

A P P E N D I X B

THRESHOLDS OF SIGNIFICANCE
USED IN THE ANALYSIS



MEMORANDUM

DATE February 3, 2016
TO Hillary Gitelman, Director
City of Palo Alto Planning & Community Environment Department
FROM Joanna Jansen and Alexis Mena
SUBJECT Comprehensive Plan Update Environmental Impact Report Thresholds

The Comprehensive Plan (Comp Plan) and EIR work program approved in 2006 by the City of Palo Alto City Council called for City staff to submit to the Council the significance criteria to be used for the Environmental Impact Report (EIR) for the Comprehensive Plan Update. These criteria were submitted to City Council in 2007 and are attached to this memorandum as Attachment A. The criteria were developed based on City policy and the California Environmental Quality Act (CEQA) Guidelines. The 2006 work program called for the criteria to be included in an appendix to the Comprehensive Plan and subsequently to serve as the thresholds for significance for all discretionary review projects in the city. These criteria have since been used in several City environmental documents, including the Stanford Shopping Center and Stanford Medical Center EIR.

In preparing the Comprehensive Plan Update EIR for publication in 2016, PlaceWorks, the City's lead consultant for the Comprehensive Plan Update and EIR, has revisited the 2007 thresholds for their applicability to the Comprehensive Plan Update EIR. As part of this review and in discussion with City staff, including staff from the City Attorney's office, PlaceWorks recommended revisions to the thresholds for three main reasons:

- » Some thresholds needed to be updated to reflect legislative changes, guidance from responsible agencies (such as the Bay Area Air Quality Management District), and case law since 2006.
- » Some thresholds are more appropriate for project-level EIRs, when specific projects have been proposed and detailed information is available about site plans, grading plans, building design, landscaping design, and occupancy. The Comp Plan does not propose or assume any specific development projects, so no such details are available for future development that may take place after the Comp Plan is adopted. The Comp Plan EIR is a "programmatic" or "program EIR" rather than a project-level EIR.
- » Finally, any threshold that references an impact resulting from a conflict with Comp Plan policy does not make sense to apply to an analysis of the Comp Plan itself.

The updated thresholds used in the Comprehensive Plan Update EIR are contained in Exhibit 1. The changes to the City's 2007 criteria are shown in Exhibit 2 in strikethrough underline format. The 2007 criteria are contained in Exhibit 3.

Exhibit 1: Thresholds Used in the Comprehensive Plan Update EIR

- » **Aesthetics**
 - Substantially degrade the existing visual character or quality of the area and its surroundings.
 - Significantly alter public viewsheds or view corridors or scenic resources (such as trees, rocks, outcroppings or historic buildings along a scenic highway).
 - Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
 - Substantially shadow public open space (other than public open streets and adjacent sidewalks) between 9:00 a.m. and 3:00 p.m. from September 21 to March 21.
- » **Air Quality**
 - Conflict with or obstruct implementation of the applicable air quality plan, such as the *2010 Clean Air Plan* or the *2001 Ozone Attainment Plan*.
 - Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
 - Expose sensitive receptors to substantial pollutant concentrations.
 - Create objectionable odors affecting a substantial number of people.
- » **Biological Resources**
 - Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
 - Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, including federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
 - Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
 - Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or as defined by the City of Palo Alto's Tree Preservation Ordinance (Municipal Code Chapter 8.10).
 - Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.
- » **Cultural Resources**
 - Adversely affect a historic resource listed or eligible for listing on the National and/or California Register, or listed on the City's Historic Inventory.
 - Eliminate important examples of major periods of California history or prehistory.
 - Cause damage to an important archaeological resource as defined in §15064.5 of the CEQA Guidelines.
 - Disturb any human remains, including those interred outside of formal cemeteries.
 - Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
 - Directly or indirectly destroy a local cultural resource that is recognized by City Council resolution.

- » **Geology, Soils, and Seismicity**
 - Expose people or structures to substantial adverse effects including the risk of loss, injury or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure (including liquefaction), landslides, or expansive soil.
 - Expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques.
 - Be located on a geologic unit or on soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
 - Cause substantial erosion or siltation.
- » **Greenhouse Gas Emissions and Climate Change**
 - Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
 - Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
 - Expose people or structures to the physical effects of climate change, including but not limited to flooding, public health, wildfire risk, or other impacts resulting from climate change.
- » **Hazards and Hazardous Materials**
 - Create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials.
 - Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
 - Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.
 - Create a significant hazard to the public or the environment from existing hazardous materials contamination by exposing future occupants or users of the site to contamination either in excess of soil and groundwater cleanup goals developed for the site or from location on listed hazardous materials sites compiled pursuant to Government Code Section 65962.5.
 - Expose people or structures to a significant risk of loss, injury or death involving wildland fires.
 - Result in a safety hazard from a public airport for people residing or working within the project area.
 - Impair implementation of or physically interfere with an adopted emergency response or evacuation plan.
 - For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- » **Hydrology and Water Quality**
 - Violate any water quality standards or waste discharge requirements.
 - Substantially degrade or deplete ground water resources or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.
 - Substantially increase the rate, volume, or flow duration of storm water runoff or alter the existing drainage pattern of the site or area, including altering the course of a stream or river, in a

manner which would result in substantial erosion or siltation on- or off-site, including increased in-stream erosion.

- Result in stream bank instability.
 - Significantly increase the rate, volume, or flow duration of storm water runoff in a manner which would result in new or increased flooding on- or off-site, or exceedance of the capacity of existing or planned storm water drainage systems in local streams.
 - Provide substantial additional sources of pollutants associated with urban runoff or otherwise substantially degrade surface or ground water quality.
 - Substantially impede or redirect flood flows through placement of structures within the 100-year flood hazard area.
 - Expose people or structures to a significant risk or loss, injury or death involving flooding by placing housing or other development within a 100-year flood hazard area or a levee or dam failure inundation area.
 - Inundation by seiche, tsunami, or mudflow.
- » **Land Use and Planning**
- Substantially adversely change the type or intensity of existing or planned land use patterns in the area.
 - Be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height.
 - Conflict with established residential, recreational, educational, religious, or scientific uses of an area.
 - Conflict with any applicable City land use plan, policy or regulation (including, but not limited to the Comprehensive Plan, CAP, or the City's Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
 - Physically divide an established community.
 - Conflict with an applicable habitat conservation plan or natural community plan.
- » **Noise**
- Cause the average 24-hour noise level (L_{dn}) to increase by 5.0 decibels (dB) or more in an existing residential area, even if the L_{dn} would remain below 60 dB.
 - Cause the L_{dn} to increase by three dB or more in an existing residential area, thereby causing the L_{dn} in the area to exceed 60 dB.
 - Cause an increase of three dB or more in an existing residential area where the L_{dn} currently exceeds 60 dB.
 - Result in indoor noise levels for residential development to exceed an L_{dn} of 45 dB.
 - Expose persons to or generate excessive groundbome vibrations or groundbome noise levels.
 - Expose people to noise levels in excess of established State standards.
 - Exposure of people to or generation of noise levels in excess of standards established in the General Plan or the Municipal Code, or applicable standards of other agencies.
 - A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.
- » **Population and Housing**
 - Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
 - Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
 - Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.
 - Create a substantial imbalance between employed residents and jobs.
- » **Public Services and Recreation**
 - Result in an adverse physical impact from the construction of additional school facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional fire protection facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional police protection facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional parks and recreation facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional library facilities in order to maintain acceptable performance standards.
- » **Transportation and Traffic**
 - Cause an intersection to drop below its level of service standard, or if it is already operating at a substandard level of service, deteriorate by more than a specified amount.
 - Cause a roadway segment to drop below its level of service standard, or deteriorate operations that already operate at a substandard level of service.
 - Cause a freeway segment or ramp to operate at LOS F or contribute traffic in excess of 1 percent of segment capacity to a freeway segment or ramp already operating at LOS F.
 - Impede the development or function of planned pedestrian or bicycle facilities.
 - Increase demand for pedestrian and bicycle facilities that cannot be met by existing or planned facilities.
 - Impede the operation of a transit system as a result of congestion.
 - Create demand for transit services that cannot be met by current or planned services.
 - Create the potential demand for through traffic to use local residential streets.
 - Create an operational safety hazard.
 - Result in inadequate emergency access.

» **Utilities and Service Systems**

- Need new or expanded entitlements for water supplies.
- Result in adverse physical impacts from new or expanded utility facilities required to provide service as a result of the project.
- Result in a substantial physical deterioration of a utility facility due to increased use as a result of the project.
- Exceed wastewater treatment requirements of the Regional Water Quality Control Board.
- Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Result in adverse physical impacts from new or expanded utility facilities required to provide service as a result of the project.
- Result in a substantial physical deterioration of a utility facility due to increased use as a result of the project.
- Require or result in the construction of new stormwater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Result in adverse physical impacts from new or expanded utility facilities required to provide service as a result of the project.
- Result in a substantial physical deterioration of a utility facility due to increased use as a result of the project.
- Be served by a landfill with insufficient permitted capacity.
- Not comply with federal, State, and local statutes and regulations related to solid waste.
- Result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities.

Exhibit 2: Changes to the City's 2007 Criteria

The following section shows the thresholds used in the Comprehensive Plan Update EIR, with changes to the City's 2007 criteria in ~~strikethrough~~ and underline:

- » **Aesthetics (~~Visual Resources~~)**
 - Substantially degrade the existing visual character or quality of the area and its surroundings.
 - Significantly alter public view sheds or view corridors or scenic resources (such as trees, rocks, outcroppings or historic buildings along a scenic highway roadway).
 - ~~Require substantial terrain modifications that degrade the visual character of the site.~~
 - ~~Allow for new development that would violate existing Comprehensive Plan policies regarding visual resources.~~
 - Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
 - Substantially shadow public open space (other than public open streets and adjacent sidewalks) between 9:00 a.m. and 3:00 p.m. from September 21 to March 21.

- » **Air Quality**
 - Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation, ~~as indicated by the following:~~
 1. ~~Direct and/or indirect operational emissions that exceed the Bay Area Air Quality Management District (BAAQMD) criteria air pollutants of 80 pounds per day and/or 15 tons per year for nitrogen oxides (NO) reactive organic gases (ROG), and fine particulate matter of less than 10 microns in diameter (PM10); or~~
 2. ~~Carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of nine parts per million (ppm) averaged over eight hours or 20 ppm for one hour (as demonstrated by CALINE4 modeling, which would be performed when a) project CO emissions exceed 550 pounds per day or 100 tons per year; or b) project traffic would impact intersections or roadway links operating at level of Service (LOS) D, E or F or would cause LOS to decline to D, E or F; or c) project would increase traffic volumes on nearby roadways by 10% or more).~~
 - ~~Expose sensitive receptors to substantial pollutant concentrations, or the general public to substantial levels of toxic air contaminants (TAC) where:~~
 1. ~~Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million; or~~
 2. ~~Ground-level concentrations of non-carcinogenic TACs would result in a hazard index greater than one (1) for the MeI; or~~
 - ~~Does not implement all applicable construction emission control measures recommended in the Bay Area Air Quality Management District CEQA Guidelines (Table 2); or~~
 - Conflict with or obstruct ~~with implementation of the applicable air quality plan, such as the 2000 2010 Clean Air Plan, or the 2001-2010 Ozone Attainment Plan, or the 2005 Bay Area Ozone Strategy.~~
 - Create objectionable odors affecting a substantial number of people.

» **Biological Resources**

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, including federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ~~Result in a substantial adverse effect to any "protected tree"~~ as defined by the City of Palo Alto's Tree Preservation Ordinance (Municipal Code Section 8.10).
- Conflict with the provisions of an adopted ~~any applicable~~ Habitat Conservation Plan, ~~or~~ Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

» **Cultural Resources**

- Adversely affect a historic resource listed or eligible for listing on the National and/or California Register, or listed on the City's Historic Inventory.
- Eliminate important examples of major periods of California history or prehistory.
- Cause damage to an important archaeological resource as defined in §15064.5 of the CEQA Guidelines.
- Disturb any human remains, including those interred outside of formal cemeteries.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Directly or indirectly destroy a local cultural resource that is recognized by City Council resolution.

» **Geology, Soils, and Seismicity**

- Expose people or structures to substantial adverse effects including the risk of loss, injury or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure (including liquefaction), landslides, or expansive soil.
- Expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques.
- Be located on a geologic unit or on soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Cause substantial erosion or siltation.

» **Greenhouse Gas Emissions**

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

- Expose people or structures to the physical effects of climate change, including but not limited to flooding, public health, wildfire risk, or other impacts resulting from climate change.
- » **Hazards and Hazardous Materials**
 - Create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials.
 - Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
 - Construct a school on a property that is subject to hazards from ~~Emit~~ hazardous materials or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school-contamination, emissions or accidental release.
 - For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
 - Create a significant hazard to the public or the environment from existing hazardous materials contamination by exposing future occupants or users of the site to contamination either in excess of soil and groundwater cleanup goals developed for the site or from location on listed hazardous materials sites compiled pursuant to Government Code Section 65962.5.
 - Expose people or structures to a significant risk of loss, injury or death involving wildland fires.
 - Result in a safety hazard from a public airport for people residing or working within the project area.
 - Impair implementation of or physically interfere with an adopted emergency response or evacuation plan.
- » **Hydrology and Water Quality**
 - Inundation by seiche, tsunami, or mudflow.
 - Substantially impede or redirect flood flows through placement of structures within the 100-year flood hazard area.
 - Substantially degrade or deplete ground water resources or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.
 - Substantially increase the rate, volume, or flow duration of storm water runoff or alter the existing drainage pattern of the site or area, including altering the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site, including increased in-stream erosion.
 - Significantly increase the rate, volume, or flow duration of storm water runoff in a manner which would result in new or increased flooding on- or off-site, or exceedance of the capacity of existing or planned storm water drainage systems in local streams.
 - Provide substantial additional sources of pollutants associated with urban runoff or otherwise substantially degrade surface or ground water quality.
 - Expose people or structures to a significant risk or loss, injury or death involving flooding by placing housing or other development within a 100-year flood hazard area or a levee or dam failure inundation area.
 - Result in stream bank instability.
 - Violate any water quality standards or waste discharge requirements.

» **Land Use and Planning**

- Conflict with any applicable habitat conservation plan or natural community plan.
- Substantially adversely change the type or intensity of ~~overall~~ existing or planned land use patterns in the area.
- Be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height.
- Conflict with established residential, recreational, educational, religious, or scientific uses of an area.
- Conflict with any applicable City land use plan, policy or regulation (including, but not limited to the Comprehensive Plan, CAP, or the City's Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Physically divide an established community.

» **Noise**

- ~~Result in instantaneous noise levels of greater than 50 dB in bedrooms or 55 dB in other rooms in areas with an exterior Ldn of 60 dB or greater.~~
- ~~Generate construction noise exceeding the daytime background Leq at sensitive receptors by 10 dBA or more.~~
- Exposure of people to or generation of noise levels in excess of standards established in the General Plan or the Municipal Code, or applicable standards of other agencies.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.
- Cause the average 24-hour noise level (L_{dn}) to increase by 5.0 decibels (dB) or more in an existing residential area, even if the L_{dn} would remain below 60 dB.
- Cause the L_{dn} to increase by three dB or more in an existing residential area, thereby causing the L_{dn} in the area to exceed 60 dB.
- Cause an increase of three dB or more in an existing residential area where the L_{dn} currently exceeds 60 dB.
- Result in indoor noise levels for residential development to exceed an L_{dn} of 45 dB.
- Expose persons to or generate excessive groundborne vibrations or groundborne noise levels.
- Expose people to noise levels in excess of established State standards.

» **Population and Housing**

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.
- Create a substantial imbalance between employed residents and jobs.
- » **Public Services and Recreation**
 - ~~Result in an adverse physical impact from the construction of additional fire, police, recreational or school facilities, such as stations, parks or schools in order to maintain acceptable performance standards.~~
 - Result in an adverse physical impact from the construction of additional school facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional fire protection facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional police protection facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional parks and recreation facilities in order to maintain acceptable performance standards.
 - Result in an adverse physical impact from the construction of additional library facilities in order to maintain acceptable performance standards.
- » **Traffic and Transportation**
 - ~~Cause queuing impacts based on a comparative analysis between the design queue length and the available queue storage capacity. Queuing impacts include, but are not limited to, spillback queues at project access locations; queues at turn lanes at intersections that block through traffic; queues at lane drops; queues at one intersection that extend back to impact other intersections, and spillback queues on ramps.~~
 - Cause an intersection to drop below its level of service standard, or if it is already operating at a substandard level of service, deteriorate by more than a specified amount.
 - Cause a roadway segment to drop below its level of service standard, or deteriorate operations that already operate at a substandard level of service.
 - Cause a freeway segment or ramp (for each direction of traffic) to operate at LOS F or contribute traffic in excess of 1% of segment capacity to a freeway segment or ramp already operating at LOS F.
 - ~~Cause any change in traffic that would increase the Traffic Infusion on Residential Environment (TIRE) index by 0.1 or more on a local or collector.~~ Create the potential demand for through traffic to use local residential streets.
 - ~~Result in inadequate on-site parking capacity.~~
 - Impede the development or function of planned pedestrian or bicycle facilities.
 - Increase demand for pedestrian and bicycle facilities that cannot be met by existing or planned facilities.
 - Impede the operation of a transit system as a result of congestion.
 - Create demand for transit services that cannot be met by current or planned services.
 - Create the potential demand for through traffic to use local residential streets.
 - Create an operational safety hazard.
 - Result in inadequate emergency access.

» **Utilities and Service Systems**

- Comply with federal, state, and local statutes and regulations related to solid waste.
- Need new or expanded entitlements for water supplies.
- Result in adverse physical impacts from new or expanded utility facilities required to provide service as a result of the project.
- Result in a substantial physical deterioration of a utility facility due to increased use as a result of the project.
- Exceed wastewater treatment requirements of the Regional Water Quality Control Board.
- Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Result in adverse physical impacts from new or expanded utility facilities required to provide service as a result of the project.
- Result in a substantial physical deterioration of a utility facility due to increased use as a result of the project.
- Require or result in the construction of new stormwater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Result in adverse physical impacts from new or expanded utility facilities required to provide service as a result of the project.
- Result in a substantial physical deterioration of a utility facility due to increased use as a result of the project.
- Be served by a landfill with insufficient permitted capacity.
- Result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities.

ENVIRONMENTAL CRITERIA USED BY THE CITY OF PALO ALTO

Aesthetics (Visual Resources)

A visual impact is considered significant if the project will:

- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Significantly alter public view sheds or view corridors or scenic resources (such as trees, outcroppings or historic buildings along a scenic roadway); or
- Require substantial terrain modifications that degrade the visual character of the site; or
- Allow for new development that would violate existing Comprehensive Plan policies regarding visual resources; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or
- Substantially shadow public open space (other than public streets and adjacent sidewalks) between 9:00 a.m. and 3:00 p.m. from September 21 to March 21

Air Quality

An air quality impact is considered significant if the project will:

- Violate an ambient air quality standard or contribute substantially to an existing or projected air quality violation as indicated by the following:
 1. Direct and/or indirect operational emissions that exceed the Bay Area Air Quality Management District (BAAQMD) criteria air pollutants of 80 pounds per day and/or 15 tons per year for nitrogen oxides (NO) reactive organic gases (ROG), and fine particulate matter of less than 10 microns in diameter (PM₁₀); or
 2. Carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of nine parts per million (ppm) averaged over eight hours or 20 ppm for one hour (as demonstrated by CALINE4 modeling, which would be performed when a) project CO emissions exceed 550 pounds per day or 100 tons per year; or b) project traffic would impact intersections or roadway links operating at level of Service (LOS) D, E or F or would cause LOS to decline to D, E or F; or c) project would increase traffic volumes on nearby roadways by 10% or more) or
- Create objectionable odors affecting a substantial number of people; or
- Expose sensitive receptors or the general public to substantial levels of toxic air contaminants (TAC) where:
 1. Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million; or
 2. Ground-level concentrations of non-carcinogenic TACs would result in a hazard index greater than one (1) for the MEI; or

- Does not implement all applicable construction emission control measures recommended in the *Bay Area Air Quality Management District CEQA Guidelines* (Table 2); or
- Conflict with or obstruct with implementation of the *2000 Clean Air Plan*, *The 2001 Ozone Attainment Plan*, or the *2005 Bay Area Ozone Strategy*.

Biological Resources

A biological resources impact is considered significant if the project will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations; or
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, including federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; or
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- Result in a substantial adverse effect to any “protected tree” as defined by the City of Palo Alto’s Tree Preservation Ordinance (Municipal Code Section 8.10) or
- Conflict with any applicable habitat conservation plan or natural community plan.

Cultural Resources

A cultural resources impact is considered significant if the project will:

- Adversely affect a historic resource listed or eligible for listing on the National and/or California Register, or listed on the City’s Historic Inventory; or
- Eliminate important examples of major periods of California history or prehistory; or
- Cause damage to an important archaeological resource as defined in §15064.5 of the CEQA Guidelines; or
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or
- Directly or indirectly destroy a local cultural resource that is recognized by City Council resolution.

Energy

Pursuant to CEQA Guidelines §15126.4(a) and Appendix F (Energy Conservation), EIRs must include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary

consumption of energy. Impacts are assessed based on an evaluation of consumption of energy by the project. Development generally results in the consumption of energy in three forms: 1) the fuel energy consumed by construction vehicles; 2) bound energy in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as milled lumber and glass; and 3) operational use of energy by future businesses for transportation, equipment operation, and cooling of buildings. Construction materials and the operational use of energy should be addressed.

Geology, Soils and Seismicity

A geologic or seismic impact is considered significant if the project will:

- Expose people or structures to substantial adverse effects including the risk of loss, injury or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure (including liquefaction), landslides, or expansive soil; or
- Expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques; or
- Be located on a geologic units or on soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; or
- Cause substantial erosion or siltation.

Hazardous Materials

Note: Some of the thresholds below can also be dealt with under a topic heading of Public Health and Safety if the primary issues are related to a subject other than hazardous material use.

A hazardous materials impact is considered significant if the project will:

- Create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials; or
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school; or
- Construct a school on a property that is subject to hazards from hazardous materials contamination, emissions or accidental release; or
- Create a significant hazard to the public or the environment from existing hazardous materials contamination by exposing future occupants or users of the site to contamination either in excess of soil and ground water cleanup goals developed for the site or from location on listed hazardous materials sites compiled pursuant to Government Code Section 65962.5; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires; or

- Result in a safety hazard from a public airport for people residing or working within the project area; or
- Impair implementation of or physically interfere with an adopted emergency response or evacuation plan.

Hydrology

A drainage and water quality impact is considered significant if the project will:

- Substantially impede or redirect flood flows through placement of structures within the 100-year flood hazard area; or
- Substantially degrade or deplete ground water resources or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level; or
- Substantially increase the rate, volume, or flow duration of storm water runoff or alter the existing drainage pattern or the site or area, including altering the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site, including increased in-stream erosion;
- Significantly increase the rate, volume, or flow duration of storm water runoff in a manner which would result in new or increased flooding on-or off-site, or exceedance of the capacity of existing or planned storm water drainage systems in local streams; or
- Provide substantial additional sources of pollutants associated with urban runoff or otherwise substantially degrade surface or ground water quality; or
- Expose people or structures to a significant risk or loss, injury or death involving flooding by placing housing or other development within a 100-year flood hazard area or a levee or dam failure inundation area; or
- Result in stream bank instability; or
- Violate any water quality standards or waste discharge requirements.

Land Use

A land use impact is considered significant if the project will:

- Adversely change the type or intensity of overall existing or planned land use patterns in the area; or
- Be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height; or
- Conflict with established residential, recreational, educational, religious, or scientific uses of an area; or
- Convert prime farmland, unique farmland, or farmland of statewide importance (farmland) to non-agricultural use; or
- Conflict with any applicable City land use plan, policy or regulation (including, but not limited to the Comprehensive Plan, coordinated area plan, or the City's

Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

- Physically divide an established community.

Noise

A noise impact is considered significant if the project will:

- Cause the average 24 hour noise level (Ldn) to increase by 5.0 decibels (dB) or more in an existing residential area, even if the Ldn would remain below 60 dB; or
- Cause the Ldn to increase by 3.0 dB or more in an existing residential area, thereby causing the Ldn in the area to exceed 60 dB; or
- Cause an increase of 3.0 dB or more in an existing residential area where the Ldn currently exceeds 60 dB; or
- Result in indoor noise levels for residential development to exceed an Ldn of 45 dB; or
- Result in instantaneous noise levels of greater than 50 dB in bedrooms or 55 dB in other rooms in areas with an exterior Ldn of 60 dB or greater; or
- Expose persons to or generate excessive groundborne vibrations or groundborne noise levels; or
- Expose people to noise levels in excess of established state standards; or
- Generate construction noise exceeding the daytime background Leq at sensitive receptors by 10 dBA or more.

Population and Housing

Population and housing impacts are considered significant if the project will:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere; or
- Create a substantial imbalance between employed residents and jobs; or
- Cumulatively exceed regional or local population projections.

Public Service

A public service impact is considered significant if the project will:

- Result in an adverse physical impact from the construction of additional fire, police, recreational or school facilities, such as stations, parks or schools in order to maintain acceptable performance standards.

Transportation

A traffic impact is considered significant if the project will:

- Cause a local (City of Palo Alto) intersection to deteriorate below Level of Service (LOS) D; or
- Cause a local intersection already operating at LOS E or F to deteriorate in the average control delay for the critical movements by four seconds or more, and the critical volume/capacity ratio (V/C) value to increase by 0.01 or more; or
- Cause a regional intersection to deteriorate from an LOS E or better to LOS F; or
- Cause a regional intersection already operating at LOS F to deteriorate in the average control delay for the critical movements to increase by four seconds or more, and the critical V/C value to increase by 0.01 or more; or
- Cause queuing impacts based on a comparative analysis between the design queue length and the available queue storage capacity. Queuing impacts include, but are not limited to, spillback queues at project access locations; queues at turn lanes at intersections that block through traffic; queues at lane drops; queues at one intersection that extend back to impact other intersections, and spillback queues on ramps; or
- Cause a freeway segment (for each direction of traffic) to operate at LOS F or contribute traffic in excess of 1% of segment capacity to a freeway segment already operating at LOS F; or
- Impede the development or function of planned pedestrian or bicycle facilities; or
- Impede the operation of a transit system as a result of congestion; or
- Create an operational safety hazard; or
- Cause any change in traffic that would increase the Traffic Infusion on Residential Environment (TIRE) index by 0.1 or more on a local or collector residential street; or
- Result in inadequate on-site parking capacity; or
- Result in inadequate emergency access.

Utilities and Service Systems

A utility impact is considered significant if the project will:

- Exceed wastewater treatment requirements of the Regional Water Quality Control Board; or
- Require or result in the construction of new storm water or wastewater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- Need new or expanded entitlements for water supplies; or
- Be served by a landfill with insufficient permitted capacity; or
- Result in adverse physical impacts from new or expanded utility facilities required to provide service as a result of the project; or

- Result in a substantial physical deterioration of a utility facility due to increased use as a result of the project.

