations should heights be allowed to reach the maximum parameters as prescribed by the LUCE? What are the conditions that trigger the highest heights? At what locations should heights be limited to the minimum parameters?
- Should the length of any one building along the length of the street be limited? Should a single building be allowed to be 300'+ in length? If so should the building façade be articulated and expressed in a manner so that it appears to be several smaller buildings and thus reducing the apparent scale of the building?
- The LUCE characterizes the Bergamot Transit Village as a "Village" of workers, residents and local serving retail/services. What are the characteristics that will distinguish this area as a "Village?" Realistically, given the limited opportunity areas that currently exist within the Transit Village boundaries, what features of the District Plan are most important to be realized and in what areas?
- Should the new buildings fronting the "new internal roadways" within each district follow the same design guidelines as for buildings fronting the "existing external roadways/ boulevards?" How should the District Plan address the LUCE hierarchy of streets to create a permeable, walkable and functional street pattern?
- Should there be provisions to control the impact of reflective glass on adjacent open space or other structures? Should this be an issue that is explored in the building's EIR?

- Should projects over a certain size require a more rigorous design review process? Should projects of a certain size require a different architect for different buildings such as was the case on the Village where there were originally three architects?
- Should there be a “Village” incentive to encourage multiple smaller buildings that are more in keeping with the concept of a “Village?”
- To what extent should the District Plan identify industrial or architectural “artifacts” (non-landmarks) or themes as a means to establish an existing “industrial and creative arts” context for new development to reference, as stated in Policy D20.8?

It is the city’s hope that based upon your knowledge and experience you might be able to bring to the worksession examples of what you believe to be good or bad examples of streetscapes, large buildings in a boulevard or major street context, etc. One example that is close to Santa Monica is the street facades/streetwalls on the exterior and the interior of Playa Vista. It might be worth criving by (through) as the scale is not dissimilar to BTV and there are lessons to be learned.

The following are the first thoughts on the agenda for the worksession:

11:00 AM - Staff Overview/Orientation

1. Goals/Objectives for the Worksession
2. Overview of the Area Plan’s Work Flow/Scope
3. Project Boundaries – Surrounding Context
4. Existing Development Agreements
5. Other Proposed Projects
 - i. Bergamot hotel
 - ii. Expo Maintenance Facility

11:15 AM - Review of Transportation/Circulation Issues/Opportunities

1. BTV Concept Diagram
2. Shared parking opportunities
3. Circulation Opportunities
 - i. Regional Bikeway
4. Expo Station
 - i. Expo single platform
 - ii. Side Platform opportunities

11:30 AM – Review of LUCE Goals and Policies

1. Goals and Policies
2. Height and FAR
3. Stepbacks and other provisions

11:45 AM – Open Discussion

1. Review precedents as brought to meeting by participants/staff

12:15 PM – Lunch Served – Eileen Fogarty intends to join the worksession during the noon hour

1. Discuss/Agree on Specific Streetscape/Streetwall Design Guideline Elements (similar to the bulleted list of issues above).
2. Open Discussion for each of the agreed to Streetscape/Streetwall Design Guideline Elements.

1:15 PM – Summary

1. Streetscape/Streetwall Design Guideline

We very much appreciate your participation in this Streetscape Design Guideline Worksession and look forward to your valuable insights and contributions.

**DEVELOPMENT AGREEMENT PROJECTS
WITHIN BERGAMOT TRANSIT VILLAGE AND MIXED USE CREATIVE DISTRICTS**

NO	Project Name	Project Location	Project Description
1	Lionsgate	2834 Colorado Ave	151,600 sf creative studio building with a 550 space garage, childcare-center and extension of Pennsylvania Ave
2	Roberts Center	2848-2912 Colorado Avenue	Mixed-use project with 170 residential units, 12,000 sf retail space and 135,000 sf creative studio space
3	Village Trailer Park	2930 Colorado Ave	399,581 sf project w/227 condos, 166 rental units, 105,334 sf creative office space, and 11,710 sf of retail.
4	Papermate	Olympic Blvd between 26th St and Stewart St	~400-500 residential units, 80,000 sf retail and 606,000 sf creative arts office space
5	Paseo Nebraska	3030 Nebraska Ave/ 3025 Olympic Blvd	545 residential units, 75,000 sf creative studio space, 5,000 sf retail space and associated parking
6	Agensys	Stewart St south of Olympic Blvd	Office/Lab/Manufacturing Complex - 153,000 sf building with 204 parking spaces
7	SMC Academy of Entertainment & Technology Campus Expansion	SEC Stewart St & Pennsylvania Ave	Add new 19,419 sf wing to AET building, 27,753 sf for KCRW radio station, and 450 space parking structure

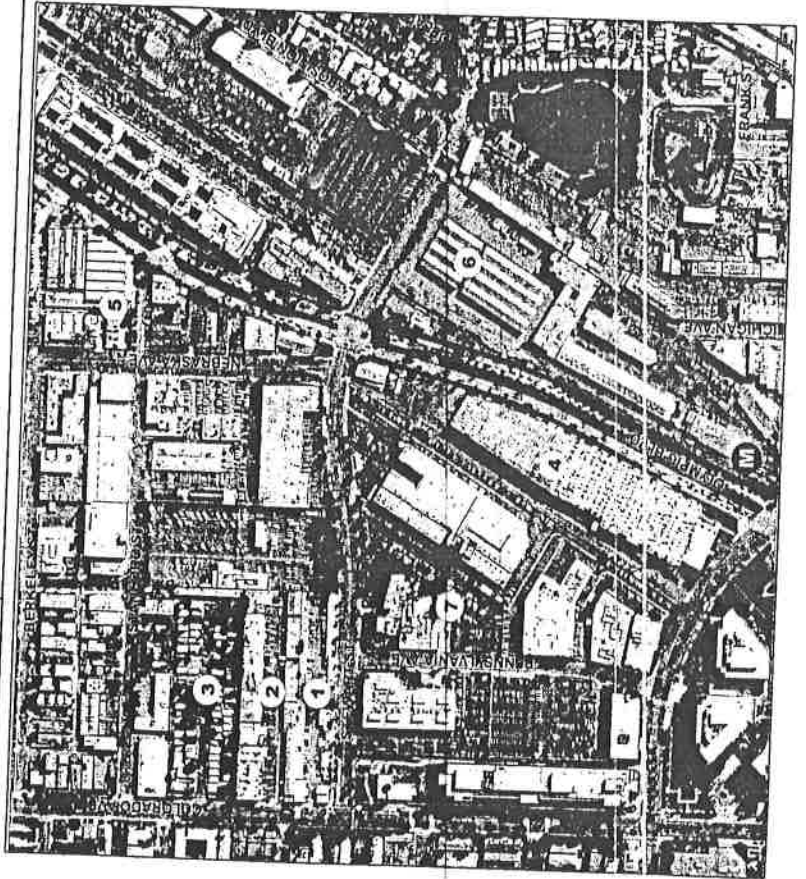


EXHIBIT 8



City of
Santa Monica®

Eileen Fogarty
Director

Planning & Community
Development Department
1685 Main Street
PO Box 2200
Santa Monica, California 90407-2200

June 15, 2009

Mr. Jimmy Liao and Diana Kithching
City Planners, EIR Unit
Division of Land/Environmental Review
Room 750, City Hall
Department of City Planning
200 North Spring Street
Los Angeles, CA 90012

Re: Comments on DEIR for Bundy Village and Medical Park Project

Dear Mr. Liao and Ms. Kitching:

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) prepared for the Bundy Village and Medical Park project located at 1901, 1925, and 1933 South Bundy and 12333 Olympic Boulevard in the City of Los Angeles. This letter constitutes the City of Santa Monica's comments on the environmental analysis prepared for the project. The City's comments are solely related to the traffic analysis section of the report.

The City of Santa Monica is deeply concerned about the impacts of this project on Santa Monica streets. Based on the City of Los Angeles (LADOT) impact criteria, 15 out of the 25 intersections within or bordering on the City of Santa Monica are significantly impacted. These intersections include:

1. Colorado Avenue/Stewart Street
2. Olympic Boulevard/20th Street
3. Olympic Boulevard/Cloverfield Boulevard
4. Olympic Boulevard/26th Street
5. Olympic Boulevard /Stewart Street
6. Olympic Boulevard/Centinela Avenue (north leg)
7. Olympic Boulevard/Centinela Avenue (south leg)
8. Centinela Avenue/I-10 WB On-/Off-Ramps
9. Pico Boulevard/23rd Street
10. Pico Boulevard/Cloverfield Boulevard
11. Pico Boulevard /I-10 EB Off-Ramp
12. Pico boulevard/Centinela Avenue
13. Centinela Avenue /I-10 EB On-Ramp
14. Ocean Park Boulevard/23rd Street
15. Ocean Park Boulevard/Centinela Avenue

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An additional 2 intersections would be impacted under the Critical Movement Analysis, according to LADOT significance criteria:

1. Santa Monica Boulevard/Cloverfield Boulevard
2. Pico Boulevard/Lincoln Boulevard

The document characterizes the City of Santa Monica's methodology and impact criteria as the same as that for the City of Los Angeles, which is mistaken. The City of Santa Monica's criteria are provided for your reference in Attachment A. It is unclear whether there would be additional or more severe impacts using the City of Santa Monica's criteria because the intersection volume-to-capacity (V/C) and average vehicle delay data are not provided in the document we received. Finally, the trip generation methodology provides a credit for medical office as being neighborhood serving. The City does not agree with this assumption.

The proposed mitigation measures at the border intersections deteriorate the built environment for pedestrians, transit riders and residents and are not acceptable to the City of Santa Monica. Any proposed mitigations in or at the border of the City of Santa Monica need to be discussed and agreed to by the City of Santa Monica. The document also refers to compensation by the developer for "fair share" impacts. The "fair share" methodology needs to be clarified and the City of Santa Monica needs to agree. Finally, although the Exposition Boulevard/Centinela Avenue intersection was not analyzed in the DEIR, the City is requesting signalization.

Please refer to Attachment B, which provides the City's detailed comments regarding the analysis for intersections and right-of-way within or bordering on the City of Santa Monica. One issue we are particularly concerned with is that the preferred haul route is identified as entirely on Centinela Avenue to the I-10 Freeway (adjacent to our residents) and avoids the reality that Bundy Drive has the most street frontage and will be the destination/origination of at least some of the trucking activity. The Bundy entrance to the I-10 Freeway should also be identified.

If you have questions, need clarification or would like to discuss our comments, please contact Sam Morrissey, Principal Transportation Engineer at: sam.morrissey@smgov.net or Beth Rolandson Principal Transportation Planner at: beth.rolandson@smgov.net. Both of them can also be reached by calling (310) 458-8291.

Yours truly,



EILEEN FOGARTY
Director, Planning and Community Development Department



Transportation Management Division
 1685 Main Street, Room 115, PO Box 2200
 Santa Monica, CA 90407-2200
 310/458-8291

ATTACHMENT A

**City of Santa Monica Significance Criteria
 Arterial and Collector Intersections**

Future Base Scenario	Future Plus Project Scenario
If LOS = A, B, or C → and is a collector street intersection → and is an arterial intersection	Significant Impact If: Average vehicle delay increase is ≥ 15 seconds Or LOS becomes D, E, or F Average vehicle delay increase is ≥ 15 seconds Or LOS becomes E or F
If LOS = D → and is a collector street intersection → and is an arterial intersection	Significant Impact If: Any net increase in average seconds of delay per vehicle Average vehicle delay increase is ≥ 15 seconds Or LOS becomes E or F
If LOS = E → and is a collector or arterial intersection	Significant Impact If: Any net increase in average seconds of delay per vehicle
If LOS = F → and is a collector or arterial intersection	Significant Impact If: HCM V/C ratio net increase is ≥ 0.005



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City of Santa Monica Significance Criteria Collector, Feeder and Local Streets

COLLECTOR STREETS	
A transportation impact is significant if the Base Average Daily Traffic Volume (ADT) is:	Greater than 13,500 and there is a net increase* of one trip or more in ADT due to project related traffic
	Greater than 7,500 but less than 13,500 and the project related traffic increases* the ADT by 12.5% or the ADT becomes 13,500 or more
	Less than 7,500 and the project related traffic increases* the ADT by 25%
FEEDER STREETS	
A transportation impact is significant if the Base Average Daily Traffic Volume (ADT) is:	Greater than 6,750 and there is a net* increase of one trip or more in ADT due to project related traffic
	Greater than 3,750 but less than 6,750 and the project related traffic increases* the ADT by 12.5% or the ADT becomes 6,750 or more
	Less than 3,750 and the project related traffic increases* the ADT by 25%
LOCAL STREETS	
A transportation impact is significant if the Base Average Daily Traffic Volume (ADT) is:	Greater than 2,250 and there is a net increase* of one trip or more in ADT due to project related traffic
	Greater than 1,250 but less than 2,250 and the project related traffic increases* the ADT by 12.5% or the ADT becomes 2,250 or more
	Less than 1,250 and the project related traffic increases* the ADT by 25%

*Average Daily Traffic Volume "increase" denotes adverse impacts; "decrease" denotes beneficial impacts

ATTACHMENT B

**City of Santa Monica Comments on the
Bundy Village and Medical Park DEIR
June 15, 2009**

Page	Comment
IV.K-2	Wilshire Boulevard has bus only lanes during peak hours and should be described as such. The City of Santa Monica generally does allow on street parking on Pico Boulevard.
IV.K-7	Parking is not permitted along segments of Cloverfield Boulevard north of the Santa Monica Freeway, with parking allowed adjacent to residential properties south of the freeway. On-street parking is generally permitted on 20 th Street adjacent to residential properties, but not adjacent to commercial properties north of the Santa Monica Freeway.
IV.K-15	Comparison of the Year 2006 intersection count data to Year 2007 count data collected by the City of Santa Monica shows high degrees of variation. At the four intersections selected for "correlation" analysis in the EIR that are within/adjacent to the City of Santa Monica, traffic volumes vary from 15% to 48% during AM and PM peak hours (See attached <u>Exhibit 1</u>). The comparison to Year 2007 count data collected by the City of Santa Monica therefore indicates a lack of correlation to Year 2006 count data used in the DEIR traffic analysis.
IV.K-25	The City of Santa Monica respectfully requests that intersections entirely within and partially within Santa Monica be evaluated using the City of Santa Monica's significance criteria (Attachment B).
IV. K-29	Bundy Drive should also be considered as a haul route, especially for vehicles accessing the site from the location with the most street frontage, which is Bundy itself. Use of Centinela Avenue should be minimized as it is adjacent to a residential neighborhood between Exposition Boulevard and the Santa Monica Freeway.
IV.K-40	Table IV.K-5 presents project trip generation rates used in the study. Why were the trip generation formulas used, rather than specific values of trips/unit? Particularly for more standardized uses such as General Office and Condominium, ITE rates used should be consistent with other recent studies and/or reflect the specific values presented in the ITE Trip Generation Manual.

ATTACHMENT B

**City of Santa Monica Comments on the
Bundy Village and Medical Park DEIR
June 15, 2009**

Page	Comment
IV.K-41	<p>Can more detail be provided regarding the justification for internal capture rates, rather than simply consultation with staff? Internal capture rates can vary significantly depending on the type of use and demographics of the development. The DEIR presents a nearly 10% overall reduction in daily trips and between 25% to 48% reduction in AM and PM peak hour trips, respectively, due to internal capture; these percentages seem very high.</p> <p>Medical office facilities are generally regional in nature and should not be considered a neighborhood use with the subsequent reduction in vehicle trip generation.</p> <p>It is unclear how neighborhood friendly the site will be; with very little street frontage it will be difficult for pedestrians and bicyclists to access the site with the vehicular access that dominates the street frontage.</p>
IV.K-45	<p>Table IV.K-7 presents project trip distribution percentages. What is the justification for these distribution patterns? Is the distribution of trips based on the application of any travel demand models? More explanation and documentation should be provided.</p>
IV.K-59 & 61	<p>Figures IV.K-10 and IV.K-11 present driveway AM and PM peak hour trips. When summing the inbound and outbound trips, the total AM and PM peak hour driveway trips do not equal the project trip generation numbers shown on Table IV.K-6 (Pgs. IV.K-42 & 43), even when the pass-by trips are included in the generation. Please explain the discrepancy.</p>
IV. K-65	<p>Future (2011) Traffic Conditions is not an appropriate time frame for occupancy of the project as the likelihood of the project being built and occupied by 2011 is extremely low.</p>
IV.K-66	<p>Provide more justification for the 1.0 percent per year ambient growth factor. Is this factor based on any application of travel demand models, or simply a review of historic trends?</p>
IV.K-86	<p>Please provide an updated timeline of the implementation of the 'Pico/Olympic Plan' to justify the appropriateness of describing the first phase as being in place as of 2011 or when the most realistic occupation of the project is expected.</p>
IV.K-92	<p>The City of Santa Monica has its own adopted impact criteria (Attachment B) that should be used to evaluate the impacts within the City of Santa Monica.</p>

ATTACHMENT B

**City of Santa Monica Comments on the
Bundy Village and Medical Park DEIR
June 15, 2009**

Page	Comment
IV.K-125	<p>Why is there no difference identified between direct and cumulative project impacts? The DEIR should evaluate direct traffic impacts (e.g., existing plus project conditions) in order to identify project-specific contributions to traffic impacts.</p> <p>Construction traffic should be routed away from the residential area adjacent to Centinela Avenue between Exposition Boulevard and the Santa Monica Freeway.</p> <p>There are six impacted intersections that are managed jointly by the City of Santa Monica and the City of Los Angeles as at least one leg of each intersection lies within Santa Monica.</p>
IV.K-128	<p>Mitigation K-6 specifies the addition of one dedicated eastbound right-turn lane on Colorado Avenue, and the conceptual drawing proposes a lane configuration consisting of one 10-foot left-turn lane, one 10-foot through lane, and one 12-foot right-turn lane. This lane configuration would likely be unacceptable to the City of Santa Monica. There does not appear to be adequate paved width to accommodate this proposed lane configuration with acceptable lane widths. Additionally, as the DEIR reports, that this mitigation would merely 'formalize' the operation of the intersection, thus there would be no actual change to the operation of the intersection. This impact should be characterized as significant and unavoidable.</p>
IV.K-129	<p>Mitigation K-9 at Olympic Boulevard and Centinela Avenue (south leg) is an intersection that is shared with the City of Santa Monica. Reducing the existing sidewalk width along the west side of Centinela Avenue south of Olympic Boulevard is not acceptable to the City of Santa Monica. This is a sidewalk that will be used by the residents of the neighborhood directly to the south to access retail destinations, such as the one proposed, and discouraging pedestrian activity is not consistent with the City of Santa Monica's philosophy on mitigation measures. Please consider reducing the impact by removing the on-street parking on the west side of Centinela Avenue instead; while this parking does serve the commercial buildings in the area, the buildings immediately adjacent to this area have their own off street parking.</p>
IV.K-130	<p>Mitigation K-12 suggests reducing the existing sidewalk widths within the City of Santa Monica. Reducing the width of the sidewalk and eliminating parkway is not acceptable to the City of Santa Monica. Please coordinate any proposed changes to this intersection with both the City of Santa Monica and the California Department of Transportation.</p> <p>Mitigation K-13 also suggests removing parkway and reducing sidewalk width. This is not only unacceptable for a major boulevard but there is a bus stop with shelter at this location. If anything more amenities and space should be dedicated to transit riders at this location rather than fewer.</p>

ATTACHMENT B

**City of Santa Monica Comments on the
Bundy Village and Medical Park DEIR
June 15, 2009**

Page	Comment
IV.K-131	<p>Mitigation K-19 recommends widening both sides of Centinela Avenue north and south of the east bound on-ramp 'as necessary.' The mitigation measure needs to be more specific as to how this can be accomplished: by removing crosswalk, by purchasing private property, or by widening the freeway overpass? Changing the curb line, reducing parkways and reducing sidewalk widths are not acceptable to the City of Santa Monica.</p>
IV.K-132	<p>Mitigation K-20 describes reconfiguring the intersection to convert the southbound through lane to a shared left turn and through lane. The operation of this intersection for pedestrians must also be considered as this configuration will lead to a minimum of three phases for pedestrians, including: 1. east-west travel on both the north and south legs of the intersections 2. north-south travel on the east leg of the intersection, and 3. north-south travel on the west leg of the intersection. All pedestrians must be retained to provide access to transit on both sides of Ocean Park as well as the office park and retail on both sides of the street. Retaining this will affect the operation of the traffic signal since it will increase the cycle length and should be analyzed before determining if this is an acceptable mitigation measure.</p> <p>The document describes the previous mitigation measures as affecting intersections 'wholly within or under the operational jurisdiction of the City of Los Angeles.' Many of the intersections along the border with Santa Monica have joint responsibility and the mitigation measure impact the City of Santa Monica. Similarly the City of Santa Monica's analysis methodology and significance criteria should be used.</p> <p>The DEIR must define the fair-share contribution, or methodology for calculating this contribution. Without an analysis of direct project traffic impacts, it is difficult to identify an appropriate fair-share contribution amount. The City of Santa Monica is currently developing and deploying an Advanced Traffic Management System (ATMS), similar to LADOT's ATSAC system. The City would welcome fair-share contributions towards expansion of this system within the City limits.</p>
IV.K-138	<p>Mitigation K-25 specifies the restriping of Lincoln Boulevard at Pico Avenue to include one dedicated northbound right-turn lane. Currently portions of Lincoln Boulevard function as a six-lane facility due to the lack of curbside parking during peak periods. Therefore, the proposed mitigation measure may adversely affect operations. In addition, the City of Santa Monica is currently working with Caltrans to determine the feasibility for peak period bus only lanes on Lincoln Boulevard; the bus only lanes would be located within the existing parking areas along the curbs, with parking restricted during peak periods to provide for the bus only lanes. The DEIR should include coordination with Caltrans and the City of Santa Monica for any proposed mitigation measures.</p>

Attachment: Exhibit 1

2007
PM

L90 #	Intersection	North			South			East			West			E/W Totals	I/S Totals	Percent Change					
		Right	THR	Left	Right	THR	Left	Right	THR	Left	Right	THR	Left			TOTAL	N/S Totals	E/W	Total		
153	Centinela Ave and Colorado Ave	30	436	126	592	35	601	23	659	83	657	20	294	25	339	1251	596	2247			
	2006 (Bundy Village EIR)																				
	2007 (Bundy Village EIR)	39	378	106	513	52	501	33	586	106	577	25	295	50	350	1059	1117	2216			
	2007 (City of SM)	36	548	236	860	37	716	11	764	123	1165	13	285	71	369	1674	1584	3158			
	Difference (2007 City of SM vs. 2006 BV EIR)	6	152	110	266	7	115	12	106	122	297	90	90	46	39	373	588	911	29.8%	54.0%	40.5%
343	Stewart St and Olympic Blvd	75	253	61	387	90	338	211	639	139	48	111	910	179	1200	1026	2800	3826			
	2006 (Bundy Village EIR)																				
	2007 (Bundy Village EIR)	69	274	52	395	73	365	113	571	137	1473	71	1681	94	933	119	1146	966	2827	3793	
	2007 (City of SM)	164	413	96	673	132	640	282	1054	214	994	207	1415	255	877	129	1261	1727	2676	4603	
	Difference (2007 City of SM vs. 2006 BV EIR)	91	160	35	286	42	302	71	415	75	421	161	165	144	-33	50	61	701	-124	577	68.3%
354	Centinela Ave (East) and Olympic Blvd	196	0	501	697	0	0	0	0	785	1550	0	2335	0	1457	130	1587	697	3922	4619	
	2006 (Bundy Village EIR)																				
	2007 (Bundy Village EIR)	160	0	471	631	0	0	0	0	713	1495	0	2208	0	1405	136	1543	631	3749	4380	
	2007 (City of SM)	197	3	563	763	5	8	13	26	754	1785	4	2043	8	1698	109	1615	789	3858	4647	
	Difference (2007 City of SM vs. 2006 BV EIR)	37	3	62	66	5	8	13	26	-31	-265	4	-292	8	241	-21	228	92	-64	28	13.2%
653	Centinela North L18 West off and on ramp	0	312	339	661	119	1162	0	1281	191	0	202	393	0	0	0	0	1942	393	2355	
	2006 (Bundy Village EIR)																				
	2007 (Bundy Village EIR)	0	330	340	670	65	887	0	972	207	0	210	417	0	0	0	0	1842	417	2259	
	2007 (City of SM)	0	451	778	1229	131	958	0	1069	342	0	497	839	0	0	0	0	2298	839	3137	
	Difference (2007 City of SM vs. 2006 BV EIR)	0	139	439	568	22	-224	0	-212	151	0	295	446	0	0	0	0	356	446	802	113.5%