

**Mitigation Monitoring and Reporting Program  
NBC Universal Evolution Plan  
Project No. TR068565**

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**Introduction**

As of January 1, 1989, the California Environmental Quality Act (CEQA) requires a Mitigation Monitoring and Reporting Program (MMRP) for projects where mitigation measures are a condition of their approval and development. This MMRP has been prepared in compliance with the requirements of CEQA, Public Resources Code Section 21081.6 and Section 15097 of the CEQA Guidelines. The MMRP describes the procedures the Project Applicant or its successor will use to implement the Mitigation Measures adopted in connection with the approval of the Project and the methods of monitoring and reporting on such actions. Monitoring refers to the observation of mitigation activities at the Project Site, in the design of plans or in the operation of designated agencies. The County of Los Angeles is a Responsible Agency for implementation of the NBC Universal Evolution Plan Project. A MMRP is necessary only for impacts which would be significant if not mitigated.

An Environmental Impact Report (EIR) was prepared to address the potential environmental impacts of the NBC Universal Evolution Plan Project (Project). Where appropriate, the EIR includes recommended mitigation measures to avoid or substantially lessen the significant environmental impacts associated with the Project. The City of Los Angeles and the County entered into a Memorandum of Understanding concerning cooperative efforts to process the Project’s environmental documents and entitlements. The City of Los Angeles Department of City Planning served as the lead agency for the EIR, however, the City and County were each involved in the preparation and evaluation of the EIR as set forth in the Memorandum of Understanding. The Project as approved by the City of Los Angeles is “Alternative 10: No Residential Alternative,” which the EIR identified as the environmentally superior alternative to the originally proposed project. This MMRP is designed to monitor implementation of these measures that would reduce the Project impacts that are expressly identified as “Mitigation Measures.” In addition to Mitigation Measures, which would lessen an otherwise significant Project impact, the Environmental Impact Report includes Project Design Features, which are measures proposed by the Applicant as a feature of the Project, and were taken into consideration in the evaluation of the Project’s impacts. As a result, this MMRP lists CEQA Mitigation Measures and Project Design Features together.

Not all Project Design Features and Mitigation Measures will be applicable to all development areas within the Project Site. This MMRP references the Business, Entertainment, Studio, and Back Lot Areas including the streets and roadways in the vicinity as illustrated on Attachment A to this MMRP.

The Project Applicant shall be obligated to provide documentation concerning implementation of the listed Project Design Features and Mitigation Measures to the appropriate Monitoring Agency as listed in the table below. Unless otherwise specified in Project Design Features or Mitigation Measures, the County of Los Angeles shall have sole authority with regard to projects built pursuant to the County Specific Plan and the City of Los Angeles shall have sole authority with regard to projects built within the City’s jurisdiction. Project Design Features and Mitigation Measures applicable only to County of Los Angeles Projects are noted (Co), those Project Design Features and Mitigation Measures applicable only to City of Los Angeles

Projects are noted (Ci), and Project Design Features and Mitigation Measures applicable to both City and County Projects are noted (Ci/Co). For those Project Design Features and Mitigation Measures applicable only to the City of Los Angeles Projects noted (Ci), only the alpha-numeric designation is provided to identify those Project Design Features and Mitigation Measures as the responsibility of the City of Los Angeles to enforce. Please refer to the City MMRP for those Project Design Features and Mitigation Measures applicable to projects developed within the City of Los Angeles.

### **Enforcement**

The MMRP for the Project will be in place throughout all phases of development of the Project. The entity responsible for implementing each Project Design Feature or Mitigation Measure is set forth within the text of the Project Design Feature or Mitigation Measure itself. The entity responsible for implementing the Project Design Feature or Mitigation Measure shall also be obligated to provide certification, as identified below, to the appropriate Monitoring Agency that compliance with the required Project Design Feature or Mitigation Measure has been implemented.

### **Program Modification**

The City of Los Angeles as the Lead Agency approved and adopted the final Project MMRP for the Evolution Plan Project on November 14, 2012. Minor changes and modifications to the MMRP are permitted, but can only be made by the Project Applicant or its successor subject to the approval by the Lead Agency for Project Design Features and Mitigation Measures applicable to the Lead Agency. In conjunction with any appropriate agencies or departments, the Lead Agency will determine the adequacy of any proposed change or modification. The County of Los Angeles and other responsible agencies have the authority and requirement under CEQA to approve their own MMRPs for the Project, provided that Mitigation Measures therein address only the direct or indirect environmental effects of those parts of the Project, which the responsible agency decides to carry out, finance, or approve. (Pub. Resources Code § 21081.6(a); CEQA Guidelines §§ 15096(g)(1), 15097(d).) Minor changes and modifications to any MMRP approved by a responsible agency can only be made by the Project Applicant or its successor subject to the approval by that responsible agency. Any revisions to a Mitigation Measure in the final MMRP or any MMRP adopted thereafter by a responsible agency must achieve the same level or more of mitigation as the original mitigation measure and not result in new or more severe environmental impacts.

### **MMRP Attachments**

- Attachment A** Project Development Areas
- Attachment B** Los Angeles Department of Transportation Assessment Letter
- Attachment C** Vibration Mitigation Area in southern portion of the Back Lot
- Attachment D** Maximum Allowable Heights
- Attachment E** Report of Geotechnical Investigation NBC Universal Evolution Plan (March 2010)
- Attachment F** Drainage Areas
- Attachment G** Universal Studios Potential Historic District Preservation Plan
- Attachment H** Areas designated as high, moderate or low sensitivity for the presence of buried prehistoric archaeological sites (*DEIR Fig. 202*)
- Attachment I** Areas designated as high sensitivity for the presence of buried historical period archaeological sites (*DEIR Fig. 203*)

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>A.1 LAND USE – Land Use Plans/Zoning</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>A.2 LAND USE – Physical Land Use</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>B.1 TRAFFIC / ACCESS – Traffic/Circulation</b>					
<p>The Traffic Access / Traffic Circulation Project Design Features and Mitigation Measures set forth in the Environmental Impact Report and this MMRP include several off-site improvements and fair-share funding obligations. These traffic-related Project Design Features and Mitigation Measures are all part of the Transportation Improvement Program for the Project. The Transportation Improvement Program shall be implemented according to the final adopted phasing program presented in Attachment B to this MMRP, as may be modified and approved by the City of Los Angeles Department of Transportation in accordance with these provisions. The Transportation Improvement Program phasing program may be revised, where appropriate and as determined, by the City of Los Angeles Department of Transportation: (1) upon demonstration that Mitigation Measures for each phase in the revised phasing plan are equivalent or superior to the original Project Design Feature and/or Mitigation Measures, and/or (2) upon demonstration that approval or implementation of Project Design Features or Mitigation Measures have been delayed by other governmental entities, provided that the Project Applicant or its successor has demonstrated reasonable efforts and due diligence to the satisfaction of the City of Los Angeles Department of Transportation.</p>					
<b>Project Design Features</b>					
<b>PDF B-1 (Ci/Co):</b> The Project Applicant or its successor shall prepare and implement a Transportation Demand Management program to reduce traffic impacts of the Project encouraging Project employees and patrons to reduce vehicular	a. Provide documentation satisfactory to the Director that a Preliminary TDM plan	Preliminary TDM plan prior to the issuance of the first Substantial Conformance	Applicant	Director of Regional Planning in consultation with the Department of Public Works, Traffic and	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>traffic on the street and freeway system during the most congested time periods of the day. The Transportation Demand Management program shall include implementation of several Transportation Demand Management strategies, which may include, but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• Flexible work schedules and telecommuting programs;</li> <li>• Alternative work schedules;</li> <li>• Bicycle and pedestrian-friendly environment (i.e., established and clear pedestrian networks, intersections, and built environments);</li> <li>• Bicycle amenities;</li> <li>• Rideshare/carpool/vanpool promotion and support;</li> <li>• Mixed-use development;</li> <li>• Education and information on alternative transportation modes;</li> <li>• Transportation Information Center;</li> <li>• Guaranteed Ride Home Program;</li> <li>• Join an existing or form a new Transportation Management Association;</li> <li>• On-site flex cars;</li> <li>• Discounted employee and tenant transit passes; and</li> <li>• Financial mechanisms and/or programs to provide for the implementation of the Transportation Demand Management program.</li> </ul> <p>The Transportation Demand Management program shall be subject to the approval of the applicable jurisdiction. In the City, it shall be subject to the approval of the Los Angeles Department of Transportation. In the County, it shall be subject to the approval of the Director of Regional Planning.</p>	<p>has been prepared to the satisfaction of the City of Los Angeles Department of Transportation.</p>	<p>Review for the first Project developed under this Specific Plan.</p>		<p>Lighting Division. <i>(See City MMRP for projects in the City.)</i></p>	
	<p>b. Provide documentation satisfactory to the Director that a Final TDM plan has been prepared to the satisfaction of the City of Los Angeles Department of Transportation.</p>	<p>Final TDM plan prior to the issuance of the permanent certificate of occupancy for the first Project developed under this Specific Plan.</p>		<p>Director of Regional Planning in consultation with County Department of Public Works, Traffic and Lighting Division. <i>(See City MMRP for projects in the City.)</i></p>	
<p><b>PDF B-2:</b> Deleted due to selection of Alternative 10.</p>	<p>None</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p><b>PDF B-3 (Ci/Co):</b> Buddy Holly Drive between Barham Boulevard and the US 101 northbound off-ramp shall be widened from its current configuration of two westbound lanes to three westbound lanes. The roadway shall continue to accommodate only westbound traffic on this section.</p>	<p>Funding or guarantee provided in accordance with the phasing program of the Transportation Improvement Program, or acceptance of completed roadway improvements by County for improvements in County (See Attachment B).</p>	<p>At the implementation of the applicable phase described in the phasing program of the Transportation Improvement Program (See Attachment B).</p>	<p>Applicant</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>PDF B-4 (Ci/Co):</b> Buddy Holly Drive between the US 101 northbound off-ramp to Donald O'Connor Drive shall be widened to accommodate between four and five lanes. At the approach to Donald O'Connor Drive, a dedicated right-turn lane shall be provided, and a dedicated left-turn lane onto the northbound US-101 Freeway shall be provided.</p>	<p>Funding or guarantee provided in accordance with the phasing program of the Transportation Improvement Program, or acceptance of completed roadway improvements by County for improvements in County (See Attachment B).</p>	<p>At the implementation of the applicable phase described in the phasing program of the Transportation Improvement Program (See Attachment B).</p>	<p>Applicant</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>PDF B-5 (Ci/Co):</b> The final segment of Buddy Holly Drive between Donald O'Connor Drive and Universal Studios Boulevard/Universal Center Drive may be widened to accommodate four westbound travel lanes and two eastbound travel lanes. If this segment of Buddy Holly Drive is widened, the US 101 northbound on-ramp at Universal Studios Boulevard/Buddy Holly Drive shall be relocated maintaining the existing 12-foot travel lane, an 8-foot left shoulder, and a 6-foot right shoulder. Entrance to the on-ramp shall be reconfigured from the</p>	<p>Funding or guarantee provided in accordance with the phasing program of the Transportation Improvement Program, or acceptance of completed roadway improvements by County for</p>	<p>At the implementation of the applicable phase described in the phasing program of the Transportation Improvement Program (See Attachment B).</p>	<p>Applicant</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

<b>Project Design Feature / Mitigation Measure</b>	<b>Action Required</b>	<b>Mitigation Timing</b>	<b>Responsible Party</b>	<b>Monitoring Agency or Party</b>	<b>Date Completed</b>
existing northbound right-turn lane off of Universal Studios Boulevard to a right-turn off the new westbound lanes on Buddy Holly Drive between Donald O'Connor Drive and Universal Studios Boulevard/Universal Center Drive. If operated under two-way flow, the westbound approach on Buddy Holly Drive would include two left-turn lanes, one through lane, and two free-flow right-turn lanes. Also, Universal Studios Boulevard would be restriped to provide a northbound right-turn lane, and the eastbound approach would be restriped to provide one left-turn lane and one shared through/right-turn lane. The entire improvement described above would not be needed if Buddy Holly remains a one-way eastbound street.	improvements in County (See Attachment B).				
<b>PDF B-6 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles	___/___/___
<b>PDF B-7 (Ci/Co):</b> The new development calls for the realignment and widening of Universal Hollywood Drive, which extends between the Universal Tram stop east of Lankershim Boulevard and Universal Studios Boulevard, providing access to parking structures within Universal Studios Hollywood and the entrance to CityWalk near Universal CityWalk, to improve overall circulation both on-site and off-site.	Funding or guarantee provided in accordance with the phasing program of the Transportation Improvement Program, or acceptance of completed roadway improvements by County for improvements in County (See Attachment B).	At the implementation of the applicable phase described in the phasing program of the Transportation Improvement Program (See Attachment B).	Applicant	Department of Public Works. (See City MMRP for projects in the City.)	___/___/___
<b>PDFs B-8, B-9, B-10, B-11 and B-12 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles.	___/___/___
<b>PDF B-13:</b> Deleted due to selection of Alternative 10.	N/A	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<b>MMs B-1 and B-2 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles.	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>MMs B-3 and B-4 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles; CALTRANS.	___/___/___
<b>MM B-5 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles.	___/___/___
<p><b>MM B-6 (Ci/Co):</b> The Project Applicant or its successor shall implement the following Lankershim Boulevard Corridor improvements:</p> <ul style="list-style-type: none"> <li>a. Deleted due to selection of Alternative 10;</li> <li>b. Deleted due to selection of Alternative 10;</li> <li>c. Restripe James Stewart Avenue at its intersection with Lankershim Boulevard to provide one left-turn, one shared through/left-turn, and dual right-turn lanes in the westbound direction (Co);</li> <li>d. (Ci) For more information see Attachment B to this MMRP;</li> <li>e. Widen Main Street at its intersection with Lankershim Boulevard to improve ingress/egress to/from the Project Site (Co);</li> <li>f. Deleted due to selection of Alternative 10;</li> <li>g. (Ci) For more information see Attachment B to this MMRP;</li> <li>h. (Ci) For more information see Attachment B to this MMRP;</li> <li>i. (Ci) For more information see Attachment B to this MMRP;</li> <li>j. Widen Universal Hollywood Drive at its intersection with Lankershim Boulevard to provide a separate westbound left-turn lane and additional signal equipment for protected left-turn phasing on the east-west approach (Ci/Co);</li> <li>k. (Ci) For more information see Attachment B to this MMRP;</li> <li>l. (Ci) For more information see Attachment B to this MMRP; and</li> <li>m. Deleted due to selection of Alternative 10.</li> </ul>	Funding or guarantee provided in accordance with the phasing program of the Transportation Improvement Program, or acceptance of completed roadway improvements by County for improvements in County (See Attachment B).	At the implementation of the applicable phase described in the phasing program of the Transportation Improvement Program (See Attachment B).	Applicant	Department of Public Works. (See City MMRP for projects in the City.)	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>MMs B-7, B-8, B-9 and B-10 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles.	___/___/___
<b>MM B-11:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MMs B-12 and B-13 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles.	___/___/___
<b>MM B-14:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MMs B-15 and B-16(Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles.	___/___/___
<b>MM B-17:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MMs B-18, B-19 and B-20 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles.	___/___/___
<b>MM B-21:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MMs B-22 and B-23 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles; CALTRANS.	___/___/___
<b>MMs B-24 and B-25:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MM B-26 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles; CALTRANS.	___/___/___
<b>MMs B-27, B-28 and B-29 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles; City of Burbank.	___/___/___
<b>MM B-30 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles; City of Burbank; CALTRANS.	___/___/___
<b>MM B-31 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles; City of Burbank.	___/___/___
<b>MM B-32:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MMs B-33, B-34, B-35, B-36, B-37, B-38, B-39, B-40 and B-41 (Ci):</b> For more information see Attachment B to this MMRP.	See Attachment B.	See Attachment B.	Applicant	City of Los Angeles; City of Burbank.	___/___/___
<b>MM B-42:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MM B-43 (Ci/Co):</b> All construction workers shall be prohibited from parking on neighborhood streets offsite. To the extent that parking would not be	Include prohibiting construction worker parking on	On-going during construction.	Applicant / Contractor	Department of Public Works.	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>available on-site, parking shall be provided by the Project Applicant or its successor at offsite locations. A construction worker shuttle service shall be provided if an offsite parking lot is not within reasonable walking distance of the Project Site.</p>	<p>neighborhood streets off-site in construction traffic management plan.</p>			<p><i>(See City MMRP for projects in the City.)</i></p>	
<p><b>MM B-44 (Ci/Co):</b> The Project Applicant or its successor shall prepare construction traffic management plans, including but not limited to street closure information, detour plans, haul routes, and staging plans, satisfactory to the affected jurisdictions. The construction traffic management plans shall be based on the nature and timing of the specific construction and other projects in the vicinity of the Project Site, and shall include the following elements as appropriate:</p> <ol style="list-style-type: none"> <li>1. Provisions to configure construction parking to minimize traffic interference;</li> <li>2. Provisions for temporary traffic control during all phases of construction activities to improve traffic flow on public roadways (e.g., flag person);</li> <li>3. Scheduling construction activities to reduce the effect on traffic flow on public roadways;</li> <li>4. Rerouting construction trucks to reduce travel on congested streets;</li> <li>5. Consolidating construction truck deliveries;</li> <li>6. Provision of dedicated turn lanes for movement of construction trucks and equipment on- and off-site;</li> <li>7. Construction-related vehicles shall not park on any residential street;</li> <li>8. Provision of safety precautions for pedestrians and bicyclists through such measures as alternate routing, and protection barriers;</li> <li>9. All contractors shall be required to participate in a common carpool registry during all periods of contract performance monitored and maintained by the contractor;</li> <li>10. Schedule construction-related deliveries, other</li> </ol>	<p>Prepare construction traffic management plan with required plan provisions as set forth in mitigation measure.</p>	<p>Prior to issuance of building permit.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>than concrete and earthwork-related deliveries to reduce travel during peak travel periods;</p> <p>11. Construction vehicle travel through neighboring jurisdictions other than the City of Los Angeles shall be conducted in accordance with the standard rules and regulations established by the respective jurisdictions where such jurisdictions would be subject to construction impacts. These include allowable operating times for construction activities, truck haul routes, clearance requirements, etc.;</p> <p>12. Prior to the issuance of any permit for the Project, required permits for the truck haul routes, if applicable, shall be obtained from the City of Los Angeles;</p> <p>13. Obtain a Caltrans transportation permit for use of oversized transport vehicles on Caltrans facilities; and</p> <p>14. Submit a traffic management plan to Caltrans for approval to avoid potential access restrictions to and from Caltrans facilities.</p> <p>15. In order to facilitate coordination with funeral processions, the Applicant shall provide the Forest Lawn Memorial-Park Association 72-hour notice of major improvements to Forest Lawn Drive.</p> <p>16. During construction, lane closures on Forest Lawn Drive shall be limited in terms of scope and duration to the extent feasible. A minimum of one lane of through traffic shall be maintained on Forest Lawn Drive in each direction at all times.</p>					
<p><b>MM B-45 (Ci):</b> For more information see Attachment B to this MMRP.</p>	<p>See Attachment B.</p>	<p>See Attachment B.</p>	<p>Applicant</p>	<p>City of Los Angeles.</p>	<p>___/___/___</p>
<p><b>MMs B-46 and B-47 (Ci):</b> For more information see Attachment B to this MMRP.</p>	<p>See Attachment B.</p>	<p>See Attachment B.</p>	<p>Applicant</p>	<p>City of Los Angeles; CALTRANS.</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>B.2 TRAFFIC / ACCESS – Parking</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>C. NOISE</b>					
<b>Project Design Features</b>					
<b>PDF C-1 (Ci/Co):</b> The Project shall not utilize pile driving machinery as part of its construction equipment mix.	Include in Construction Management Plan.	Prior to issuance of building permit.	Applicant / Contractor	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDFs C-2 and C-3 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>Mitigation Measures</b>					
<b>MM C-1 (Ci/Co):</b> When Project construction staging occurs within 500 feet of an occupied residential structure that is located outside of the combined boundaries of the Universal Studios Specific Plan and the City jurisdiction, or along the frontage of Forest Lawn Memorial Park, Hollywood Hills, the contractor shall: Locate stationary construction equipment away from the occupied residential structure or install temporary acoustic barriers around stationary construction noise sources; and Shut off construction equipment that is not in use.	Include in Construction Management Plan.	Prior to issuance of building permit.	Applicant / Contractor	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM C-2 (Ci/Co):</b> Project construction or grading activity shall be permitted during the following times: <ul style="list-style-type: none"> <li>Monday through Friday (non-legal Holidays) between 7:00 A.M. and 7:00 P.M.;</li> <li>Saturdays between 8:00 A.M. and 6:00 P.M.,</li> </ul>	Include in Construction Management Plan.	Prior to issuance of building permit.	Applicant / Contractor	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>except that no hauling shall occur along Forest Lawn Drive during this time.</p> <p><u>Exceptions</u></p> <p>Notwithstanding the above permitted times, the following construction activities may occur between 7:00 P.M. and 7:00 A.M. Monday through Friday (non-legal holidays), between 6:00 P.M. and 8:00 A.M. on Saturdays, and on Sundays and legal Holidays:</p> <ul style="list-style-type: none"> <li>• Construction activities conducted within an enclosed structure that either: (1) do not result in an audible sound outside of the combined boundaries of the proposed Universal Studios Specific Plan and the City jurisdiction; or (2) are located more than 400 feet from an occupied residential structure that is located outside of the combined boundaries of the proposed Universal Studios Specific Plan and the City jurisdiction.</li> <li>• Those construction activities which must occur during otherwise prohibited hours due to restrictions imposed by a public agency.</li> <li>• Roofing activities in the Studio, Entertainment, and Business Areas which cannot be conducted during daytime hours due to weather conditions, provided at least 72 hour advance written notice is submitted to the County Department of Public Works or City Building and Safety Department, as appropriate to jurisdiction.</li> <li>• Emergency repairs, such as repairs to damaged utility infrastructure.</li> <li>• Project construction activities which cannot be interrupted (e.g., continuous concrete pours and other activities which affect health and safety as approved by the County Department of Public Works or City Building and Safety Department, as appropriate to jurisdiction).</li> </ul>					
<p><b>MM C-3 (Ci):</b> <i>Not applicable to development in the County.</i></p>	<p><i>None by County.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>City of Los Angeles.</i></p>	<p><i>Not applicable to County.</i></p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>MM C-4:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<p><b>MM C-5 (Ci/Co):</b> In the event that there are concurrent cumulative hauling activities from the Project and related projects along or adjacent to Forest Lawn Drive that result in 78 haul trips per hour, the Applicant or its successor shall monitor whether such hauling results in increases of noise greater than 5 decibels above ambient within the Rancho Neighborhood in the City of Burbank. If noise increases generated by the concurrent hauling from the Project and related projects along Forest Lawn Drive exceed 5 decibels above ambient, the Applicant or its successor shall install or contribute to the installation of a sound wall consistent with the following:</p> <ul style="list-style-type: none"> <li>• The installation of a noise barrier shall occur along the north end of Forest Lawn Drive. The barrier shall extend approximately 0.4 mile along Forest Lawn Drive across from the Rancho Neighborhood. The barrier may consist of plywood panels (fifteen feet in height) and each panel shall overlap each end by 4 inches.</li> <li>• The Applicant or its successor shall post notices on the temporary noise barrier adjacent to the north side of Forest Lawn Drive that no unauthorized materials (such as graffiti or posters) may be posted on the temporary barrier and shall visually inspect and remove graffiti and/or unauthorized posters from the temporary barrier within 24 hours, as necessary.</li> </ul>	Include in Construction Management Plan for Projects that would require hauling on Forest Lawn Drive in excess of 78 haul trips per hour.	Prior to issuance of grading or building permit, if applicable.	Applicant	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	__/__/__
<p><b>MM C-6 (Ci/Co):</b> During Project construction, the Applicant or its successor shall:</p> <ul style="list-style-type: none"> <li>• Prior to initiation of Project hauling along Forest Lawn Drive, the Applicant shall coordinate with the Los Angeles Department of Transportation to determine the number of haul truck trips scheduled to occur along Forest Lawn Drive at that time in connection with the Forest Lawn</li> </ul>	Include in Construction Management Plan for Projects that would require hauling on Forest Lawn Drive.	Prior to issuance of grading or building permit, if applicable.	Applicant	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	__/__/__

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
Memorial-Park Master Plan and the Oakwood Garden Apartments expansion. <ul style="list-style-type: none"> <li>The Applicant shall limit the Project's haul truck trips such that cumulative haul truck trips on Forest Lawn Drive from the Project, Forest Lawn Memorial-Park Master Plan, and the Oakwood Garden Apartments expansion does not exceed 140 haul truck trips per hour.</li> <li>At such time as the haul truck trips from the Forest Lawn Memorial-Park Master Plan and the Oakwood Garden Apartments expansion are reduced from the level established at the time Project hauling is initiated, the Los Angeles Department of Transportation may allow the Applicant to increase the Project's haul truck trips up to a cumulative total of 140 haul trips per hour.</li> </ul>					
<b>MM C-7 (Ci/Co):</b> Prior to the issuance of a City of Los Angeles haul route permit for hauling on Forest Lawn Drive, the Applicant shall have provided notice to Forest Lawn Memorial-Park Association 10 days in advance of any hearing on a haul route permit for Project hauling on Forest Lawn Drive.	Provide notice to Forest Lawn Memorial-Park Association.	10-days prior to hearing for City of Los Angeles haul route permit.	Applicant	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>D. VISUAL QUALITIES – Aesthetics</b>					
<b>Project Design Features</b>					
<b>PDFs D-1, D-2, D-3 and D-4 (Ci):</b> <i>Not applicable to development in the County.</i>	None by County.	See City MMRP.	See City MMRP.	City of Los Angeles.	Not applicable to County.
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>E.1 LIGHT AND GLARE – Natural Light</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental</i>	None	N/A	N/A	N/A	N/A

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<i>issue.</i>					
<b>Mitigation Measures</b>					
<b>MM E.1-1 (Ci/Co):</b> Prior to issuance of a building permit for structures proposed to be built within 560-foot of Lankershim Boulevard and 440-foot of Universal Hollywood Drive within the 850-foot or 890-foot MSL Height Zones, the Project Applicant or its successor shall submit a site specific shadow study that illustrates that the proposed structure would not cause the Campo de Cahuenga historic site to be shaded for more than 3.0 continuous hours between 9:00 A.M. and 3:00 P.M. PST during the Spring Equinox or add shading to an area of the Campo de Cahuenga historic site already shaded continuously for 3.0 hours during the Winter Solstice.	Provide shadow study for applicable structure(s).	Prior to issuance of building permit for applicable structure(s).	Applicant / Project Architect	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM E.1-2 (Co):</b> Structures proposed to be built within the 850-foot MSL Height Zone shall conform with the Project's height limitations and setback requirements as shown on Attachment D to this MMRP.	Provide drawings showing building heights and setbacks for applicable structure(s).	Prior to issuance of building permit for applicable structure(s).	Applicant / Project Architect	Department of Regional Planning.	___/___/___
<b>MMs E.1-3 and E.1-4:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>E.2 LIGHT AND GLARE – Artificial Light</b>					
<b>Project Design Features</b>					
<b>PDF E-2-1 (Ci):</b> Not applicable to development in the County.	None by County.	See City MMRP.	See City MMRP.	City of Los Angeles.	Not applicable to County.
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>E.3 LIGHT AND GLARE - Glare</b>					
<b>Project Design Features</b>					
<b>PDF E-3-1 (Ci):</b> Not applicable to development in the County.	None by County.	See City MMRP.	See City MMRP.	City of Los Angeles.	Not applicable to County.

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>F. GEOTECHNICAL</b>					
<b>Project Design Features</b>					
<b>PDF F-1 (Ci/Co):</b> All Project construction would conform to the requirements of the applicable building code, including all provisions related to seismic safety.	Provide drawings with Project pursuant to the applicable building code.	Prior to issuance of building permit.	Applicant / Project Engineer / Project Architect	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF F-2 (Ci/Co):</b> As part of Project grading, erosion and sedimentation control measures would be implemented during site grading to reduce erosion impacts. The Project Applicant or its successor would also comply with all construction site runoff control and implement construction "Best Management Practices" under applicable state and local requirements, as discussed further in Section IV.G.1.b, Water Resources – Surface Water Quality of the Draft EIR.	Provide Construction Management Plan including applicable Best Management Practices.	Prior to issuance of grading permits.	Applicant / Contractor	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF F-3 (Ci/Co):</b> Dewatering activities would be conducted in accordance with the applicable permit requirements, as discussed further in Section IV.G.1.b, Water Resources – Surface Water Quality of the Draft EIR.	Obtain permit for discharge of construction dewatering.	Prior to issuance of grading and/or building permits, if required.	Applicant / Project Engineer	Department of Public Works. If NPDES permit also required, Regional Water Quality Control Board. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF F-4 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>Mitigation Measures</b>					
<b>MM F-1 (Ci/Co):</b> Prior to issuance of the building permit for a building or structure, a site-specific geotechnical report shall be prepared for each Project (not including sets/façades or temporary uses), pursuant to the City's Department of Building and Safety regulations, and as the term is defined in	a. Preparation of site-specific geotechnical report.	Prior to issuance of building permit.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
	b. Incorporate	Prior to issuance of	Applicant /	Department of Public	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>the County Specific Plan, in accordance with the City or County of Los Angeles requirements to the satisfaction of the applicable jurisdiction. The recommendations contained within these site-specific geotechnical reports, including those pertaining to site preparation, fill placement, and compaction; foundations; pavement design; footings; and pile foundations shall be implemented. The site-specific geotechnical reports shall include all applicable recommendations included in the <i>Report of Geotechnical Investigation NBC Universal Evolution Plan</i> (March 2010) prepared by Shannon &amp; Wilson, Inc. included as Attachment E to this MMRP. The site specific study shall determine which mitigation measures listed in Mitigation Measures F-3 to F-19 below are applicable for implementation of the Project, required by the City's Department of Building and Safety, and as that term is defined in the County Specific Plan, the study is considering.</p>	<p>applicable site-specific geotechnical recommendations in building design as shown on Project drawings.</p>	<p>building permit.</p>	<p>Project Engineer</p>	<p>Works. <i>(See City MMRP for projects in the City.)</i></p>	
<p><b>MM F-2 (Ci/Co):</b> During construction, geotechnical observation and testing shall be completed during the placement of new compacted fills, foundation construction, buttresses, stabilization fills, ground improvement, and any other geotechnical-related construction for each Project, pursuant to the City's Department of Building and Safety regulations, and as that term is defined in the County Specific Plan, in accordance with the City or County of Los Angeles requirements to the satisfaction of the applicable jurisdiction. The geotechnical firm performing these services for locations within the City of Los Angeles shall be approved by the City of Los Angeles when work is occurring within its jurisdiction.</p>	<p>Undertake on-site geotechnical observation and testing as required by mitigation measure.</p>	<p>As necessary and appropriate during construction.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>MM F-3 (Ci/Co):</b> For slope stability hazards identified in Attachment E to this MMRP, such locations shall be mitigated by either reorienting the cut slopes, reducing the slope angle to the angle of the bedding or flatter, or by construction of buttress and stabilization fills. Site-specific geotechnical</p>	<p>If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate site-specific</p>	<p>Prior to issuance of building permit.</p>	<p>Applicant / Project Engineer</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
investigations shall be performed to the satisfaction of the applicable jurisdiction for the design of all cut and fill slopes in accordance with the City or County of Los Angeles requirements, as applicable.	geotechnical recommendations in design as shown on Project drawings.				
<b>MM F-4 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>MM F-5 (Ci/Co):</b> Grading within the hillside areas shall address slope stability. Where favorable bedding exists, the slopes shall be constructed no steeper than a 2:1 (horizontal to vertical) inclination. If the bedding dips unfavorably out of the slopes, the slopes shall either be flattened to the angle of the bedding (or flatter), or the slopes shall be stabilized. The degree of stabilization would depend on the orientation of the bedding with respect to the final slope and the depth of the excavation. Where the bedding dips out of the slopes, buttress fills shall be provided. If the bedding is approximately parallel to the slopes, thinner stabilization fills will suffice. The design of the buttress or stabilization fills and specific design criteria for each slope shall be included to the satisfaction to the applicable jurisdiction in the site-specific geotechnical report prepared prior to construction of each Project, pursuant to the City's Department of Building and Safety regulations, and as that term is defined in the County Specific Plan, in accordance with the City or County of Los Angeles requirements, as applicable.	If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate site-specific geotechnical recommendations in design as shown on Project drawings.	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	__/__/__
<b>MM F-6 (Ci/Co):</b> Site-specific liquefaction hazard studies shall be required to the satisfaction to the applicable jurisdiction for each Project (not including sets/façades or temporary uses), pursuant to the City's Building and Safety regulations, and as the term is defined in the County Specific Plan, within a liquefaction hazard area identified in Attachment E to this MMRP in accordance with the City or County of Los Angeles requirements, as applicable. For areas with a high liquefaction potential, identified in	a. If determined applicable by the site-specific study prepared pursuant to MM F-1, prepare site-specific liquefaction hazard study within a liquefaction hazard area as identified in the mitigation	Prior to issuance of building permit.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	__/__/__

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>Attachment E to this MMRP, where there is potential for more than four inches of settlement resulting from liquefaction, and areas of moderate liquefaction potential, where there is a potential for between one and four inches of settlement resulting from liquefaction, the liquefaction hazard shall be mitigated to the satisfaction to the applicable jurisdiction in accordance with the applicable City or County of Los Angeles requirements. Mitigation for high liquefaction potential could include ground improvement or deep foundations extending through the potentially liquefiable soils and structurally-supported floor slabs. Mitigation for moderate liquefaction potential could include ground improvement, deep foundations, or special foundation design procedures, such as extra reinforcement and strengthening of building foundations and floor slab systems.</p>	<p>measure.</p> <p>b. Incorporate site-specific liquefaction hazard study recommendations, if applicable, in building design as shown on Project drawings.</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Project Engineer</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>MM F-7 (Co):</b> Deep foundations shall be provided for any structures located over waste in the closed landfill in accordance with the requirements of the County of Los Angeles. These foundations shall extend through the closed landfill and into the underlying bedrock. Downdrag loads resulting from decomposition and settlement of the closed landfill shall be added to the design loads on the piles.</p>	<p>If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate required foundation design on Project drawings for applicable structures.</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Project Engineer</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>MM F-8 (Ci/Co):</b> Any required fill shall be placed in loose lifts not more than 8 inches thick and compacted to the standard as determined by the American Society for Testing and Materials (ASTM) Designation D1557 method of compaction. The fill shall be compacted in accordance with the applicable City or County of Los Angeles requirements to the satisfaction of the applicable jurisdiction. Cohesive fills shall be compacted to 90%. Granular, non-cohesive soil shall be compacted to at least 95%. Where deep fills are required a greater degree of compaction may be</p>	<p>If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate required fill and soil specifications on Project drawings.</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Project Engineer</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
required to reduce the settlement of the completed fills.					
<b>MM F-9 (Ci/Co):</b> The on-site excavated materials, less any debris or organic matter, may be used in required fills in accordance with the City or County of Los Angeles requirements, as applicable. On-site clayey soils shall not be used within one foot of the subgrade for floor slabs, walks, and other slabs. Cobbles larger than 4 inches in diameter shall not be used in fill. Any required import material shall consist of relatively non-expansive soils with an Expansion Index of less than 35. The imported materials shall contain sufficient fines (binder material) so as to be relatively impermeable and result in a stable subgrade when compacted. All proposed import materials shall be approved by the geotechnical consultant-of-record prior to being placed at the site.	If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate required fill and soils specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM F-10:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MM F-11 (Ci/Co):</b> All concrete slabs on grade shall be underlain by at least one foot of non-expansive soil with an Expansion Index less than 35 to minimize the expansion potential. In addition, subsurface cutoff walls shall be provided between landscaped and hardscape areas. The cutoff walls shall consist of a concrete-filled trench at least six inches wide and two feet deep. The cutoff walls shall extend at least six inches below any adjacent granular non-expansive material or the paving base course. Drain lines shall also be installed adjacent to landscaped areas.	If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate required design specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM F-12 (Ci/Co):</b> The geotechnical engineer-of-record shall be provided with a copy of the hardscape and landscaping plans in order to review in terms of movement of water and expansive soils prior to final design.	Provide hardscape and landscape plans to project engineer for review.	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>MM F-13 (Ci/Co):</b> During construction non-engineered fills shall be excavated, and replaced as compacted fill properly benched into suitable materials, to the satisfaction to the applicable jurisdiction, in accordance with the City or County of Los Angeles requirements, as applicable. In general, most of the excavated materials can be reused in the compacted fills. The suitability of the materials shall be confirmed during the site-specific geotechnical report prepared for the individual development.	If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate required design specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM F-14 (Ci/Co):</b> For new buildings, surface water runoff shall be removed by subdrains from behind building basement walls and retaining walls to prevent development of damaging hydrostatic pressures and to avoid detrimental effects on the strength and compressibility of compacted fills, to the satisfaction to the applicable jurisdiction, in accordance with the City or County of Los Angeles requirements, as applicable.	If determined applicable by the site-specific study prepared pursuant to MM F-1, incorporate required design specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MMs F-15, F-16, F-17, F-18 and F-19:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>G.1.A WATER RESOURCES – Surface Water-Drainage</b>					
<b>Project Design Features</b>					
<b>PDF G.1.a-1 (Ci/Co):</b> The Project Applicant or its successor shall construct new storm drains as needed that shall be designed and sized using the Los Angeles County Hydrology Manual method for a minimum 50-year frequency storm event capacity.	If new storm drains needed, provide required storm drain specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF G.1.a-2:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<b>MM G.1.a-1 (Ci/Co):</b> The Project Applicant or its successor shall prepare detailed drainage plans for each Project, pursuant to City of Los Angeles Department of Public Works and Bureau of Engineering requirements, and as that term is	Provide detailed drainage plans, as applicable, with required specifications on Project drawings.	Prior to issuance of grading or building permits, as applicable.	Applicant / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>defined in the County Specific Plan, for review and approval by the appropriate responsible agency (i.e., Los Angeles County Department of Public Works or the City of Los Angeles Department of Public Works) at the time that grading or building permit applications are submitted. These drainage plans shall include detailed hydrologic/hydraulic calculations, as necessary, and drainage improvement plans, and show quantitatively how projected stormwater runoff in each drainage area of the Project Site would be conveyed to off-site stormwater conveyance facilities.</p>					
<p><b>G.1.B WATER RESOURCES – Surface Water Quality</b></p>					
<p><b>Project Design Features</b></p>					
<p><b>PDF G.1.b-1 (Ci/Co):</b> Prior to the issuance of grading permits for Projects (not including sets/façades or temporary uses), pursuant to the City's Department of Public Works and Bureau of Engineering regulations, and as that term is defined in the County Specific Plan, that are expected to disturb one acre or more of land, the Project Applicant, its successor, or authorized agent (i.e., contractor) shall provide proof to the applicable jurisdiction (the City or County Department of Public Works), as appropriate, with evidence that a Notice of Intent has been filed with the State Water Resources Control Board for coverage under the General Construction Permit and a certification that a Storm Water Pollution Prevention Program has been prepared. Such evidence shall consist of a copy of the Notice of Intent stamped by the State Water Resources Control Board or Regional Board, or a letter from either agency stating that the Notice of Intent has been filed. The Stormwater Pollution Prevention Plan shall include a menu of Best Management Practices to be selected and implemented based on the phase of construction and the weather conditions to effectively control erosion, sediment, and other construction-related pollutants to</p>	<p>a. Preparation and approval of Stormwater Pollution Prevention Plan, if applicable.</p>	<p>Prior to issuance of grading permits, if applicable.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
	<p>b. Submit documentation to County substantiating the Notice of Intent having been filed with the State Water Resources Control Board.</p>	<p>Prior to issuance of grading permits, if applicable.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>meet the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards. The Best Management Practices to be implemented during construction shall address the following:</p> <ul style="list-style-type: none"> <li>• Erosion Control;</li> <li>• Sediment Control;</li> <li>• Waste and Materials Management;</li> <li>• Non-stormwater Management;</li> <li>• Training and Education; and</li> <li>• Maintenance, Monitoring, and Inspections.</li> </ul> <p>The construction site management Best Management Practices shall be implemented for the Project during the dry season and wet season as necessary depending upon the phase of construction and weather conditions. As required by the Construction General Permit, during all phases of construction, the Project shall implement Best Management Practices consistent with the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards.</p>					
<p><b>PDF G.1.b-2 (Ci/Co):</b> For individual Projects (pursuant to the City Department of Public Works and Bureau of Engineering regulations, and as that term is defined in the County Specific Plan), that may occur over time that disturb less than one acre, prior to receiving a grading permit from either the City of Los Angeles or the County of Los Angeles, the Project Applicant or its successor shall certify to the satisfaction of the City or County Department of Public Works, dependent upon the location of the Project, that the Project Applicant or its successor understands and shall implement all applicable Best Management Practices meeting the minimum requirements contained in the Municipal Separate Storm Sewer System Permit (National Pollutant Discharge Elimination System Permit No.</p>	<p>Provide Construction Management Plan including applicable Best Management Practices, if applicable.</p>	<p>Prior to issuance of grading permits, if applicable.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>CAS00400) including:</p> <ul style="list-style-type: none"> <li>Retaining sediments generated on the Project Site using adequate Treatment Control or Structural Best Management Practices;</li> <li>Retaining construction-related materials, wastes, spills, or residues at the Project Site;</li> <li>Containing non-storm water runoff from equipment and vehicle washing and any other activity at the Project Site; and</li> <li>Controlling erosion from slopes and channels by implementing an effective combination of Best Management Practices.</li> </ul>					
<p><b>PDF G.1.b-3 (Ci/Co):</b> Prior to issuance of a B-Permit or building permit for any Project, (pursuant to the City's Department of Public Works and Bureau of Engineering regulations, and as that term is defined in the County Specific Plan), that triggers the Standard Urban Stormwater Mitigation Plan requirements, the Project Applicant or its successor shall prepare and submit a Standard Urban Stormwater Mitigation Plan to the City of Los Angeles or County of Los Angeles to the satisfaction to the applicable jurisdiction, as applicable, for review. In addition, drawings and specifications of the proposed permanent stormwater quality Best Management Practices, including continuous deflection separator units and media filters (or Best Management Practices of similar technology with equivalent treatment or pollutant removal performance) in Drainage Areas A, D, E, F, J, L, M and O as shown on Attachment F to this MMRP, and bioswales and bioretention/underdrains (or Best Management Practices of similar technology with equivalent treatment or pollutant removal performance) in Drainage Areas M, R and S, as applicable, shall be submitted for review to the City of Los Angeles or County of Los Angeles, as applicable.</p>	<p>a. Prepare and submit Standard Urban Stormwater Mitigation Plan and proposed permanent stormwater quality Best Management Practices, if required.</p>	<p>Prior to issuance of building permits, if applicable.</p>	<p>Applicant / Project Engineer / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
	<p>b. Implement approved Standard Urban Stormwater Mitigation Plan and permanent stormwater quality Best Management Practices, if required.</p>	<p>During construction as applicable.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
PDFs G.1.b-4 and G.1.b-5: Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.	None	N/A	N/A	N/A	N/A
<b>G.2 WATER RESOURCES – Groundwater</b>					
<b>Project Design Features</b>					
PDF G.2-1 (Ci/Co): Should a groundwater monitoring well be discovered during construction, the abandonment or removal of the well shall be in accordance with the applicable guidelines of the California Department of Water Resources, and the California Department of Health Services. As part of the abandonment process, a Well Abandonment Permit shall be obtained from the Los Angeles County Department of Public Health.	a. If during construction a well is discovered, obtain well abandonment permit.	Prior to well abandonment, if well discovered.	Applicant / Contractor	County Department of Public Health in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
	b. Abandon well pursuant to Well Abandonment Permit, if required.	During construction as applicable.	Applicant / Contractor	County Department of Public Health in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>Mitigation Measures</b>					
No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.	None	N/A	N/A	N/A	N/A
<b>H. AIR QUALITY</b>					
<b>Project Design Features</b>					
PDF H-1 (Ci/Co): The Project Applicant or its successor shall implement fugitive dust control measures during Project construction in accordance with South Coast Air Quality Management District Rule 403. The Project Applicant or its successor shall include in construction contracts the fugitive dust control measures in accordance with South	Include fugitive dust control measures in Construction Management Plan.	Prior to issuance of demolition or grading permits.	Applicant / Contractor	South Coast Air Quality Management District. Regional Planning in consultation with the Department of Public	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>Coast Air Quality Management District Rule 403, with construction controls being at least as effective as the following:</p> <ul style="list-style-type: none"> <li>• Watering active construction areas at least twice daily to minimize fugitive dust emissions;</li> <li>• Maintaining soil stabilization of inactive construction areas with exposed soil via water, non-toxic soil stabilizers, or replaced vegetation;</li> <li>• Suspending earthmoving operations or requiring additional watering to meet Rule 403 criteria if wind gusts exceed 25 mph;</li> <li>• Covering all haul trucks or maintaining at least six inches of freeboard;</li> <li>• Minimizing track-out emissions; and</li> <li>• Limiting vehicle speeds to 15 miles per hour or less in staging areas and on-site haul roads.</li> </ul>				<p>Works. (See City MMRP for projects in the City.)</p>	
<p><b>PDF H-2 (Ci/Co):</b> Project Site haul roads during vertical construction shall be paved temporary or permanent paving.</p>	<p>Include in Construction Management Plan.</p>	<p>Prior to issuance of building permit.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. (See City MMRP for projects in the City.)</p>	<p>___/___/___</p>
<p><b>PDF H-3 (Ci/Co):</b> Diesel-emitting construction equipment greater than 200 horsepower shall use diesel particulate filters having 85% removal efficiency based on California Air Resources Board verified technologies.</p>	<p>Include in Construction Management Plan.</p>	<p>Prior to issuance of building permit.</p>	<p>Applicant / Contractor</p>	<p>Regional Planning in consultation with the Department of Public Works. South Coast Air Quality Management District. (See City MMRP for projects in the City.)</p>	<p>___/___/___</p>
<p><b>PDFs H-4 and H-5:</b> Deleted due to selection of Alternative 10.</p>	<p>None</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>PDF H-6 (Ci/Co):</b> New on-site facility NOx emissions shall be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters) as required by South</p>	<p>Incorporate emission control measures in building design as applicable.</p>	<p>Prior to issuance of building permit.</p>	<p>Applicant / Project Architect Project Engineer</p>	<p>Department of Public Works. South Coast Air Quality Management District.</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
Coast Air Quality Management District Regulation XIII, New Source Review.				<i>(See City MMRP for projects in the City.)</i>	
<b>Mitigation Measures</b>					
<p><b>MM H-1 (Ci/Co):</b> The Project Applicant or its successor shall include in construction contracts the following control measures:</p> <ul style="list-style-type: none"> <li>• Keep all construction equipment in proper tune and maintained in accordance with manufacturer's specifications.</li> <li>• All contractors shall operate in compliance with the California Air Resource Board in-use off-road diesel engine rule.<sup>1</sup></li> <li>• Limit truck and equipment idling time to five minutes or less.</li> <li>• Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export), to the extent available.</li> <li>• Rely on the electricity infrastructure surrounding the construction sites rather than electrical generators powered by internal combustion engines to the extent feasible.</li> <li>• Use coatings and solvents with a VOC content lower than that required under AQMD Rule 1113, to the extent available.</li> <li>• Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM<sub>10</sub> generation.</li> <li>• Require the use of pre painted construction materials, to the extent available.</li> </ul>	Include control measures in construction contracts and Construction Management Plan.	Prior to issuance of grading or building permits, as applicable.	Applicant / Contractor	Department of Public Works. South Coast Air Quality Management District. <i>(See City MMRP for projects in the City.)</i>	___/___/___

<sup>1</sup> CARB, 2007. *Regulation for In-Use Off-Road Diesel Vehicles. Article 4.8, Section 2449.*  
<http://www.arb.ca.gov/regact/2007/ordiesel07/ordiesel07.htm>; <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>.

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p><b>MM H-2 (Ci/Co):</b> Construct or build with materials that do not require painting, to the extent available.</p>	<p>Incorporate in building design as applicable.</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>MM H-3 (Ci/Co):</b> During Project construction, all internal combustion engines/construction equipment used on the Project Site for purposes of the Project construction shall be designed or retrofitted to meet EPA-Certified Tier 2 emissions standards, or higher, according to the following:</p> <ul style="list-style-type: none"> <li>• January 1, 2012, to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier 3 off-road emissions standards, to the extent available. In addition, construction equipment shall be outfitted with BACT devices certified by CARB to the extent available for such construction equipment. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations to the extent available for such equipment.</li> <li>• Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, to the extent available. In addition, construction equipment shall be outfitted with BACT devices certified by CARB to the extent available for such construction equipment. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations to the extent available for such equipment.</li> </ul>	<p>Incorporate in Construction Management Plan, to the extent equipment is available.</p>	<p>Prior to issuance of building permit.</p>	<p>Applicant / Contractor</p>	<p>Regional Planning in consultation with the Department of Public Works. South Coast Air Quality Management District. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<ul style="list-style-type: none"> <li>For each applicable unit of construction equipment, a copy of the certified tier specification, BACT documentation, and CARB or SCAQMD operating permit, to the extent such are available for such construction equipment, shall be maintained and made available upon request by the lead agency.</li> </ul>					
<b>MM H-4 (Ci/Co):</b> The Project Applicant or its successor shall minimize delivery truck idling times to a maximum of five (5) minutes, per the California Air Resources Board's Airborne Toxic Control Measure.	Post limitation in loading dock area.	Annually at time of MMRP compliance report.	Applicant	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM H-5 (Ci/Co):</b> The Project Applicant or its successor shall route delivery trucks via the most efficient route on the Project Site.	Include in security manual.	Annually at time of MMRP compliance report.	Applicant	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>I. BIOTA</b>					
<b>Project Design Features</b>					
<b>PDF I-1 (Co):</b> The Project Applicant or its successor shall mitigate consistent with Mitigation Measure I-5 below for all impacted oak woodlands that are located within the current County jurisdiction, regardless of the proposed annexation of some of this habitat into the City under the proposed Project.	See Mitigation Measure I-5.	See Mitigation Measure I-5.	Applicant / Contractor	Department of Regional Planning in consultation with the County Fire Department, Forestry Division.	___/___/___
<b>PDF I-2:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>PDF I-3 (Ci/Co):</b> Three sensitive reptile species (silvery legless lizard, coastal western whiptail, and San Bernardino ringneck snake) have low potential to occur on-site and, if present, are likely to exist in small numbers due to the fragmented and/or disturbed habitat conditions and the Project Site's prolonged isolation, a situation that might lead to their eventual extirpation. The proposed Project includes the following project design feature to avoid or minimize potential impacts to sensitive reptile species:	a. Perform field surveys.	Prior to construction operations in the Back Lot area within the applicable time protocols set forth in the mitigation measure.	Applicant / Project Biologist / Contractor	Department of Regional Planning. California Department of Fish and Game	___/___/___
	b. Prepare and obtain approval of plans, if applicable.	Prior to implementation and prior to vegetation removal or ground	Applicant / Project Biologist / Contractor	Department of Regional Planning. California Department of Fish and Game	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<ul style="list-style-type: none"> <li>Prior to construction activities, field surveys would be conducted in oak woodland and scrub habitat in the Back Lot Area during the peak activity season and time of day for each species (ranging from February to May for silvery legless lizard, April to August for coastal western whiptail, and late spring through summer for San Bernardino ringneck snake) to determine the presence or absence of the aforementioned three special status reptiles on the Project Site, and their approximate population size and distribution if present. Surveys would be conducted by a qualified biologist according to standard methods of surveying for reptiles. A report would be submitted to the City Planning Department, County Department of Regional Planning, and California Department of Fish and Game documenting the survey methods and results, including number and location of individuals observed, if any, and estimated population sizes.</li> <li>Based on the field survey results, a plan would be prepared by a qualified biologist to trap special status reptile individuals present on-site prior to and during ground-disturbing construction activities and release them to nearby suitable protected habitat. This may include preserved habitat areas on-site or public lands in the vicinity if approved through a Memorandum of Understanding with the landholding agency (i.e. the City for Griffith Park, or the Santa Monica Mountains National Recreation Area). This plan would be submitted to and be approved by the City Planning Department and/or County Department of Regional Planning and California Department of Fish and Game prior to implementation and prior to vegetation removal or ground disturbance. A follow-up report documenting trapping and</li> </ul>		disturbance.			
	c. Implement approved plan(s), if applicable.	During construction.	Applicant / Project Biologist / Contractor	Department of Regional Planning. California Department of Fish and Game	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>relocation methods and results would also be submitted to the City Planning Department and County Department of Regional Planning and California Department of Fish and Game following construction.</p> <ul style="list-style-type: none"> <li>If special status reptiles are relocated to preserved habitat on-site, this area would be protected during Project construction using silt fencing or other fencing as approved by a qualified biologist. The protective fencing would be installed prior to any ground disturbance or vegetation removal, and would be maintained during all phases of Project construction occurring within or adjacent to suitable habitat for the species; fence maintenance would be regularly monitored by a qualified biologist. No construction-related activities would be allowed in the protected habitat, including storage of materials or equipment, or trespass by construction crew members. This preserved on-site habitat would also be protected in perpetuity from the adjacent development by appropriate permanent fencing as recommended and approved in the relocation plan described above. If special status reptiles are present on-site based on the field survey results, a qualified biologist would be present during vegetation removal and grading activities conducted in the oak woodland and scrub habitat in the Back Lot Area to monitor activities and relocate any special status reptiles in accordance with the above plan in order to avoid impacts to any individuals remaining on-site following pre-construction trapping and relocation activities.</li> </ul>					
<b>Mitigation Measures</b>					
<p><b>MM I-1 (Co):</b> In order to avoid and compensate for impacts to Southern California black walnut trees within the County portion of the Project Site, the following measures shall be implemented:</p>	<p>a. Implement tree protective measures, if applicable.</p>	<p>Prior to issuance of grading or building permits as applicable.</p>	<p>Applicant / Contractor</p>	<p>Department of Regional Planning in consultation with the County Fire</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
a) Southern California black walnut trees that are avoided shall be protected during site development activities in compliance with protective measures described for avoided trees under Mitigation Measure I-4.				Department, Forestry Division. <i>(See City MMRP for projects in the City.)</i>	
b) Southern California black walnut trees impacted within the County portion of the Project Site shall be replaced at a minimum 2:1 ratio. Impact includes cutting, relocating, inflicting damage, or encroaching into the root zone or filling the drip line area. Replacement shall generally follow the Oak Tree Removal Regulations of the proposed County Specific Plan, but shall relate specifically to Southern California black walnut trees, including the following:	b. Implement tree replacement requirements, if applicable.	Prior to issuance of permanent certificate of occupancy, if applicable.	Applicant / Contractor	Department of Regional Planning in consultation with the County Forester. <i>(See City MMRP for projects in the City.)</i>	___/___/___
1. The Project Applicant or its successor shall provide and plant two replacement trees for each single Southern California black walnut tree impacted. The replacement trees shall meet the following minimum requirements: <ul style="list-style-type: none"> <li>i. shall consist of a range of plant sizes, at a minimum of one gallon in size, in order to approximate a natural habitat condition and the range of sizes of the individuals impacted;</li> <li>ii. shall consist exclusively of indigenous trees and certified as being grown from a seed source collected from an indigenous habitat within valley regions of Los Angeles County;</li> <li>iii. if planted off-site, the replacement walnut trees shall be planted at a location approved by the County Forester, in consultation with the Supervisor's Office; and</li> </ul> 2. Additional Requirements. <ul style="list-style-type: none"> <li>i. The Project Applicant or its successor shall monitor the replacement trees for a minimum of 5 years, to evaluate the</li> </ul>	c. Monitor replacement trees, if applicable.	Once a year for five years following replacement, if applicable.	Applicant / Contractor	Department of Regional Planning in consultation with the County Forester. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>growth, health and condition of the replacement trees.</p> <p>ii. The soil for new tree plantings shall be appropriately inoculated with beneficial mycorrhizal fungi.</p> <p>iii. The Project Applicant or its successor shall design landscapes and irrigation systems which are adjacent to the replacement trees in a manner that is compatible for the survival of the replacement trees.</p> <p>iv. Trees which are determined to be healthy and structurally sound shall be considered as candidates for relocation, to the extent feasible.</p>					
<p><b>MM I-2 (Ci/Co):</b> Avoidance of Special Status Plants. To avoid impacts to special-status plants that may not have been detected during focused surveys in June 2006, prior to vegetation clearing for construction in the Back Lot Area, focused surveys for the special-status plants identified below shall be conducted in the Back Lot Area during the blooming period for the species. If any species identified below are detected, then prior to vegetation clearing for construction the plants shall be censused and a special-status plant relocation plan shall be developed and implemented to provide for translocation of the plants. The plan shall be prepared by a biologist and shall include the following components: (1) identify an area of appropriate habitat on-site; (2) depending on the species detected, determine if translocation will take the form of seed collection and deposition, or transplanting the plants and surrounding soil as appropriate; (3) develop protocols for irrigation and maintenance of the translocated plants where appropriate; (4) set forth performance criteria (e.g., establishment of quantitative goals, expressed in percent cover or number of individuals, comparing</p>	<p>a. Prepare focused survey.</p>	<p>Prior to issuance of grading permit and vegetation clearing for construction in the Back Lot Area.</p>	<p>Applicant / Project Biologist or Contractor</p>	<p>Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
	<p>b. Prepare and implement relocation plan, if required.</p>	<p>Prior to issuance of certificate of occupancy for buildings in Back Lot Area, if applicable.</p>	<p>Applicant / Project Biologist or Contractor</p>	<p>Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
	<p>c. Monitor relocated special-status plants, if applicable.</p>	<p>Every five years following relocation of special-status plant, if applicable.</p>	<p>Applicant / Project Biologist or Contractor</p>	<p>Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>the restored and impacted population) and remedial measures for the translocation effort; and (5) establish a five-year monitoring procedures/protocols for the translocated plants. The following species will be targeted for focused pre-construction surveys:</p> <ul style="list-style-type: none"> <li>• Catalina mariposa lily (<i>Calochortus catalinae</i>)</li> <li>• Club-haired mariposa lily (<i>Calochortus clavatus</i> var. <i>clavatus</i>)</li> <li>• Plummer's mariposa lily (<i>Calochortus plummerae</i>)</li> <li>• Many-stemmed dudleya (<i>Dudleya multicaulis</i>)</li> <li>• Robinson's pepper grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)</li> <li>• Coulter's matilija poppy (<i>Romneya coulteri</i>)</li> </ul>					
<p><b>MM I-3 (Ci/Co):</b> To avoid impacting nesting birds, including migratory birds and raptors, one of the following shall be implemented:</p> <ul style="list-style-type: none"> <li>• Conduct vegetation removal associated with building demolition and construction from September 1<sup>st</sup> through January 31<sup>st</sup>, when birds are not nesting. Initiate grading activities prior to the breeding season (which is generally February 1<sup>st</sup> through August 31<sup>st</sup>) and keep disturbance activities constant throughout the breeding season to prevent birds from establishing nests in surrounding habitat (in order to avoid possible nest abandonment); if there is a lapse in activities of more than five days, pre-construction surveys shall be necessary as described in the bullet below. - OR -</li> <li>• Conduct pre-construction surveys for nesting birds if vegetation removal, building demolition or grading is initiated during the nesting season. A qualified wildlife biologist shall conduct a weekly pre-construction bird survey no more than 30 days prior to initiation of grading to provide</li> </ul>	<p>Remove vegetation as specified during applicable time protocol stated in mitigation measure OR conduct pre-construction surveys during nesting season.</p>	<p>Prior to issuance of grading permit according to applicable time protocols stated in mitigation measure.</p>	<p>Applicant / Contractor or Project Biologist</p>	<p>Department of Regional Planning. (See City MMRP for projects in the City.)</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>confirmation on the presence or absence of active nests in the vicinity (at least 300 to 500 feet around the individual construction site, as access allows). The last survey should be conducted no more than three days prior to the initiation of clearance/construction work. If active nests are encountered, clearing and construction in the vicinity of the nest shall be deferred until the young birds have fledged and there is no evidence of a second attempt at nesting. A minimum exclusion buffer of 300 feet (500 feet for raptor nests) or as determined by a qualified biologist, shall be maintained during construction depending on the species and location. The perimeter of the nest-setback zone shall be fenced or adequately demarcated with staked flagging at 20-foot intervals, and construction personnel and activities restricted from the area. Construction personnel should be instructed on the sensitivity of the area. A survey report by the qualified biologist documenting and verifying compliance with the mitigation and with applicable state and federal regulations protecting birds shall be submitted to the City of Los Angeles, Department of Building and Safety, or County of Los Angeles, Department of Public Works, as applicable, in charge of Mitigation Monitoring, depending on within which jurisdiction the construction activity is occurring. The qualified biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts on these nests would occur.</p>					
<p><b>MM I-4 (Ci/Co):</b> In order to prevent damage to any protected trees that would be avoided within the City or County area during Project construction, the following measures shall be implemented for any such trees within 20 feet of an active construction</p>	<p>a. Implement tree protective measures, if applicable.</p>	<p>Prior to issuance of grading or building permits, if applicable.</p>	<p>Applicant / Contractors / Registered Consulting Arborist</p>	<p>County Fire Department, Forestry Division. Department of Regional Planning.</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>area: <i>Pre-Construction</i></p> <ul style="list-style-type: none"> <li><i>Fencing:</i> Chain link fencing, not less than 4 feet high with tree - protection signs, shall be erected around all undisturbed trees (or tree groups). The protective fence shall be installed at the protected zone boundary of each tree (or tree group), which is defined as five (5) feet beyond the tree canopy dripline. The intent of protection fencing is to prevent root damage and/or compaction by grading equipment. A Registered Consulting Arborist may be required on-site if grading activities occur within the tree protected zone. The fencing shall be secured to 6-foot, heavy gauge t-bar line posts, pounded in the ground a minimum of 18-inches and spaced a minimum of 8-feet on-center. Fencing shall be attached to t-bar posts with minimum 14-gage wire fastened to the top, middle and bottom of each post. Tree protection signs shall be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut and aligned at all times. Fencing shall be removed only after all construction activities are complete.</li> <li><i>Pre-Construction Meeting:</i> A pre-construction meeting shall be held between all contractors (including grading, tree removal/pruning, builders, etc.) and a Registered Consulting Arborist. The meeting shall focus on instructing the contractors on tree protection practices and to answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices</li> </ul>				(See City MMRP for projects in the City.)	
	b. Implement construction period and post-construction protocols, if applicable.	During and following construction, if applicable.	Applicant / Contractors / Registered Consulting Arborist	County Fire Department, Forestry Division. Department of Regional Planning. (See City MMRP for projects in the City.)	
	c. Monitoring of protected trees and submittal of monitoring report, if applicable.	Quarterly during post-construction for seven years following construction, if applicable.	Applicant / Contractors / Registered Consulting Arborist	Department of Regional Planning; County Fire Department, Forestry Division. (See City MMRP for projects in the City.)	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>that shall accomplish such.</p> <p><u>During Construction</u></p> <ul style="list-style-type: none"> <li><i>Equipment Operation and Storage:</i> Contractors shall avoid using heavy equipment operation around the undisturbed, protected trees. Operating heavy machinery around the root zones of trees would increase soil compaction, which decreases soil aeration and subsequently reduces water penetration into the soil. All heavy equipment and vehicles shall, at minimum, stay out of the fenced protected tree zone, unless where specifically approved in writing and under the supervision of a Registered Consulting Arborist.</li> <li><i>Materials Storage and Disposal:</i> Contractors shall not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the protected zone, and shall remove all foreign debris within the protected zone. However, the contractors shall leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrient supply. In addition, contractors shall avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) shall be disposed of properly. The contractors shall ensure that equipment be parked at least 50 feet from the protected zone to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could result in tree decline and/or mortality.</li> <li><i>Grade Changes:</i> Contractors shall ensure that grade changes, including adding fill, shall not be permitted within the protected zone without special written authorization and under supervision by a Registered Consulting Arborist. Lowering the grade within the protected zone</li> </ul>					

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>would necessitate cutting main support and feeder roots, thus jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade would compact the soil further, and decrease both water and air availability to the tree roots. Contractors shall ensure that grade changes made outside of the protected tree zone shall not create conditions that allow water to pond at the base of the tree. Water trapped at the base of a tree could lead to root rot and other detrimental tree impacts.</p> <ul style="list-style-type: none"> <li> <p><i>Moving Construction Materials:</i> Contractors shall ensure that care be exercised when moving construction equipment or supplies near the protected trees, especially overhead. Contractors shall ensure that damage to the tree(s) be avoided when transporting or moving construction materials and working around the tree (even outside of the fenced protected zone). Contractors shall flag above ground tree parts that could be damaged (e.g., low limbs, scaffold branches, trunks) with high visibility flagging, such as florescent red or orange. If contact with the tree crown is unavoidable, conflicting branch(es) may be pruned by an ISA Certified Tree Worker under the supervision of a Registered Consulting Arborist and shall adhere to ISA standards.</p> </li> <li> <p><i>Trenching:</i> Except where specifically approved in writing beforehand, all trenching shall be outside of the fenced protected zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain roots from retained trees, contractors shall use trenching techniques that include the use of either a root pruner (Dosko root pruner or equivalent) or an Air-Spade to limit</p> </li> </ul>					

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>root impacts. A Registered Consulting Arborist shall ensure that all pruning cuts shall be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. Root damage caused by backhoes, earthmovers, dozers, or graders is severe and may ultimately result in tree mortality. Use of both root pruning and Air-Spade equipment shall be accompanied only by hand tools to remove soil from trench locations. The trench shall be made no deeper than necessary.</p> <ul style="list-style-type: none"> <li>• <i>Irrigation:</i> Irrigation of native oaks retained on-site shall seek to mimic natural rainfall patterns in Southern California. Supplemental irrigation for trees adjacent to construction activity may be necessary during winter or spring months. Summer and fall irrigation may be necessary based on variable climatic and site conditions, but should be conducted judiciously to avoid over-watering. One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should be allowed to dry out between watering to avoid keeping a consistently wet soil. The contractors shall be responsible for irrigating (deep watering) the trees. Soil moisture shall be checked with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that would distribute water slowly (to avoid runoff) and evenly throughout the fenced protection zone. Over watering of native oak trees may promote the growth of tree-damaging agents, such as Oak Root Fungus, so proper soil moisture monitoring is critical to prolonged tree health. For any trees that have been substantially root pruned (30% or more of their root zone), irrigation shall be required for the first twelve months. The first irrigation shall occur within 48 hours of root pruning. The tree(s) should be deep watered</li> </ul>					

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>every two weeks during the summer and once a month during the winter (adjusted accordingly with rainfall).</p> <ul style="list-style-type: none"> <li>• <i>Canopy Pruning:</i> The contractor shall not prune trees until all construction is completed, unless standard pruning would reduce conflict between canopy and equipment. This would help protect the tree canopies from damage. All pruning shall be conducted by an ISA Certified Tree Worker under the supervision of a Registered Consulting Arborist and shall adhere to ISA pruning standards.</li> <li>• <i>Canopy Washing:</i> During construction, the contractors shall wash the foliage of trees adjacent to construction activity with a strong water stream every two weeks in early hours before 10:00 a.m. to control mite and insect populations.</li> <li>• <i>Inspection:</i> A Registered Consulting Arborist shall inspect the preserved trees adjacent to grading and construction activity on a monthly basis for the duration of the Project. A report summarizing site conditions, observations, tree health, and recommendations for minimizing tree damage shall be submitted by the Registered Consulting Arborist or Registered Professional Forester following each inspection.</li> </ul> <p><u>Post-construction</u></p> <ul style="list-style-type: none"> <li>• <i>Mulch:</i> The contractors shall ensure that the natural duff layer under all trees shall be maintained. This would stabilize soil temperatures in root zones, conserve soil moisture, and reduce erosion. The contractors shall ensure that the mulch be kept clear of the trunk base to avoid creating conditions favorable to the establishment and growth of decay causing fungal pathogens. Should it be necessary to add organic mulch beneath retained oak trees, packaged or commercial oak</li> </ul>					

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>leaf mulch shall not be used as it may contain Oak Root Fungus. Also, the use of Redwood chips shall be avoided as certain inhibitive chemicals may be present in the wood. Other wood chips and crushed walnut shells can be used, but the best mulch that provides a source of nutrients for the tree is its own leaf litter. Any added organic mulch added by the contractors shall be applied to a maximum depth of 4- inches where possible.</p> <ul style="list-style-type: none"> <li>• <i>Pruning:</i> Regular pruning of the trees is not required. An ISA Certified Tree Worker under the supervision of a Registered Consulting Arborist shall only prune trees to maintain clearance and remove broken, dead or diseased branches. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA standards.</li> <li>• <i>Watering:</i> The trees should not require irrigation other than the twelve months following substantial root pruning, if applicable. However, soil probing shall be necessary to accurately monitor moisture levels. Especially in years with low winter rainfall supplemental irrigation for the trees that sustained root pruning and any newly planted trees may be necessary.</li> <li>• <i>Watering Adjacent Plant Material:</i> All plants near the trees shall require moderate to low levels of water. The contractor shall water surrounding plants infrequently with deep soaks and allow them to dry out in-between, rather than frequent light irrigation. The soil shall not be allowed to become saturated or stay continually wet, nor should drainage allow ponding of water beneath the canopy of the oak trees. Irrigation spray shall not hit the trunk of any tree. The contractors shall maintain a 30-inch dry-zone around all tree trunks. An above ground micro-spray irrigation system shall be used in lieu of</li> </ul>					

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>typical underground pop-up sprays.</p> <ul style="list-style-type: none"> <li><i>Chemical Applications:</i> If the trees are maintained in a healthy state, regular spraying for insect or disease control would not be necessary. If a problem does develop, a Registered Consulting Arborist shall be consulted as the trees may require the application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying shall be performed by a licensed applicator under the direction of a licensed pest control advisor.</li> <li><i>Monitoring:</i> A Registered Consulting Arborist shall inspect the trees preserved on-site for a period of seven (7) years following the completion of construction activity. Monitoring visits shall be completed quarterly, totaling twenty-eight (28) visits. Following each monitoring visit, a report summarizing site conditions, observations, tree health, and recommendations for promoting tree health shall be submitted. Additionally, any tree mortality shall be noted and any tree dying during the seven year monitoring period shall be replaced according to regulations of the City's Department of Public Works, or provisions of the County Specific Plan, as applicable.</li> </ul>					
<p><b>MM I-5 (Co):</b> Mitigation for impacts to oak woodland habitat shall be accomplished through one or a combination of the options presented below.</p> <p>1. Oak Woodland Conservation Easements – Protect existing oak woodlands on or off the Project Site in perpetuity at a 2:1 acreage ratio through a conservation easement approved by the County and the Department of Fish and Game. Priority should be given to oak habitat that is (1) of equal or greater ecological value as the habitat to be removed, and (2) is contiguous with or adjacent to larger areas of existing</p>	<p>a. Implement mitigation as set forth, if applicable.</p>	<p>Prior to issuance of permanent certificate of occupancy for building(s) in Oak Woodlands habitat.</p>	<p>Applicant</p>	<p>Department of Regional Planning in consultation with the County Fire Department, Forestry Division.</p>	<p>___/___/___</p>
	<p>b. Monitor replacement trees, if applicable.</p>	<p>Annually.</p>	<p>Applicant</p>	<p>Department of Regional Planning in consultation with the County Fire Department, Forestry</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>woodlands under conservation easements, public lands, or open space lands. Approval should be contingent on demonstrating that such lands meet these criteria to the maximum extent feasible and available. Mitigation for individual developments shall be clustered into the fewest areas possible, to avoid habitat fragmentation.</p> <p>2. Plant Replacement Trees - Plant and maintain replacement trees on or off the Project Site at a 2:1 tree ratio, with the intention of recreating the acreage of oak woodlands impacted. The goal is to restore declining woodlands or re-establish them where they once grew. The selection of off-site planting should follow the same criteria as noted in option 1 above (equivalent habitat replacement, contiguous with other protected woodland habitat, consolidation of mitigation to avoid fragmentation). Restoration should result in species composition and density similar to the Project Site and appropriate to the restoration site. This type of mitigation shall not fulfill more than one-half of the mitigation requirements for the Project. The replacement of oak woodland habitat, if pursued as a mitigation option, should be coordinated with the replacement of oak trees during implementation of the proposed County Specific Plan Oak Tree Removal regulations. An option is to propose planting a range of sizes including seedlings, 1 gallon, 5 gallon, 15 gallon, 24-inch box, 36-inch box, 48-inch box, and 60-inch box trees (depending on the planting area and the ability to irrigate). The goal is to stress sustainability and replicate natural oak woodlands by creating a diversity of size and age classes. The mitigation oaks shall be maintained for a period of no less than seven (7) years from the date of planting, and replaced if mortality should occur during that seven year period.</p>				Division.	

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>3. Oak Woodlands Conservation Funding – This final mitigation alternative involves contributing funds to the California Wildlife Conservation Board’s Oak Woodlands Conservation Fund or, a segregated trust fund maintained or selected by the County. The contribution amount would equal an in lieu fee of \$2,700 for each removed Oak Tree. This fee shall be adjusted by the County Forester consistent with the Consumer Price Index for the Los Angeles-Long Beach metropolitan statistical area on the annual anniversary of the adoption of the proposed County Specific Plan. The contribution should specify that funds should be prioritized for use in acquiring or restoring oak woodland habitat within Los Angeles County.</p> <p>The in lieu fee (\$2,700) is the calculated average value of all trees that may be impacted by the proposed Project and the No Annexation scenario. The value of each impacted tree was calculated using the Trunk Formula Method presented in the “Guide for Plant Appraisal,” published by the International Society of Arboriculture (Council of Tree and Landscape Appraisers, 2000).</p> <p>Compliance with the proposed County Specific Plan oak tree regulations would also satisfy the Oak Woodland mitigation requirements, except that on-site or off-site tree replacement may only satisfy up to half of the mitigation to oak woodland habitat.</p>					
<p><b>MM I-6 (Ci/Co):</b> Prior to removal of trees within oak woodland habitat of eight inch diameter at breast height or greater, as well as native or non-native palm trees greater than ten feet in height, which may provide roosting habitat for special-status bat species, conduct pre-construction surveys for bats in the immediate vicinity of the affected trees using sonic bat detectors (e.g. Anabat). The surveys shall</p>	<p>a. Conduct pre-construction survey.</p>	<p>Prior to removal of oak tree(s) of specified size within the oak woodland habitat.</p>	<p>Applicant / Project Biologist / Contractor</p>	<p>Department of Regional Planning in consultation with the County Fire Department, Forestry Division.</p>	<p>___/___/___</p>
	<p>b. Implementation of exclusion device or</p>	<p>Prior to removal of oak tree(s) of</p>	<p>Applicant / Project Biologist</p>	<p>Department of Regional Planning in</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>be conducted at dusk and after nightfall by a biologist. If special-status bats are detected, and based upon the experience of the biologist conducting the surveys, the detected bats are likely roosting in the trees to be removed, then exclusion devices (e.g., netting, canvas, or similar materials) shall be employed once bats have emerged from identified roosts to block access to tree cavities or other roost entry points. If tree removal is to occur during the maternity season (March 1 to September 30), and if during this period the biologist detects maternity roosts, then removal of the trees shall be delayed for the remainder of the maternity season until the young are sufficiently mature to leave the maternity roost as determined by the biologist.</p>	<p>delay of tree(s) removal if required under the mitigation measure.</p>	<p>specified size within the oak woodland habitat.</p>	<p>/ Contractor</p>	<p>consultation with the County Fire Department, Forestry Division.</p>	
<p><b>MM I-7 (Ci):</b> <i>Not applicable to development in the County.</i></p>	<p><i>None by County.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>City of Los Angeles.</i></p>	<p><i>Not applicable to County.</i></p>
<p><b>J.1 CULTURAL RESOURCES – Historic Resources</b></p>					
<p><b>Project Design Features</b></p>					
<p><b>PDF J.1-1 (Co):</b> As part of the Project, the alteration of contributing buildings, structures and sites within the potential Universal Studios Historic District shall comply with the Universal Studios Historic District Preservation Plan (see Attachment G to this MMRP). The Plan provides appropriate guidance for the alteration of contributing buildings, structures, and sites within the potential Universal Studios Historic District and establishes criteria for new construction to ensure that the historic integrity of the district is maintained. The Plan should serve as the framework for future repair, maintenance, and rehabilitation, and guide architects and designers in designing compatible new construction in the areas identified as potential sites for new buildings within the district. The Plan also includes guidelines for the documentation of historic resources.</p>	<p>Provide documentation of compliance from a Historic Preservation Expert.</p>	<p>Prior to issuance of demolition or building permit(s) for contributing buildings or building permits for new buildings within the potential Universal Studios Historic District.</p>	<p>Applicant / Project Historic Preservation Expert / Contractor</p>	<p>Department of Regional Planning in consultation with the Department of Public Works.</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>Mitigation Measures</b>					
<b>MM J.1-1 (Co):</b> Retain and/or relocate the 1946 Film Vault (#6237) to avoid its demolition.	Provide relocation plans for 1946 Film Vault (#6237), if applicable.	Prior to issuance of relocation permit for the 1946 Film Vault (#6237).	Applicant / Contractor	Department of Public Works.	___/___/___
<b>MM J.1-2 (Co):</b> Retain and/or relocate the Jack Webb (#2250) and William Goetz (#2252) buildings to avoid their demolition.	Provide relocation plans for the Jack Webb (#2250) and/or William Goetz (#2252) buildings, if applicable.	Prior to issuance of relocation permit(s) for the Jack Webb (#2250) and/or William Goetz (#2252) buildings.	Applicant / Contractor	Department of Public Works.	___/___/___
<b>MM J.1-3 (Co):</b> Maintain the Universal Studios Back Lot Area identified on Attachment G to this MMRP as an area of open space primarily used for outdoor filming using large-scale, semi-permanent sets. Retain important character-defining features including: (1) the location in the northeastern portion of the Studio Area, adjacent to the motion picture production facilities; (2) the circulation pattern of streets, roads and trails; and (3) the large scale sets recreating different streetscapes and locations and arranged along key segments of the circulation system.	Maintain Back Lot Area as identified on Attachment G as set forth in mitigation measure.	On-going with report included at time of MMRP compliance report.	Applicant	Department of Regional Planning in consultation with the Department of Public Works.	___/___/___
<b>MM J.1-4:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>J.2 CULTURAL RESOURCES – Archaeological Resources</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<b>MM J.2-1 (Ci/Co):</b> During construction, an archaeologist and Native American monitor shall be retained by the Project Applicant or its successor to monitor any earth-moving activities, including grading, in areas designated as high, moderate or low sensitivity for the presence of buried prehistoric	Retain archaeologist and Native American monitor, if applicable.	Prior to issuance of grading or building permit for Projects in designated areas.	Applicant / Archaeologist / Native American Monitor / Contractor	Regional Planning in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
archaeological sites (see Attachment H to this MMRP).					
<b>MM J.2-2 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<p><b>MM J.2-3 (Ci/Co):</b> If potentially significant archaeological resources are encountered during Project development, site preparation/ construction activities in the area of potential impact shall be halted until the archaeological consultant and/or Native American monitor, as appropriate, have evaluated the resources and, if necessary, developed a plan to mitigate associated impacts. The construction manager at the Project Site shall be notified, and shall notify the responsible lead agency of the discovery. The archaeologist and/or the Native American monitor, as appropriate, with the concurrence of the City or County, as applicable, shall determine the area of potential impact and the timing when construction activities can resume.</p> <p>a) Discovered cultural resources shall be stored in a protected environment to prevent vandalism, damage, or theft until such time as they are examined by an archaeologist and/or Native American monitor, as appropriate.</p> <p>b) The identification and handling of archaeological resources at the site shall be conducted by a qualified archaeologist and overseen by local Native American monitor.</p> <p>c) All Project-related notes, records, photographs, and artifacts, both prehistoric and historical period, shall be curated at a repository in accordance with 36 Code of Federal Regulations 79. Any items of cultural patrimony, however, shall be returned to an appropriate Native American community, which shall be responsible for the disposition of these materials.</p>	Development and implementation of mitigation plan if resources encountered.	Periodic, as required, if resources encountered.	Applicant / Contractor / Archaeological Consultant and/or Native American Monitor, as appropriate	Department of Regional Planning in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM J.2-4 (Ci/Co):</b> If human remains are encountered during construction, work in the affected	Notify required parties and undertake	Periodic, as required, if human	Applicant / Contractor /	Department of Regional Planning in	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>area and the immediate vicinity shall be halted immediately. The construction manager at the Project Site shall be notified, and shall notify the archaeologist and Native American monitor, if they are not on-site at the time, as well as the responsible lead agency of the discovery, who in turn shall notify the Native American Heritage Commission and the County Coroner pursuant to procedures and requirements set forth in California Health and Safety Code Section 7050.5. Disposition of the human remains and any associated grave goods shall also be in accordance with this regulation and Public Resources Code 5097.91 and 5097.98, as amended. The archaeologist and the Native American monitor, with the concurrence of the City or County, as applicable, shall determine the area of potential impact and the timing when construction activities can resume.</p>	<p>disposition in accordance with County and State regulations, if human remains encountered.</p>	<p>remains encountered.</p>	<p>Archaeologist / Native American Monitor</p>	<p>consultation with the Department of Public Works. (See City MMRP for projects in the City.)</p>	
<p><b>MM J.2-5 (Ci/Co):</b> All construction-phase employees shall undergo a cultural resources orientation and awareness training prior to commencing work activities on the Project Site. Such training shall include familiarization with the stop-work restrictions, noticing, and handling procedures, and ultimate disposition of cultural resources as described below. The construction manager shall provide the responsible lead agency with a verification list of the employees completing the orientation.</p>	<p>Include training of construction employees in Construction Management Plan.</p>	<p>Prior to issuance of grading permit.</p>	<p>Applicant / Contractor</p>	<p>Department of Regional Planning in consultation with the Department of Public Works. (See City MMRP for projects in the City.)</p>	<p>___/___/___</p>
<p><b>MM J.2-6 (Ci):</b> <i>Not applicable to development in the County.</i></p>	<p><i>None by County.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>City of Los Angeles.</i></p>	<p><i>Not applicable to County.</i></p>
<p><b>MM J.2-7 (Ci/Co):</b> An archaeologist shall be retained by the Project Applicant or its successor to monitor any earthmoving activities, including grading, in areas designated as high sensitivity for the presence of buried historical period archaeological sites (see Attachment I to this MMRP).</p>	<p>Retain archaeologist, if applicable.</p>	<p>Prior to issuance of grading permits for designated areas.</p>	<p>Applicant / Contractor / Archaeologist</p>	<p>Department of Regional Planning in consultation with the Department of Public Works. (See City MMRP for projects in the City.)</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>J.3 CULTURAL RESOURCES – Paleontological Resources</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<b>MM J.3-1 (Ci/Co):</b> The services of a qualified paleontologist approved by the City or County of Los Angeles, as applicable, and the Los Angeles County Natural History Museum Vertebrate Paleontology Department shall be retained prior to earth-moving activities associated with construction in a particular development area or with a particular development phase. Prior to these earth-moving activities, the paleontologist shall develop a site-specific mitigation plan to be implemented in support of the activities in the particular development area or during a particular development phase. The plan shall specify the level and types of mitigation efforts as set forth below, based on the types and depths of any earth-moving activity and the rock unit in which the activity would be conducted.	Retain paleontologist and prepare site-specific mitigation plan, if applicable.	Prior to issuance of grading permits.	Applicant / Contractor / Paleontologist	Department of Regional Planning in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM J.3-2 (Ci/Co):</b> Earth-moving activities shall be monitored by the paleontologist or a monitor only in those areas of the Project Site where these activities would disturb previously undisturbed strata. Monitoring shall be conducted on a full-time basis in areas underlain by the Upper Topanga Formation and at depths greater than 10 feet below current grade in areas underlain by younger alluvium. If no fossil remains are found once 50 percent of earth-moving activities have been completed in an area underlain by one or the other rock unit, monitoring can be reduced or suspended in the remainder of that area following approval from the City or County of Los Angeles, as applicable. Monitoring shall consist of visually inspecting debris piles and freshly exposed strata for larger fossil remains, and	Paleontologist monitoring of designated areas, if applicable.	On-going full time or periodic during earthmoving activities as described in the mitigation measure, if applicable.	Applicant / Contractor / Paleontologist	Department of Regional Planning in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>periodically dry test screening sediment, rock, and debris for smaller fossil remains. As soon as practicable, the monitor shall recover all vertebrate fossil specimens, a representative sample of invertebrate or plant fossils, or any fossiliferous rock sample that can be recovered easily. If recovery of a large or unusually productive fossil occurrence is warranted, earth-moving activities shall be diverted temporarily around the fossil site and a recovery crew shall be mobilized as necessary to remove the occurrence as quickly as possible. If the paleontologist or monitor is not on site when a fossil occurrence is uncovered by these activities, the activities shall be diverted temporarily around the fossil site and the monitor called to the site to evaluate and, if warranted, remove the occurrence. If the fossil site is determined by the paleontologist or monitor to be too unproductive or the fossil remains not worthy of recovery, no further action shall be taken to preserve the fossil site or remains, and earth-moving activities shall be allowed to proceed through the site immediately. The location and proper geologic context of any fossil occurrence shall be documented, as appropriate.</p> <p>As part of the monitoring effort, rock or sediment samples of the Upper Topanga Formation and younger alluvium shall be collected from each construction site and processed to allow for the recovery of smaller fossil remains. The total weight of all processed samples from either rock unit at each construction site shall not exceed 6,000 pounds (12,000 pounds total). The results of processing 250-pound test samples shall be used by the paleontologist or monitor in determining how much of the remainder of the total collected shall be processed. More of the samples or more of each sample shall be processed if the recovered remains are sufficiently common (at least 4-5 identifiable specimens per test sample), generally identifiable to genus or species level, and represent a</p>					

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>taxonomically diverse faunal assemblage. With the development of each successive construction site, the paleontologist or monitor may specify that less than 6,000 pounds shall be processed, based on the amount of excavation and other earth-moving activities that would occur in areas underlain by either rock unit, and on the results of processing samples from the same rock unit at previous construction sites.</p> <p>Unless potentially fossilized remains are discovered at or near the surface, no paleontological monitoring of earth-moving activities in the younger alluvium shall be conducted at depths less than 10 feet below current grade, and no sample shall be collected or processed.</p>					
<p><b>MM J.3-3 (Ci/Co):</b> Before the mitigation program begins, the paleontologist or monitor shall coordinate with the appropriate construction contractor personnel to provide information regarding City or County of Los Angeles requirements, as applicable, for the protection of paleontological resources. Contractor personnel shall be briefed on procedures to be followed in the event that fossil remains and a previously unrecorded fossil site are encountered by earth-moving activities, particularly when the monitor is not on site. The briefing shall be presented to new contractor personnel as necessary. Names and telephone numbers of the monitor and other appropriate mitigation program personnel shall be provided to appropriate contractor personnel. The Project's construction superintendent shall be instructed by the paleontologist or monitor regarding the identification of conditions whereby potential paleontological resources could occur. The construction superintendent shall be sufficiently informed that he/she will be able to recognize when fossil remains have been uncovered and require that grading be temporarily diverted around the fossil site until the monitor has evaluated and, if warranted,</p>	<p>Include contractor training for applicable procedures in Construction Management Plan, if applicable.</p>	<p>Prior to issuance of grading permits.</p>	<p>Applicant / Contractor / Paleontologist</p>	<p>Department of Regional Planning in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
recovered the remains. Similarly, and if necessary, the monitor shall be empowered to temporarily divert grading around an exposed fossil specimen to facilitate evaluation and, if warranted, recovery.					
<b>MM J.3-4 (Ci/Co):</b> The paleontologist shall reach a formal agreement with a recognized museum repository, such as the Los Angeles County Natural History Museum, before the mitigation program begins, regarding final disposition and permanent storage and maintenance of any fossil remains that might be recovered as a result of the mitigation program, the archiving of associated specimen data and corresponding geologic and geographic site data, and the level of treatment (preparation, identification, curation, and cataloguing) of the remains that would be required before the entire mitigation program fossil collection would be accepted by the repository for storage. The fossil collection shall be donated to a public, nonprofit institution, such as the Los Angeles County Natural History Museum, with a research interest in the collection. The costs to be charged by the repository for curating and permanently storing the collection should be specified in the agreement.	Include written verification in contract with paleontologist, if applicable.	Prior to issuance of grading permits, if applicable.	Applicant / Contractor / Paleontologist / Selected Museum	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM J.3-5 (Ci/Co):</b> All fossil specimens recovered at the Project Site as a result of the mitigation program, including those recovered as the result of processing fossiliferous rock samples, shall be prepared, identified, curated, and catalogued in accordance with designated museum repository requirements. Rock samples from the Upper Topanga Formation and the younger alluvium shall be submitted to commercial laboratories for microfossil, pollen, or radiometric dating analysis.	Include written verification in contract with paleontologist, if applicable.	Prior to issuance of grading permits, if applicable.	Applicant / Contractor / Paleontologist,	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>MM J.3-6 (Ci/Co):</b> The paleontologist or monitor shall maintain daily monitoring logs that record the particular tasks accomplished, locations where earth-moving activities and monitoring were conducted, rock unit(s) encountered, any fossil specimen	Maintain monitoring logs per mitigation measure, if applicable.	On-going during grading, if applicable.	Applicant / Paleontologist	Department of Regional Planning in consultation with the Department of Public	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
recovered, and associated specimen data and geologic and geographic site data.				Works. <i>(See City MMRP for projects in the City.)</i>	
<b>MM J.3-7 (Ci/Co):</b> A final technical report of results and findings shall be prepared by the paleontologist in accordance with any City or County of Los Angeles requirements, as applicable. Copies of the final report and any supporting documentation, including the paleontologist's or monitor's field notes and fossil site maps shall be archived at the designated museum repository. The final report shall be prepared upon completion of grading activities for the first Project requiring monitoring by a paleontologist, pursuant to the City's Department of Building and Safety regulations, and as that term is defined in the County Specific Plan. Subsequent Project reports shall be issued as addenda to the first final report. Projects whose grading activities are completed within a one-year time period may be addressed collectively in one report or addenda.	Prepare final technical report as set forth in mitigation measure, if applicable.	Prior to issuance of permanent certificate of occupancy, if applicable.	Applicant / Paleontologist	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>K.1 PUBLIC SERVICES – Fire</b>					
<b>Project Design Features</b>					
<b>PDFs K.1-1, K.1-2, K.1-3, K.1-4 and K.1-5 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>PDF K.1-6 (Co):</b> In conjunction with the building permit process in the County, the Project Applicant or its successor shall consult with the County Fire Department and incorporate fire prevention and suppression features appropriate to the design of the Project.	Provide Project drawings with fire prevention and suppression features designed pursuant to County Fire Department requirements.	Prior to issuance of building permit.	Applicant / Project Architect / Project Engineer	Department of Public Works County Fire Department.	___/___/___
<b>PDF K.1-7 (Co):</b> Project development in the County shall comply with all applicable County code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.	Provide Project drawings with Project designed pursuant to the applicable codes and ordinances.	Prior to issuance of building permit.	Applicant / Project Architect / Project Engineer	Department of Public Works. County Fire Department.	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>PDF K.1-8 (Co):</b> The Project shall continue to provide fire flows up to 8,000 gallons per minute at 20 pounds per square inch residual pressure for up to a four-hour duration in the County. Final fire flows will be based on the square footage of the buildings, the types of construction used, and the type of sprinkler system within the structure.	Provide Project drawings with fire flows pursuant to County Fire Department requirements.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. County Fire Department.	___/___/___
<b>PDF K.1-9 (Co):</b> Future buildings in the County shall be designed with sprinklers in accordance with the County of Los Angeles Building and Fire Codes. An automatic fire sprinkler system shall be provided for all buildings with four stories or greater above Los Angeles County Fire Department vehicular access (e.g. street level).	Provide Project drawings with sprinklers pursuant to County of Los Angeles Building and Fire Codes.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. County Fire Department.	___/___/___
<b>PDF K.1-10 (Co):</b> All new permanent outdoor facades that fall within the scope of the current edition of Los Angeles County, Fire Department Regulation #29 shall be constructed and maintained in accordance with that Regulation.	Provide drawings with outdoor façade design pursuant to Regulation #29 requirements.	Prior to issuance of Regulation 29 approval.	Applicant / Project Architect / Project Engineer	Department of Public Works. County Fire Department.	___/___/___
<b>PDF K.1-11 (Co):</b> Prior to the removal of Park Lake (see Attachment A to this MMRP), a drafting reservoir and drafting appliances shall be provided and maintained with the ability to draft 1.5 million gallons of water designed to the satisfaction of the Los Angeles County Fire Department.	Provide drawings with replacement facilities.	Prior to issuance of permit for removal of Park Lake.	Applicant / Contractor	Department of Public Works. County Fire Department.	___/___/___
<b>PDF K.1-12:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<b>MMs K.1-1, K.1-2 and K.1-3 (Ci):</b> Not applicable to development in the County.	None by County.	See City MMRP.	See City MMRP.	City of Los Angeles.	Not applicable to County.
<b>MM K.1-4 (Co):</b> Upon the issuance of the first building permit for new construction in the County portion of the Project Site, the Project Applicant or its successor shall enter into an agreement with the County to reimburse the County for the cost of staffing Fire Station 51 with a permanent fire inspector to serve the needs of implementation of the	Complete reimbursement agreement.	Prior to issuance of first building permit for new project construction.	Applicant	Department of Public Works. County Fire Department.	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
Project during construction activities and ongoing expanded operations.					
<p><b>MM K.1-5 (Co):</b> Expanded County fire fighting facilities shall be provided to serve the Project. The expanded facilities may be a new fire station or remodeling of the existing Fire Station 51 to accommodate additional equipment and staffing (Facility Improvements). The decision to remodel the existing station or construct a second additional station is solely the County Fire Department's based upon its determination of service needs. The new fire station, if this option is selected, shall be a "four-man" station built to County Fire Department's specifications that could accommodate a new "tiller-quint", or similar equipment approved by the County Fire Department, with a minimum of four firefighter positions. The Project Applicant or its successor shall construct or cause to be constructed and furnish the Facility Improvements at no cost to the County as well as providing the quint and ancillary equipment for the quint, or similar equipment at no cost to the County. The County Fire Department shall be responsible for staffing costs. The Facility Improvements shall be constructed / conveyed to the County Fire Department before building permits are issued for: (a) the first new building that is 75-feet or greater in height; (b) the first new building that is 70,000 square-feet in total net new floor area; or (c) the last of multiple buildings less than 75 feet in height that cumulatively exceed 100,000 square feet of net new floor area in the same vicinity. The Project Applicant or its successor and the County Fire Department shall work together to appropriately locate the station.</p>	Completion / conveyance of improvement to County.	Prior to issuance of first building permit(s) for buildings meeting stated criteria.	Applicant	Department of Public Works. County Fire Department.	___/___/___
<p><b>MM K.1-6 (Co):</b> The Project Applicant or its successor shall engage in an annual review through Project build-out with the County Fire Department to determine fire service needs of the Project Site.</p>	Perform annual review.	Prior to submittal of annual MMRP compliance report.	Applicant	County Fire Department.	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>MM K.1-7 (Co):</b> Prior to the issuance of a certificate of occupancy, the Project Applicant or its successor shall contact the local water purveyor, if the fire hydrant is public, or a private sprinkler contractor, if the fire hydrant is private, to have the closest existing fire hydrant(s) to the location under review verified and tested to the satisfaction of the County Fire Department by conducting a fire flow availability test.	Verify fire flow availability to satisfaction of Fire Department.	Prior to issuance of temporary or permanent certificate of occupancy.	Applicant / Contractor	County Fire Department.	___/___/___
<b>MM K.1-8 (Ci/Co):</b> When the Applicant provides to County Fire Station 51 the tiller-quint pursuant to Mitigation Measure K.1-5 and the City Fire Department obtains the rescue ambulance pursuant to Mitigation Measure K.1-2, the City Fire Department and County Fire Department shall agree upon use of their respective equipment on an automatic response basis pursuant to a mutually acceptable automatic aid agreement.	Provide written verification specified equipment has been provided.	After Applicant provides equipment required by mitigation measure and City and County have reached agreement.	Applicant / City of Los Angeles Fire Department.  County Fire Department.	City of Los Angeles Fire Department. County Fire Department.	___/___/___
<b>K.2 PUBLIC SERVICES – Police/Sheriff</b>					
<b>Project Design Features</b>					
<b>PDF K.2-1 (Ci/Co):</b> During Project construction, the Project Applicant or its successor shall implement security measures at Project construction sites that are accessible to the general public. Security measures could include, but are not limited to, fencing, security lighting, and providing security personnel to patrol construction sites.	Include security measures in Construction Management Plan.	Prior to issuance of building permit.	Applicant / Contractor	County Sheriff <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF K.2-2 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>PDF K.2-3 (Ci/Co):</b> The Project Applicant or its successor shall design on-site streets, street lighting, and street signage for public streets in accordance with the emergency access requirements of the applicable jurisdiction (i.e., City of Los Angeles or County of Los Angeles). The Project Applicant or its successor shall submit to the applicable jurisdiction (i.e., City or County) for review the design plans for on-site street widths, street lighting, and street	Provide on-site design plans complying with applicable requirements.	Prior to issuance of applicable permits for on-site street widths, street lighting, and street signage.	Applicant / Project Engineer	Department of Public Works in consultation with County Sheriff. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
signage.					
<b>Mitigation Measures</b>					
<b>MM K.2-1:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>MM K.2-2 (Co):</b> The Project Applicant or its successor shall provide a new up to 16,000 square foot facility within the County portion of the Project Site, for the shared use of the County Sheriff's Department, contract security, and corporate security for the Project Site. Construction of the facility shall meet the operational needs of the County Sheriff's Department and comply with applicable California Code of Regulations Title 15 requirements and County standards. The facility shall include holding cells, office space, locker room, and several access points. The Project Applicant or its successor shall improve the facility at its cost. The facility shall be available once certificates of occupancy have been issued for a cumulative total of 765,000 square feet of net new Project development within County portions of the Project Site or 2022, whichever comes first, and once constructed shall replace the existing on-site County Sheriff's Department facility.	Provide 16,000 square-foot County facility as set forth in mitigation measure.	At the time of issuance of certificate of occupancy for cumulative total of 765,000 square feet or year 2022, whichever comes first.	Applicant	Department of Public Works.  County Sheriff.	___/___/___
<b>MM K.2-3 (Ci/Co):</b> Extra private security personnel shall be deployed at important entertainment events (i.e., visits to the Project Site by state, national, or international dignitaries and red carpet events), in order to reduce the need for sworn officer response.	Provide extra security.	At the time of applicable event.	Applicant	County Sheriff. (See City MMRP for projects in the City.)	___/___/___
<b>MMs K.2-4 and K.2-5:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>K.3 PUBLIC SERVICES – Schools</b>					
<b>Project Design Features</b>					
No Project Design Features are identified in the Environmental Impact Report for this environmental issue.	None	N/A	N/A	N/A	N/A

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>Mitigation Measures</b>					
<b>MM K.3-1 (Ci/Co):</b> The Project Applicant or its successor shall pay all applicable school fees to the Los Angeles Unified School District to offset the impact of additional student enrollment at schools serving the Project area.	Payment of LAUSD fees.	Prior to issuance of first building permit for each building.	Applicant	Department of Regional Planning in consultation with the Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>K.4 PUBLIC SERVICES – Parks and Recreation</b>					
<b>Project Design Features</b>					
<b>PDFs K.4-1, K.4-2, and K.4-3:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>K.5 PUBLIC SERVICES – Libraries</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>Mitigation Measures</b>					
<b>MMs K.5-1, K.5-2, K.5-3 and K.5-4:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>L.1 UTILITIES – Sewer</b>					
<b>Project Design Features</b>					
<b>PDF L.1-1 (Ci/Co):</b> Prior to the development of a new building, the capacity of the on-site sewer lines serving the building shall be evaluated and replacement or new sewer lines shall be installed as necessary.	Provide required specifications on Project drawings.	Prior to issuance of permits for sewer lines.	Applicant / Project Engineer	County of Los Angeles Sanitation District. City of Los Angeles, Department of Public Works, Bureau of Sanitation. <i>(See City MMRP for projects in</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
				<i>the City.)</i>	
<b>PDF L.1-2 (Ci/Co):</b> Gauging stations shall be installed in the proposed sewer lines in the County areas of the Project Site at the point of connection with the City-owned sewer for wastewater flows to pass through before entering a City-owned sewer.	Provide required specifications on Project drawings	Prior to issuance of permits for the sewer connection.	Applicant / Project Engineer / Contractor	County of Los Angeles Sanitation District. City of Los Angeles, Department of Public Works, Bureau of Sanitation. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF L.1-3 (Ci/Co):</b> New sanitary sewers in the City areas of the Project Site shall be designed to conform to the standards of the City’s Bureau of Sanitation. New sanitary sewers in the County areas of the Project Site shall be designed to conform to the standards of the County of Los Angeles Sanitation District. The Project Applicant or its successor shall construct the additional on-site sanitary sewer system improvements required to support the additional development per these standards.	Provide required specifications on Project drawings.	Prior to issuance of permits for sewers.	Applicant / Project Engineer	County of Los Angeles Sanitation District. City of Los Angeles, Department of Public Works, Bureau of Sanitation. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>L.2 UTILITIES – Water</b>					
<b>Project Design Features</b>					
<b>PDF L.2-1 (Ci/Co):</b> Any additional water lines and hydrants that may be needed to provide additional fire flows to new buildings shall be constructed as necessary. The new water lines shall be designed and installed in accordance with applicable City and County standards and would be sized to accommodate both fire flow demand and peak day domestic demand.	If applicable, include new lines and hydrants in Project drawings.	Prior to issuance of building permits.	Applicant / Project Engineer / Contractor	Department of Public Works. County Fire Department <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF L.2-2 (Ci/Co):</b> All water lines that are constructed that deliver both domestic and fire water	If applicable, include new lines in Project	Prior to issuance of building permits.	Applicant / Project Engineer	Department of Public Works.	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
shall be constructed with the necessary materials and appropriate size to deliver the highest instantaneous demand on the individual water line.	drawings.		/ Contractor	County Fire Department <i>(See City MMRP for projects in the City.)</i>	
<p><b>PDF L.2-3 (Ci/Co):</b> The following water conservation features shall be incorporated into the proposed outdoor and indoor areas of the Project:</p> <p><u>Outdoor</u></p> <ul style="list-style-type: none"> <li>• Use recycled water for landscape irrigation.</li> <li>• Installation of the infrastructure to deliver and use recycled water.</li> <li>• Expanded use of high efficiency irrigation systems, including weather-based irrigation controllers with rain shutoff technology or smart irrigation controllers for any area that is either landscaped or designated for future landscaping.</li> <li>• Use of native/drought tolerant plant materials (for at least 25 percent of new landscaping) and use of water efficient landscaping such as proper hydro-zoning, turf minimization, and landscaping contouring (to minimize precipitation runoff) for new landscaping in areas other than production activities, entertainment attractions, sets/façades, the theme park, and visitor entries to the theme park and Universal CityWalk. Other than the exempted areas described above, areas of the Project Site within the County’s jurisdiction would also comply with the County’s landscaping design regulations, as applicable.</li> <li>• Provide education on water conservation for employees.</li> </ul> <p><u>Indoor</u></p> <ul style="list-style-type: none"> <li>• Install high efficiency toilets that use 1.28 gallons per flush or less.</li> <li>• Install high efficiency urinals that use 0.5 gallons per flush or less for commercial applications.</li> <li>• Install restroom faucets that use 1.5 gallons per</li> </ul>	Include water conservation measures set forth in mitigation measure on Project drawings.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
minute or less for all applications. <ul style="list-style-type: none"> <li>Install pre-rinse spray valves that use 1.6 gallons per minute or less for commercial kitchens.</li> <li>Install self-closing faucets for public restrooms for commercial applications.</li> <li>Install high efficiency clothes washers with a water savings factor of 7.5 or less for commercial applications.</li> <li>Install cooling tower conductivity controllers or cooling tower pH conductivity controllers, as applicable.</li> </ul>					
<b>PDFs L.2-4 and L.2-5 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>Mitigation Measures</b>					
<b>MM L-2-1 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>L.3 UTILITIES – Solid Waste</b>					
<b>Project Design Features</b>					
<b>PDF L.3-1 (Ci/Co):</b> During new construction a minimum of 65 percent of the non-hazardous demolition and construction debris by weight from construction of new Project buildings (not including sets/façades, production activities, and temporary uses) shall be recycled and/or salvaged for reuse.	Include recycling requirement in Construction Management Plan.	Prior to issuance of building permit.	Applicant / Contractor	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDFs L.3-2, L.3-3 and L.3-4:</b> <i>Deleted due to selection of Alternative 10.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>PDF L.3-5 (Ci/Co):</b> During occupancy and operations, the Project shall have a solid waste diversion target of 65 percent of the non-hazardous waste (not including production activities and temporary uses), pursuant to the City's Department of Building and Safety, and Bureau of Sanitation regulations and County Specific Plan.	Documentation of agreement with waste hauler(s).	Annually at time of MMRP compliance report.	Applicant	County of Los Angeles Sanitation District. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<i>Environmental Impact Report for this environmental issue.</i>					
<b>L.4 UTILITIES – Electricity</b>					
<b>Project Design Features</b>					
<p><b>PDF L.4-1 (C/Co):</b> Where available, spare conduits in the existing underground cable and conduit system within the Project Site would be utilized in lieu of providing new conduits. For areas with no spare conduits, additional conduits would be provided. New cables, electrical lines, and facilities would be provided for the Project in currently underdeveloped areas.</p>	<p>For new conduits, include in Project drawings.</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Project Architect / Project Engineer</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>PDF L.4-2 (Co):</b> Under the Project, additional power would be supplied to meet the increased demand for the County portion of the Project Site through relocation of the Studio Master Substation and upgrades to the substation owned and operated by Southern California Edison. Specifically:</p> <ul style="list-style-type: none"> <li>• A new Project Applicant-owned and operated distribution substation would be located east of the existing Studio Master Substation. The Project Applicant-owned facility currently housed within the existing Studio Master Substation would be relocated and expanded with new equipment to the new location.</li> <li>• Additional electricity would be supplied to the existing Studio Master Substation through an additional 66kV transmission line for an additional 60 MVA for the Project Site, which will increase the total capacity of the existing Studio Master Substation to 100 MVA. The substation would also be equipped with an outdoor 66kV Gas Insulated Switchgear which would be configured in an operating and transfer bus arrangement. All 66kV lines and transformer bank feeders would enter the Gas Insulated Switchgear equipment by means of an underground riser pedestal. The substation</li> </ul>	<p>Completion of new substation and related electrical system improvements by the applicant.</p>	<p>As determined by Southern California Edison.</p>	<p>Applicant / Project Engineer</p>	<p>Department of Public Works in consultation with Southern California Edison.</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>would also have a Mechanical-Electrical Equipment Room to house all controls, switches, relay protection equipment, alarms, meters, batteries, HVAC and the station AC and DC distribution panels.</p> <ul style="list-style-type: none"> <li>Once expanded, operation of the existing Studio Master Substation facility would transfer from the Project Applicant or its successor to Southern California Edison, and the substation would be connected to the Edison Universal Substation via subterranean electrical lines on Southern California Edison's 66kV subtransmission system. The Edison Universal Substation has an existing capacity of 22 MVA. The combined substations that would be operated by Southern California Edison would have a total capacity of 122 MVA and would supply power to the new Project Applicant-owned and operated distribution substation, which would distribute electricity within the County portion of the Project Site.</li> <li>The private on-site electrical system would have new electrical lines to serve new buildings constructed as part of the Project.</li> </ul>					
<p><b>PDFs L-4-3 and L.4-4 (Ci):</b> <i>Not applicable to development in the County.</i></p>	<p><i>None by County.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>See City MMRP.</i></p>	<p><i>City of Los Angeles.</i></p>	<p><i>Not applicable to County.</i></p>
<p><b>PDF L.4-5 (Ci/Co):</b> Each of the Project's buildings would be subject to the State Energy Conservation Standards for New Non-Residential Buildings (Title 24, Part 6, Article 2, California Code of Regulations). The Project shall incorporate energy conservation measures to exceed Title 24 (2005) requirements by 15 percent. In the event Title 24 is amended such that the energy conservation requirements exceed Title 24 (2005) by more than 15 percent, the Project shall comply with the amended Title 24.</p>	<p>Provide required specifications on Project drawings.</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Project Architect / Project Engineer</p>	<p>Department of Public Works. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>PDF L.4-6 (Ci/Co):</b> Install efficient lighting and lighting control systems.</p>	<p>Provide required specifications on</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Project Architect</p>	<p>Department of Public Works.</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
	Project drawings.		/ Project Engineer	(See City MMRP for projects in the City.)	
<b>PDF L.4-7 (Ci/Co):</b> Install light colored “cool” roofs.	Provide required specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. (See City MMRP for projects in the City.)	___/___/___
<b>PDF L.4-8 (Ci/Co):</b> Install energy efficient heating and cooling systems, appliances (e.g., ENERGY STAR) and equipment, and control systems.	Provide required specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. (See City MMRP for projects in the City.)	___/___/___
<b>PDF L.4-9 (Ci/Co):</b> Install light-emitting diodes for private on-site traffic and street lighting.	Provide required specifications on Project drawings.	Prior to issuance of applicable permits.	Applicant / Project Engineer	Department of Public Works. (See City MMRP for projects in the City.)	___/___/___
<b>PDF L.4-10:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>PDF L.4-11 (Ci/Co):</b> Provide education on energy efficiency, water conservation, waste diversion, and recycling services to the Project Applicant’s employees through new employee orientation materials and three times annually through the company website, exhibits, or meetings on energy conservation.	Provide employee education as specified in the mitigation measure.	At employee orientation and three times annually.	Applicant	Department of Regional Planning. (See City MMRP for projects in the City.)	___/___/___
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>L.5 UTILITIES – Natural Gas</b>					
<b>Project Design Features</b>					
<b>PDFs L.5-1 and L.5-2:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>PDF L.5-3 (Ci/Co):</b> A portion of the existing gas main located beneath Universal Hollywood Drive shall be removed and relocated by the Project Applicant or its successor to the extent necessary in connection with	Submit plans for replacement gas main as required.	Prior to issuance of applicable permit(s) for new gas main and realignment of	Applicant / Project Engineer	Department of Public Works Southern California	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
the proposed re-alignment of the road. The relocation of this line would not impact its capacity nor its ability to supply natural gas to the Project Site, as the relocated line would be fully operational prior to abandoning the existing line.		Universal Hollywood Drive		Gas Company. <i>(See City MMRP for projects in the City.)</i>	
<b>PDF L.5-4 (Ci/Co):</b> State Energy Conservation Standards for New Non-Residential Buildings, pursuant to Title 24, Part 6, Article 2, California Code of Regulations (Title 24) (2005), shall be exceeded by 15 percent. In the event Title 24 is amended such that the energy conservation requirements exceed Title 24 (2005) by more than 15 percent, Project shall comply with the amended Title 24.	Provide required specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF L.5-5 (Ci/Co):</b> Install energy efficient heating and cooling systems, appliances (e.g., ENERGY STAR) and equipment, and control systems.	Provide required specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF L.5-6:</b> Deleted due to selection of Alternative 10.	None	N/A	N/A	N/A	N/A
<b>PDF L.5-7 (Ci/Co):</b> Provide education on energy efficiency, water conservation, waste diversion, and recycling services to the Project Applicant's employees through new employee orientation materials and three times annually through company website, exhibits, or meetings on energy conservation.	Provide employee education as specified in the mitigation measure.	At employee orientation and three times annually.	Applicant	Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A
<b>M. ENVIRONMENTAL SAFETY</b>					
<b>Project Design Features</b>					
<b>PDF M-1 (Ci/Co):</b> Prior to the issuance of any demolition permit or building permit for remodeling of existing buildings, the Project Applicant or its successor shall provide evidence to the City of Los	Provide written verification of qualified asbestos abatement contract, as	Prior to issuance of demolition or building permits.	Applicant / Contractor	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
Angeles, Department of Building and Safety or County of Los Angeles, Department of Public Works, as applicable, that the demolition contract provides for a qualified asbestos abatement contractor/specialist to remove or otherwise abate or manage asbestos during demolition or renovation activities in accordance with all applicable federal, state and local regulations.	applicable.				
<b>PDF M-2 (Ci/Co):</b> Prior to the issuance of any demolition permit or building permit for remodeling of existing buildings, the Project Applicant or its successor shall provide evidence to the City of Los Angeles, Department of Building and Safety, or County of Los Angeles, Department of Public Works, as applicable, that the demolition contract provides for a qualified lead-based paint abatement contractor/specialist to remove or otherwise abate or manage lead-based paint during demolition or renovation activities in accordance with all applicable federal, state and local regulations.	Provide written verification of qualified lead-based paint abatement contract, as applicable.	Prior to issuance of demolition or building permits.	Applicant / Contractor	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF M-3 (Ci/Co):</b> The Project Applicant or its successor shall implement a soil management plan, or other applicable plan, approved by the Department of Toxic Substances Control, pursuant to Department of Toxic Substances Control's Voluntary Cleanup Program, or other applicable state or local regulatory agency providing oversight, to address contamination in soil in the Back Lot Area. The approved soil management plan or other applicable plan shall include procedures for soil sampling and remedial options that may include removal (excavation), treatment ( <i>in-situ</i> or <i>ex-situ</i> ), or other measures, as appropriate.	Include soil management plan, or other applicable plan, in Construction Management Plan.	Prior to issuance of grading, foundation, other earth-moving, or building permits for work in the Back Lot Area.	Applicant / Project Environmental consultant / Contractor	Department of Public Works. California State Department of Toxic Substances Control. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF M-4 (Ci/Co):</b> The Project Applicant or its successor shall submit to the County Fire Department, City Fire Department, and Los Angeles County Department of Public Works, and City Department of Building and Safety, as applicable, an updated emergency response and/or evacuation	Submit updated emergency response and/or evacuation plan.	Annually prior to MMRP compliance report.	Applicant	County Fire Department. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>plan, as appropriate, to include operation of the Project. The emergency response plan shall include but not be limited to the following: mapping of evacuation routes for vehicles and pedestrians, and the location of the nearest hospital and fire departments.</p>					
<p><b>Mitigation Measures</b></p>					
<p><b>MM M-1 (Ci/Co):</b> If soil contamination is suspected to be present, prior to excavation and grading, the South Coast Air Quality Management District's Rule 1166 shall be implemented, as appropriate. If soil contamination is not suspected, but is observed (i.e., by sight, smell, visual, etc.) by a qualified professional during excavation and grading activities, excavation and grading within such an area shall be temporarily halted and redirected around the area until the appropriate evaluation and follow-up measures are implemented, as contained in Southern California Air Quality Management District's Rule 1166, so as to render the area suitable for grading activities to resume. The contaminated soil discovered shall be evaluated and excavated/disposed of, treated <i>in-situ</i> (in-place), or otherwise managed in accordance with all applicable regulatory requirements.</p>	<p>Implement Rule 1166 as applicable.</p>	<p>Prior to issuance of grading or excavation permits if contamination suspected in advance of work, or as soon as contaminated soils encountered during grading and excavation activities.</p>	<p>Applicant / Contractor / Project Environmental Consultant</p>	<p>Department of Public Works. South Coast Air Quality Management District <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>MM M-2 (Ci/Co):</b> As required by the Occupational Safety and Health Administration, Construction Worker Safety Plan shall be developed by each contractor working within the footprint of the landfill. The Construction Worker Safety Plan shall comply with Occupational Safety and Health Administration Safety and Health Standards 29 Code of Federal Regulations 1910.120, the California Code of Regulations, Title 8, General Industry Safety orders, and U.S. Occupational Safety and Health Administration. The Plan shall include requirements associated with potential exposure to landfill gases. In addition, construction personnel shall wear protective equipment and clothing and other safety</p>	<p>Prepare Construction Worker Safety Plan for Projects within the footprint of the landfill and include in the Construction Management Plan, if applicable.</p>	<p>Prior to issuance of building permits for buildings within the footprint of the landfill.</p>	<p>Applicant / Contractor</p>	<p>Department of Public Works. Occupational Safety and Health Administration. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
equipment, as appropriate, in accordance with the Construction Worker Safety Plan and/or Project site-specific safety plans, as applicable.					
<b>MM M-3 (Co):</b> Construction of all new development within 1,000 feet of the landfill shall be designed and constructed to prevent gas migration into the buildings in accordance with the recommendations of a licensed civil engineer. The recommendations shall be subject to the review and approval of the Los Angeles County, Department of Public Works.	Provide required specifications on Project drawings for buildings within 1,000 feet of landfill.	Prior to issuance of building permits for buildings within 1,000 feet of landfill.	Applicant / Contractor	Department of Public Works.	___/___/___
<b>MM M-4 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>MM M-5 (Ci/Co):</b> During operation, monitoring of methane safety systems shall occur in accordance with County or City requirements, as applicable.	Monitoring of methane safety systems, if applicable.	During operations.	Applicant	Department of Public Works (See City MMRP for projects in the City.)	___/___/___
<b>MM M-6 (Ci/Co):</b> The Project Applicant or its successor shall locate and operate satellite-uplink antennas with an absolute minimum of 1 foot of separation between the eye level and all waveguide connections, waveguide components, and flexible waveguide. Exposure within 1 to 3 feet from waveguide shall be limited to less than one minute.	Provide required specifications on Project drawings.	Prior to issuance of applicable permit.	Applicant	Department of Public Works. Department of Regional Planning. (See City MMRP for projects in the City.)	___/___/___
<b>MM M-7 (Ci/Co):</b> The Project Applicant or its successor shall develop and use a simple lockout, tagout procedure prior to the maintenance activities of satellite-uplink antennas (i.e., reflector antennas) to ensure that the high-power amplifiers cannot be energized while anyone is working on an antenna.	Provide maintenance and safety procedures for applicable antennas.	Prior to installation of applicable antenna(s).	Applicant	Department of Public Works. (See City MMRP for projects in the City.)	___/___/___
<b>MM M-8 (Ci/Co):</b> If a 2.4-meter-diameter antenna is installed so that the bottom lip of the antenna is less than 7 feet above ground, the Project Applicant or its successor shall install a barrier, such as a chain and stanchion barrier to be added in front of the antenna, to prevent access to the area directly in front of the antenna. As appropriate, the width of the restricted access area shall be 10 feet wide, to ensure that no	Provide required specifications on Project drawings, as applicable.	Prior to issuance of applicable permits.	Applicant / Contractor	Department of Public Works. (See City MMRP for projects in the City.)	___/___/___

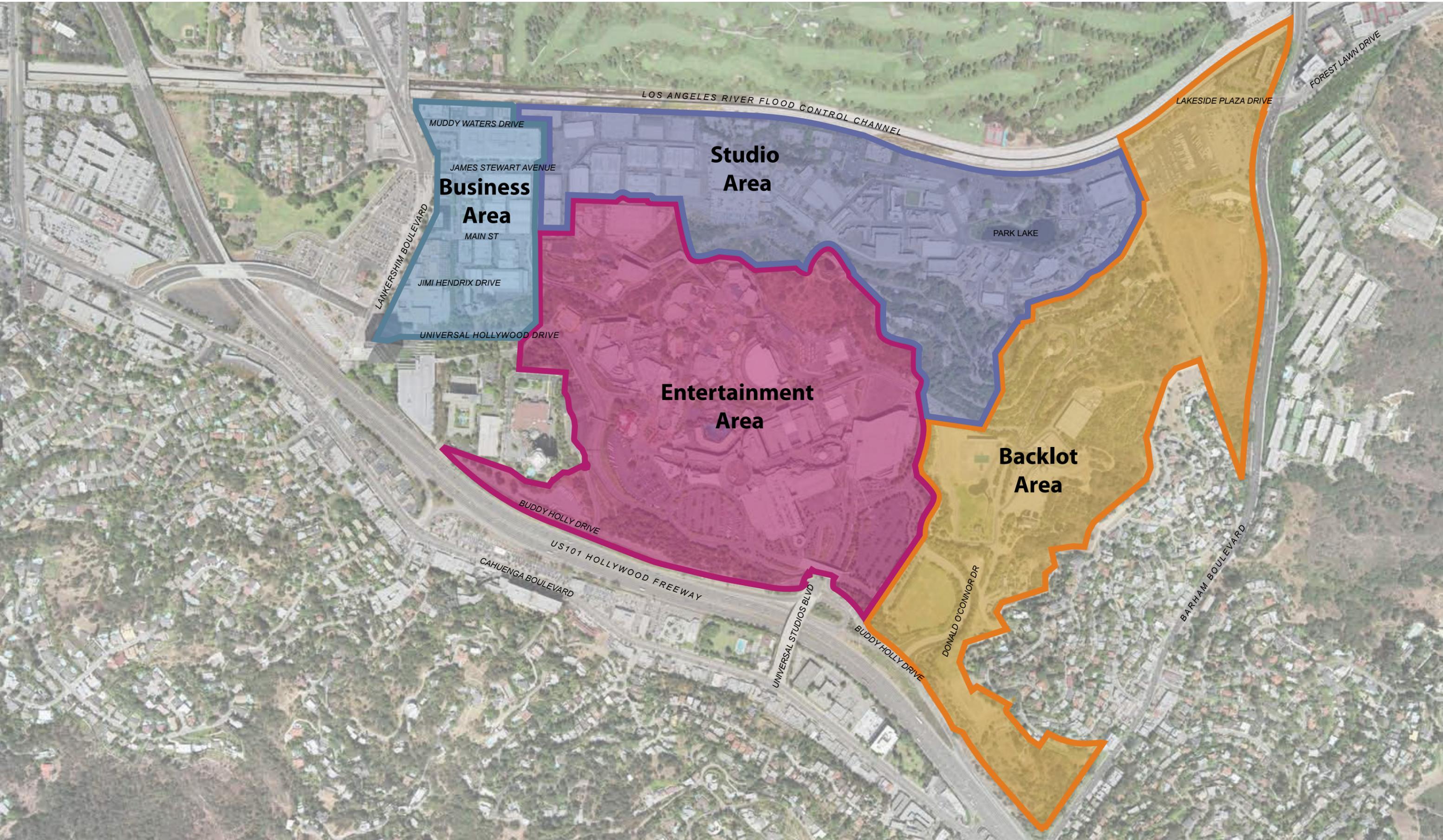
Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>access to the area is possible by leaning over the chain. The distance in front of the antenna shall be determined based on the minimum elevation angle and height of the bottom lip of the antenna above the ground. The bottom lip of the antenna shall be a minimum of 7 feet above ground level at the chain. In addition, a warning/notice sign shall be hung on each side of the enclosure.</p> <p>As an alternative, 2.4-meter-diameter antenna(s) shall be mounted on a platform, with a chain and warning/notice sign on the platform stairs. The bottom lip of the antenna shall be a minimum of 7 feet above ground level.</p>					
<p><b>MM M-9 (Ci/Co):</b> The Project Applicant or its successor shall restrict access to the beam of the 2.4-meter-diameter antenna(s) only to workers trained in radio frequency safety.</p>	<p>Provide maintenance and safety procedures for applicable antennas.</p>	<p>Prior to installation of applicable antenna(s).</p>	<p>Applicant</p>	<p>Department of Public Works Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>MM M-10 (Ci/Co):</b> Prior to operation of new antennas on the Project Site, the Project Applicant's or its successor's existing Radio Frequency Radiation Safety and Health Program shall be updated and additional training given to maintenance personnel, as appropriate.</p>	<p>Provide maintenance and safety procedures for applicable antennas.</p>	<p>Prior to operation of new antenna(s).</p>	<p>Applicant</p>	<p>Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i></p>	<p>___/___/___</p>
<p><b>N.1 EMPLOYMENT</b></p>					
<p><b>Project Design Features</b></p>					
<p><i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i></p>	<p>None</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>Mitigation Measures</b></p>					
<p><i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i></p>	<p>None</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<b>N.2 HOUSING</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>N.3 POPULATION</b>					
<b>Project Design Features</b>					
<i>No Project Design Features are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	<i>None</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<b>O. CLIMATE CHANGE</b>					
<b>Project Design Features</b>					
<b>PDF O-1 (Ci/Co):</b> Construction of new buildings shall exceed Title 24 (2005) energy requirements by 15 percent. In the event Title 24 is amended such that the energy conservation requirements exceed Title 24 (2005) by more than 15 percent, the building shall comply with the amended Title 24.	Provide required specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>PDF O-2 (Ci):</b> <i>Not applicable to development in the County.</i>	<i>None by County.</i>	<i>See City MMRP.</i>	<i>See City MMRP.</i>	<i>City of Los Angeles.</i>	<i>Not applicable to County.</i>
<b>PDF O-3 (Ci/Co):</b> The Project shall include the following energy saving and emission reducing features that would be implemented during the design and construction of each new building (other than sets/facades): <ul style="list-style-type: none"> <li>Installing energy efficient heating and cooling</li> </ul>	Provide required specifications on Project drawings.	Prior to issuance of building permits.	Applicant / Project Architect / Project Engineer	Department of Public Works. <i>(See City MMRP for projects in the City.)</i>	___/___/___

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>systems, equipment, and control systems;</p> <ul style="list-style-type: none"> <li>• Installing energy efficient appliances (e.g., Energy Star refrigerators, clothes washers, clothes dryers, dishwashers, ventilation fans, and ceiling fans);</li> <li>• Installing efficient lighting and lighting control systems;</li> <li>• Installing light-emitting diodes for private on-site traffic and street lighting;</li> <li>• Installing light colored 'cool' roofs;</li> <li>• Providing education on energy efficiency, waste diversion, recycling services to the Project Applicant's employees through new employee orientation materials and three times annually through company website, exhibits, or meetings on energy conservation;</li> <li>• Prohibit Heating, Ventilation, and Air-Conditioning, refrigeration, and fire suppression equipment that contains banned chlorofluorocarbons;</li> <li>• For mechanically or naturally ventilated spaces in the building, meet the minimum requirements of Section 121 of the California Energy Code or the applicable local code, whichever is more stringent;</li> <li>• Adhesives, Paints, Stains, Coatings, and Carpet shall be low volatile organic compound; and</li> <li>• Minimum Efficiency Reporting Value 6 or higher filters are installed on central air and heating systems.</li> </ul>					
<p><b>PDF O-4:</b> Deleted due to selection of Alternative 10.</p>	<p>None</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>PDF O-5 (Ci/Co):</b> The Project shall implement the following indoor and outdoor water conservation project design features:  <u>Outdoor:</u></p> <ul style="list-style-type: none"> <li>• Use of native/drought tolerant plant materials (for</li> </ul>	<p>Provide required specifications on Project drawings.</p>	<p>Prior to issuance of building permits.</p>	<p>Applicant / Project Architect / Project Engineer</p>	<p>Department of Public Works.                      (See City MMRP for projects in the City.)</p>	<p>___/___/___</p>

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
<p>at least 25 percent of new landscaping) and use of water efficient landscaping such as proper hydro-zoning, turf minimization, and landscaping contouring (to minimize precipitation runoff) for new landscaping in areas other than production activities, entertainment attractions, sets/facades, the theme park, and visitor entries to the theme park and Universal CityWalk. Other than the exempted areas described above, areas of the Project Site within the County’s jurisdiction would also comply with the County’s landscaping design regulations, as applicable;</p> <ul style="list-style-type: none"> <li>• Use of available reclaimed water for landscape irrigation;</li> <li>• Installation of the infrastructure to deliver and use reclaimed water;</li> <li>• Expanded use of high efficiency irrigation systems, including weather-based irrigation controllers with rain shutoff technology or smart irrigation controllers for any area that is either landscaped or designated for future landscaping; and</li> <li>• Provide education on water conservation to the Project Applicant’s employees through new employee orientation materials and three times annually through company website, exhibits, or meetings on energy conservation.</li> </ul> <p><u>Indoor:</u></p> <ul style="list-style-type: none"> <li>• High Efficiency Toilets: 1.28 gallons/flush or less (All Applications);</li> <li>• High Efficiency Urinals: 0.5 gallons/flush or less (Commercial Applications);</li> <li>• Restroom Faucets: 1.5 gallons/minute or less (All Applications);</li> <li>• Pre-rinse Spray Valve: 1.6 gallons per minute or less for commercial kitchens;</li> <li>• Public Restroom: self-closing faucets</li> </ul>					

Project Design Feature / Mitigation Measure	Action Required	Mitigation Timing	Responsible Party	Monitoring Agency or Party	Date Completed
(Commercial Applications); <ul style="list-style-type: none"> <li>High efficiency clothes washers (water factor of 7.5 or less) (Commercial Applications); and</li> <li>Cooling tower conductivity controllers or cooling tower pH conductivity controllers, as applicable.</li> </ul>					
<b>PDF O-6 (Ci/Co):</b> The Project shall implement the following: <ul style="list-style-type: none"> <li>Establish a solid waste diversion target of 65 percent for non-hazardous operational waste (not including production activities and temporary uses);</li> <li>During new construction, a minimum of 65 percent of non-hazardous demolition and construction debris by weight from construction of new Project buildings (not including sets/façades, production activities and temporary uses) would be recycled and/or salvaged for reuse; and</li> <li>Recycling Centers: Provide readily accessible areas to serve the entire building for depositing, storage, and collection of non-hazardous materials for recycling.</li> </ul>	<ul style="list-style-type: none"> <li>Documentation of agreement with waste hauler(s).</li> <li>Include recycling requirement in Construction Management Plan.</li> <li>Include in design of Project.</li> </ul>	<ul style="list-style-type: none"> <li>Annually at time of MMRP compliance report.</li> <li>Prior to issuance of building permit.</li> <li>Prior to issuance of building permit.</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> <li>Applicant / Contractor</li> <li>Applicant / Contractor / Project Architect</li> </ul>	County of Los Angeles Sanitation District; Department of Regional Planning. <i>(See City MMRP for projects in the City.)</i>	___/___/___
<b>Mitigation Measures</b>					
<i>No Mitigation Measures are identified in the Environmental Impact Report for this environmental issue.</i>	None	N/A	N/A	N/A	N/A



# ATTACHMENT A - PROJECT DEVELOPMENT AREAS

AUGUST 15, 2012



# ATTACHMENT B

## CITY OF LOS ANGELES INTER-DEPARTMENTAL CORRESPONDENCE

DOT Case No. CEN 10-5270  
NBC Universal Evolution Plan

Date: August 13, 2012

To: Jon Foreman, Senior City Planner  
Department of City Planning

From: Tomas Carranza, Senior Transportation Engineer  
Department of Transportation



**Subject: TRAFFIC ASSESSMENT OF ALTERNATIVE 10 OF THE NBC UNIVERSAL EVOLUTION PLAN PROJECT (EIR NO. ENV 2007-07-1036)**

*On April 2, 2010, the Department of Transportation (DOT) issued a traffic assessment report to the Department of City Planning on the proposed NBC Universal Evolution Plan project located within the 391-acre Universal City property. However, in response to public comments submitted on the project's Draft Environmental Impact Report, the applicant has presented a new "no residential" alternative that is of reduced density and considered environmentally superior as it is estimated to result in 35% fewer afternoon peak hour vehicle trips compared to the project that was the subject of DOT's original report. The applicant has submitted a new traffic study to reflect the changes resulting from the new scenario (Alternative 10). Therefore, DOT submits this traffic impact assessment report for Alternative 10.*

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DOT has reviewed the traffic analysis dated August 2012, prepared by the applicant's traffic engineering consultant team of Gibson Transportation Consulting, Inc. and Raju Associates, Inc., for Alternative 10 of the NBC Universal Evolution Plan project. The project, located within the 391-acre Universal City property, proposes additions to the existing studio, theme park, retail and entertainment uses, and the addition of new hotel uses. Alternative 10 represents a substantial reduction in the overall density of the proposed project that was the subject of a traffic impact study dated March 2010. Alternative 10 would eliminate the proposed 2,937 residential units and 180,000 square feet of neighborhood retail, while increasing the area for studio office, entertainment space and hotels. The Alternative 10 project involves the net increase of approximately 2.68 million square-feet of new commercial development, including additional retail space within Universal CityWalk, expansion of the Universal Studios Theme Park, two 500-room hotels and additional studio and office space. This includes approximately 3.25 million square-feet of new development and the demolition of approximately 585,000 square-feet of existing uses. A detailed breakdown of the project components is listed in **Attachment A**.

The project site, which is illustrated in **Attachment B**, is divided into the following three development subareas for planning purposes:

- Studio/Business Areas West - includes the offices and related structures located on the western portion of the project site fronting Lankershim Boulevard
- Studio/Business Areas East and Back Lot Area - includes the studio offices and production facilities for movie, television and commercial production located along part of the northern portion of the project site adjacent to the Los Angeles River Flood Control Channel

- Entertainment Area - includes the Universal Studios Hollywood theme park, Universal CityWalk and related uses located in the center and southern portion of the project site

The project is expected to be built over various phases, with the project buildout completed by year 2030. The following report summarizes the assumptions used to prepare the traffic impact analysis, the anticipated significant project traffic impacts, and the recommended transportation mitigation plan to offset the impacts. This report represents DOT's revised assessment of the project's traffic impacts as reflected in Alternative 10. Revisions or amendments to this letter may follow as the project proceeds through the environmental review and certification process, or if any further revisions to the project are proposed.

## I. TRAFFIC IMPACT ANALYSIS

The transportation analysis adequately addresses the traffic impacts of the project. The study describes a comprehensive set of transportation mitigation measures deemed necessary to fully or partially mitigate the project's significant traffic impacts.

### A. Study Area

In preparing the traffic impact analysis, 164 intersections were identified for detailed analysis. Of these intersections studied, 96 are entirely within the City of Los Angeles, 28 are within the City of Burbank, and four are within the City of West Hollywood. There are 36 intersections that are under the shared jurisdiction of the City of Los Angeles and another agency, including the freeway ramp intersections that are under the joint jurisdiction with Caltrans. The study intersections are generally located within the area bounded by Buena Vista Street in the City of Burbank to the east, Burbank Boulevard to the north, Sepulveda Boulevard to the west, and Santa Monica Boulevard to the south. The study area is illustrated in **Attachment C** and was examined to ensure that all potential project impacts are appropriately evaluated. **Attachment D** lists all of the 164 study intersections and identifies the agency with jurisdiction over each intersection. Of these intersections, 148 are signalized intersections under future conditions that were evaluated for potential project impacts. The remaining 16 unsignalized intersections were individually analyzed solely to evaluate if a new traffic signal is warranted.

### B. Trip Generation

The Alternative 10 project is estimated to generate a net increase of approximately 2,241 trips during the a.m. peak hour, 2,197 trips during the p.m. peak hour, and 23,601 trips on a typical weekday (see **Attachment E**). As shown in Attachment E, the trip generation estimates for Alternative 10 are significantly lower than the trip generation for the project alternative evaluated in the traffic study dated March 2010. It should be noted that the trip generation figures are conservative estimates that do not include any trip reductions that are typical of mixed-use developments and of projects within close proximity of a Metro transit station. DOT's traffic study guidelines allow projects to reduce their total trip generation to account for likely transit usage to and from the site, and for the internal-trip making opportunities that

are afforded by mixed-use projects. Since the project is located across the street from a Metro Red Line station and bus transfer facility, a trip reduction of the project's total trip generation rate to account for the use of transit to and from the site is acceptable.

The source of the trip generation rates used for the office, retail, and hotel land uses is the Institute of Transportation Engineers (ITE) "Trip Generation Handbook, 7<sup>th</sup> Edition." However, since the proposed studio-related and theme park uses are unique and are not characterized in the ITE handbook, empirical data from the project site and from other similar studio uses were evaluated. Traffic surveys of the studio-related uses in the existing NBC/Universal campus were used to validate these special use trip generation rates.

C. Travel Demand Simulation Model

A traffic forecasting model was developed to forecast future traffic volumes and to estimate the expected distribution of the project's traffic. The model for the traffic impact analysis was developed using the 2004 Regional Transportation Plan travel demand model prepared by the Southern California Association of Governments (SCAG) as the base. Enhancements and refinements to the SCAG model were necessary to add the detail needed in preparing an intersection-level traffic impact analysis for this project. The enhancements included expanding the SCAG roadway network to include additional nodes (intersections), links (roadways), and traffic analysis zones (TAZ). Also, the SCAG network was updated to reflect the current number of lanes, link capacities and link speeds. The traffic model for the project was calibrated consistent with DOT guidelines, which require the model results for link volumes in the existing conditions scenario to be reasonably comparable to actual observed roadway counts. Then, using SCAG socioeconomic forecasts, and the estimated traffic and travel patterns of the 256 related projects in the area (including the previously proposed Metro Universal project), the model was used to simulate future traffic demands for year 2030.

D. Traffic Impacts

In order to evaluate the effects of the project traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-to-capacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to DOT's established threshold standards to assess the project-related traffic impacts. DOT has determined that, before accounting for the trip reduction benefits afforded to projects adjacent to Metro Line stations, of the 148 signalized intersections studied, the project would result in significant traffic impacts at 60 intersections with TDM before mitigation. The proposed transportation mitigation program (discussed in the next section) is expected to fully or partially mitigate these project impacts. However, the remaining impact at four intersections would be considered significant and unmitigated after implementation of the proposed mitigation program. The intersections expected to experience unmitigated impacts during one or both of the peak commute hours are:

1. US-101 Northbound Ramps / Campo de Cahuenga Way (p.m. peak hour)
2. Cahuenga Boulevard / Moorpark Street (both peak hours)
3. Lankershim Boulevard / Main Street (p.m. peak hour)
4. Lankershim Boulevard / Campo de Cahuenga Way / Universal Hollywood Drive (a.m. peak hour)

Of these four intersections, two are expected to operate at a level-of-service (LOS) of C or better after build-out of the project, and two are adjacent to the project site. **Attachment F1** summarizes the morning and afternoon peak hour LOS calculated for the 148 signalized study intersections for the different scenarios and indicates the extent of the project-related traffic impacts. Similarly, **Attachment F2** summarizes the LOS for the 16 stop-controlled intersections. To address project impacts, a comprehensive set of transportation improvements is necessary to fully or partially mitigate these anticipated impacts. The results of the proposed transportation mitigation measures are also shown on Attachment F1, which summarizes the benefit of the improvements in terms of V/C ratio at the study intersections.

F. Shared Mitigation

Consistent with DOT policies, the cost of traffic mitigation measures can be shared between two or more development projects, provided that the mitigation can fully or partially mitigate the combined impact of these projects. This would be applicable in those cases where there are other proposed developments in the vicinity that may also contribute toward the cost of the improvement.

## II. PROJECT TRANSPORTATION MITIGATION PROGRAM

Sustainability, smart growth and the reduction of greenhouse gas emissions have become prime concerns for the City in addition to traditional mobility considerations. Therefore, under the direction of DOT, the mitigation program was designed to first focus on providing project employees and visitors with usable and accessible transit options, and on developing an aggressive trip reduction program. A clear goal of the project's transportation mitigation plan is to implement enhancements and strategies that reduce the number of project-generated vehicle trips and that make the use of transit a convenient, reliable and cost-effective option for project visitors. However, freeway, street and intersection improvements to enhance mobility and remove bottlenecks were also evaluated and, if feasible, are included in the mitigation program. A comprehensive mitigation program has been developed for the Alternative 10 project that includes the following major elements: trip reduction program, transit system enhancements, freeway improvements, traffic signal system upgrades, intersection upgrades and improvements, and neighborhood traffic management measures.

Several physical traffic mitigation improvement options at the impacted intersections were evaluated in an attempt to fully mitigate the impacts; however, in some cases, no feasible mitigations were identified due to the constraints of the existing physical conditions. Also, for other locations, street widening was not an option due to right-of-way constraints or it was not considered practical nor desirable to widen the street at the expense of reduced

sidewalk widths. In other cases, traffic flow improvements that required the removal of on-street parking along a roadway with a high demand for parking were not recommended. The recommended traffic mitigation program includes the following improvements to be implemented in accordance with the Transportation Improvement Phasing Plan:

A. Transportation Demand Management (TDM) Program

The purpose of implementing a TDM program is to reduce the use of single occupant vehicles (SOV) by increasing the number of trips by walking, bicycle, carpool, vanpool, bus, or rail. To minimize external trips, the project should be designed to provide patrons with viable and convenient options that include high quality and convenient transit service. Through thoughtful building design and orientation, the project should provide a pedestrian-friendly environment, promote non-automobile travel and implement an aggressive trip-reduction program. Also, given the amount of transit services provided in the area and that the project is proposed across the street from an existing Metro Red Line station and bus terminal facility, there is an inherent incentive for project employees and visitors to search for alternative commute options other than driving. Additionally, developing a mixed-use project can aid in the effort of minimizing off-site traffic impacts and encouraging more internal trips by providing project tenants, employees and visitors with the necessary resources for shopping, entertainment, day care, and employment within a single community. The design of the development should contribute to minimizing traffic impacts by emphasizing non-auto modes of transportation. Also, to substantially reduce SOV trips to the project, a transit-friendly project with safe and walkable sidewalks should be included in the overall design of this mixed-use project.

A preliminary TDM program shall be prepared and provided for DOT review prior to the issuance of the first building permit for this project and a final TDM program approved by DOT is required prior to the issuance of the first certificate of occupancy for the project. The TDM program should include, but not be limited to, the following strategies:

- flexible & alternative work schedules and telecommuting programs
- internal mobility and support for first and last mile connections (see shuttle system program discussed below)
- bicycle and pedestrian-friendly environment
- bicycle amenities like racks and showers for employees
- convenient and secure pedestrian, shuttle and/or bicycle connections linking the Project Area to transit via walkways, paths, or paseos
- education and information on alternative transportation modes
- transportation information center
- join or create a Transportation Management Association (TMA) or Transportation Management Organization (TMO)
- on-site shared ("flex") cars
- pursuant to Internal Revenue Code Section 132(f), information should be provided to employees regarding pre-tax dollar transit commute expense accounts to provide transportation fringe benefits to eligible employees
- a guaranteed ride home program

- discounted monthly or annual transit passes provided to all eligible project employees
- contribute a one-time fixed-fee of **\$500,000** to be deposited into the City's Bicycle Plan Trust Fund that is currently being established (CF 10-2385-S5). These funds would be used by DOT to implement bicycle improvements within the project vicinity.

The TMA or TMO for this project would promote non-traditional travel alternatives and would educate project employees and patrons of the available trip-reduction services provided in the TDM plan. Specific components of the TMA may include, but not be limited to, the following:

- rideshare matching
- administrative support for formation of carpools/vanpools
- bike and walk to work promotions
- emergency rides home
- preferential loading/unloading for ridesharers
- transportation information center, which would provide a centrally-located commuter information center that allows employees to obtain information on ridesharing, telecommuting, transit schedules, bicycle plans, flex cars, etc.
- monitoring and reporting on the effectiveness of different TDM measures

B. Transit Enhancements

A major component of the transportation mitigation program is to enhance and expand the area's transit system by augmenting existing regional transit service, and by providing a new demand-responsive, fixed-route shuttle system. The following enhancements are proposed:

1. **Transit System Upgrades**

The traffic analysis included a review of the existing and future transit system serving the project study area. Passenger boarding and alighting information was collected for the transit lines currently servicing the project vicinity to determine where the need for additional buses or enhanced service exists. Metro Local 150/240 and Metro Rapid 750 travel along Ventura Boulevard and serve the project site. Based on a review of the boarding information, Metro Rapid 750 currently exceeds the seated capacity in the peak direction during most of the peak commute period. Given the number of project trips expected along Ventura Boulevard, the current ridership demands and capacity deficiency on the Metro lines along this corridor, the applicant proposes to provide one additional articulated bus, to be operated by Metro, to supplement the Metro Rapid Line 750 service along Ventura Boulevard.

This proposal is acceptable to DOT; however, the applicant shall contribute towards net operations and maintenance (O&M) costs for the new bus during peak commute hours (7:00 a.m. to 10:00 a.m. and 3:00 p.m. to 6:00 p.m.) for the first three years. To ensure continued operations, the project shall compensate for the unsubsidized portion of these costs for an

additional seven years. Farebox revenues and state/ federal transit subsidies shall be credited against O&M costs. The applicant shall work with Metro to ensure that this enhanced service is provided in a timely manner consistent with the traffic mitigation phasing plan. The applicant shall record a covenant and agreement, to the satisfaction of DOT, to guarantee the provisions of this transit improvement.

2. **Shuttle System**

The traffic study proposes to provide a demand-responsive shuttle system that provides viable and convenient transit options for Project visitors, employees, and the surrounding community. This system will focus on providing connections to key destinations such as the Universal City Metro Red Line station, downtown Burbank, Burbank Media District, CityWalk, and other nearby destinations. Connections to regional transit service shall be provided at the Universal City Metro Red Line station and the Downtown Burbank Metrolink station. The shuttle system is expected to provide approximately 15 minute headways during the morning and afternoon peak hours and 30 minute headways during off-peak daytime and early evening hours. This shuttle system will consist of the following key features:

a. Business Area East Shuttle

This shuttle would travel from the Universal City Metro Red Line station to Lakeside Plaza Drive area providing the employees in the Business Area East with a connection to the Universal City Metro Red Line station. From the Metro Red Line station, the shuttle is expected to travel along Lankershim Boulevard, Cahuenga Boulevard West, and Barham Boulevard to reach Lakeside Plaza Drive, then the shuttle would travel along Pass Avenue to connect with the Burbank Shuttle.

b. Downtown Burbank Shuttle

This shuttle from the Universal City Metro Red Line Station to the city of Burbank would provide a connection from the project site to the Downtown Burbank Metrolink station and to the Burbank Media District. The shuttle is expected to travel along Lankershim Boulevard, Riverside Drive and Olive Avenue. The final configuration of this shuttle would also be subject to review and approval by the City of Burbank.

c. Specially Equipped Shuttles

The shuttles, which will be low or zero emission vehicles, shall be equipped with GPS (global positioning system) or other vehicle tracking system devices and communications systems in order to be able to provide "Next Bus" locational and status information.

d. Real-Time Information

Information on shuttle location and status shall be available over the Internet and at bus shelters using "next bus" technologies.

e. Bus Call Capability

Patrons at bus stops outside of the project site along the routes shall have the ability to call for the shuttle from a designated shuttle stop. Upon doing so, information on the status of the bus and the anticipated wait time would then be given to the patron.

f. Bus Shelters

All stops for the shuttle system within or adjacent to the Project Area should include shelters, benches, shaded sidewalks, street lighting, ADA accessibility and pedestrian amenities.

The proposed Shuttle System program is acceptable to DOT; however, the program should be guaranteed for 20 years. The applicant shall work with DOT, Metro and neighboring cities when developing the final shuttle routes and stop locations prior to implementation of the shuttle program. Also, to maximize the benefits of the shuttle program, the routes, stops, headways and hours of operation should be revisited periodically after deployment of the shuttle program to determine if the program can be improved consistent with the financial commitment guaranteed by the Applicant for 20 years. The applicant shall work with DOT to ensure that this enhanced service is provided in a timely manner consistent with the traffic mitigation phasing plan. The applicant shall record a covenant and agreement, to the satisfaction of DOT, to guarantee the provisions of the Shuttle System. Together with the TDM program, the provision of the Shuttle System program can effectively reduce the number of SOV trips related to both the Project and neighboring communities by providing other viable and convenient travel options.

C. Freeway Interchange Improvements

The applicant has met and consulted with staff from DOT and Caltrans' District 7 regarding the design and feasibility of freeway system improvements. The project would construct a new on-ramp from Universal Studios Boulevard to the southbound US-101 freeway, and would modify the interchange at the US-101 freeway at Universal Terrace Parkway (Campo de Cahuenga Way). In accordance with the traffic mitigation plan for Alternative 10, the applicant should enter into a Highway Improvement Agreement with Caltrans that ensures the applicant's involvement in the design, funding and timely completion of these improvements.

Also, in the event these proposed freeway improvements become infeasible or are not approved by Caltrans, substitute mitigation measures shall be provided subject to approval by DOT or Caltrans, upon demonstration that the substitute measure is equivalent or superior to the original measure in mitigating the project's significant impact. DOT recommends that the applicant be required to construct the following freeway improvements:

1. **US-101 Southbound On-Ramp at Universal Studios Boulevard**

The Project proposes to build a new southbound on-ramp to the US-101 Freeway from Universal Studios Boulevard. Direct access to this ramp would be provided from the Entertainment Area via the intersection of Buddy Holly Drive and Universal Studio Boulevard. Providing this connection is expected to relieve congestion on Cahuenga Boulevard West and at the US-101 southbound ramps from Cahuenga Boulevard. This proposed improvement is illustrated in Figure 49 of the original traffic study dated March 2010.

2. **US-101 Freeway / Universal Terrace Parkway (Campo de Cahuenga Way) Interchange**

The Project proposes to improve the operation of the US-101 Freeway interchange at Universal Terrace Parkway by constructing new southbound ramps and redesigning the existing northbound off-ramp. This improvement would provide direct access to the Project Site and the Universal City area. The enhanced interchange is expected to reduce traffic congestion on Ventura Boulevard, Lankershim Boulevard, Cahuenga Boulevard, and the US-101 southbound ramps at Regal Place by allowing southbound traffic to use the US-101 interchange at Universal Terrace Parkway. The major components of this interchange improvement are illustrated in Figure 50 of the original traffic study dated March 2010.

The applicant has met and consulted with staff from Caltrans' District 7 regarding the design and feasibility of this interchange improvement. A Project Study Report (PSR) required by Caltrans that evaluates the feasibility and cost of this improvement and other interchange alternatives was completed and approved by Caltrans in March 2009. While DOT supports this interchange improvement as currently proposed, it should be noted that during the Project Report process led by Caltrans, additional alternatives will be evaluated. DOT would be supportive of another alternative if it is demonstrated that it provides similar or enhanced benefit and if it is environmentally equal or superior to the current proposal.

D. Freeway Mainline Improvements

According to the traffic study, which includes a freeway impact analysis, Alternative 10 is expected to result in significant traffic impacts on the freeway system. The applicant has worked with Caltrans' District 7 staff to identify a set of potential freeway mainline improvements to off-set these impacts and to address existing deficient traffic conditions. To mitigate impacts on the freeway system, Caltrans typically requires a fair-share contribution toward specific mainline improvements. Caltrans staff will lead this effort and will determine the required freeway mitigations or fair-share financial requirements for this Project. It is expected that the applicant will continue to work with Caltrans to explore alternatives, to evaluate the feasibility of each proposal, to prepare design plans and to prepare any necessary environmental documents.

To be conservative and since alternatives are still being evaluated, the traffic impact analysis did not include any mitigation credit that would result from freeway mainline improvements. The applicant should continue to work with Caltrans to develop meaningful freeway enhancements that can serve to alleviate commuter congestion. Consideration of improvements to the US-101 freeway adjacent to the Project site should also include the improvement of the Barham Boulevard bridge over the freeway. This is a chronic bottleneck location and should be included in any regional improvement program for this area.

E. Roadway Improvements

The Project proposes key roadway improvements needed to address the expected traffic demands resulting from the Project. For these proposed improvements, the final determination on the feasibility of street widenings and of narrowing of sidewalk widths shall be made by the Department of Public Works, Bureau of Engineering. The following roadway improvements are proposed:

1. **Barham Boulevard Corridor Improvements**

Barham Boulevard currently carries two lanes in each direction from Forest Lawn Drive/Lakeside Plaza Drive to Buddy Holly Drive/Cahuenga Boulevard East. The project proposes to dedicate right-of-way along the west side of Barham Boulevard, and widen the roadway to accommodate three lanes in the southbound direction and left-turn lanes at minor intersections along the entire segment. This corridor improvement should also include streetscape and pedestrian enhancements along the project site boundary.

2. **Lankershim Boulevard Corridor Improvements**

The project proposes to improve the traffic flow along key intersections on Lankershim Boulevard between Cahuenga Boulevard and the US-101 northbound off-ramp. This segment includes the western boundary of the project site. These intersection improvements, that include upgrading or installing new traffic signal equipment and/or providing additional roadway capacity, would improve traffic flow along Lankershim Boulevard and enhance ingress/egress to the project site. These intersection improvements are described in more detail below - see "Intersection Improvements."

3. **Forest Lawn Drive Roadway Improvements**

The project proposes to provide a continuous four-lane cross-section along Forest Lawn Drive between Barham Boulevard/Lakeside Plaza and the State Route (SR) 134 eastbound ramps by widening Forest Lawn Drive between Zoo Drive and the SR 134 Freeway. This improvement is expected to improve the connection between the project and the SR 134 freeway.

F. Project-Related Transportation Improvements

The proposed project includes the construction of new roadway connections and private driveways to serve the access and circulation needs of the development. The applicant shall work with DOT and the Bureau of Engineering on the design of the Project's internal street system layout in the city of Los Angeles, which includes,

but is not limited to, lane configuration, connectivity to existing street system, implementation of any necessary traffic control devices, etc. As part of the project's design features and description, the following key enhancements are proposed as project-related roadway improvements:

1. **Lakeside Plaza Drive**

Since Lakeside Plaza Drive is expected to serve as a main access point from Barham Boulevard for Business Area East employees, the project proposes to widen Lakeside Plaza Drive to provide a minimum of two travel lanes in each direction from the Business Area entrance to Barham Boulevard.

2. **Buddy Holly Drive**

The project proposes to facilitate traffic flow along Buddy Holly Drive between Universal Studios Boulevard and Barham Boulevard by providing additional lanes and enhanced access to the freeway and the project site. Along Buddy Holly Drive between Barham Boulevard and the US 101 northbound off-ramp, the road will provide three westbound travel lanes - this segment will continue to operate as a one-way westbound street. Between the US-101 northbound off-ramp and Donald O'Connor Drive, Buddy Holly Drive will accommodate four or five lanes. At the approach to Donald O'Connor Drive, a dedicated right-turn lane will be provided, and a dedicated left-turn lane onto the northbound US-101 Freeway will also be provided. Between Donald O'Connor Drive and Universal Studios Boulevard, Buddy Holly Drive may operate as a two-way roadway providing four westbound lanes and two eastbound lanes. This proposed improvement will also require review and approval by Caltrans.

3. **Universal Hollywood Boulevard**

Universal Hollywood Boulevard between Lankershim Boulevard and Universal Studios Boulevard (a private street) would be realigned and improved to enhance traffic circulation, accommodate transit priority lanes and wider sidewalks. Since the project's mixed-use and transit-oriented development features are expected to increase the level of pedestrian activity over what currently exists today, this improvement can serve to enhance the connections between the Universal City Metro Red Line station and the project site.

4. **Universal Studios Boulevard / Buddy Holly Drive**

This intersection would be improved as part of the Buddy Holly Drive improvement described above. The segment of Buddy Holly Drive between Universal Studios Boulevard and Donald O'Connor Drive may be improved to operate as a two-way roadway to allow access to the new theme park parking structure. If operated under two-way flow, the westbound approach on Buddy Holly Drive would provide two left-turn lanes, one through lane, and two free-flow right-turn lanes. Also, Universal Studios Boulevard would be restriped to provide a northbound right-turn lane, and the eastbound

approach would be restriped to provide one left-turn lane and one shared through/right-turn lane. This configuration would not be needed if Buddy Holly Drive remains a one-way eastbound street.

The Applicant shall provide the necessary infrastructure for all of the intersections internal to the project site that are expected to be signalized by the expected build out year and connected to DOT's traffic signal system. The traffic signals for these intersections should be constructed to ATCS specifications including, but not limited to, all required system loops, interconnect (conduit and twisted pair cable), and miscellaneous communications equipment needed to provide an operating ATCS intersection. Also, the project-related roadway improvements listed above should be constructed in accordance with the Traffic Mitigation Phasing Plan described below.

G. Intersection Improvements

Several intersection improvements are proposed to mitigate the traffic impacts of the project and enhance traffic flow and improve safety at key intersections. These mitigations include upgrades to the traffic signal system, the installation of new traffic signals, and physical improvements including approach widening to provide additional lanes. Intersection improvements, needed to reduce and mitigate the project's traffic impacts, are proposed as follows:

**Traffic Signal System Upgrade**

Many of the signalized intersections within the City of Los Angeles in the project study area require an upgrade to the signal equipment and hardware. The traffic signals at these intersections currently operate using a Type 170 traffic signal controller. Newer controllers (Type 2070) provide for enhanced and real-time operation of the traffic signal timing. Also, when supplemented by CCTV cameras at key locations, DOT can identify the causes of delay and implement instant signal timing remedies to improve the flow of vehicles and buses. The applicant shall fund the upgrade of the traffic signal controllers and the installation of CCTV cameras at the intersections listed in **Attachment G**.

**New Traffic Signals**

In the preparation of traffic studies, DOT guidelines indicate that unsignalized intersections should be evaluated solely to determine the need for the installation of a traffic signal or other traffic control device. Additionally, when choosing which unsignalized intersections to evaluate in the study, intersections that are adjacent to the project or that are integral to the project's site access and circulation plan should be identified. Nonetheless, to be conservative, the project's traffic study identified several off-site unsignalized intersections to evaluate. Based on traffic signal warrant analyses conducted at 16 intersections, the applicant proposes to fund the installation of nine new traffic signals at the following intersections:

- Barham Boulevard and C Street
- Buddy Holly Drive, Donald O'Connor Drive and US-101 NB on-ramp (*required only if Buddy Holly Drive or Donald O'Connor Drive operate as two-way streets*)

- Cahuenga Boulevard and US-101 southbound ramps
- Cahuenga Boulevard and Valley Spring Lane
- Forest Lawn Drive and SR-134 westbound ramps
- Lankershim Boulevard and Muddy Waters Drive
- Riverside Drive and SR-134 eastbound on-ramp
- US-101 southbound ramps and Ventura Boulevard / Fruitland Drive
- Universal Studio Boulevard and US-101 southbound on-ramp

The satisfaction of a traffic signal warrant does not in itself require the installation of a signal. Other factors relative to safety, traffic flow, signal spacing, coordination, etc. should be considered. The design and construction of these traffic signals, if deemed warranted by DOT, would be required of the applicant pursuant to the schedule identified in the traffic mitigation phasing plan. DOT's East Valley District Office will issue a Traffic Control Report (TCR) authorizing the installation of each traffic signal within the City of Los Angeles that is warranted per DOT's requirements. The traffic signal warrant analysis shall be prepared pursuant to Section 353 of DOT's Manual of Policies and Procedures and submitted by the applicant to DOT for review. Furthermore, it is the responsibility of the applicant to secure approval and any necessary permits by Caltrans for the traffic signal proposed at freeway ramps. An officially approved TCR does not remove the responsibility of the applicant from securing the acceptance and/or approval by Caltrans where State right-of-way is involved.

If left-turn phasing is proposed at any intersection within the City of Los Angeles, the applicant shall submit a left-turn study analysis pursuant to Section 531 of DOT's Manual of Policies and Procedures. Each left-turn study shall be submitted to DOT's Signal Timing and Operations Division and to DOT's East Valley District Office for review, approval, and preparation of an official TCR for each location.

### **Physical Improvements (City of Los Angeles)**

As stated above, for some locations, street widening was not an option due to right-of-way constraints or DOT did not approve street widening at the expense of reduced sidewalk widths. In other cases, proposals that would require the removal of on-street parking along a roadway with a high demand for parking were not recommended. Traffic mitigations were proposed to mitigate project impacts at intersections along Cahuenga Boulevard. However, since these proposals were in conflict with a city project along Cahuenga Boulevard, these proposed mitigations were not accepted. The city project was awarded grant funding to construct an improvement along Cahuenga Boulevard between Magnolia Boulevard and Lankershim Boulevard. The scope of this improvement was developed with input from Council District 4 and community stakeholders. Therefore, the traffic mitigations that were considered on Cahuenga Boulevard between Magnolia Boulevard and Lankershim Boulevard were not accepted since these designs were not consistent with the intent of the design of the city project. The following intersection improvements are proposed within the City of Los Angeles:

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1. Barham Blvd and Cahuenga Blvd West (IS #47) – widen to install an additional westbound through lane on Cahuenga Boulevard. The westbound approach would provide two through lanes, and one right-turn lane. This mitigation would require right-of-way acquisition from Caltrans; therefore, this impact would remain unmitigated if the applicant is not successful in acquiring the necessary right-of-way.
2. Barham Blvd and Buddy Holly Dr/Cahuenga Blvd (IS #48) – in addition to funding the upgrade of the traffic signal controller, widen the westbound approach to provide a separate left-turn only lane and widen the southbound approach to provide a separate right-turn only lane.
3. Barham Blvd and Coyote Canyon Rd (IS #54) – in addition to funding the upgrade of the traffic signal controller, an additional southbound through lane will be installed per the Barham Boulevard roadway improvement described above.
4. Barham Blvd and De Witt Dr (IS #52) – an additional southbound through lane will be installed per the Barham Boulevard roadway improvement described above.
5. Barham Blvd and Lake Hollywood Dr (IS #53) – an additional southbound through lane will be installed per the Barham Boulevard roadway improvement described above.
6. Barham Blvd and Lakeside Plaza/Forest Lawn Dr (IS #55) – in addition to funding the upgrade of the traffic signal controller, this intersection will be improved as part of both the Barham Boulevard roadway improvement and the Lakeside Plaza Drive project-related improvement. When fully improved, the intersection will accommodate: two left-turn lanes, two through lanes, and one right-turn lane on the eastbound approach; two left-turn lanes, one shared through/left-turn lane, and one right-turn lane on the westbound approach; and one left-turn lane, two through lanes, and one shared through/right-turn lane on the southbound approach.
7. Cahuenga Blvd and Riverside Dr (IS #29) – in addition to funding the upgrade of the traffic signal controller, restripe the westbound approach on Riverside Drive to install a right-turn lane. The westbound approach would provide one left-turn lane, two through lanes, and one right-turn lane.
8. Cahuenga Blvd and SR 134 Eastbound Ramps (IS #28) – in addition to funding the upgrade of the traffic signal controller, provide Caltrans with a fair-share contribution to install a shared left-right-turn lane on the SR 134 Eastbound off-ramp. The eastbound off-ramp approach would provide one left-turn lane, one shared left-right-turn lane, and one right-turn lane. To alleviate expected queues at the ramp that can potentially spill-over onto Cahuenga Boulevard, this improvement would also provide additional

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storage by widening the SR 134 eastbound on-ramp to provide two lanes beyond the ramp meter. This mitigation requires approval by Caltrans.

9. Cahuenga Blvd and US 101 southbound ramps (IS #162) – a new traffic signal is proposed at this intersection with permitted left-turn phasing for the southbound approach. Due to the proximity of this intersection to the intersection of Cahuenga Boulevard and US 101 northbound off-ramp (IS #68), a single controller design is proposed to coordinate the signal timing for these two intersections. The installation of a traffic signal at this intersection would require review and approval of a signal warrants analysis by Caltrans and by DOT's East Valley District Office.
10. Cahuenga Blvd and Valley Spring Ln (IS #32) - a new traffic signal is proposed at this intersection. However, as discussed above, the installation of a traffic signal at this intersection would require a review and approval of a signal warrants analysis by DOT's East Valley District Office.
11. Forest Lawn Dr & SR 134 eastbound ramps (IS #60) – an additional southbound through lane would be installed per the Forest Lawn Drive roadway improvement described above.
12. Forest Lawn Dr & SR 134 westbound ramps (IS #61) – install a traffic signal at this intersection and restripe Forest Lawn Drive to install an additional southbound through lane. This intersection is included in the Forest Lawn Drive roadway improvement described above. The installation of a traffic signal at this intersection would require review and approval by Caltrans and DOT's East Valley District Office.
13. Forest Lawn Dr & Zoo Drive (IS #59) – widen Forest Lawn Drive to install an additional southbound through lane and to allow for two through lanes and one right-turn lane on the northbound approach. This intersection is included in the Forest Lawn Drive roadway improvement described above.
14. Lankershim Blvd and Moorpark St (IS #20) – widen Moorpark Street and install an eastbound right-turn only lane. However, to prevent the permanent elimination of on-street parking, the right-turn lane would be operational only between 7 a.m. and 7 p.m. The widening and posting of “No Stopping between 7 a.m. and 7 p.m.” signs would accommodate the right-turn lane. The eastbound approach would provide one left-turn lane, one through lane, and one right-turn lane.
15. Lankershim Blvd and Riverside Dr (IS #19) – widen to provide a right-turn lane on the westbound approach of Riverside Drive. The westbound approach would provide one left-turn lane, two through lanes, and one right–turn lane.
16. Lankershim Blvd and US 101 northbound off-ramp (#37) - restripe the US

northbound off-ramp to provide a shared through/right lane. The US 101 northbound off-ramp would provide one left-turn lane, a shared through/right lane, and two right-turn lanes. This intersection is included in the Lankershim Boulevard roadway improvement described above. However, if the Metro Universal project is not built, then this improvement would not be needed.

17. Ledge Ave/Moorpark Wy and Riverside Dr (IS #40) – in addition to funding the upgrade of the traffic signal controller, the Project proposes to remove the raised median on the east leg of the intersection to accommodate an additional left-turn lane on the westbound approach of Riverside Drive. However, since this mitigation would remove the existing raised median, the applicant should be responsible for the relocation of the median island and a community monument sign to an alternate location. This would require input from Council District 4 and community stakeholders.
18. Metro Driveway and Campo de Cahuenga Wy (IS# 23) – upgrade the traffic signal to provide protected left-turn phasing operation for eastbound Campo de Cahuenga Way, and to provide a right-turn signal phase for southbound motorists exiting the Metro Driveway - this right-turn phase will overlap with the eastbound Campo de Cahuenga Way left-turners. If the Metro Universal project is not built, then this improvement would not be needed.
19. Moorpark St and Vineland Ave (IS #11) – remove or reconstruct the median to accommodate a right-turn lane on the southbound approach. The southbound approach would provide one left-turn lane, three through lanes, and one right–turn lane. To enhance safety by improving visibility, DOT also recommends that the Project remove the raised median islands on the north and south legs to better align the north and southbound left-turn lanes.
20. Riverside Dr and SR 134 eastbound on-ramp (IS #15) – a new traffic signal with protected left-turn phasing for the eastbound approach is proposed at this intersection. The eastbound would be striped to provide two left-turn lanes and two through lanes. As discussed above, the installation of a traffic signal at this intersection would require review and approval of a signal warrants analysis by Caltrans and by DOT's East Valley District Office.

### **Physical Improvements (Los Angeles County/City of Los Angeles)**

Additionally, several intersection improvements are proposed in other jurisdictions or at intersections shared with another jurisdiction. The following intersection mitigations, which are all included in the Lankershim Boulevard corridor improvement described above, are also subject to review and consent by Los Angeles County. It should be noted that the design of these improvements assumed the future traffic volumes of the proposed Metro Universal project (one of the 256 related projects) that has been delayed. If the Metro Universal project is not built, then the following intersection improvements should be redesigned since

the projected traffic demands along Lankershim Boulevard would be overstated.

1. Lankershim Blvd and Campo de Cahuenga Wy/Universal Hollywood Dr (IS #36) – widen the northbound approach to provide two left-turn lanes, two through lanes, one shared through-right lane, and one right-turn; restripe Campo de Cahuenga Way to provide an additional left-turn lane in the eastbound approach; provide a right-turn overlap arrow for southbound Lankershim Boulevard and restripe southbound Lankershim Boulevard to provide two left-turn lanes, two through lanes, one shared through/right-turn lane, and one right-turn only lane; widen the westbound approach to provide one left-turn lane, two through lanes and one right-turn lane. Included in this improvement are the necessary traffic signal upgrades and improvements to accommodate any necessary left-turn arrows.

DOT would like to reduce the use of dual right-turn lanes to minimize potential pedestrian conflicts. However, the proposed dual right-turn lanes at this intersection may not result in such conflicts in the future since there is a programmed improvement that would eliminate the north leg crosswalk. This improvement would install a pedestrian bridge connecting the Metro Red Line portal to the east side of Lankershim Boulevard. The Los Angeles County Metropolitan Transportation Authority is currently finalizing the design of this pedestrian overpass.

2. Lankershim Blvd and Main St (IS #35) – in addition to funding the upgrade of the traffic signal controller, widen to install a second northbound left-turn lane and upgrade the traffic signal to provide protected left-turn signal phasing operation for northbound Lankershim Boulevard. Also, widen the east leg (Main Street) to enhance ingress and egress from the project site. This improvement would not be needed if the proposed Metro Universal project is not built.
3. Lankershim Blvd and Muddy Waters Dr (IS #72) – a new traffic signal is proposed at this intersection. If approved, the new traffic signal would provide protected left-turn phasing operation for southbound Lankershim Boulevard. The installation of a traffic signal at this intersection has not yet been approved by DOT. A review and approval of the traffic signal warrants analysis for this signal is required by DOT's East Valley District Office.
4. Lankershim Blvd and Valleyheart Dr/James Stewart Ave (IS #34) – in addition to funding the upgrade of the traffic signal controller, widen the eastbound approach on Valleyheart Drive to provide dual left-turn lanes and a shared through/right lane. Restripe the westbound approach on James Stewart Avenue to provide one left turn, one shared through/left, and dual right-turn lanes. Also, widen Lankershim Boulevard to provide an additional southbound left-turn lane. This improvement would not be needed if the proposed Metro Universal project is not built.

**Intersection Improvements (City of Burbank)**

The following intersection mitigations are subject to review and approval by the City of Burbank:

1. Evergreen St/Riverside Dr & Alameda Ave (IS #77) – fund the upgrade of the traffic signal equipment to connect the intersection to the City of Burbank’s Citywide Signal Control System (CSCS).
  2. Pass Ave and Alameda Ave (IS #79) – fund the upgrade of the traffic signal equipment to connect the intersection to the City of Burbank’s CSCS. The project would also widen the westbound approach to add a right-turn lane. The westbound approach would provide one left-turn lane, two through lanes and one right-turn lane.
  3. Pass Ave and Olive Ave (IS #81) – widen to install an additional northbound left-turn lane on Pass Avenue. The northbound approach would provide two left-turn lanes and three through lanes. This improvement should also include any necessary upgrades to the traffic signal equipment.
  4. Pass Ave and SR 134 eastbound off-ramp (IS #78) – fund the installation and upgrade of the traffic signal equipment needed to connect the intersection to the City of Burbank’s Traffic Signal Interconnect/Signal Timing System and CSCS.
  5. Pass Ave and Verdugo Ln (IS #75) – fund the installation and upgrade of the traffic signal equipment needed to connect the intersection to the City of Burbank’s Traffic Signal Interconnect/Signal Timing System and CSCS.
  6. Olive Ave and Warner Brothers Studio Gate 2/Gate 3 (IS #82) – fund the upgrade of the traffic signal equipment to connect the intersection to the City of Burbank’s CSCS.
  7. Olive Ave and Warner Brothers Studio Gate 1/Lakeside Dr (IS #83) – widen the eastbound approach to add a right-turn lane. The eastbound approach would provide one shared through/left-turn lane, and one right-turn lane.
- H. Neighborhood Traffic Management Program (NTMP)  
According to the residential street impact analysis included in the traffic study, three neighborhoods were identified for their potential to be impacted by the project’s traffic. A local residential street is considered to be impacted based on an increase in the average daily traffic volumes. The objective of the residential street impact analysis is to determine the potential for cut-through traffic impacts on a residential street that can result from the project. Cut-through trips are measured as vehicles that bypass a congested arterial by instead opting to travel along a residential street. These local street impacts are typically mitigated through the implementation of neighborhood traffic calming measures such as installing speed humps. The traffic study identified three neighborhood boundaries that can

potentially experience increases in cut-through traffic.

The applicant has offered up to \$300,000 to fund any necessary NTM measures within these three neighborhood boundaries. This amount, which is commensurate with the size of the project and with the level of residential street impacts that are expected, is acceptable to DOT. Working within this budget, it would be the applicant's responsibility to coordinate with DOT, the affected neighborhood residents, and the local City Council office to design and implement NTM measures approved by DOT and supported by stakeholders.

The applicant has submitted an initial NTMP Implementation Plan to DOT (see **Attachment H**) that sets key milestones and identifies a proposed process in developing a NTM plan for the three identified neighborhoods consistent with DOT policy. This implementation plan should be formalized through an agreement between the applicant and DOT prior to the issuance of the first building permit for this project. As discussed in the initial plan, the agreement should include a funding guarantee, an outreach process and budget for each of the identified neighborhoods, selection and approval criteria for any evaluated NTM measures, and an implementation phasing plan. The final NTM plan, if consensus is reached among the stakeholders, should be completed to the satisfaction of DOT and should consider and evaluate neighborhood improvements that can offset the effects of added traffic, including street trees, sidewalks, landscaping, neighborhood identification features, and pedestrian amenities. Such measures can support trip reduction efforts by encouraging walking, bicycling, and the use of public transit.

I. Traffic Mitigation Phasing Plan

The project is proposed to be built over four phases. To ensure that the full occupancy of the project does not take place until all of the required transportation mitigations are implemented, a mitigation phasing plan has been prepared that coordinates all mitigation measures, project development and the associated permitting (see **Attachment I**). The phasing plan attempts to maintain an appropriate balance between development and corresponding transportation capacity/enhancements. This phasing plan may be modified in the future to adjust the mitigation sequencing or as a result of changes in the project phasing. Any changes to the mitigation phasing plan shall be subject to approval by DOT.

III. **Additional Transportation Enhancements**

The applicant has committed to fund the following voluntary transportation improvements in addition to the traffic mitigation measures identified above. The anticipated benefit to traffic flow associated with these enhancements has not been quantified; therefore, the project impacts at the study intersections are likely overstated.

A. Traffic Flow and Safety Enhancements

To address local traffic flow and safety needs within the study area, the applicant has agreed to install left-turn arrows at several key intersections. These locations

have been identified by DOT as candidate intersections for the installation of left-turn phasing. If left-turn arrows are deemed warranted by DOT's East Valley District Office, the applicant would design and implement the left-turn signals at the following intersections:

1. Riverton Avenue/Campo de Cahuenga Way & Ventura Boulevard (westbound approach)
2. Lankershim Boulevard & Riverside Drive (eastbound approach)
3. Lankershim Boulevard & Moorpark Street (northbound/eastbound approaches)
4. Cahuenga Boulevard & Camarillo Street (all approaches)
5. Cahuenga Boulevard & Moorpark Street (northbound/southbound approaches)
6. Lankershim Boulevard & Valleyheart Drive/James Stewart Avenue (northbound approach)
7. Cahuenga Boulevard & SR 134 Eastbound Ramps (southbound approach)
8. Radford Avenue/Ventura Place & Ventura Boulevard (westbound/eastbound approaches)
9. US 101 Southbound On-Ramp/Fruitland Avenue & Ventura Boulevard (westbound approach)
10. Lankershim Boulevard & Chandler Boulevard North (northbound approach)
11. Vineland Avenue & Moorpark Street (eastbound approach)

Also, as part of these voluntary traffic improvements, the applicant would fund the design and installation of a new traffic signal at the intersection of Riverside Drive and Strohm Avenue, if deemed warranted by DOT's East Valley District Office.

**B. Hollywood Event Management Infrastructure**

The Project proposed to fund the design and installation of up to five fixed or portable dynamic roadway message signs that can be utilized to guide motorists during events, alert motorists of traffic conditions and street closures, recommend alternate routes, etc. These signs operate similar to changeable message signs but require significantly less public right-of-way to install. These signs would provide motorists on arterial streets leading up to Hollywood from other parts of the region with advance information and warning regarding lane closures due to special events in Hollywood. Providing motorists with advance information regarding street closures would assist motorists in choosing alternative routes of travel. Alternative routes can be selected early thus avoiding long delays and preventing further congestion. The design, size and placement of these signs will be determined by DOT at a later date.

#### **IV. SITE ACCESS AND CIRCULATION**

Currently, the project site provides ten access points - one along the US-101 freeway, five along Lankershim Boulevard, two along Barham Boulevard, and two that are internal to the site. The proposed project would enhance the existing studio entry points and visitor gateways and would install two new public gateways to the project. The two new access points include a public gateway at a proposed new signalized intersection on Barham

Boulevard south of Lakeside Plaza Drive and a public entry/exit point at Buddy Holly Drive and Donald O'Connor Drive. The attached graphic (**Attachment J**) illustrates the proposed vehicular and pedestrian circulation features for the Project.

The project would continue to provide the four existing studio gates along Lankershim Boulevard at James Stewart Avenue, Main Street, Jimi Hendrix Drive, and the visitor gate south of the Technicolor Building at Muddy Waters Drive. Two relocated studio gates entering off Lakeside Plaza Drive would provide direct, controlled access for studio employees, authorized visitors, and deliveries to the Business and Studio Areas.

Universal Hollywood Drive and Universal Studios Boulevard would continue to provide the primary east-west and north-south access to and within the project. As part of the project, Universal Hollywood Drive, which extends between Lankershim Boulevard and Universal Studios Boulevard, providing access to parking structures within Universal Studios Hollywood and Universal CityWalk, would be realigned and widened to facilitate travel between these two roadways. Universal Studios Boulevard extends over the US-101 freeway between Cahuenga Boulevard and Buddy Holly Drive, and connects to the parking structures within Universal CityWalk. Buddy Holly Drive would also be widened and may operate as a two-way roadway between Universal Studios Boulevard and Donald O'Connor Drive. The main function of these primary access roads would continue to be to lead visitors into parking structures, allowing them to then access the rest of the site on foot or by the Universal shuttle system.

Internal project roadways, consisting of public and private streets, would be developed within the project site as needed in accordance with the applicable design guidelines to emergency vehicle access requirements and to ensure efficient circulation. The internal street system within the Studio, Entertainment, and Business Areas would continue to be largely restricted to authorized vehicles, as well as vendor-owned service vehicles and vehicles driven by Universal City studio employees.

This determination does not include approval of the final design plans of the project's driveways, internal circulation, or parking scheme. In order to minimize and prevent last minute building design changes, it is imperative that the applicant, prior to the commencement of building or parking layout design efforts, work with DOT regarding driveway width and internal circulation requirements, so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans to avoid any unnecessary time delays and potential costs associated with late design changes. Final DOT approval shall be obtained prior to issuance of building permits for such phase by submitting detailed site and driveway plans, with a minimum scale of 1"=40', to DOT.

## **V. GENERAL CONDITIONS**

The following conditions are in addition to the traffic mitigation measures identified in DOT's determination.

- In accordance with the project's traffic mitigation phasing plan, all transportation improvements and associated traffic signal work within the City of Los Angeles must be **guaranteed** through the B-Permit process of the Bureau of Engineering, prior to the issuance of the building permits for such phase and **completed** prior to the issuance of the certificates of occupancy for such phase. Temporary certificates of occupancy may be granted in the event of any delay through no fault of the applicant, provided that, in each case, the applicant has demonstrated reasonable efforts and due diligence to the satisfaction of DOT.
- If a proposed traffic mitigation measure does not receive the required approval, a substitute mitigation measure may be provided subject to the approval of DOT or other governing agency with jurisdiction over the mitigation location, upon demonstration that the substitute measure is equivalent or superior to the original measure in mitigating the project's significant traffic impact. To the extent that a mitigation measure proves to be infeasible and no substitute mitigation is available, then a significant traffic impact would remain.
- All improvements along state highways and at freeway ramps require approval from the State of California Department of Transportation (Caltrans). The applicant may be required to obtain an encroachment permit or other approval from Caltrans for each of these improvements before the issuance of any building permits, to the satisfaction of Caltrans, DOT, and the Bureau of Engineering.
- For all of the proposed roadway and intersection improvements within the City of Los Angeles, the final determination on the feasibility shall be made by the Department of Public Works, Bureau of Engineering.
- For all buildings in the City of Los Angeles, a parking and driveway plan shall be submitted to DOT for approval of access and circulation prior to the submittal of building plans for plan check to the Department of Building and Safety.
- A construction work site traffic control plan should be submitted to DOT for review and approval prior to the start of any construction work in the City. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. All construction related traffic should avoid peak commute hours unless otherwise approved by DOT.
- All temporary construction traffic control plans in the City involving temporary traffic signal modifications, the relocation of any signal equipment, and the installation of crash cushions or temporary roadway striping shall be prepared, submitted and signed by a registered Civil or Traffic Engineer in the state of California, on DOT-standard plan format, for review and approval by DOT's Design Division.
- Unless detour plans, worksite traffic control plans, and/or traffic circulation plans are pre-approved by DOT's Design Division, all construction traffic control proposals involving temporary signal modifications and/or relocations of any signal equipment,

and utilizations of temporary traffic striping and crash cushions, are the responsibility of the applicant, and must be submitted, signed and sealed by California Registered Civil Engineers and Traffic Engineers on DOT-standard plan submittal format for approval by DOT's Design Division.

- Pursuant to LAMC 41.20, the applicant shall be advised of the necessity of obtaining Street Use Permits from the Board of Public Works, which normally delegates such permitting authority to the Department of Public Works, Bureau of Street Services, for any proposed street closures.
- All other temporary construction traffic control proposals in the City involving the use of flashing arrow boards, traffic cones, barricades, delineators, construction signage, etc., shall require the review and approval by DOT's East Valley District Office.
- An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT for permit issuance activities was adopted by the Los Angeles City Council. Ordinance No. 180542, effective March 28, 2009, identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

## **VI. OTHER COMMENTS**

### **A. Los Angeles River Bike Path**

In February 2007, the City of Los Angeles announced the start of a comprehensive Los Angeles River revitalization plan that includes the completion of the bike path along the river to connect Downtown Los Angeles with Canoga Park. In addition to revitalizing the river, the goal of this project is to provide a continuous and functional riverfront bike path that extends through the City of Los Angeles and is part of an integrated Countywide bicycle plan. DOT fully supports the Los Angeles River Bike Path project. The close proximity of this Project and the Metro Red Line station to a bike path along the Los Angeles River Flood Control Channel can provide for an enhanced multi-modal transportation system in this area that provides commuters with more options and alternatives to driving a vehicle. However, the project does not propose providing public access along the Los Angeles River Flood Control Channel (the site's northern boundary) due to existing constraints and since the Applicant does not own the right-of-way. The County of Los Angeles Flood Control District owns the majority of the right-of-way for River Road along the northern end of the project site. DOT is aware of these right-of-way issues and of the constraints that include buildings and electrical substations currently located within the anticipated footprint of any future bike path along the south side of the river channel.

While DOT supports the bicycle system features proposed in the project's design, a truly comprehensive multi-modal system would include a riverfront bike path. This project does not propose to construct any new buildings within 20-feet of the

edge of the Los Angeles River Flood Control Channel, but the project scope does not include the removal of the existing constraints. To preserve the future right-of-way for any Los Angeles River bike path options, DOT recommends that any future plans for the northern edge of the project site prohibit construction within the anticipated footprint of a future Los Angeles River bike path (currently estimated at 20-feet from the edge of the channel).

B. Barham Boulevard Bridge

As stated above, the applicant should continue to work with Caltrans to develop meaningful freeway enhancements that can serve to alleviate commuter congestion. Improving traffic flow along the freeway mainline can provide for enhanced travel along the City's street network. However, any improvements to the US-101 freeway adjacent to the project site should also include the replacement (or retrofitting) and expansion of the Barham Boulevard bridge over the freeway.

**CONCLUSION**

Under the Alternative 10 scenario, the project is expected to result in four unmitigated traffic impacts after implementation of the proposed transportation mitigation program. Of these four intersections, two are expected to operate at a level-of-service (LOS) of C or better after build out of the project, and two are adjacent to the project site. While mitigations are proposed at these locations that partially mitigate the project's impacts, a significant impact still remains. Overall, Alternative 10 reduces the total number of unmitigated traffic impacts as it would generate 35% less traffic during the afternoon peak hour than the alternative that was the subject of DOT's report dated April 2, 2010.

If you have any questions, please call me at (213) 972-8476 or Christopher Hy of my staff at (213) 972-8479.

- Attachment A: Proposed Project Land Uses
- Attachment B: Conceptual Site Plan
- Attachment C: Study Area
- Attachment D: Study Intersections
- Attachment E: Trip Generation Summary
- Attachment F1: Project Impact Summary - Level of Service (Signalized Intersections)
- Attachment F2: Level of Service Summary for Unsignalized Intersections
- Attachment G: Traffic Signal Upgrades
- Attachment H: Neighborhood Traffic Management Plan Implementation Process
- Attachment I: Transportation Improvement Phasing Plan
- Attachment J: Project Circulation

## ATTACHMENT B

Jon Foreman

- 25 -

August 13, 2012

c: Renee Weitzer, Fourth Council District  
Mark Lyum, NBC/Universal  
Pat Gibson, Gibson Transportation Consulting, Inc.  
Srinath Raju, Raju Associates, Inc.  
Bruce Lackow, Matrix Environmental  
Elmer Alvarez, Caltrans  
Bill Winter, LA County  
Jay Kim, DOT Planning  
Brian Gallagher, DOT Operations  
Carl Mills, Bureau of Engineering

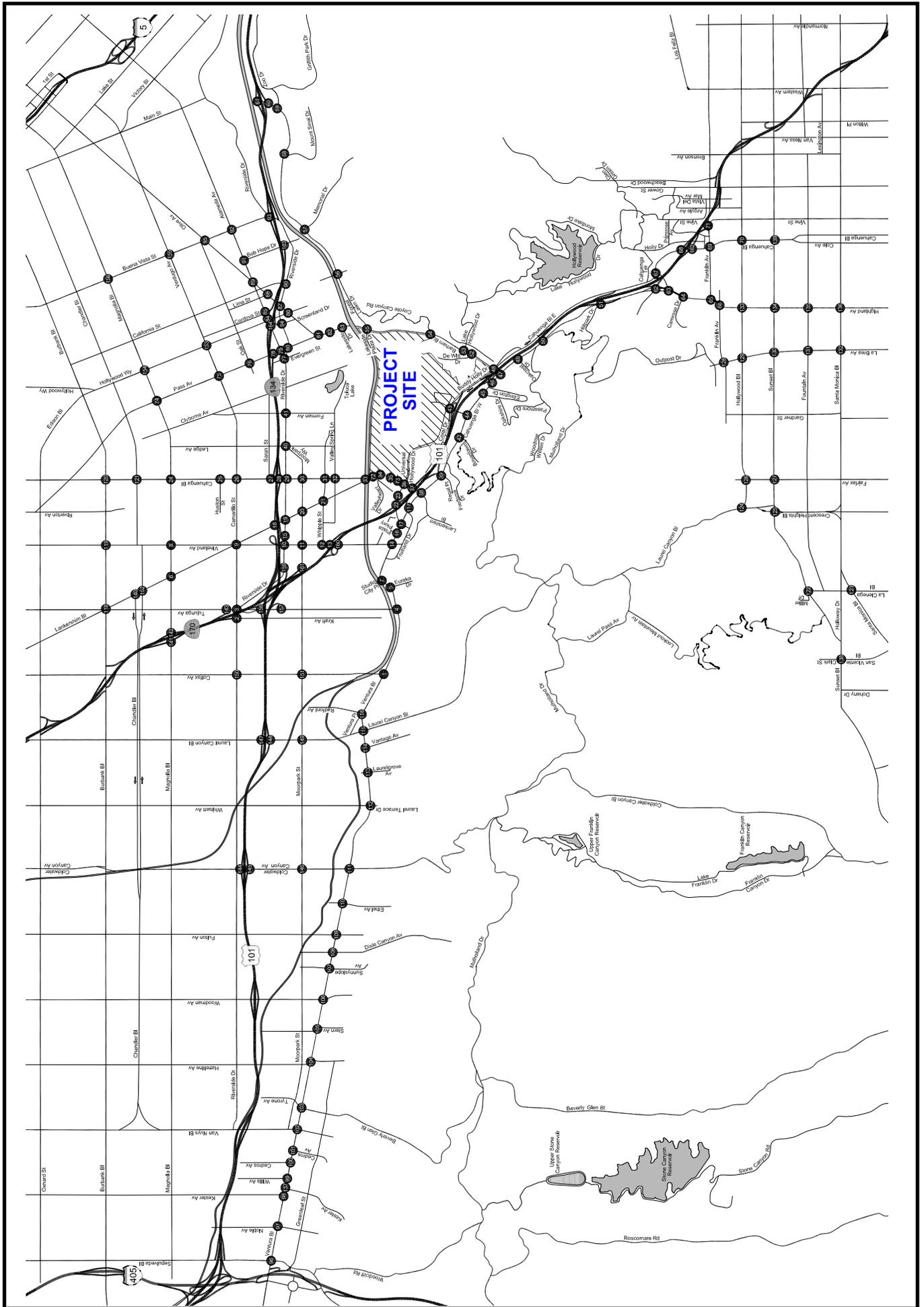
**ATTACHMENT A**  
**NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10**  
**PROPOSED PROJECT LAND USES**

Land Use	Existing Development	Demolition	Gross New Development	Alternate 10 - Net New Development	Totals - Existing and New Development
Studio (square feet)	1,228,120	185,051	493,000	307,949	1,536,069
Studio Office (square feet)	942,545	97,680	745,000	647,320	1,589,865
Office (square feet)	463,430	54,594	550,000	495,406	958,836
Entertainment (square feet)	775,132	107,105	445,000	337,895	1,113,027
Entertainment Retail (square feet)	656,144	30,784	70,000	39,216	695,360
Amphitheater (square feet)	110,600	110,600	60,000	-50,600	60,000
Hotel (square feet)			900,000	900,000	900,000
Hotel (guest rooms)			1,000	1,000	1,000
<b>TOTAL</b>	<b>4,175,971</b>	<b>585,814</b>	<b>3,263,000</b>	<b>2,677,186</b>	<b>6,853,157</b>
	<b>(square feet)</b>	<b>585,814</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>
	<b>(guest rooms)</b>				

ATTACHMENT B  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
CONCEPTUAL SITE PLAN



ATTACHMENT C  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
STUDY AREA



# ATTACHMENT B

## ATTACHMENT D

### NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10 STUDY INTERSECTIONS

No.	Intersection	Jurisdiction
1.	Colfax Avenue & Ventura Boulevard	City of Los Angeles
2.	Kraft Avenue/SR 170 SB Off-Ramp & Riverside Drive	City of Los Angeles/Caltrans
3.	Tujunga Avenue & Riverside Drive/Camarillo Street	City of Los Angeles
4.	Tujunga Avenue & Ventura Boulevard	City of Los Angeles
5.	Eureka Drive & Ventura Boulevard	City of Los Angeles
6.	Lankershim Boulevard & Magnolia Boulevard	City of Los Angeles
7.	Studio City Place & Ventura Boulevard	City of Los Angeles
8.	Vineland Avenue & Magnolia Boulevard	City of Los Angeles
9.	Vineland Avenue/Lankershim Boulevard & Camarillo Street	City of Los Angeles
10.	Vineland Avenue & Riverside Drive	City of Los Angeles
11.	Vineland Avenue & Moorpark Street	City of Los Angeles
12.	Vineland Avenue & Whipple Street	City of Los Angeles
13.	Vineland Avenue & US 101 NB Off-Ramp	City of Los Angeles/Caltrans
14.	Vineland Avenue & Ventura Boulevard	City of Los Angeles
15. [a]	SR 134 EB On-Ramp e/o Vineland Avenue & Riverside Drive	City of Los Angeles/Caltrans
16.	Plaza Parkway & Ventura Boulevard	City of Los Angeles
17.	Riverton Avenue/Campo de Cahuenga Way & Ventura Boulevard	City of Los Angeles
18.	Lankershim Boulevard & SR 134 WB Off-Ramp	City of Los Angeles/Caltrans
19.	Lankershim Boulevard & Riverside Drive	City of Los Angeles
20.	Lankershim Boulevard & Moorpark Street	City of Los Angeles
21.	Lankershim Boulevard & Whipple Street	City of Los Angeles
22.	US 101 NB Ramps & Campo de Cahuenga Way	City of Los Angeles/Caltrans
23.	Metro Driveway & Campo de Cahuenga Way	City of Los Angeles
24.	Cahuenga Boulevard & Magnolia Boulevard	City of Los Angeles
25.	Cahuenga Boulevard & Huston Street	City of Los Angeles
26.	Cahuenga Boulevard & Camarillo Street	City of Los Angeles
27.	Cahuenga Boulevard & SR 134 WB Off-Ramp	City of Los Angeles/Caltrans
28.	Cahuenga Boulevard & SR 134 EB Ramps	City of Los Angeles/Caltrans
29.	Cahuenga Boulevard & Riverside Drive	City of Los Angeles
30.	Cahuenga Boulevard & Moorpark Street	City of Los Angeles
31.	Cahuenga Boulevard & Whipple Street	City of Los Angeles
32. [b]	Cahuenga Boulevard & Valley Spring Lane	City of Los Angeles
33.	Lankershim Boulevard & Cahuenga Boulevard	City of Los Angeles
34.	Lankershim Boulevard & Valleyheart Drive/James Stewart Avenue	City of Los Angeles/County of Los Angeles
35.	Lankershim Boulevard & Main Street	City of Los Angeles/County of Los Angeles
36.	Lankershim Boulevard & Campo de Cahuenga Way/Universal Hollywood Drive	City of Los Angeles/County of Los Angeles
37.	Lankershim Boulevard & US 101 NB Off-Ramp	City of Los Angeles/Caltrans
38. [c]	Lankershim Boulevard & Ventura Boulevard/Cahuenga Boulevard	City of Los Angeles
39.	US 101 SB Ramps/Regal Place & Cahuenga Boulevard	City of Los Angeles/Caltrans
40.	Ledge Avenue/Moorpark Way & Riverside Drive	City of Los Angeles
41.	Forman Avenue & Riverside Drive	City of Los Angeles
42.	Broadlawn Drive & Cahuenga Boulevard	City of Los Angeles
43.	Universal Center Drive/Universal Studios Boulevard & Buddy Holly Drive	City of Los Angeles/County of Los Angeles
44.	Universal Studios Boulevard & Cahuenga Boulevard	City of Los Angeles
45.	Oakshire Drive & Cahuenga Boulevard	City of Los Angeles
46.	US 101 SB Ramps w/o Barham Boulevard/Cahuenga Boulevard & Cahuenga Boulevard	City of Los Angeles/Caltrans
47.	Barham Boulevard & Cahuenga Boulevard	City of Los Angeles
48.	Barham Boulevard & Buddy Holly Drive/Cahuenga Boulevard	City of Los Angeles
49.	Oakcrest Drive & Cahuenga Boulevard	City of Los Angeles
50.	Mulholland Drive & Cahuenga Boulevard	City of Los Angeles
51.	Cahuenga Boulevard & Hillpark Drive	City of Los Angeles
52.	Barham Boulevard & De Witt Drive	City of Los Angeles
53.	Barham Boulevard & Lake Hollywood Drive	City of Los Angeles
54.	Barham Boulevard & Coyote Canyon Road	City of Los Angeles
55.	Barham Boulevard & Lakeside Plaza Drive/Forest Lawn Drive	City of Los Angeles
56.	Warner Brothers Studios Gate 7/Gate 8 & Forest Lawn Drive	City of Los Angeles
57.	Memorial Drive & Forest Lawn Drive	City of Los Angeles
58.	Mount Sinai Drive & Forest Lawn Drive	City of Los Angeles
59.	Forest Lawn Drive & Zoo Drive	City of Los Angeles
60. [b]	Forest Lawn Drive & SR 134 EB Ramps	City of Los Angeles/Caltrans

**Notes:**

- [a] Intersection is uncontrolled.
- [b] Intersection is controlled by stop signs on minor approach.
- [c] Denotes Congestion Management Program (CMP) arterial monitoring station.

# ATTACHMENT B

## ATTACHMENT D - Continued

### NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10 STUDY INTERSECTIONS

No.	Intersection	Jurisdiction
61. [b]	Forest Lawn Drive & SR 134 WB Ramps	City of Los Angeles/Caltrans
62.	Cahuenga Boulevard/Highland Avenue & Pat Moore Way/US 101 On-Ramps	City of Los Angeles/Caltrans
63.	Highland Avenue & Odin Street	City of Los Angeles
64.	Highland Avenue & Camrose Drive	City of Los Angeles
65.	Highland Avenue & Franklin Avenue	City of Los Angeles
66.	Highland Avenue & Franklin Place/Franklin Avenue	City of Los Angeles
67. [b]	Odin Street & Cahuenga Boulevard	City of Los Angeles
68.	Cahuenga Boulevard & US 101 NB Off-Ramp	City of Los Angeles/Caltrans
69.	Cahuenga Boulevard & Franklin Avenue	City of Los Angeles
70.	Cahuenga Boulevard & Hollywood Boulevard	City of Los Angeles
71.	Vine Street & Franklin Avenue/US 101 SB Off-Ramp	City of Los Angeles/Caltrans
72. [b]	Lankershim Boulevard & Muddy Waters Drive	City of Los Angeles/County of Los Angeles
73. [a]	Lankershim Boulevard & Jimi Hendrix Drive	City of Los Angeles/County of Los Angeles
74.	Pass Avenue & Magnolia Boulevard	City of Burbank
75.	Pass Avenue & Verdugo Avenue	City of Burbank
76.	Pass Avenue & Oak Street	City of Burbank
77.	Evergreen Street/Riverside Drive & Alameda Avenue	City of Burbank
78.	Pass Avenue & SR 134 EB Off-Ramp	City of Burbank/Caltrans
79.	Pass Avenue & Alameda Avenue	City of Burbank
80.	Pass Avenue & Riverside Drive	City of Burbank
81.	Olive Avenue & Pass Avenue	City of Burbank
82.	Olive Avenue & Warner Brothers Studios Gate 2/Gate 3	City of Burbank
83.	Olive Avenue & Warner Brothers Studios Gate 1/Lakeside Drive	City of Burbank
84.	Hollywood Way & Alameda Avenue	City of Burbank
85.	Cordova Street/SR 134 WB Off-Ramp & Alameda Avenue	City of Burbank/Caltrans
86.	Hollywood Way & Olive Avenue	City of Burbank
87.	Olive Avenue & Riverside Drive	City of Burbank
88.	Lima Street & Olive Avenue	City of Burbank
89.	Olive Avenue & Alameda Avenue	City of Burbank
90.	California Street & Riverside Drive	City of Burbank
91.	Bob Hope Drive & Alameda Avenue	City of Burbank
92.	Buena Vista Street & Alameda Avenue	City of Burbank
93.	Buena Vista Street/SR 134 EB On-Ramp & Riverside Drive/SR 134 WB Ramps	City of Burbank/Caltrans
94. [a]	SR 134 EB On-Ramp/Screenland Drive & Riverside Drive	City of Burbank/Caltrans
95.	Buena Vista Street & Olive Avenue	City of Burbank
96. [c]	Sepulveda Boulevard & Ventura Boulevard	City of Los Angeles
97.	Noble Avenue & Ventura Boulevard	City of Los Angeles
98.	Kester Avenue (West) & Ventura Boulevard	City of Los Angeles
99.	Willis Avenue & Ventura Boulevard	City of Los Angeles
100.	Cedros Avenue (West) & Ventura Boulevard	City of Los Angeles
101.	Cedros Avenue (East) & Ventura Boulevard	City of Los Angeles
102.	Van Nuys Boulevard & Ventura Boulevard	City of Los Angeles
103.	Tyrone Avenue/Beverly Glen Boulevard & Ventura Boulevard	City of Los Angeles
104.	Hazeltine Avenue (West) & Ventura Boulevard	City of Los Angeles
105.	Stern Avenue (West) & Ventura Boulevard	City of Los Angeles
106. [c]	Woodman Avenue & Ventura Boulevard	City of Los Angeles
107.	Sunnyslope Avenue & Ventura Boulevard	City of Los Angeles
108.	Dixie Canyon Avenue & Ventura Boulevard	City of Los Angeles
109.	Fulton Avenue & Ventura Boulevard	City of Los Angeles
110.	Valley Vista Boulevard/Ethel Avenue & Ventura Boulevard	City of Los Angeles
111.	Coldwater Canyon Avenue & Ventura Boulevard	City of Los Angeles
112.	Whitsett Avenue/Laurel Terrace Drive & Ventura Boulevard	City of Los Angeles
113.	Laurelgrove Avenue & Ventura Boulevard	City of Los Angeles
114.	Vantage Avenue & Ventura Boulevard	City of Los Angeles
115. [c]	Laurel Canyon Boulevard & Ventura Boulevard	City of Los Angeles
116.	Radford Avenue/Ventura Place & Ventura Boulevard	City of Los Angeles
117. [a]	US 101 SB On-Ramp n/o Lankershim Boulevard & Ventura Boulevard	City of Los Angeles/Caltrans
118.	Lankershim Boulevard/Tujunga Avenue & Burbank Boulevard	City of Los Angeles
119.	Vineland Avenue & Burbank Boulevard	City of Los Angeles
120.	Cahuenga Boulevard & Burbank Boulevard	City of Los Angeles

**Notes:**

- [a] Intersection is uncontrolled.
- [b] Intersection is controlled by stop signs on minor approach.
- [c] Denotes Congestion Management Program (CMP) arterial monitoring station.

## ATTACHMENT B

### ATTACHMENT D - Continued

#### NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10 STUDY INTERSECTIONS

No.	Intersection	Jurisdiction
121.	Cahuenga Boulevard & Chandler Boulevard	City of Los Angeles
122.	La Cienega Boulevard & Sunset Boulevard	City of West Hollywood
123. [c]	La Cienega Boulevard & Santa Monica Boulevard	City of West Hollywood
124.	Laurel Canyon Boulevard & Hollywood Boulevard	City of Los Angeles
125.	Crescent Heights Boulevard & Sunset Boulevard	City of Los Angeles
126.	Fairfax Avenue & Hollywood Boulevard	City of Los Angeles
127.	Fairfax Avenue & Sunset Boulevard	City of Los Angeles
128.	La Brea Avenue & Franklin Avenue	City of Los Angeles
129.	La Brea Avenue & Hollywood Boulevard	City of Los Angeles
130.	La Brea Avenue & Sunset Boulevard	City of Los Angeles
131.	La Brea Avenue & Fountain Avenue	City of West Hollywood/City of Los Angeles
132.	La Brea Avenue & Santa Monica Boulevard	City of West Hollywood
133.	Highland Avenue & Hollywood Boulevard	City of Los Angeles
134.	Highland Avenue & Sunset Boulevard	City of Los Angeles
135.	Highland Avenue & Fountain Avenue	City of Los Angeles
136. [c]	Highland Avenue & Santa Monica Boulevard	City of Los Angeles
137.	Kester Avenue (East) & Ventura Boulevard	City of Los Angeles
138.	San Vicente Boulevard/Clark St & Sunset Boulevard	City of West Hollywood
139.	Cahuenga Boulevard & Sunset Boulevard	City of Los Angeles
140.	Lankershim Boulevard & Chandler Boulevard (North)	City of Los Angeles
141.	SR 170 SB Ramps & Magnolia Boulevard	City of Los Angeles/Caltrans
142.	SR 170 NB Ramps & Magnolia Boulevard	City of Los Angeles/Caltrans
143. [a]	Tujunga Avenue & SR 170 NB On-Ramp/Private Driveway	City of Los Angeles/Caltrans
144.	Coldwater Canyon Avenue & US 101 NB Ramps	City of Los Angeles/Caltrans
145.	Coldwater Canyon Avenue & US 101 SB Ramps	City of Los Angeles/Caltrans
146.	Coldwater Canyon Avenue & Moorpark Street	City of Los Angeles
147.	Laurel Canyon Boulevard & US 101 NB Ramps	City of Los Angeles/Caltrans
148.	Laurel Canyon Boulevard & US 101 SB Ramps	City of Los Angeles/Caltrans
149.	Laurel Canyon Boulevard & Moorpark Street	City of Los Angeles
150.	Colfax Avenue & Riverside Drive	City of Los Angeles
151.	Colfax Avenue & Moorpark Street	City of Los Angeles
152.	Lankershim Boulevard & Chandler Boulevard (South)	City of Los Angeles
153.	Hollywood Way & Verdugo Avenue	City of Burbank
154.	Hollywood Way & Magnolia Boulevard	City of Burbank
155.	Buena Vista Street & Verdugo Avenue	City of Burbank
156.	Buena Vista Street & Magnolia Boulevard	City of Burbank
157. [b]	Tujunga Avenue & US 101 SB Off-Ramp	City of Los Angeles/Caltrans
158. [a]	Tujunga Avenue & US 101 NB On-Ramp	City of Los Angeles/Caltrans
159. [b]	US 101 SB Off-Ramp & Riverside Drive	City of Los Angeles/Caltrans
160.	Vineland Avenue & US 101 SB Ramps	City of Los Angeles/Caltrans
161. [a]	US 101 NB On-Ramp & Moorpark Street	City of Los Angeles/Caltrans
162. [b]	Cahuenga Boulevard & US 101 SB Ramps	City of Los Angeles/Caltrans
163. [b]	Bob Hope Drive & SR 134 EB Off-Ramp	City of Burbank/Caltrans
164. [a]	SR 134 WB On-Ramp & Alameda Avenue	City of Burbank/Caltrans

**Notes:**

- [a] Intersection is uncontrolled.
- [b] Intersection is controlled by stop signs on minor approach.
- [c] Denotes Congestion Management Program (CMP) arterial monitoring station.

## ATTACHMENT B

### ATTACHMENT E

#### NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10 TRIP GENERATION SUMMARY

##### EVOLUTION PLAN PROJECT (1)

Scenario	Daily	A.M. Peak Hour			P.M. Peak Hour		
		In	Out	Total	In	Out	Total
Existing Development	44,883	2,433	582	3,015	1,530	3,184	4,714
Net Project without TDM Program	36,451	1,538	1,531	3,069	1,396	2,227	3,623
Full Site without TDM Program	81,334	3,971	2,113	6,084	2,926	5,411	8,337
Full Site with TDM Program	72,991	3,556	1,787	5,343	2,560	4,924	7,484
<b>Net Project with TDM Program</b>	<b>28,108</b>	<b>1,123</b>	<b>1,205</b>	<b>2,328</b>	<b>1,030</b>	<b>1,740</b>	<b>2,770</b>

##### ALTERNATIVE 10

Scenario	Daily	A.M. Peak Hour			P.M. Peak Hour		
		In	Out	Total	In	Out	Total
Existing Development	44,883	2,433	582	3,015	1,530	3,184	4,714
Net Alternative 10 without TDM Program	23,601	1,642	599	2,241	447	1,752	2,197
Full Site without TDM Program	68,484	4,075	1,181	5,256	1,977	4,936	6,911
Full Site with TDM Program	64,022	3,704	1,071	4,775	1,837	4,575	6,412
<b>Net Alternative 10 with TDM Program</b>	<b>19,139</b>	<b>1,271</b>	<b>489</b>	<b>1,760</b>	<b>307</b>	<b>1,391</b>	<b>1,698</b>

<b>Difference between Alternative 10 and Project with TDM Program</b>	<b>(8,969)</b>	<b>148</b>	<b>(716)</b>	<b>(568)</b>	<b>(723)</b>	<b>(349)</b>	<b>(1,072)</b>
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(1) SOURCE: Table 20 of the Project Transportation Study

ATTACHMENT F1  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
PROJECT IMPACT SUMMARY - LEVEL OF SERVICE (SIGNALIZED INTERSECTIONS)

No.	Intersection	Peak Hour	Future without Alternative 10			Future with Alternative 10 with TDM, Before Mitigations			Future with Alternative 10 with TDM Program and Mitigation Measures								
			V/C	LOS	V/C	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Required Evolution Mitigation V/C	Mitigation V/C Effectiveness	Required Metro Universal Mitigation V/C	Mitigation Shared with Metro Universal	Leftover Mitigation V/C after Metro Universal Required Credit	Required V/C Improvement to eliminate Evolution Plan Significant Impact
1.	[a] Colfax Avenue & Ventura Boulevard	A.M. P.M.	0.770 1.032	C F	0.793 1.057	C F	0.023 0.025	NO YES	0.755 1.019	C F	0.000 0.016	0.038 0.038	0.000 0.017	NO YES	0.038 0.021		NO NO
2.	[a] Kraft Avenue/SR 170 SB Off-Ramp & Riverside Drive	A.M. P.M.	0.663 0.613	B B	0.700 0.621	B B	0.037 0.008	NO NO	0.647 0.592	B A	0.000 0.000	0.053 0.029	0.000 0.000	NO NO	0.053 0.029		NO NO
3.	[a] Tujunga Avenue & Riverside Drive/Camarillo Street	A.M. P.M.	1.171 1.126	F F	1.200 1.128	F F	0.029 0.002	YES NO	1.158 1.118	F F	0.020 0.000	0.042 0.010	0.017 0.000	YES NO	0.025 0.010		NO NO
4.	[a] Tujunga Avenue & Ventura Boulevard	A.M. P.M.	0.696 0.841	B D	0.719 0.867	C D	0.023 0.026	NO YES	0.682 0.831	B D	0.000 0.007	0.037 0.036	0.000 0.000	NO NO	0.037 0.036		NO NO
5.	[a] Eureka Drive & Ventura Boulevard	A.M. P.M.	0.695 0.668	B B	0.719 0.694	C B	0.024 0.026	NO NO	0.683 0.657	B B	0.000 0.000	0.036 0.037	0.000 0.000	NO NO	0.036 0.037		NO NO
6.	[a] Lankershim Boulevard & Magnolia Boulevard	A.M. P.M.	1.197 1.107	F F	1.206 1.113	F F	0.009 0.006	NO NO	1.196 1.103	F F	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010		NO NO
7.	[a] Studio City Place & Ventura Boulevard	A.M. P.M.	0.617 1.101	B F	0.643 0.709	B C	0.026 0.026	NO NO	0.606 0.673	B B	0.000 0.000	0.037 0.036	0.000 0.000	NO NO	0.037 0.036		NO NO
8.	[a] Vineland Avenue & Magnolia Boulevard	A.M. P.M.	1.351 1.402	F F	1.376 1.406	F F	0.025 0.004	YES NO	1.324 1.396	F F	0.016 0.000	0.052 0.010	0.021 0.000	YES NO	0.031 0.010		NO NO
9.	[a] Vineland Avenue/Lankershim Boulevard & Camarillo Street	A.M. P.M.	1.205 1.124	F D	1.216 0.820	F D	0.011 0.023	YES YES	1.068 0.791	F C	0.002 0.004	0.107 0.052	0.028 0.000	YES NO	0.079 0.052		NO NO
10.	[a] Vineland Avenue & Riverside Drive	A.M. P.M.	1.127 1.056	F F	1.136 1.073	F F	0.009 0.017	NO YES	1.051 1.037	F F	0.000 0.008	0.085 0.036	0.000 0.004	NO YES	0.085 0.032		NO NO
11.	[a] Vineland Avenue & Moorpark Street	A.M. P.M.	0.500 0.446	A A	0.501 0.447	A A	0.001 0.001	NO NO	0.491 0.437	A A	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010		NO NO
12.	[a] Vineland Avenue & Whipple Street	A.M. P.M.	1.027 1.049	F F	1.075 1.087	F F	0.048 0.038	YES YES	0.909 0.987	E E	0.039 0.029	0.166 0.100	0.080 0.043	YES NO	0.086 0.057		NO NO
13.	[a] Vineland Avenue & US 101 NB Off-Ramp	A.M. P.M.	0.804 0.539	D A	0.847 0.566	D A	0.043 0.027	YES NO	0.713 0.529	D A	0.024 0.000	0.134 0.037	0.010 0.000	YES NO	0.124 0.037		NO NO
14.	[a] Vineland Avenue & Ventura Boulevard	A.M. P.M.	0.640 0.616	B B	0.646 0.648	B B	0.006 0.032	NO NO	0.691 0.657	B B	0.000 0.000	-0.045 -0.009	0.000 0.000	NO NO	0.000 0.000		NO NO
15.	[a] Lankershim Boulevard & SR 134 WB Off-Ramp	A.M. P.M.	0.935 0.597	E A	0.965 0.615	E B	0.030 0.018	YES NO	0.916 0.605	E B	0.021 0.000	0.049 0.010	0.021 0.000	YES NO	0.028 0.010		NO NO
16.	[a] Lankershim Boulevard & Riverside Drive	A.M. P.M.	1.259 1.060	F F	1.337 1.082	F F	0.078 0.022	YES YES	1.192 0.995	F E	0.069 0.013	0.145 0.087	0.069 0.018	YES YES	0.076 0.069		NO NO
17.	[a] Lankershim Boulevard & Moorpark Street	A.M. P.M.	1.368 1.178	F F	1.463 1.233	F F	0.095 0.055	YES YES	1.137 1.138	F F	0.086 0.046	0.326 0.095	0.075 0.017	YES YES	0.251 0.078		NO NO
18.	[a] Lankershim Boulevard & Whipple Street	A.M. P.M.	0.951 0.489	E A	1.034 0.528	F A	0.083 0.039	YES NO	0.889 0.518	D A	0.074 0.000	0.145 0.010	0.065 0.000	YES NO	0.080 0.010		NO NO
19.	[a] US 101 NB Ramps & Campo de Cahuenga Way	A.M. P.M.	0.235 0.667	A B	0.264 0.727	A C	0.029 0.060	NO YES	0.362 0.727	A C	0.000 0.027	-0.098 0.000	0.000 0.003	NO YES	0.000 0.000	0.027	NO YES
20.	[a] Campo de Cahuenga Way Metro DriveWAY & Campo de Cahuenga Way	A.M. P.M.	0.202 0.607	A B	0.219 0.671	A B	0.017 0.064	NO NO	0.237 0.697	A B	0.000 0.000	-0.018 -0.026	0.000 0.072	NO YES	0.000 0.000		NO NO
21.	[a] Campo de Cahuenga Way	A.M. P.M.	1.828 1.403	F F	1.845 1.408	F F	0.017 0.005	YES NO	1.809 1.329	F F	0.008 0.000	0.036 0.079	0.016 0.000	NO NO	0.020 0.079		NO NO
22.	[a] Magnolia Boulevard	A.M. P.M.	0.940 0.549	E A	0.956 0.553	E A	0.016 0.004	YES NO	0.923 0.480	E A	0.007 0.000	0.033 0.073	0.000 0.000	NO NO	0.033 0.073		NO NO
23.	[a] Huston Street	A.M. P.M.	1.489 1.278	F F	1.507 1.282	F F	0.018 0.004	YES NO	1.472 1.234	F F	0.009 0.000	0.035 0.048	0.017 0.000	YES NO	0.018 0.048		NO NO
24.	[a] Campo de Cahuenga Way & Camarillo Street	A.M. P.M.	0.702 0.555	C A	0.805 0.591	D A	0.103 0.036	YES NO	0.740 0.554	F A	0.064 0.000	0.065 0.037	0.000 0.000	NO NO	0.065 0.037		NO NO

ATTACHMENT F1 (Continued)  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
PROJECT IMPACT SUMMARY - LEVEL OF SERVICE (SIGNALIZED INTERSECTIONS)

No.	Intersection	Peak Hour	Future without Alternative 10			Future with Alternative 10 with TDM, Before Mitigations			Future with Alternative 10 with TDM Program and Mitigation Measures							Residual Significant Impact?	
			V/C	LOS	V/C	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Required Evolution Mitigation V/C	Mitigation V/C Effectiveness	Required Metro Universal Mitigation V/C	Mitigation Shared with Metro Universal		Leftover Mitigation V/C after Metro Universal Required Credit
28. [a]	Cahuenga Boulevard & SR 134 EB Ramps	A.M. P.M.	0.924 0.969	E E	0.966 1.077	E F	0.042 -0.108	YES YES	0.678 0.899	B D	0.033 0.099	0.288 0.178	0.010 0.088	YES YES	0.278 0.090		NO NO
29. [a]	Cahuenga Boulevard & Riverside Drive	A.M. P.M.	1.158 1.291	F F	1.221 1.372	F F	0.063 0.081	YES YES	1.019 1.215	F F	0.054 0.072	0.202 0.157	0.065 0.067	YES YES	0.137 0.090		NO NO
30. [a]	Cahuenga Boulevard & Moorpark Street	A.M. P.M.	1.047 1.117	F F	1.129 1.202	F F	0.082 0.085	YES YES	0.987 1.148	E A	0.073 0.076	0.142 0.054	0.139 0.138	YES NO	0.003 0.000	0.070 0.076	YES YES
31. [a]	Cahuenga Boulevard & Whipple Street	A.M. P.M.	0.658 0.692	B B	0.727 0.777	F C	0.069 0.085	YES YES	0.578 0.723	A C	0.027 0.046	0.149 0.054	0.000 0.000	NO NO	0.000 0.054		NO NO
33. [a]	Lankershim Boulevard & Cahuenga Boulevard	A.M. P.M.	0.837 0.636	D B	0.938 0.699	E B	0.101 0.063	YES NO	0.745 0.602	C B	0.082 0.000	0.193 0.097	0.090 0.000	YES NO	0.103 0.097		NO NO
34. [a]	Lankershim Boulevard & Valleyheart Drive/James Stewart Avenue	A.M. P.M.	0.904 0.880	E D	1.000 0.939	E E	0.096 0.059	YES YES	0.579 0.726	A C	0.015 0.040	0.190 0.213	0.000 0.110	NO PARTIAL	0.190 0.103		NO NO
35. [a], [b]	Lankershim Boulevard & Main Street	A.M. P.M.	0.760 1.034	F F	0.965 1.254	F F	0.205 0.220	YES YES	0.721 1.121	C F	0.166 0.211	0.244 0.133	0.114 0.020	PARTIAL PARTIAL	0.130 0.113	0.036 0.098	YES NO
36. [a], [b]	Lankershim Boulevard & Campo de Cahuenga Way/Universal Hollywood Drive	A.M. P.M.	1.375 0.937	F E	1.563 1.094	F E	0.188 0.157	YES YES	1.120 0.730	F C	0.179 0.148	0.443 0.364	0.140 0.060	PARTIAL YES	0.303 0.304		NO NO
37. [a]	Lankershim Boulevard & US 101 NB Off-Ramp	A.M. P.M.	0.877 0.911	D E	0.978 1.003	E F	0.101 0.051	YES YES	0.647 0.884	B D	0.082 0.042	0.331 0.119	0.000 0.011	NO YES	0.331 0.108		NO NO
38. [a], [c]	Lankershim Boulevard & Ventura Boulevard/Cahuenga Boulevard	A.M. P.M.	0.952 0.911	E E	0.945 0.882	F D	0.034 0.036	YES YES	0.790 0.817	C D	0.025 0.017	0.155 0.065	0.011 0.000	YES NO	0.144 0.065		NO NO
39. [a]	US 101 SB Ramps/Regal Place & Cahuenga Boulevard	A.M. P.M.	0.846 0.810	D D	0.882 0.850	D D	0.036 0.040	YES YES	0.817 0.657	D B	0.017 0.021	0.065 0.193	0.000 0.000	NO YES	0.065 0.193		NO NO
40. [a]	Ledge Avenue/Moorpark Way & Riverside Drive	A.M. P.M.	1.070 1.067	F F	1.110 1.125	F F	0.040 0.058	YES YES	0.894 0.918	D E	0.031 0.049	0.216 0.207	0.093 0.084	YES YES	0.123 0.113		NO NO
41. [a]	Foman Avenue & Riverside Drive	A.M. P.M.	0.798 0.901	C E	0.820 0.939	D E	0.022 0.038	YES YES	0.759 0.855	C D	0.003 0.029	0.061 0.064	0.000 0.022	NO YES	0.061 0.036		NO NO
42. [a]	Broadlawn Drive & Cahuenga Boulevard	A.M. P.M.	0.661 0.447	B A	0.692 0.527	B A	0.031 0.080	NO NO	0.656 0.490	B A	0.000 0.000	0.036 0.037	0.000 0.000	NO NO	0.036 0.037		NO NO
43. [a]	Universal Center Drive/Universal Studios Boulevard & Buddy Holly Drive	A.M. P.M.	0.397 0.892	A D	0.413 0.876	A D	0.016 -0.016	NO NO	0.403 0.866	A D	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.114		NO NO
44. [a]	Universal Studios Boulevard & Cahuenga Boulevard	A.M. P.M.	0.668 0.724	C C	0.800 0.753	C C	0.076 0.035	YES NO	0.658 0.649	B B	0.037 0.044	0.142 0.207	0.000 0.000	NO NO	0.142 0.207		NO NO
45. [a]	Oakshire Drive & Cahuenga Boulevard	A.M. P.M.	0.718 0.776	C C	0.844 0.844	D D	0.068 0.044	YES YES	0.637 0.637	B B	0.044 0.044	0.207 0.207	0.000 0.000	NO NO	0.207 0.207		NO NO
46. [a]	US 101 SB Ramps w/o Barham Boulevard & Cahuenga Boulevard	A.M. P.M.	1.225 1.368	F F	1.283 1.468	F F	0.058 0.100	YES YES	1.171 1.222	F F	0.049 0.091	0.112 0.246	0.000 0.000	NO NO	0.112 0.246		NO NO
47. [a]	Barham Boulevard & Cahuenga Boulevard	A.M. P.M.	1.072 1.356	F F	1.092 1.374	F F	0.018 0.018	YES YES	1.079 1.322	F F	0.011 0.009	0.013 0.052	0.000 0.007	NO YES	0.013 0.045		NO NO
48. [a]	Barham Boulevard & Buddy Holly Drive/Cahuenga Boulevard	A.M. P.M.	1.109 0.973	F E	1.121 0.992	F E	0.012 -0.022	YES NO	1.103 0.980	F E	0.003 0.000	0.018 0.030	0.000 0.000	NO NO	0.018 0.030		NO NO
49. [a]	Oakcrest Drive & Cahuenga Boulevard	A.M. P.M.	0.723 0.723	C C	0.739 0.739	C C	0.016 0.016	YES YES	0.721 0.721	E E	0.000 0.000	0.018 0.018	0.000 0.000	NO NO	0.018 0.018		NO NO
50. [a]	Mulholland Drive & Cahuenga Boulevard	A.M. P.M.	1.051 1.061	F F	1.075 1.085	F F	0.024 0.024	YES YES	1.046 1.066	F F	0.015 0.015	0.029 0.019	0.000 0.000	NO NO	0.029 0.019		NO NO
51. [a]	Cahuenga Boulevard & Hillpark Drive	A.M. P.M.	0.869 0.725	D C	0.885 0.738	D C	0.016 0.013	NO NO	0.857 0.719	D C	0.000 0.000	0.028 0.019	0.000 0.000	NO NO	0.028 0.019		NO NO
52. [a]	Barham Boulevard & De Witt Drive	A.M. P.M.	1.028 1.005	F F	1.040 1.005	F F	0.012 0.000	YES NO	1.018 0.917	F E	0.003 0.000	0.022 0.088	0.000 0.000	NO NO	0.022 0.088		NO NO
53. [a]	Barham Boulevard & Lake Hollywood Drive	A.M. P.M.	1.168 1.093	F F	1.179 1.115	F F	0.011 0.022	YES YES	1.157 1.094	F F	0.002 0.013	0.022 0.021	0.000 0.000	NO NO	0.022 0.021		NO NO
54. [a]	Lake Hollywood Drive & Coyote Canyon Road	A.M. P.M.	1.049 0.927	F E	1.059 0.923	F E	0.010 -0.004	YES NO	1.038 0.896	F D	0.010 0.000	0.021 0.027	0.000 0.000	NO NO	0.021 0.027		NO NO

ATTACHMENT F1 (Continued)  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
PROJECT IMPACT SUMMARY - LEVEL OF SERVICE (SIGNALIZED INTERSECTIONS)

No.	Intersection	Peak Hour	Future without Alternative 10			Future with Alternative 10 with TDM, Before Mitigations					Future with Alternative 10 with TDM Program and Mitigation Measures							
			V/C	LOS	V/C	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Required Evolution Mitigation V/C	Mitigation V/C Effectiveness	Required Metro Universal Mitigation V/C	Mitigation Shared with Metro Universal	Leftover Mitigation V/C after Metro Universal Required Credit	Required V/C Improvement to eliminate Evolution Plan Significant Impact	Residual Significant Impact?
55. [a]	Berham Boulevard & Lakeside Plaza Drive/Forest Lawn Drive	A.M. P.M.	1.352 1.204	F F	1.363 1.213	F F	0.031 0.009	YES NO	1.241 1.077	F F	0.022 0.000	0.142 0.136	0.000 0.000	NO NO	0.142 0.136	0.000 0.000	NO NO	NO NO
56. [a]	Warner Brothers Studios Gate 7/Gate 8 & Forest Lawn Drive	A.M. P.M.	0.753 0.542	C A	0.763 0.559	C A	0.021 0.017	NO NO	0.763 0.537	C A	0.000 0.000	-0.009 0.022	0.000 0.000	NO NO	0.000 0.022	0.000 0.000	NO NO	NO NO
57. [a]	Memorial Drive & Forest Lawn Drive	A.M. P.M.	0.529 0.535	A A	0.560 0.552	A A	0.021 0.017	NO NO	0.559 0.534	A A	0.000 0.000	-0.009 0.018	0.000 0.000	NO NO	0.000 0.018	0.000 0.000	NO NO	NO NO
58. [a]	Mount Sinai Drive & Forest Lawn Drive	A.M. P.M.	0.531 0.443	A A	0.551 0.460	A A	0.021 0.017	NO NO	0.561 0.441	A A	0.000 0.000	-0.010 0.019	0.000 0.000	NO NO	0.000 0.019	0.000 0.000	NO NO	NO NO
59. [a]	Forest Lawn Drive & Zoo Drive	A.M. P.M.	1.141 0.816	F D	1.180 0.843	F D	0.039 0.027	YES YES	0.573 0.708	A C	0.030 0.008	0.607 0.135	0.000 0.000	NO NO	0.607 0.135	0.000 0.000	NO NO	NO NO
62. [a]	Cahuenga Boulevard/Highland Avenue & Pat Moore Way/US 101 On-Ramps	A.M. P.M.	0.738 0.616	C B	0.748 0.636	C B	0.010 0.020	NO NO	0.738 0.626	C B	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.000 0.000	NO NO	NO NO
63. [a]	Highland Avenue & Odin Street	A.M. P.M.	0.861 0.744	D C	0.872 0.720	D C	0.011 0.010	NO NO	0.862 0.710	D C	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.000 0.000	NO NO	NO NO
64. [a]	Highland Avenue & Camrose Drive	A.M. P.M.	0.697 -	B F	0.702 -	C F	0.007 0.005	NO NO	0.741 0.692	C B	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.000 0.000	NO NO	NO NO
65. [a], [d]	Highland Avenue & Franklin Avenue	A.M. P.M.	- -	F F	- -	F F	0.010 0.005	YES NO	- -	F F	0.001 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.000 0.000	NO NO	NO NO
66. [a], [d]	Highland Avenue & Franklin Place/Franklin Avenue	A.M. P.M.	- -	F F	- -	F F	0.014 0.009	YES NO	- -	F F	0.005 0.000	0.010 0.010	0.002 0.000	YES NO	0.008 0.010	0.000 0.000	NO NO	NO NO
67. [a]	Odin Street & Cahuenga Boulevard	A.M. P.M.	0.571 0.771	A B	0.577 0.775	A C	0.006 0.004	NO NO	0.577 0.775	A C	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO
68. [a]	Cahuenga Boulevard & US 101 NB Off-Ramp	A.M. P.M.	0.652 1.071	B F	0.663 1.077	B F	0.011 0.006	NO NO	0.663 1.077	B F	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO
69. [a]	Cahuenga Boulevard & Franklin Avenue	A.M. P.M.	0.875 1.325	D F	0.880 1.328	D F	0.005 0.003	NO NO	0.875 1.318	D F	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.000 0.000	NO NO	NO NO
70. [a]	Cahuenga Boulevard & Hollywood Boulevard	A.M. P.M.	0.925 0.825	E D	0.927 0.829	E D	0.002 0.004	NO NO	0.927 0.829	E D	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO
71. [a]	Vine Street & Franklin Avenue/US 101 SB Off-Ramp	A.M. P.M.	0.665 0.543	B A	0.665 0.545	B A	0.000 0.002	NO NO	0.655 0.535	B A	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.000 0.000	NO NO	NO NO
74.	Pass Avenue & Magnolia Boulevard	A.M. P.M.	0.776 0.889	C D	0.778 0.891	C D	0.002 0.002	NO NO	0.795 0.887	C D	0.000 0.000	-0.017 0.004	0.000 0.000	NO NO	0.000 0.004	0.000 0.004	NO NO	NO NO
75.	Pass Avenue & Verdugo Avenue	A.M. P.M.	0.866 1.203	D F	0.877 1.209	D F	0.011 0.006	NO NO	0.847 1.139	D F	0.000 0.000	0.030 0.070	0.000 0.000	NO NO	0.030 0.070	0.000 0.000	NO NO	NO NO
76.	Pass Avenue & Oak Street	A.M. P.M.	0.526 0.626	A B	0.528 0.627	A B	0.002 0.001	NO NO	0.541 0.627	A B	0.000 0.000	-0.013 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO
77. [e]	Evergreen Street/Riverside Drive & Alameda Avenue	A.M. P.M.	0.740 0.827	C D	0.755 0.849	C D	0.015 0.022	NO YES	0.647 0.764	B C	0.000 0.003	0.108 0.085	0.000 0.000	NO NO	0.108 0.085	0.000 0.000	NO NO	NO NO
78.	Pass Avenue & SR 134 EB Off-Ramp	A.M. P.M.	0.789 0.696	C B	0.793 0.701	C B	0.004 0.005	NO NO	0.757 0.651	C B	0.000 0.000	0.036 0.050	0.000 0.000	NO NO	0.036 0.050	0.000 0.000	NO NO	NO NO
79. [e]	Pass Avenue & Alameda Avenue	A.M. P.M.	0.987 1.078	E F	0.994 1.094	E F	0.007 0.016	NO YES	0.978 1.011	E F	0.000 0.007	0.016 0.083	0.000 0.005	NO YES	0.016 0.078	0.000 0.005	NO NO	NO NO
80.	Pass Avenue & Riverside Drive	A.M. P.M.	0.818 0.641	D B	0.834 0.645	D B	0.016 0.004	NO NO	0.809 0.604	D B	0.000 0.000	0.016 0.041	0.000 0.000	NO NO	0.025 0.041	0.000 0.000	NO NO	NO NO
81. [e]	Olive Avenue & Pass Avenue	A.M. P.M.	0.967 0.948	E E	0.986 0.965	E E	0.019 0.017	YES YES	0.859 0.770	D C	0.010 0.008	0.127 0.127	0.000 0.000	NO NO	0.127 0.195	0.000 0.000	NO NO	NO NO
82. [e]	Olive Avenue & Warner Brothers Studios Gate 2/Gate 3	A.M. P.M.	0.807 0.853	D D	0.811 0.859	D D	0.004 0.006	NO NO	0.781 0.865	D D	0.000 0.000	0.030 -0.006	0.000 0.000	NO NO	0.030 0.000	0.000 0.000	NO NO	NO NO
83. [e]	Olive Avenue & Warner Brothers Studios Gate 1/Lakeside Drive	A.M. P.M.	0.652 0.825	B D	0.661 0.831	B D	0.009 0.006	NO NO	0.648 0.795	B D	0.000 0.000	0.013 0.036	0.000 0.000	NO NO	0.013 0.036	0.000 0.000	NO NO	NO NO
84. [e]	Hollywood Way & Alameda Avenue	A.M. P.M.	1.315 1.266	F F	1.319 1.272	F F	0.004 0.006	NO NO	1.323 1.272	F F	0.000 0.000	-0.004 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO

ATTACHMENT F1 (Continued)  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
PROJECT IMPACT SUMMARY - LEVEL OF SERVICE (SIGNALIZED INTERSECTIONS)

No.	Intersection	Peak Hour	Future without Alternative 10			Future with Alternative 10 with TDM, Before Mitigations					Future with Alternative 10 with TDM Program and Mitigation Measures							
			V/C	LOS	V/C	LOS	V/C	Change in V/C	Significant Impact?	V/C	LOS	Required Evolution Mitigation V/C	Mitigation V/C Effectiveness	Required Metro Universal Mitigation V/C	Mitigation Shared with Metro Universal	Leftover Mitigation V/C after Metro Universal Required Credit	Required V/C Improvement to eliminate Evolution Plan Significant Impact	Residual Significant Impact?
85.	[e] Cordova Street/SR 134 WB Off-Ramp & Alameda Avenue	A.M. P.M.	1.052 0.941	F E	1.055 0.955	F E	0.003 0.014	NO YES	1.055 0.949	F E	0.000 0.005	0.000 0.006	0.000 0.008	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO
86.	[e] Hollywood Way & Olive Avenue	A.M. P.M.	0.791 1.209	C F	0.796 1.209	C F	0.005 0.002	NO NO	0.796 1.216	C F	0.000 0.005	0.000 -0.007	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO
87.	[e] Olive Avenue & Riverside Drive	A.M. P.M.	0.786 0.871	C D	0.788 0.872	C D	0.002 0.001	NO NO	0.788 0.868	C D	0.000 0.000	0.000 0.004	0.000 0.000	NO NO	0.000 0.004	0.000 0.004	NO NO	NO NO
88.	[e] Lima Street & Olive Avenue	A.M. P.M.	0.435 0.452	A A	0.435 0.453	A A	0.000 0.001	NO NO	0.435 0.430	A A	0.000 0.000	0.029 0.023	0.000 0.000	NO NO	0.029 0.023	0.000 0.000	NO NO	NO NO
89.	[e] Olive Avenue & Alameda Avenue	A.M. P.M.	0.937 1.100	E F	0.941 1.108	E F	0.004 0.008	NO NO	0.852 1.061	D F	0.000 0.000	0.049 0.047	0.000 0.000	NO NO	0.089 0.047	0.000 0.000	NO NO	NO NO
90.	California Street & Riverside Drive	A.M. P.M.	0.605 0.827	B D	0.606 0.829	B D	0.001 0.002	NO NO	0.606 0.825	B D	0.000 0.000	0.000 0.004	0.000 0.000	NO NO	0.000 0.004	0.000 0.004	NO NO	NO NO
91.	[e] Bob Hope Drive & Alameda Avenue	A.M. P.M.	0.985 1.013	E F	0.986 1.017	E F	0.001 0.004	NO NO	0.986 1.017	E F	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO	NO NO
92.	[e] Buena Vista Street & Alameda Avenue	A.M. P.M.	0.937 0.946	E E	0.938 0.949	E E	0.001 0.003	NO NO	0.933 0.949	E E	0.000 0.000	0.005 0.000	0.000 0.000	NO NO	0.005 0.000	0.000 0.000	NO NO	NO NO
93.	Buena Vista Street/SR 134 EB On-Ramp & Riverside Drive/SR 134 WB Ramps	A.M. P.M.	1.075 1.020	F F	1.075 1.023	F F	0.000 0.003	NO NO	1.073 1.019	F F	0.000 0.000	0.002 0.004	0.000 0.000	NO NO	0.002 0.004	0.000 0.004	NO NO	NO NO
95.	[e] Buena Vista Street & Olive Avenue	A.M. P.M.	1.121 1.099	F F	1.123 1.100	F F	0.002 0.001	NO NO	1.076 1.052	F F	0.000 0.000	0.047 0.048	0.000 0.000	NO NO	0.047 0.048	0.000 0.000	NO NO	NO NO
96.	[e], [c] Sepulveda Boulevard & Ventura Boulevard	A.M. P.M.	1.291 1.485	F F	1.291 1.485	F F	0.000 0.000	NO NO	1.264 1.485	F F	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.027 0.000	0.000 0.000	NO NO	NO NO
97.	[a] Noble Avenue & Ventura Boulevard	A.M. P.M.	0.815 0.873	D D	0.828 0.884	D D	0.013 0.011	NO NO	0.791 0.847	C D	0.000 0.000	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.000 0.000	NO NO	NO NO
98.	[a] Kester Avenue & Ventura Boulevard	A.M. P.M.	0.777 0.830	C D	0.777 0.830	C D	0.000 0.012	NO NO	0.753 0.793	C C	0.000 0.000	0.024 0.037	0.000 0.000	NO NO	0.024 0.037	0.000 0.000	NO NO	NO NO
99.	[a] Willis Avenue & Ventura Boulevard	A.M. P.M.	0.676 0.729	B C	0.691 0.747	B C	0.015 0.018	NO NO	0.654 0.710	B C	0.000 0.000	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.000 0.000	NO NO	NO NO
100.	[a] Cedros Avenue (West) & Ventura Boulevard	A.M. P.M.	0.784 0.941	C E	0.798 0.959	C E	0.014 0.018	NO NO	0.761 0.922	C E	0.000 0.009	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.000 0.000	NO NO	NO NO
101.	[a] Cedros Avenue (East) & Ventura Boulevard	A.M. P.M.	1.078 0.835	F D	1.094 0.838	F D	0.016 0.003	YES NO	1.056 0.800	F C	0.007 0.000	0.038 0.038	0.000 0.000	NO NO	0.038 0.038	0.000 0.000	NO NO	NO NO
102.	[a] Van Nuys Avenue & Ventura Boulevard	A.M. P.M.	1.125 1.297	F F	1.143 1.318	F F	0.018 0.021	YES YES	1.103 1.278	F F	0.009 0.012	0.040 0.040	0.000 0.000	NO NO	0.040 0.040	0.000 0.000	NO NO	NO NO
103.	[a] Tyrone Avenue/Beverly Glen Boulevard & Ventura Boulevard	A.M. P.M.	0.864 1.004	D F	0.879 1.006	D F	0.015 0.002	NO NO	0.843 0.969	D E	0.015 0.000	0.036 0.037	0.000 0.000	NO NO	0.036 0.037	0.000 0.000	NO NO	NO NO
104.	[a] Hazeltine Avenue (West) & Ventura Boulevard	A.M. P.M.	0.751 0.871	C D	0.767 0.890	C D	0.016 0.019	NO NO	0.730 0.853	C D	0.000 0.000	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.000 0.000	NO NO	NO NO
105.	[a] Stern Avenue (West) & Ventura Boulevard	A.M. P.M.	0.597 0.605	A B	0.613 0.624	A B	0.016 0.019	NO NO	0.577 0.587	A A	0.000 0.000	0.036 0.037	0.000 0.000	NO NO	0.036 0.037	0.000 0.000	NO NO	NO NO
106.	[a], [c] Woodman Avenue & Ventura Boulevard	A.M. P.M.	0.818 0.903	D E	0.835 0.923	D E	0.017 0.020	NO YES	0.799 0.886	C D	0.000 0.011	0.036 0.037	0.000 0.000	NO NO	0.036 0.037	0.000 0.000	NO NO	NO NO
107.	[a] Sunnyslope Avenue & Ventura Boulevard	A.M. P.M.	0.624 0.665	B B	0.714 0.644	C B	0.017 0.020	NO NO	0.677 0.607	B B	0.000 0.000	0.000 0.037	0.000 0.000	NO NO	0.000 0.037	0.000 0.000	NO NO	NO NO
108.	[a] Dixie Canyon Avenue & Ventura Boulevard	A.M. P.M.	0.701 0.857	C D	0.682 0.722	B C	0.017 0.021	NO NO	0.645 0.685	B B	0.000 0.000	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.000 0.000	NO NO	NO NO
109.	[a] Fulton Avenue & Ventura Boulevard	A.M. P.M.	0.868 0.868	D D	0.874 0.888	D D	0.017 0.020	YES NO	0.837 0.851	D D	0.000 0.001	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.000 0.000	NO NO	NO NO
110.	[a] Valley Vista Boulevard/Ethel Avenue & Ventura Boulevard	A.M. P.M.	0.775 0.765	C C	0.795 0.786	C C	0.020 0.021	NO NO	0.758 0.787	C C	0.000 0.000	0.037 0.049	0.000 0.000	NO NO	0.037 0.049	0.000 0.000	NO NO	NO NO
111.	[a] Coldwater Canyon Avenue & Ventura Boulevard	A.M. P.M.	1.217 1.491	F F	1.237 1.515	F F	0.020 0.024	YES YES	1.197 1.475	F F	0.011 0.015	0.040 0.040	0.007 0.007	YES YES	0.033 0.033	0.007 0.007	NO NO	NO NO

ATTACHMENT F1 (Continued)  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
PROJECT IMPACT SUMMARY - LEVEL OF SERVICE (SIGNALIZED INTERSECTIONS)

No.	Intersection	Peak Hour	Future without Alternative 10			Future with Alternative 10 with TDM, Before Mitigations					Future with Alternative 10 with TDM Program and Mitigation Measures						
			V/C	LOS	V/C	LOS	V/C	Change in V/C	Significant Impact?	V/C	LOS	Required Evolution Mitigation V/C	Mitigation V/C Effectiveness	Required Metro Universal Mitigation V/C	Mitigation Shared with Metro Universal	Leftover Mitigation V/C after Metro Universal Required Credit	Required V/C Improvement to eliminate Evolution Plan Significant Impact
112.	[a] Whittsett Avenue/Laurel Terrace Drive & Ventura Boulevard	A.M. P.M.	0.744 0.904	C E	0.765 0.928	C E	0.021 0.024	NO YES	0.725 0.888	C D	0.000 0.015	0.040 0.040	0.000 0.002	NO YES	0.040 0.038	0.040 0.038	NO NO
113.	[a] Laurelgrove Avenue & Ventura Boulevard	A.M. P.M.	0.609 0.729	B C	0.629 0.752	B C	0.020 0.023	NO NO	0.629 0.715	A C	0.000 0.000	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.037 0.037	NO NO
114.	[a] Vantage Avenue & Ventura Boulevard	A.M. P.M.	0.682 0.710	B C	0.704 0.733	B C	0.022 0.023	NO NO	0.667 0.697	B B	0.000 0.000	0.037 0.036	0.000 0.000	NO YES	0.037 0.036	0.037 0.036	NO NO
115.	[e], [c] Laurel Canyon Boulevard & Ventura Boulevard	A.M. P.M.	1.152 1.069	F F	1.175 1.095	F F	0.023 0.026	YES YES	1.135 1.055	F F	0.014 0.017	0.040 0.040	0.013 0.013	YES YES	0.040 0.027	0.040 0.027	NO NO
116.	[a] Redford Avenue/Ventura Place & Ventura Boulevard	A.M. P.M.	0.649 0.640	B B	0.673 0.645	B B	0.024 0.005	NO NO	0.634 0.606	B B	0.000 0.000	0.039 0.039	0.000 0.000	NO NO	0.039 0.039	0.039 0.039	NO NO
118.	[a] Lanekshim Boulevard/Tjunga Avenue & Burbank Boulevard	A.M. P.M.	1.189 1.170	F F	1.194 1.178	F F	0.005 0.008	NO NO	1.184 1.168	F F	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
119.	[a] Vineland Avenue & Burbank Boulevard	A.M. P.M.	0.843 0.798	D C	0.850 0.803	D C	0.007 0.005	NO NO	0.840 0.793	D C	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
120.	[a] Cahuanga Boulevard & Burbank Boulevard	A.M. P.M.	1.169 1.080	F F	1.174 1.084	F F	0.005 0.004	NO NO	1.147 1.074	F F	0.000 0.000	0.027 0.010	0.000 0.000	NO NO	0.027 0.010	0.027 0.010	NO NO
121.	[a] Cahuanga Boulevard & Chandler Boulevard	A.M. P.M.	0.471 0.706	A C	0.476 0.712	A C	0.005 0.006	NO NO	0.455 0.695	A B	0.000 0.000	0.021 0.017	0.000 0.000	NO NO	0.021 0.017	0.021 0.017	NO NO
122.	La Cienega Boulevard & Sunset Boulevard	A.M. P.M.	0.831 1.218	D F	0.832 1.222	D F	0.001 0.004	NO NO	0.832 1.222	D F	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
123.	[c] La Cienega Boulevard & Santa Monica Boulevard	A.M. P.M.	1.067 0.916	F E	1.066 0.917	F E	-0.001 0.001	NO NO	1.066 0.917	F E	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
124.	[a] Laurel Canyon Boulevard & Hollywood Boulevard	A.M. P.M.	0.607 0.754	B C	0.611 0.754	B C	0.004 0.000	NO NO	0.601 0.744	B C	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
125.	[a] Crescent Heights Boulevard & Sunset Boulevard	A.M. P.M.	1.243 0.981	F E	1.250 0.981	F E	0.007 0.000	NO NO	1.250 0.981	F E	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
126.	[a] Fairfax Avenue & Hollywood Boulevard	A.M. P.M.	0.950 0.875	E D	0.953 0.875	E D	0.003 0.000	NO NO	0.953 0.875	E D	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
127.	[a] Fairfax Avenue & Sunset Boulevard	A.M. P.M.	0.728 0.949	C E	0.730 0.952	C E	0.002 0.003	NO NO	0.730 0.952	C E	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
128.	[a], [d] La Brea Avenue & Franklin Avenue	A.M. P.M.	- -	E E	- -	E E	0.007 0.007	NO NO	- -	E E	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
129.	[a] La Brea Avenue & Hollywood Boulevard	A.M. P.M.	1.026 0.930	F E	1.033 0.934	F E	0.007 0.004	NO NO	1.023 0.924	F E	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
130.	[a] La Brea Avenue & Sunset Boulevard	A.M. P.M.	0.929 1.091	E F	0.933 1.101	E F	0.004 0.010	NO YES	0.923 1.091	E F	0.000 0.001	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
131.	La Brea Avenue & Fountain Avenue	A.M. P.M.	1.076 1.033	F F	1.079 1.035	F F	0.003 0.002	NO NO	1.079 1.035	F F	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
132.	La Brea Avenue & Santa Monica Boulevard	A.M. P.M.	0.977 1.080	E F	0.979 1.083	E F	0.002 0.003	NO NO	0.979 1.083	E F	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
133.	[a], [d] Highland Avenue & Hollywood Boulevard	A.M. P.M.	- -	F F	- -	F F	0.016 0.017	YES YES	- -	F F	0.007 0.008	0.010 0.010	0.002 0.002	YES YES	0.008 0.008	0.008 0.008	NO NO
134.	[a] Highland Avenue & Sunset Boulevard	A.M. P.M.	0.930 0.866	E D	0.949 0.914	E D	0.019 0.018	YES YES	0.939 0.904	E E	0.010 0.009	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
135.	[a] Highland Avenue & Fountain Avenue	A.M. P.M.	0.991 0.793	E C	0.989 0.804	E D	0.008 0.011	NO NO	0.989 0.794	E C	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
136.	[a], [c] Highland Avenue & Santa Monica Boulevard	A.M. P.M.	0.918 0.938	E E	0.922 0.939	E E	0.004 0.001	NO NO	0.912 0.929	E E	0.000 0.000	0.010 0.010	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
137.	[a] Kester Avenue (East) & Ventura Boulevard	A.M. P.M.	0.697 0.996	B E	0.710 1.010	C F	0.013 0.014	NO YES	0.673 0.973	B E	0.000 0.005	0.037 0.037	0.000 0.000	NO NO	0.037 0.037	0.037 0.037	NO NO
138.	San Vicente Boulevard/Clerk St & Sunset Boulevard	A.M. P.M.	0.959 1.117	E F	0.962 1.119	E F	0.003 0.002	NO NO	0.962 1.119	E F	0.000 0.000	0.000 0.000	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO

ATTACHMENT F1 (Continued)  
NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10  
PROJECT IMPACT SUMMARY - LEVEL OF SERVICE (SIGNALIZED INTERSECTIONS)

No.	Intersection	Peak Hour	Future without Alternative 10			Future with Alternative 10 with TDM, Before Mitigations			Future with Alternative 10 with TDM Program and Mitigation Measures						
			V/C	LOS	V/C	LOS	V/C	Change in V/C	Significant Impact?	V/C	LOS	Required Evolution Mitigation V/C	Mitigation Shared with Metro Universal	Leftover Mitigation V/C after Metro Universal Required Credit	Required V/C Improvement to eliminate Evolution Plan Significant Impact
139.	[a] Cahuena Boulevard & Sunset Boulevard	A.M. P.M.	0.907 0.814	E D	0.908 0.817	E D	0.001 0.003	NO NO	0.898 0.807	D D	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
140.	[a] Lankershim Boulevard & Chandler Boulevard (North)	A.M. P.M.	0.594 0.353	A A	0.601 0.356	B A	0.007 0.003	NO NO	0.601 0.356	B A	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
141.	[a] SR 170 SB Ramps & Magnolia Boulevard	A.M. P.M.	0.776 0.606	C B	0.787 0.607	C B	0.011 0.001	NO NO	0.749 0.563	C A	0.000 0.000	NO NO	0.038 0.044	0.038 0.044	NO NO
142.	[a] SR 170 NB Ramps & Magnolia Boulevard	A.M. P.M.	0.551 0.712	A C	0.561 0.715	A C	0.010 0.003	NO NO	0.521 0.705	A C	0.000 0.000	NO NO	0.040 0.010	0.040 0.010	NO NO
144.	[a] Coldwater Canyon Avenue & US 101 NB Ramps	A.M. P.M.	0.560 0.551	A A	0.551 0.552	A A	0.001 0.001	NO NO	0.551 0.542	A A	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
145.	[a] Coldwater Canyon Avenue & US 101 SB Ramps	A.M. P.M.	0.632 0.605	B B	0.633 0.605	B B	0.001 0.000	NO NO	0.623 0.595	B A	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
146.	[a] Coldwater Canyon Avenue & Moorpark Street	A.M. P.M.	0.953 1.103	E F	0.985 1.104	E F	0.002 0.001	NO NO	0.945 1.094	E F	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
147.	[a] Laurel Canyon Boulevard & US 101 NB Ramps	A.M. P.M.	0.765 0.692	C B	0.765 0.692	C B	0.000 0.000	NO NO	0.755 0.682	C B	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
148.	[a] Laurel Canyon Boulevard & US 101 SB Ramps	A.M. P.M.	0.735 0.646	C B	0.736 0.646	C B	0.001 0.000	NO NO	0.726 0.636	C B	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
149.	[a] Laurel Canyon Boulevard & Moorpark Street	A.M. P.M.	1.174 1.287	F F	1.177 1.280	F F	0.003 0.003	NO NO	1.167 1.280	F F	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
150.	[a] Colfax Avenue & Riverside Drive	A.M. P.M.	1.000 1.005	E F	1.001 1.006	F F	0.001 0.001	NO NO	0.991 0.996	E E	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
151.	[a] Colfax Avenue & Moorpark Street	A.M. P.M.	0.864 0.654	D B	0.866 0.655	D B	0.002 0.001	NO NO	0.856 0.645	D B	0.000 0.000	NO NO	0.010 0.010	0.010 0.010	NO NO
152.	[a] Lankershim Boulevard & Chandler Boulevard (South)	A.M. P.M.	0.758 0.609	C B	0.766 0.619	C B	0.008 0.010	NO NO	0.766 0.619	C B	0.000 0.000	NO NO	0.000 0.000	0.000 0.000	NO NO
153.	[e] Verdugo Avenue & Hollywood Way	A.M. P.M.	1.265 1.162	F F	1.267 1.165	F F	0.002 0.003	NO NO	1.271 1.162	F F	0.000 0.000	NO NO	-0.004 0.003	0.000 0.007	NO NO
154.	[e] Hollywood Way & Magnolia Boulevard	A.M. P.M.	1.277 1.053	F F	1.279 1.054	F F	0.002 0.001	NO NO	1.283 1.054	F F	0.000 0.000	NO NO	-0.004 0.000	0.000 0.000	NO NO
155.	[e] Buena Vista Street & Verdugo Avenue	A.M. P.M.	1.012 1.176	F F	1.013 1.181	F F	0.001 0.005	NO NO	1.015 1.178	F F	0.000 0.000	NO NO	-0.002 0.003	0.000 0.003	NO NO
156.	[e] Buena Vista Street & Magnolia Boulevard	A.M. P.M.	1.068 1.147	F F	1.072 1.147	F F	0.004 0.000	NO NO	1.074 1.147	F F	0.000 0.000	NO NO	-0.002 0.000	0.000 0.000	NO NO
160.	Vineyard Avenue & US 101 SB Ramps	A.M. P.M.	0.724 0.664	C B	0.762 0.680	C B	0.038 0.016	NO NO	0.580 0.597	A A	0.000 0.000	NO NO	0.182 0.083	0.001 0.000	NO NO

Notes:

- [a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.
- [b] The mitigation proposed for the intersection by Metro Universal was further expanded by the Evolution Plan.
- [c] Denotes CMP arterial monitoring station.
- [d] Traffic counts at this location were not fully representative of the situation due to downstream constraints and pedestrian conflicts. LOS is based on field observations and has not been calculated based on the Universal City Transportation Model.
- [e] Intersection is connected to the City of Burbank's Traffic Signal Interconnect & Signal Timing System. A credit of 0.02 in V/C ratio was included in the analysis.

**ATTACHMENT F2**  
**NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10**  
**LEVEL OF SERVICE SUMMARY - UNSIGNALIZED INTERSECTIONS**

No.	Intersection	Peak Hour	Future without Alternative 10		Future with Alternative 10 with TDM, Before Mitigations			Future with Alternative 10 with TDM Program and Mitigation Measures		
			Delay	LOS	Delay	LOS	Meets Signal Warrants [a]	V/C or Delay	LOS	Meets Signal Warrants/Signal Proposed? [a]
15.	[b], [c] SR 134 EB On-Ramp e/o Vineland Avenue & Riverside Drive	A.M. P.M.	**	F	**	F	YES	0.570	A	YES
32.	[c], [d] Cahuenga Boulevard & Valley Spring Lane	A.M. P.M.	**	F	**	F	YES	0.663	B	YES
60.	[d] Forest Lawn Drive & SR 134 EB Ramps	A.M. P.M.	**	F	**	F	NO	0.547	A	YES [e]
61.	[c], [d] Forest Lawn Drive & SR 134 WB Ramps	A.M. P.M.	35.1	E	32.1	D	YES	26.6	D	N/A
72.	[c], [d] Lankershim Boulevard & Muddy Waters Drive	A.M. P.M.	**	F	**	F	YES	0.663	B	YES
73.	[d] Lankershim Boulevard & Jimmy Hendrix Drive	A.M. P.M.	**	F	**	F	YES	0.439	A	YES
94.	[d] SR 134 EB On-Ramp/Screenland Drive & Riverside Drive	A.M. P.M.	14.1 24.1	B C	15.8 32.2	C D	N/A	16.3	C	N/A
117.	[b], [c] US 101 SB On-Ramp n/o Lankershim Boulevard & Ventura Boulevard	A.M. P.M.	0.0	A	0.0	A	N/A	0.602	B	YES
143.	[b] Tujunga Avenue & SR 170 NB On-Ramp/Private Driveway	A.M. P.M.	16.5 12.5	C B	16.7 12.7	C B	N/A	0.685	B	YES
157.	[c], [d] Tujunga Avenue & US 101 SB Off-Ramp	A.M. P.M.	16.0 53.2	C F	16.0 53.2	C F	N/A	16.0	C	N/A
158.	[b] Tujunga Avenue & US 101 NB On-Ramp	A.M. P.M.	12.2 10.6	B B	12.2 10.6	B B	N/A	12.2	B	N/A
159.	[d] US 101 SB Off-Ramp & Riverside Drive	A.M. P.M.	25.3 14.5	D B	31.9 15.0	D B	N/A	20.7	C	N/A
161.	[b], [c] US 101 NB On-Ramp & Moorpark Street	A.M. P.M.	11.0 18.0	B C	11.1 18.7	B C	N/A	13.9	B	N/A
162.	[c], [d] Cahuenga Boulevard & US 101 SB Ramps	A.M. P.M.	**	F	**	F	YES	1.155	F	YES
163.	[d] Bob Hope Drive & SR 134 EB Off-Ramp	A.M. P.M.	**	F	**	F	YES	1.321	F	YES
164.	[b], [c] SR 134 WB On-Ramp & Alameda Avenue	A.M. P.M.	0.0 0.0	A A	0.0 0.0	A A	N/A	**	F	N/A

Notes:  
 [a] The unsignalized intersections are analyzed for signal warrants only if the intersection is projected to operate at LOS E or F and Alternative 10 adds traffic to the intersection. N/A signifies that the intersection operates at LOS D or better and/or All intersection is uncontrolled. Analysis was done using 2000 Highway Capacity Manual Two-Way Stop-Controlled methodology. For the purpose of evaluating the operating conditions of the intersection, level of service is based on average vehicular delay in sec  
 [b] Intersection is proposed to be signalized as part of the Project improvement program and will operate under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was include in the analysis.  
 [c] Intersection is controlled by stop signs on minor approach. Analysis was done using 2000 Highway Capacity Manual Two-Way Stop-Controlled methodology. For the purpose of evaluating the operating conditions of the intersection, level of service is based o  
 [d] While the intersection does not meet signal warrants, the Project would fund the installation of a traffic signal as part of the Neighborhood Traffic Management Plan upon LADOT's approval.  
 \*\* Indicates oversaturated conditions, i.e. long waits at the approaches controlled by stop signs. Delay cannot be calculated.

## ATTACHMENT B

### ATTACHMENT G

#### NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10 TRAFFIC SIGNAL UPGRADES

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The applicant shall fund the upgrade of the traffic signal controllers to provide a Type 2070 controller at the following intersections:

1. Barham Boulevard and Buddy Holly Drive/Cahuenga Boulevard
2. Barham Boulevard and Coyote Canyon Road
3. Barham Boulevard and Lakeside Plaza Drive/Forest Lawn Drive
4. Broadlawn Drive and Cahuenga Boulevard
5. Cahuenga Boulevard and Burbank Boulevard
6. Cahuenga Boulevard and Camarillo Street
7. Cahuenga Boulevard and Chandler Boulevard
8. Cahuenga Boulevard and Hillpark Drive
9. Cahuenga Boulevard and Huston Street
10. Cahuenga Boulevard and Magnolia Boulevard
11. Cahuenga Boulevard and Moorpark Street
12. Cahuenga Boulevard and Riverside Drive
13. Cahuenga Boulevard and SR 134 eastbound ramps
14. Cahuenga Boulevard and SR 134 westbound off-ramp
15. Cahuenga Boulevard and Whipple Street
16. Coldwater Canyon Avenue and Moorpark Street
17. Coldwater Canyon Avenue and US 101 northbound ramps
18. Coldwater Canyon Avenue and US 101 southbound ramps
19. Colfax Avenue and Moorpark Street
20. Colfax Avenue and Riverside Drive
21. Forman Avenue and Riverside Drive
22. Highland Avenue and Camrose Drive
23. Highland Avenue and Fountain Avenue
24. Highland Avenue and Odin Street
25. La Brea Avenue & Sunset Boulevard
26. Lankershim Boulevard and Cahuenga Boulevard
27. Lankershim Boulevard and Magnolia Boulevard
28. Lankershim Boulevard and Main Street
29. Lankershim Boulevard and Moorpark Street
30. Lankershim Boulevard and Riverside Drive
31. Lankershim Boulevard and Valleyheart Drive/James Stewart Avenue
32. Lankershim Boulevard and Whipple Street
33. Laurel Canyon Boulevard and Hollywood Boulevard
34. Laurel Canyon Boulevard and US 101 northbound ramps
35. Laurel Canyon Boulevard and US 101 southbound ramps
36. Ledge Avenue/Moorpark Way and Riverside Drive
37. Memorial Drive and Forest Lawn Drive
38. Mulholland Drive and Cahuenga Boulevard
39. Oakshire Drive & Cahuenga Boulevard
40. SR 170 northbound ramps and Magnolia Boulevard
41. SR 170 southbound ramps and Magnolia Boulevard

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42. Tujunga Avenue and Riverside Drive/Camarillo Street
43. Universal Center Drive/Universal Studios Boulevard and Buddy Holly Drive
44. Vine Street and Franklin Avenue/US 101 southbound off-ramp
45. Vineland Avenue and Burbank Boulevard
46. Vineland Avenue/Lankershim Boulevard and Camarillo Street
47. Vineland Avenue and Riverside Drive
48. Vineland Avenue and US 101 northbound off-ramp
49. Vineland Avenue and Whipple Street

The applicant shall also fund the installation of CCTV cameras at the following intersections:

1. Barham Boulevard & Lakeside Plaza Drive/Forest Lawn Drive
2. Cahuenga Boulevard & Sunset Boulevard
3. Coldwater Canyon Avenue & US 101 northbound ramps
4. Coldwater Canyon Avenue & US 101 southbound ramps
5. Highland Avenue & Santa Monica Boulevard
6. Lankershim Boulevard & Cahuenga Boulevard
7. Laurel Canyon Boulevard & US 101 northbound ramps
8. Laurel Canyon Boulevard & US 101 southbound ramps
9. SR 170 southbound ramps & Magnolia Boulevard
10. Tujunga Avenue & Riverside Drive/Camarillo Street

**ATTACHMENT H**

NBC UNIVERSAL EVOLUTION PLAN - ALTERNATIVE 10

***LADOT Neighborhood Traffic Management Process***

This appendix sets forth the Los Angeles Department of Transportation's (LADOT) process for implementation of Neighborhood Traffic Management Plan(s) for the Project.

**ELIGIBLE NEIGHBORHOODS**

After implementation of the Project's proposed Transportation Demand Management (TDM) program and traffic mitigation measures, the following five neighborhoods have the potential to experience neighborhood intrusion traffic:

- a. Neighborhood A – Riverside Drive to the north, Cartwright Avenue to the east, Landale Street/Woodbridge Street to the south, and Vineland Avenue/Lankershim Boulevard to the west
- b. Neighborhood B – Kling Street to the north, Lankershim Boulevard to the east, the SR 134 freeway to the south, and Vineland Avenue to the west
- c. Neighborhood C – Sarah Street to the north, Ledge Avenue/Placidia Avenue to the east, Valley Spring Lane/Moorpark Street to the south, and Cahuenga Boulevard to the west

**TRAFFIC CALMING MEASURES**

The following are traffic calming measures that may be included in Neighborhood Traffic Management Plan(s) for the Project.

## ATTACHMENT B

### **Non-restrictive Control Measures**

Non-restrictive control measures are intended to reduce traffic speeds on local streets and/or make the neighborhood streets less inviting for through traffic. Non-restrictive traffic calming measures may include, but are not limited to, traffic circles, speed humps, roadway narrowing effects (raised medians, traffic chokers, etc.), landscaping features, roadway striping changes (adding bike lanes or parking striping to reduce the perceived width of the roadway), and stop sign pattern.

### **Non-restrictive Improvements**

Non-restrictive improvements include neighborhood improvements that can offset the effects of added traffic, including street trees, sidewalks, landscaping, neighborhood identification features, and pedestrian amenities. Such measures can support trip reduction efforts by encouraging walking, bicycling, and the use of public transit.

### **NEIGHBORHOOD TRANSPORTATION MANAGEMENT PLAN(S) BUDGET**

Based on its experience implementing Transportation Management Plans, LADOT has determined that a budget of up to \$300,000 is appropriate for the development of Neighborhood Transportation Management Plan(s) for the eligible neighborhoods identified above. The Applicant or its successor shall guarantee the budget in a form reasonably satisfactory to LADOT. The \$300,000 budget is allocated among the three neighborhoods (based on the number of residential street blocks in each neighborhood) as follows:

Neighborhood A – \$69,000

Neighborhood B – \$21,000

Neighborhood C – \$210,000

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Consultant time to develop the plans shall be paid by the Applicant or its successors and shall not be counted against the \$300,000 budget, but data collection and mailing costs shall be included in the budget as shall the costs associated with the design of any changes approved by the neighborhood.

### NEIGHBORHOOD TRANSPORTATION MANAGEMENT PLAN PROCESS

Each Neighborhood Transportation Management Plan process shall include three workshops that shall take place over a maximum four-month time period. Each workshop shall be rescheduled a maximum of one time if a quorum of the Committee (described below) is not present in person or by proxy. Failure to deliver a quorum for two consecutive meetings duly called and approved by the Committee shall constitute a declaration of non-interest in the process and the process shall cease, and all unused funds allocated to that neighborhood shall be returned to the Applicant or its successors.

- a. Data Collection – Based on the schedule in the final subphasing mitigation program for the Project, the transportation consultant for the Applicant or its successors shall collect and submit to LADOT appropriate traffic data (average daily trips, speed data, intersection turning movement counts, roadway characteristics, etc.) for each of the neighborhoods.
- b. Kick-Off Neighborhood Workshops – Based on the schedule in the final Project subphasing mitigation program, the transportation consultant for the Applicant or its successors shall hold a “Kick-off Workshop” meeting with the residents for each of the neighborhoods. Working with the Council Office, residents in the boundaries of the neighborhood will be invited to participate in the workshops. At the Kick-off Workshop, each neighborhood shall select a Committee of seven members by a consensus of the neighbors present at the meeting. If less than seven members of the neighborhood attend the Kick-off Workshop, the meeting will be rescheduled. If less than seven members attend the rescheduled Kick-off Workshop, that shall constitute a declaration of non-interest in the process and the process shall cease and all funds allocated to that neighborhood shall be returned to the Applicant.

## ATTACHMENT B

A majority of the Committee members must be present at each of the workshops for the Neighborhood Transportation Management Plan. The Agenda for the “Kick-off Workshop” shall include the following:

- i. Identify the process to be used to develop the Neighborhood Traffic Management Plan
  - ii. Identify the non-restrictive control measures and non-restrictive improvement choices for the neighborhood
  - iii. Discuss the existing and anticipated traffic issues in the neighborhood
  - iv. Match the types of improvements with the types of problems that each measure addresses
  - v. Identify the types of improvements that the neighbors are likely to support
- c. Draft Plan – Based on the data and input from the Kick-off Workshop, the transportation consultant for the Applicant or its successors shall develop a draft plan to implement for the neighborhood. The transportation consultant for the Applicant shall review the proposed measures with the appropriate City agency (LADOT, Bureau of Engineering, Street Services and Sanitation, etc.) to confirm the feasibility of each of the measures.
- d. Neighborhood Workshop 2 – Upon completion of a draft plan, Neighborhood Workshop 2 shall be held to get reaction to the draft plan and suggestions for modifications to the plan from the residents.
- e. Revised Plan – Based on input obtained during Neighborhood Workshop 2, the transportation consultant for the Applicant or its successors shall revise the draft plan for the neighborhood. The transportation consultant for the Applicant shall review the revised plan with the appropriate City agency (LADOT, Bureau of Engineering, Street Services and Sanitation, etc.) to confirm the feasibility of each of the measures.
- f. Neighborhood Workshop 3 – Upon completion of the revised plan, Neighborhood Workshop 3 shall be held to finalize the plan. The plan shall be finalized based on the consensus of the residents present at Neighborhood Workshop 3.

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- g. Information Brochure – The transportation consultant for the Applicant or its successors shall prepare an information brochure that summarizes the final plan approved in Neighborhood Workshop 3 and a process for the neighborhood to approve or reject the plan. LADOT shall cause the information brochure to be mailed to all households in the neighborhood at issue.
  
- h. Approval/Rejection of the Plan – If a majority of the households in the neighborhood approve of the plan, the Applicant or its successors shall implement the traffic management plan on a temporary basis based on the schedule in the final Project subphasing mitigation program. If a majority of the households do not approve of the plan, the measures in the plan shall not be implemented, the process shall be declared over and all remaining funds for that neighborhood shall be returned to the Applicant or its successors.
  
- i. Approval on Final Plan – If step h.) above resulted in the approval of the plan and temporary measures were implemented, six months after the implementation of the temporary measures, LADOT shall cause a second survey of the households in the neighborhood at issue to determine the level of interest in making the temporary traffic measures in the plan permanent. If a majority of the households in the neighborhood approve of permanent implementation of the measures, the traffic measures shall be made permanent. If a majority of the households do not approve of the traffic measures, the measures shall be removed.

Upon completion of steps a.) through i.) above, the Applicant's or its successors' responsibility for the Neighborhood Traffic Management Plan shall be deemed complete and any remaining funds allocated for that neighborhood shall be returned to the Applicant.

# ATTACHMENT B

Development/Mitigation	Mitigation Monitoring Program Reference	P.M. Peak Hour Trips Trigger				Jurisdiction/Agency
		Phase 1 (2010 - 2015)	Phase 2 (2016 - 2020)	Phase 3 (2021 - 2025)	Phase 4 (2026 - 2030)	
<b>Land Use - Net New Development [a], [b]</b>						
Studio/Business Areas West and Back Lot (Lankershim) (Zone A)		164	564	758	1,028	
Entertainment Area (Zone B)		(142)	113	458	808	
Studio/Business Areas East (Lakeside) (Zone C)		40	163	292	361	
Studio/Business West/Back Lot and Entertainment Areas (Zones A & B)		22	677	1,216	1,836	
Entertainment & Studio/Business Areas East (Zones B & C)		(102)	276	750	1,169	
Studio/Business Areas East and West/Back Lot (Zones A & C)		204	727	1,050	1,389	
Studio/Business Areas West/Back Lot, Entertainment, & Studio/Business East (Zones A, B, & C)		62	840	1,508	2,197	
<b>Mitigation/Improvement [c], [d], [e], [f], [g]</b>						
<u>Buddy Holly Drive Improvements</u>	<b>MM B-19</b>	<b>Zone B</b>				City of Los Angeles/County of Los Angeles
<u>Lakeside Plaza Drive Roadway Improvements</u>	<b>MM B-20</b>			<b>Zone C</b>		City of Los Angeles
<u>Universal Hollywood Drive Roadway Improvements</u>	<b>Des Feat B-7</b>	<b>Zone B</b>	<b>Zone B</b>			City of Los Angeles/County of Los Angeles
<u>TDM - TMA, TIC, Transit Passes, Flex Cars, GRH, etc.</u>	<b>Des Feat B-1</b>	<b>Zones A, B, &amp; C</b>	<b>Zones A, B, &amp; C</b>	<b>Zones A, B, &amp; C</b>	<b>Zones A, B, &amp; C</b>	City of Los Angeles/County of Los Angeles
<u>US 101 Southbound On-Ramp at Universal Studios Boulevard</u>	<b>MM B-3</b>	<b>Zone B</b>	<b>Zone B</b>			City of Los Angeles/Caltrans
<u>US 101 Interchange Improvements at Universal Terrace Parkway</u>	<b>MM B-4</b>			<b>Zones A &amp; B</b>		City of Los Angeles/Caltrans
<u>Barham Boulevard Corridor Improvements</u>						
Add Third Southbound Lane from Forest Lawn to Buddy Holly	<i>Physical</i>	<b>MM B-5</b>		<b>Zone B</b>		
Int. 52 - Barham Boulevard & De Witt Drive	<i>Physical</i>	<b>MM B-5</b>		<b>Zone B</b>		City of Los Angeles
Int. 53 - Barham Boulevard & Lake Hollywood Drive	<i>Physical</i>	<b>MM B-5</b>		<b>Zone B</b>		City of Los Angeles
Int. 54 - Barham Boulevard & Coyote Canyon Road	<i>Physical</i>	<b>MM B-5</b>		<b>Zone B</b>		City of Los Angeles
Int. 55 - Barham Boulevard & Lakeside Plaza Drive & Forest Lawn Drive	<i>Physical</i>	<b>MM B-20</b>		<b>Zone C</b>		City of Los Angeles
	<i>Signal</i>	<b>MM B-20</b>		<b>Zone C</b>		
<u>Lankershim Boulevard Corridor Improvements</u>						
Int. 34 - Lankershim Boulevard & Valleyheart Drive/James Stewart Avenue	<i>Physical</i>	<b>MM B-6</b>	<b>Zones A &amp; B</b>			City of Los Angeles/County of Los Angeles
Int. 35 - Lankershim Boulevard & Main Street	<i>Physical</i>	<b>MM B-6</b>	<b>Zones A &amp; B</b>			City of Los Angeles/County of Los Angeles
	<i>Signal</i>	<b>MM B-6</b>	<b>Zones A &amp; B</b>			City of Los Angeles/County of Los Angeles
Int. 36 - Lankershim Boulevard & Campo de Cahuenga Way/Universal Hollywood Drive	<i>Physical</i>	<b>MM B-6</b>	<b>Zones A &amp; B</b>			City of Los Angeles/County of Los Angeles
	<i>Signal</i>	<b>MM B-6</b>	<b>Zones A &amp; B</b>			City of Los Angeles/County of Los Angeles
Int. 37 - Lankershim Boulevard & US 101 NB Off-Ramp	<i>Physical</i>	<b>LADOT Assess Letter</b>		<b>Zones A &amp; B</b>		City of Los Angeles/Caltrans
Int. 72 - Lankershim Boulevard & Muddy Waters Drive	<i>Signal</i>	<b>MM B-6</b>	<b>Zones A &amp; B</b>			City of Los Angeles/County of Los Angeles

**Notes:**

- [a] The Project development sub-phasing plan is approximate and may be subject to revisions.
- [b] P.M. peak hour trip generation for each sub-phase would determine the specific transportation improvements implemented. P.M. peak hour trip generation to be estimated as sub phases develop using the following factors:  
 Production Support = 0.57 per ksf, Sound Stages = 0.43 per ksf, Office = 1.28 per ksf, Studio Office = 0.63 per ksf, Warehouse = 0.35 per ksf, Entertainment/New Amphitheater = 0.93 per ksf, Entertainment Retail = 0.89 per ksf, Existing Amphitheater = Residential Apartments = 0.62 per DU, Neighborhood Retail = 1.73 per ksf, and Community Amenities = 1.42 per ksf.
- [c] The sub-phasing plan may be revised, where appropriate and as determined by LADOT: (1) upon demonstration that measures for each sub-phase in the revised sub-phasing plan are equivalent or superior to the original mitigation measures, and/or (2) upon Applicant has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT.
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- [e] Temporary Certificates of Occupancy may be granted in the event of any delay through no fault of the Applicant, provided that, in each case, the Applicant has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT.
- [f] Substitute mitigation measures may be provided subject to the approval by the agency with jurisdiction over the location of the improvement, upon demonstration that the substitute mitigation measure is equivalent or superior to the original mitigation
- [g] Prior to the issuance of any temporary or permanent Certificate of Occupancy in the final sub-phase, all required improvements in the entire mitigation phasing plan shall be funded, completed, or resolved to the satisfaction of LADOT.

# ATTACHMENT B

Development/Mitigation		P.M. Peak Hour Trips Trigger				Jurisdiction/Agency
		Phase 1 (2010 - 2015)	Phase 2 (2016 - 2020)	Phase 3 (2021 - 2025)	Phase 4 (2026 - 2030)	
<b>Land Use - Net New Development [a], [b]</b>						
Studio/Business Areas West and Back Lot (Lankershim) (Zone A)		164	564	758	1,028	
Entertainment Area (Zone B)		(142)	113	458	808	
Studio/Business Areas East (Lakeside) (Zone C)		40	163	292	361	
Studio/Business West/Back Lot and Entertainment Areas (Zones A & B)		22	677	1,216	1,836	
Entertainment & Studio/Business Areas East (Zones B & C)		(102)	276	750	1,169	
Studio/Business Areas East and West/Back Lot (Zones A & C)		204	727	1,050	1,389	
Studio/Business Areas West/Back Lot, Entertainment, & Studio/Business East (Zones A, B, & C)		62	840	1,508	2,197	
<b>Mitigation/Improvement (continued) [c], [d], [e], [f], [g]</b>						
<u>Forest Lawn Drive Corridor Improvements</u>						
				<b>Zone C</b>		
Int. 59 - Forest Lawn Drive & Zoo Drive	Physical	MM B-7		<b>Zone C</b>		City of Los Angeles
Int. 60 - Forest Lawn Drive & SR 134 EB Ramps	Physical	MM B-7		<b>Zone C</b>		City of Los Angeles/Caltrans
Int. 61 - Forest Lawn Drive & SR 134 WB Ramps	Signal	MM B-7		<b>Zone C</b>		City of Los Angeles/Caltrans
Forest Lawn Westbound Off-Ramp Widening	Physical	MM B-7		<b>Zone C</b>		
<u>Transit System Improvements</u>						
Regional Bus Transit		MM B-1		<b>Zones A &amp; B</b>		City of Los Angeles/Metro
Local Shuttle - Lakeside Plaza Drive to Universal City Metro Red Line station		MM B-2			<b>Zone C</b>	City of Los Angeles/Metro
Local Shuttle - Red Line Station to Downtown Burbank Metrolink station		MM B-2		<b>Zones A &amp; C</b>		City of Los Angeles/City of Burbank/Metro
Local Shuttle - Universal Hollywood Drive/Lankershim to Theme Park/City Walk		MM B-2	<b>Zone B</b>			City of Los Angeles/Metro
Bus Enhancements (Next Bus, Lo Emission, Bus Call, Shelters)		MM B-2				
<u>Hollywood Event Management Infrastructure</u>						
		Des Feat B-8	<b>Zones A, B, &amp; C</b>			City of Los Angeles
<u>Traffic Flow and Safety Program: Left-turn Signals</u>						
		LADOT Assess Letter	<b>Zones A &amp; B</b>			City of Los Angeles
<u>City of Los Angeles System-wide Signal System Upgrade</u>						
		LADOT Assess Letter	<b>Zones A, B, &amp; C</b>			City of Los Angeles
<u>Specific Intersection Improvements</u>						
Int. 11 - Vineland Avenue & Moorpark Street	Physical	MM B-8		<b>Zones A &amp; B</b>		City of Los Angeles
Int. 15 - SR 134 EB On-Ramp & Riverside Drive	Physical	MM B-22		<b>Zones A &amp; B</b>		City of Los Angeles/Caltrans
	Signal	MM B-22		<b>Zones A &amp; B</b>		City of Los Angeles/Caltrans
Int. 19 - Lankershim Boulevard & Riverside Drive	Physical	MM B-9	<b>Zones A &amp; B</b>			City of Los Angeles
Int. 20 - Lankershim Boulevard & Moorpark Street	Physical	MM B-10	<b>Zones A &amp; B</b>			City of Los Angeles
Int. 28 - Cahuenga Boulevard & Ventura Freeway eastbound ramps	Physical	MM B-23		<b>Zones A, B, &amp; C</b>		
	Signal	MM B-23		<b>Zones A, B, &amp; C</b>		
Int. 29 - Cahuenga Boulevard & Riverside Drive	Physical	MM B-12		<b>Zones A &amp; B</b>		City of Los Angeles
Int. 32 - Cahuenga Boulevard & Valley Spring Lane	Signal	MM B-15		<b>Zones A &amp; B</b>		City of Los Angeles
Int. 40 - Ledge Avenue/Moorpark Way & Riverside Drive	Physical	LADOT Assess Letter		<b>Zones A &amp; C</b>		City of Los Angeles
	Signal	LADOT Assess Letter		<b>Zones A &amp; C</b>		City of Los Angeles

**Notes:**

- [a] The Project development sub-phasing plan is approximate and may be subject to revisions.
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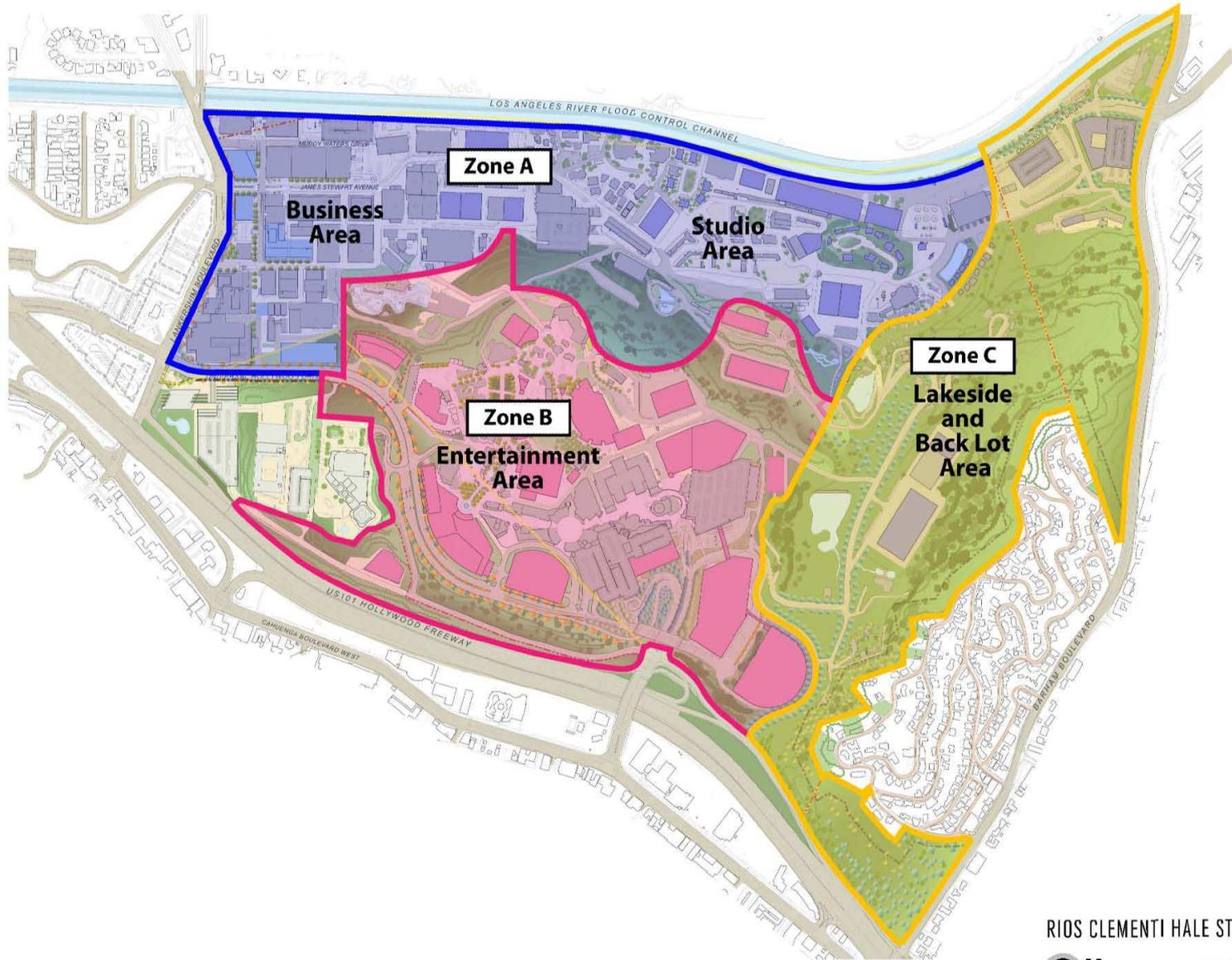
# ATTACHMENT B

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		Phase 1 (2010 - 2015)	Phase 2 (2016 - 2020)	Phase 3 (2021 - 2025)	Phase 4 (2026 - 2030)	
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<b>Mitigation/Improvement (continued) [c], [d], [e], [f], [g]</b>						
<b>Specific Intersection Improvements (continued)</b>						
Int. 47 - Barham Boulevard & Cahuenga Boulevard	<i>Physical</i>	Des Feat B-9 MM B-18	Zones B & C			City of Los Angeles
Int. 48 - Barham Boulevard Buddy & Holly Drive/Cahuenga Boulevard	<i>Physical</i>	MM B-19	Zones B & C			City of Los Angeles
Int. 75 - Pass Avenue & Verdugo Lane	<i>Signal</i>	MM B-27	Zones A, B, & C			City of Burbank
Int. 77 - Evergreen Street/Riverside Drive & Alameda Avenue	<i>Physical</i>	MM B-29	Zones A, B, & C			City of Burbank
	<i>Signal</i>	MM B-29	Zones A, B, & C			
Int. 78 - Pass Avenue & SR 134 EB Off-Ramp	<i>Signal</i>	MM B-30	Zone C			City of Burbank/Caltrans
Int. 79 - Pass Avenue & Alameda Avenue	<i>Physical</i>	MM B-31		Zones A, B, & C		City of Burbank
	<i>Signal</i>	MM B-31		Zones A, B, & C		City of Burbank
Int. 81 - Olive Avenue & Pass Avenue	<i>Physical</i>	LADOT Assess Letter	Zones B & C			City of Burbank
	<i>Signal</i>	MM B-33	Zones B & C			City of Burbank
Int. 82 - Olive Avenue & Warner Brothers Studios Gate 2/Gate 3	<i>Signal</i>	MM B-34	Zones B & C			City of Burbank
Int. 83 - Olive Avenue & Warner Brothers Studios Gate 1/Lakeside Drive	<i>Physical</i>	MM B-35	Zones B & C			City of Burbank
Int. 162 - Cahuenga Boulevard & US 101 SB Ramps	<i>Signal</i>	MM B-26	Zones A, B, & C			City of Los Angeles/Caltrans
<b>Burbank Signal Improvements</b>						
Signal Equipment		MM B-28, 36-39, 41	Zones A, B, & C			City of Burbank
Signal Timing Plan		MM B-40	Zones A, B, & C			City of Burbank
ATCS		MM B-40	Zones A, B, & C	Zones A, B, & C		City of Burbank
<b>Freeway PSR, PR/ED, PS&amp;E</b>						
US 101/SR 170/SR 134 Interchange		MM B-47	Zones A, B, & C	Zones A, B, & C		Caltrans
US 101/Highland Interchange		MM B-47		Zones A, B, & C	Zones A, B, & C	Caltrans
US 101 Auxiliary Lanes		MM B-47		Zones A, B, & C	Zones A, B, & C	Caltrans
Caltrans Ramp Fair Share Contributions		MM B-46		Zones A, B, & C	Zones A, B, & C	
Construction Management		MM B-43-44	Zones A, B, & C			
Los Angeles Neighborhood Protection Program		MM B-45	Zones A, B, & C	Zones A, B, & C	Zones A, B, & C	City of Los Angeles

**Notes:**

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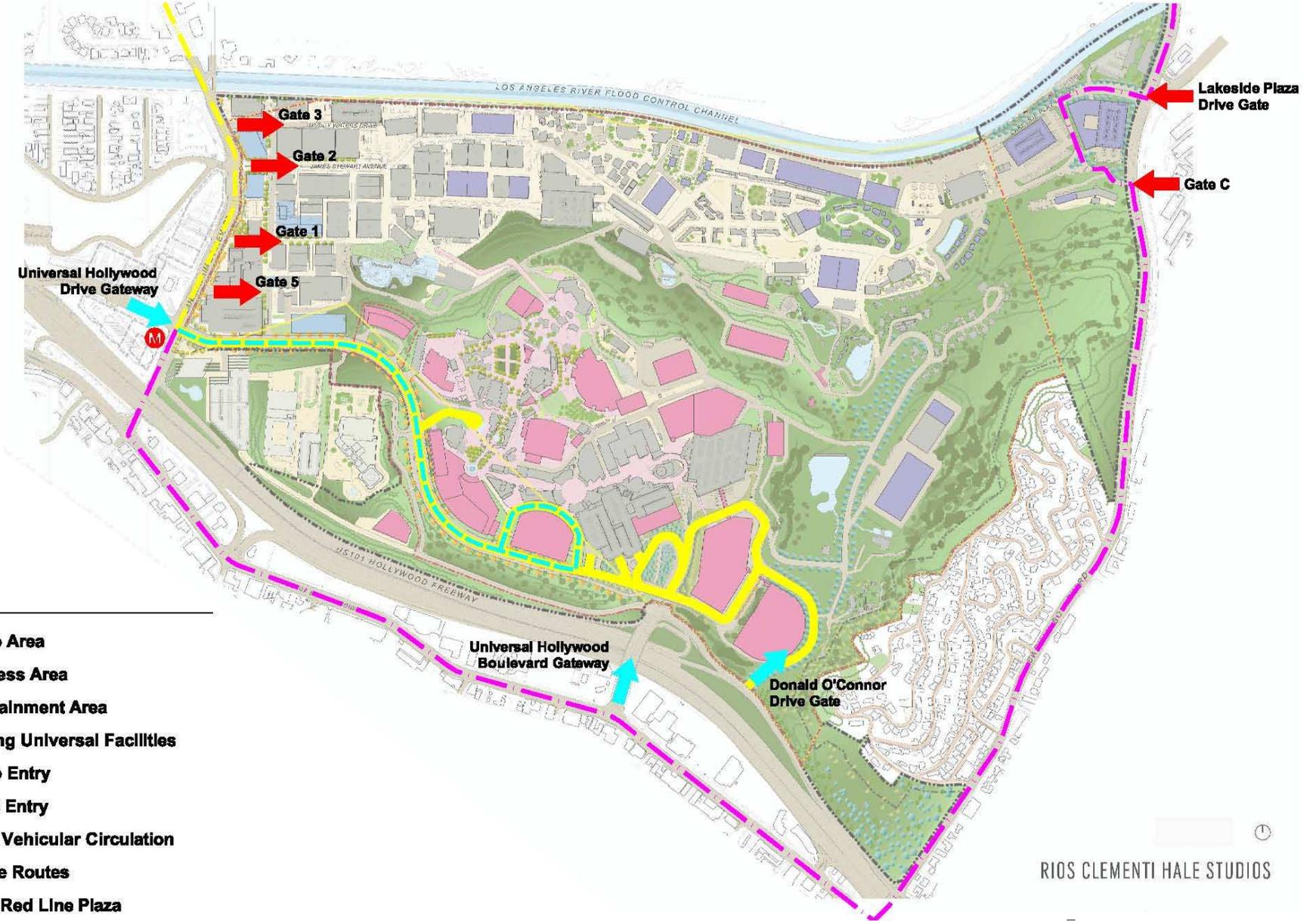
# ATTACHMENT B



RIOS CLEMENTI HALE STUDIOS

**ibson** **RAJU** Associates, Inc.  
transportation consulting, inc.

## ATTACHMENT I TRANSPORTATION IMPROVEMENT PHASING PLAN (ZONE GROUPS)



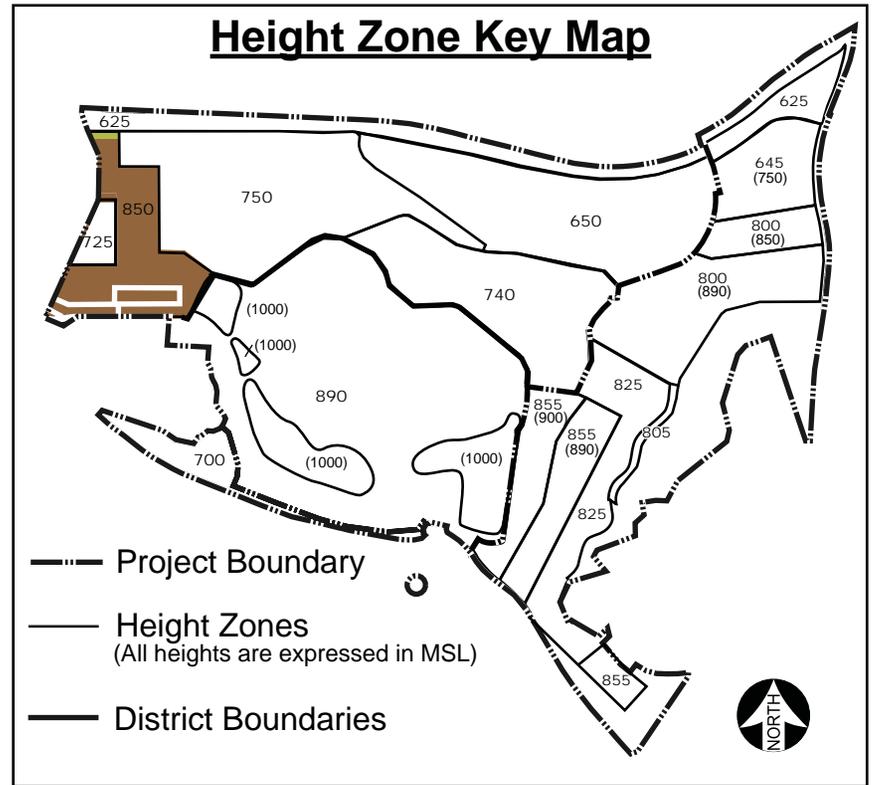
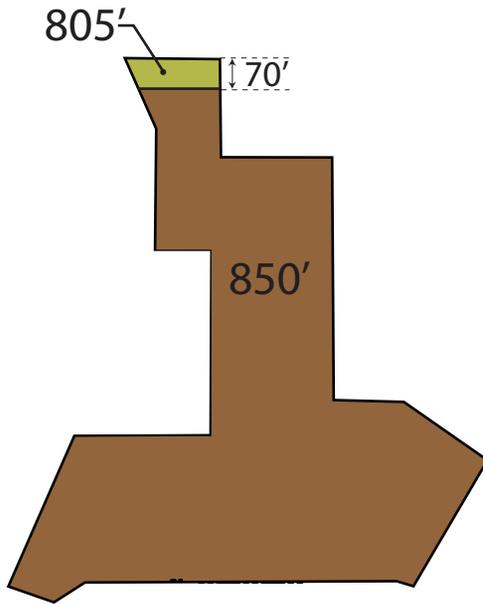
RIOS CLEMENTI HALE STUDIOS



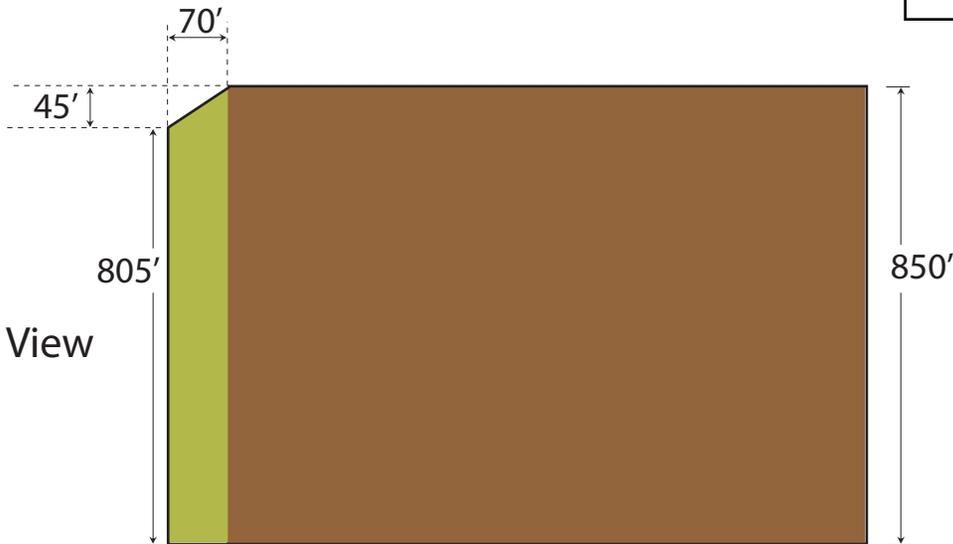
**LEGEND**

 Proposed Mitigation Area

Aerial View



Side View



Source: Matrix environmental, 2010.

**ATTACHMENT E**



**GEOTECHNICAL INVESTIGATION  
NBC UNIVERSAL EVOLUTION PLAN**

**UNIVERSAL CITY, CITY OF LOS ANGELES AND LOS ANGELES COUNTY, CALIFORNIA**

**Prepared for:**

**Universal Studios LLLP, L.P.**

**March 2010**

**Shannon & Wilson Project 06-030.1**

ATTACHMENT E



ALASKA  
CALIFORNIA  
COLORADO  
FLORIDA  
MISSOURI  
OREGON  
WASHINGTON

March 2010

Mr. E. Mark Lyum  
NBC Universal, Inc.  
100 Universal City Plaza  
Universal City, California 91608

**Subject: Report of Geotechnical Investigation  
NBC Universal Evolution Plan  
Universal City, City of Los Angeles and Los Angeles County, California  
for Universal Studios LLLP, L.P  
Shannon & Wilson Project 06-030.1**

Dear Mr. Lyum:

We are pleased to submit this report presenting the results of our geotechnical investigation for the NBC Universal Evolution Plan in Universal City, Los Angeles.

The findings, conclusions and recommendations developed during this investigation are described in the report.

Sincerely,

**Shannon & Wilson, Inc.**

John Jeffrey Butelo  
Engineering Geologist  
Vice President



James L. Van Beveren  
Geotechnical Engineer  
Senior Vice President



06-030.1 r03/VB:ay  
(1 copy submitted)

**ATTACHMENT E**



**GEOTECHNICAL INVESTIGATION  
NBC UNIVERSAL EVOLUTION PLAN**

**UNIVERSAL CITY, CITY OF LOS ANGELES AND LOS ANGELES COUNTY, CALIFORNIA**

**Prepared for:**

**Universal Studios LLLP, L.P.**

**Shannon & Wilson**

**March 2010**

**Shannon & Wilson Project 06-030.1**

# ATTACHMENT E

SHANNON & WILSON, INC.

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## ATTACHMENT E

*NBC Universal Evolution Plan—Geotechnical Investigation for EIR  
March 2010  
Shannon & Wilson Project 06-030.1*

**SHANNON & WILSON, INC.**

### SUMMARY

We have completed our geotechnical investigation as input for the NBC Universal Evolution Plan (the Project) in Universal City, California, for Universal Studios LLLP, L.P. The investigation was authorized to determine the geotechnical conditions, including geologic hazards, within the Universal Studios property.

A geotechnical investigation was performed in 1996 by Converse Consultants West for development of an earlier Environmental Impact Report (EIR) and the information in that prior report was used in preparation of this report. Concurrently with the preparation of this report, we performed an investigation for filing of a Tentative Tract Map within the Mixed-Use Residential Area of the site. The results of that investigation were also utilized in the preparation of this report.

The Project site is located on the north flank of the Santa Monica Mountains at the easterly limits of the San Fernando Valley. The Los Angeles River Flood Control Channel borders the site along the north boundary. The Project site is topographically segmented into three general areas, the relatively flat area in the north/northwest portion of the site, adjacent to the Los Angeles River Flood Control Channel and Lankershim Boulevard; the upper graded plateau in the central and south portions of the Project site, and the Back Lot in the eastern hills that extend along the east side of the Project site. The lower lot and the upper graded plateau are separated by north and northwest facing slopes.

The Project site has a history of many generations of development, including channelization of the Los Angeles River, development of studio, office and Back Lot, and construction of entertainment facilities and infrastructure. Fill and recent alluvium are present adjacent to the Los Angeles River Flood Control Channel, and several generations of fill are present throughout the site. The higher portions of the Project site are underlain by bedded sedimentary bedrock of the Topanga Formation.

Geologic hazards present on the Project site include slope stability within the eastern hillside of the site and liquefaction on the northern flat area. This report describes the geotechnical conditions of the site, and presents recommendations needed to mitigate the potential geologic hazards. It also presents preliminary data for design of foundations, grading, paving and hardscape.

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## SCOPE

This report presents the results of our geotechnical investigation for the NBC Universal Evolution Plan (the Project). The location of the Project site in relation to the surrounding properties is shown on Figure 1, Vicinity Map. The Project is described on Figure 2, NBC Universal Evolution Plan.

A geotechnical investigation was performed by Converse Consultants West (Converse) for a previous Draft Environmental Impact Report (EIR). The results of the Converse investigation were submitted in their report dated November 14, 1996. That prior report was based on the findings of numerous investigations performed by Converse and other geotechnical firms during the development of the Project. A bibliography, listing the results of the prior investigations within the Project, is presented at the end of this report. Concurrent with this report, we performed an investigation for development of the proposed Mixed-Use Residential Area of the Project and the results of that investigation were submitted in a report entitled: Report of Geotechnical Investigation, Proposed Universal Village Development, Tentative Tract Number 98564, Universal City, Los Angeles, California.

This investigation was authorized to provide geotechnical data for the NBC Universal Evolution Plan. The scope included 1) determining the physical characteristics of the existing soils and bedrock at the Project site, and 2) addressing the geological hazards pertinent to the proposed development. This report presents recommendations to mitigate potential geological hazards as well as preliminary recommendations for designing the foundations, and for grading, paving and stockpile requirements. Our recommendations are based on a site reconnaissance, our geotechnical investigation and the reported conditions from prior aforementioned investigations on the Project site.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for Universal Studios LLLP, L.P. and their design consultants to be used solely in the design of the NBC Universal Evolution Plan. The report has not been prepared for use by other parties, and may not contain sufficient information for purposes of other parties or other uses.

# ATTACHMENT E

*NBC Universal Evolution Plan—Geotechnical Investigation for EIR  
March 2010  
Shannon & Wilson Project 06-030.1*

**SHANNON & WILSON, INC.**

## PROJECT DESCRIPTION

### PROJECT LOCATION

Universal Studios LLLP, L.P. (the Applicant) is proposing a development program called the NBC Universal Evolution Plan (the Project) as shown on Figure 2, NBC Universal Evolution Plan. The Project is designed to meet the future needs of existing on-site businesses as well as the establishment of a new residential community that contributes to meeting the future housing needs of the eastern San Fernando Valley.

The Project encompasses approximately 391 acres, located two miles north of Hollywood and 10 miles northwest of downtown Los Angeles, in central Los Angeles County. The Project site is also located approximately 1.5 miles south and east of the junction of U.S. Route 101 (Hollywood Freeway) and State Route 134 (Ventura Freeway). The Project site is bounded by the Los Angeles River Flood Control Channel (LAFCC) to the north, the Hollywood Freeway to the south, Barham Boulevard and residences to the east, and Lankershim Boulevard to the west.

The Project site is located within the foothills of the north face of the Santa Monica Mountains and is topographically segmented into three general areas: (1) the relatively flat northern and western portion of the property located adjacent to the LAFCC and Lankershim Boulevard; (2) a plateau in the center of the property (commonly referred to as the “top-of-the-hill”); and (3) an eastern area that includes some sloping terrain along the property’s eastern boundary. The Project site has been extensively developed over the past 90 years, although the eastern portion of the Project site is currently underdeveloped.

The Project site is located within two governmental jurisdictions: the City of Los Angeles (approximately 95 acres) and the County of Los Angeles (approximately 296 acres). The property lines are shown on Figure 1, Vicinity Map. The portion of the Project site within City jurisdiction involves primarily three non-contiguous areas surrounding the County portion, with small areas along the northern boundary of the Project site also located within the City of Los Angeles. Proceeding clockwise from the north, these three areas are as follows: (1) the northeastern corner of the Project site along Barham Boulevard; (2) the southeastern corner of the Project site along Barham Boulevard and Buddy Holly Drive; and, (3) the southern and southwestern portion of the Project site, adjacent to the Hollywood Freeway, which also extends to include a limited amount of frontage along the south side of Universal Hollywood Drive as it

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March 2010  
Shannon & Wilson Project 06-030.1*

**SHANNON & WILSON, INC.**

extends towards Lankershim Boulevard. The portion of the Project site within County jurisdiction is a contiguous area encompassing most of the northern, central and western portions of the Project site.

### **EXISTING SETTING OF THE PROJECT SITE**

The Project site is presently developed with the following three principal land uses: (1) studio production (movie, television and commercial) and studio office uses, (2) theme park and related entertainment uses, and (3) retail entertainment uses. The Project site currently consists of approximately 4.2 million square feet of development. The Project site also includes numerous production sets and the Tram Tour.

### **PROPOSED NBC UNIVERSAL EVOLUTION PLAN**

The Project, for planning purposes, has been divided into the following four development areas: (1) Entertainment, (2) Studio, (3) Business, and (4) Mixed-Use Residential. These Areas are shown on Figure 3, Area Diagram.

The Project proposes the development of approximately 2.01 million net square feet of new studio production, office, entertainment and retail uses (approximately 2.65 million square feet of new commercial development less approximately 638,000 square feet of demolition) inclusive of 500 hotel rooms. In addition, approximately 2,937 residential dwelling units are proposed to be constructed within the Mixed-Use Residential Area of the Project Site that is located south of Lakeside Plaza Drive.

The Applicant, in addition to the proposed development described above, is seeking approval from the Local Agency Formation Commission (LAFCO) to annex approximately 76 acres from the County's jurisdiction into the City of Los Angeles. This will have the effect of placing the proposed residential development within the Mixed-Use Residential Area under the jurisdiction of the City of Los Angeles. The proposed Project would also involve detachment of approximately 32 acres of the Project site from the City's jurisdiction into the County, for an overall net change of approximately 44 acres. Should the annexation process be completed, approximately 139 acres of the Project site would be located within the City of Los Angeles, and the remaining approximately 252 acres would be located within the County.

The Project will be implemented via two proposed Specific Plans and various other land use entitlements. One proposed Specific Plan will address development within the County portions of the Project site,

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NBC Universal Evolution Plan—Geotechnical Investigation for EIR  
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namely the Entertainment, Studio and Business Areas; whereas the other proposed Specific Plan will address development within the City portions of the Project site, mainly the Mixed-Use Residential Area.

## PROJECT GRADING

Grading for the Project site will require both excavation and the placing of compacted fills. The estimated quantities of earthwork are shown on Figure 4, Conceptual Grading Plan and are summarized in Table 1, Summary of Cut and Fill Quantities.

**Table 1, Summary of Cut and Fill Quantities**

<b>Area</b>	<b>Cut (cubic yards)</b>	<b>Fill (cubic yards)</b>
Studio Area	139,000	158,000
Entertainment Area	442,000	111,000
Business Area	104,000	19,000
Mixed-Use Residential Area	4,250,000	3,800,000
<b>Total</b>	<b>4,935,000</b>	<b>4,088,000</b>

Anticipated phasing of the Mixed-Use Residential Area will require stockpiling excavated soils for future use as compacted fill.

## PROJECT CONSTRUCTION/PHASING SCHEDULE

The Project would be developed over a period of years in a number of phases. The Applicant anticipates that construction would conclude by 2030. The timing of actual development would be in response to market conditions.

## REGULATORY FRAMEWORK

### STATE LEVEL

The State of California adopted the 2007 California Building Code, which is based on the 2006 International Building Code, on January 1, 2008.

The County of Los Angeles adopted the 2007 California Building Code on January 1, 2008 as the County of Los Angeles Building Code Volumes 1 and 2.

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Together, the provisions in Volumes 1 and 2 of the Los Angeles County Building Code address issues related to site grading, cut and fill slope design, soil expansion, geotechnical investigations before and during construction, slope stability, allowable bearing pressures and settlement below footings, effects of adjacent slopes on foundations, retaining walls, basement walls, shoring of adjacent properties, and potential primary and secondary seismic effects. The County Department of Building and Safety is responsible for implementing the provisions of the Building Code. The County's primary seismic regulatory document is the Safety Element of the County of Los Angeles General Plan, dated December 1990.

The State of California, Division of Mines and Geology, adopted seismic design provisions in Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California on March 13, 1997.

The Alquist-Priolo Geologic Hazards Zone Act was enacted by the State of California in 1972 to address the hazard and damage caused by surface fault rupture during an earthquake. The Act has been amended ten times and renamed the Alquist-Priolo Earthquake Fault Zoning Act, effective January 1, 1994. The Act requires the State Geologist to establish "earthquake fault zones" along known active faults in the state. Cities and counties that include earthquake fault zones are required to regulate development projects within these zones.

The Seismic Hazard Mapping Act of 1990 was enacted, in part, to address seismic hazards not included in the Alquist-Priolo Act, including strong ground shaking, landslides, and liquefaction. Under this Act, the State Geologist is assigned the responsibility of identifying and mapping seismic hazards zones.

The California Seismic Safety Commission was established by the Seismic Safety Commission Act in 1975 with the intent of providing oversight, review, and recommendations to the Governor and State Legislature regarding seismic issues. The commission's name was changed to Alfred E. Alquist Seismic Safety Commission in 2006. Since then, the Commission has adopted several documents based on recorded earthquakes, such as the 1994 Northridge earthquake, 1933 Long Beach earthquake, the 1971 Sylmar earthquake, etc. Some of these documents are listed below:

- Research and Implementation Plan for Earthquake Risk Reduction in California 1995 to 2000, report dated December 1994.

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- Seismic Safety in California's Schools, 2004, "Findings and Recommendations on Seismic Safety Policies and Requirements for Public, Private, and Charter Schools", report dated December 1994.
- Findings and Recommendations on Hospital Seismic Safety, report dated November 2001.
- Commercial Property Owner's Guide to Earthquakes Safety, report dated October 2006.

Various state and local agencies permit the design and construction and regulate the operation, closure and development of landfills within the State of California. Those agencies include the Regional Water Quality Control Board, the Integrated Waste Management Board, the Department of Toxic Substance Control Board, the Regional Air Resources Board, the Los Angeles County Department of Public Works, the City of Los Angeles Department of Building and Safety, and the South Coast Air Quality Management District.

### **CITY LEVEL**

The City of Los Angeles adopted the 2007 California Building Code, and a series of City of Los Angeles amendments, on January 1, 2008 as the City of Los Angeles Building Code, Volumes 1 and 2. Volume 2 of the Los Angeles City Building Code includes provisions for Foundations, Retaining Walls and Expansive and Compressible Soils in Chapter 18, provisions for Site Work, Demolition and Construction in Chapter 33 and provisions for Grading, Excavation and Fills in a special Chapter 70 developed by and for the City of Los Angeles.

Together, the provisions in Volumes 1 and 2 of the Los Angeles City Building Code address issues related to site grading, cut and fill slope design, soil expansion, geotechnical investigations before and during construction, slope stability, allowable bearing pressures and settlement below footings, effects of adjacent slopes on foundations, retaining walls, basement walls, shoring of adjacent properties, potential primary and secondary seismic effects.

The City of Los Angeles, Grading Division of the Department of Building and Safety, has also adopted their Rules of General Application (RGA), a series of Geotechnical Standards which supplement the requirements of the City of Los Angeles Building Code. The RGAs include specific requirements for seismic design, slope stability, grading, foundation design, geologic investigations and reports, soil and rock testing, and groundwater. The City Department of Building and Safety is responsible for implementing the provisions of the Building Code and Grading Standards.

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The City of Los Angeles requires that the firm performing geotechnical investigations, sampling and testing have their laboratory certified by the City, Department of Building and Safety, Materials Control Section.

The City's primary seismic regulatory document is the Safety Element of the City of Los Angeles General Plan, adopted November 26, 1996. The City's regulations incorporate the State's requirements. The objective of the Safety Element is to better protect occupants and equipment during various types and degrees of seismic events. In the Safety Element, specific guidelines are included for the evaluation of liquefaction, tsunamis, seiches, non-structural elements, fault rupture zones, and engineering investigation reports. The City's Emergency Operations Organization (EOO) helps to administer certain policies and provisions of the Safety Element. The EOO is a City department comprised of all City agencies, pursuant to City Administrative Code, Division 8, Chapter 3. The Administrative Code, EOO Master Plan and associated EOO plans establish the chain of command, protocols and programs for integrating all of the City's emergency operations into one unified operation. Each City agency in turn has operational protocols, as well as plans and programs, to implement EOO protocols and programs. A particular emergency or mitigation triggers a particular set of protocols which are addressed by implementing plans and programs. The City's emergency operations program encompasses all of these protocols, plans and programs. Therefore, its programs are not contained in one comprehensive document. The Safety Element goals, objectives and policies are broadly stated to reflect the comprehensive scope of the EOO. As pertains to tsunamis and other flood hazards, the Safety Element refers to the City's Flood Hazard Specific Plan, which addresses areas adjacent to hazards, agency involvement and coordination, and procedures to be implemented during an emergency.

### **COUNTY LEVEL**

The County of Los Angeles adopted the 2007 California Building Code on January 1, 2008 as the County of Los Angeles Building Code, Volumes 1 and 2.

Together, the provisions in Volumes 1 and 2 of the Los Angeles County Building Code address issues related to site grading, cut and fill slope design, soil expansion, geotechnical investigations before and during construction, slope stability, allowable bearing pressures and settlement below footings, effects of adjacent slopes on foundations, retaining walls, basement walls, shoring of adjacent properties, and potential primary and secondary seismic effects. The County Department of Building and Safety is responsible for implementing the provisions of the Building Code. The County's primary seismic

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regulatory document is the Safety Element of the County of Los Angeles General Plan, dated December 1990.

### VARIATION IN BUILDING CODES

In 2008 the City of Los Angeles and the County of Los Angeles adopted their own building codes, although both codes are based on the 2007 California Building Code. There are differences in the codes between the City and County. Some of the major differences are summarized in Table 2, Comparison of Building Codes.

**Table 2, Comparison of Building Codes**

<b>Geotechnical Issue</b>	<b>City Code dated 2008</b>	<b>County Code dated 2008</b>
Compaction	Where cohesionless soil has less than 15% finer than 0.005 millimeters, the fill shall be compacted to at least 95%; if the soils have more than 15% finer than 0.005 millimeters the fill shall be compacted to at least 90%.	All fill shall be compacted to a minimum of 90%.
Wall Drainage	Basement wall drains are required unless the walls are designed to resist hydrostatic pressures.	Basement wall drains are not required in well-drained soils
Pile Foundation Interconnection	Interconnection required to resist 10% of vertical load	No requirement

### SITE CONDITIONS

The Project site is located on the north flank of the Santa Monica Mountains at the easterly limits of the San Fernando Valley. This area is within the Transverse Ranges Geomorphic Province. The Los Angeles River Flood Control Channel (LAFCC), borders the Project site along the northern boundary.

The Project site is divided into the lower lot in the north and northwest portion, the upper graded plateau in the central and south portions, and the eastern hills that extend along the east side of the Project site. The lower lot and the upper graded plateau are separated by north and northwest facing slopes.

The lower lot is relatively flat at an elevation of approximately 525 to 580 feet above Mean Sea Level (MSL), with a gentle surface gradient north toward the Los Angeles River Flood Control Channel. The lower lot contains sound stages, office space, technical/support space, back-lot sets, transportation services, and parking.

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The upper graded plateau ranges in elevation from about 720 to 790 feet MSL, with the highest point near the eastern portion of the plateau in the vicinity of Warehouse #8413. The upper graded plateau has gentle surface gradients to the north, west and south. Prior to grading and development, the upper graded plateau consisted of east-west trending hills with north-south trending ancestral canyons.

The largest of the ancestral canyons bisects the site from the existing Universal Hollywood Drive northward through a closed landfill. The landfill was formed when the north end of this canyon was filled with debris starting in the late 1920s. Landfill operations ceased about 1980. The landfill has been capped, and the face of the slope has been maintained for erosion prevention.

The bulk of the grading activities on the upper graded plateau occurred between 1960 and the early 1980s. These activities consisted of lowering the hills and filling in the canyons until a relatively level topography was achieved. The upper graded plateau contains the remainder of the Entertainment Area (including CityWalk and the Amphitheater) and office space.

The eastern hills are moderately to steeply sloping hillsides ranging in elevation up to 865 feet MSL. These hills have been partially graded in the past and fire roads have been constructed along the southeasterly site limits.

Several man-made water features exist onsite. Falls Lake is located on the eastern portion of the upper graded plateau. Water in Falls Lake is retained by a shallow dam located along the northern edge of the lake. Jaws Lake is located north of Falls Lake on the lower lot at the base of the north facing slope. Park Lake is also located on the lower lot north of Jaws Lake. The Collapsing Bridge pond is located at the north end of the closed landfill. New Falls Lake, which is fed by a man-made waterfall, is located southeast of Falls Lake.

The Los Angeles River which borders the Project site on the north was channelized in the late 1940s. Prior to this, the river had incised meander swings that cut across the north edge of the Project site.

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## **SUBSURFACE INFORMATION**

### **REVIEW OF AVAILABLE INFORMATION**

Numerous geotechnical investigations have been performed within the Project site for existing projects over a 60-year period. Our review of previous investigation reports and our recent site investigation formed the basis of our findings, conclusions and recommendations contained in this report. An alphabetical listing of the prior reports, by the firm responsible for preparation of those reports, is presented in the References section at the end of this report.

### **SITE RECONNAISSANCE**

A site reconnaissance was performed as an integral part of our investigation. The reconnaissance included mapping bedrock exposures on the slopes and mapping obvious evidence of slope distress. The results of the mapping are included on Figure 5, Geotechnical Map.

### **AERIAL PHOTOGRAPHIC REVIEW**

Our investigation included a review of vertical, stereo-paired, black and white aerial photographs. This review was performed to evaluate geomorphic conditions that could indicate characteristic features associated with large-scale landslides. Some of these features would include steep slopes associated with a landslide headscarp, deflected natural drainages, transverse topographic fractures, a pronounced protuberant toe, ponded water or other anomalous geomorphic features. The stereo-paired aerial photographs allow the geologist to view the site in three dimensions at thousands of feet above the surface, also referred to as remote sensing. A list of the photographs reviewed for this study are included in the References Section of this report. The results of our review are included in the Landslide Discussion Section.

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## **GEOLOGIC SETTING**

### **GEOLOGIC SETTING**

The Project site is located in the southern San Fernando Valley, at the foothills of the Santa Monica Mountains at the northerly mouth of the Cahuenga Pass. The location of the Project site is depicted on Figure 1, Vicinity Map. The San Fernando Valley is an alluvium-filled basin, approximately 12 miles wide and 23 miles long. The alluvium is derived predominantly from bedrock materials comprising the Santa Monica Mountains to the south, the Santa Susana Mountains to the north, the Simi Hills to the west, the San Gabriel Mountains to the northeast, and the Verdugo Mountains to the east. Regionally, the Project site is located in the Transverse Ranges geomorphic province. This province is characterized by east-west trending geologic structure including the nearby Santa Monica Mountains and the east-west trending San Fernando, Santa Susana, Simi, Santa Monica and Hollywood faults.

### **GEOLOGIC UNITS**

#### **General**

The Project site is underlain by a variety of geologic units. These units are divided into separate and discrete deposits of differing engineering characteristics that include a closed landfill, man-placed fill, alluvium, colluvium, landslide debris and sedimentary bedrock materials. These units are variable in composition and origin and are described in more detail in the following sections.

#### **Landfill**

A relatively large closed landfill is located in the central site limits, just east and north of the Amphitheater structure. The location of the closed landfill is shown on Figure 5, Geotechnical Map. This closed landfill was reportedly filled with debris generated during studio activities between the late 1920s until about 1980. The closed landfill has been capped, and the face of the slope maintained for erosion protection. Landfill materials consisting of an undocumented mix of inert material, mainly construction debris, and restaurant waste have been placed in a north-south trending ancestral canyon to a maximum depth of approximately 130 feet.

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### **Fills (Engineered and Non-Engineered)**

Fills have been placed throughout the lower lot, within the upper graded plateau and within the Mixed-Use Residential Area during past grading operations. Some of this fill has been engineered, tested and documented; this fill is identified as Engineered Fill (ef) on Figure 5, Geotechnical Map. Some of the fill has been placed at its current locations without any special compactive effort or geotechnical documentation; this fill is identified as Non-Engineered Fill (nef) on Figure 5.

The non-engineered fills were placed at various times prior to 1950, but as recently as the 1990s. The majority of the engineered fills were placed between the early 1960s and 1981.

The fill materials vary from silty sand to sandy silt with clay. These materials appear to be derived from on-site natural soils and bedrock materials. Fill soils may exist at other locations at the site and may be deeper than encountered in our explorations.

### **Alluvium/Colluvium Soil**

Alluvial soils (alluvium) are natural, fluvial sedimentary deposits typically confined to stream channels, flood plains or alluvial fans. Colluvium (slope wash) is the down-slope accumulation of topsoil, weathered bedrock and other organic materials under the influence of gravity and moisture. These two units often coalesce and are sometimes difficult to separate near their juncture. These deposits are Quaternary age (Pleistocene and Holocene) and usually overlie bedrock and landslide debris. Alluvium has been deposited generally in the lowermost portions of the site near Lankershim Boulevard and along the Los Angeles River Flood Control Channel. Relatively minor deposits have been mapped in the extreme southeasterly portion of the site along Barham Boulevard near the intersection with the Hollywood Freeway. Alluvial consist generally of silty clay, silty sand with interlayered clay and sand.

### **Landslide Deposits**

Features indicative of landsliding were noted at four separate locations designated Q1sA, Q1sB, Q1sC and Q1sD. Two of these landslides occupy portions of the Mixed-Use Residential Area on the ridge. These two landslides, designated Q1sA and Q1sB, were initially recognized during our aerial photographic review as distinct, geomorphic anomalies and were encountered in two and possibly three of our explorations for the Mixed-Use Residential Area.

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### QlsA:

The larger of these two landslide deposits is located beneath the Warehouse #8413 and occupies an area of approximately 9 acres. The limits of this ancient landslide as interpreted from our aerial photographic review, are depicted on Figure 5, Geotechnical Map, and identified as map symbol QlsA. Based upon observations from geologic downhole logging, the landslide is buried by 4 feet of fill and was observed to consist of very highly weathered sandstone and soft, brecciated shale. The basal landslide rupture surface was observed to be a 4-inch thick very moist, clay gouge layer in contact with competent, hard bedrock materials, below.

An additional, small diameter boring was drilled within the QlsA limits with a hollow stem auger drill rig and may have encountered landslide debris buried by fill materials. It is also possible that grading in this area removed the landslide debris prior to placing of compacted fill. The small diameter boring did not allow for direct observation by a geologist and the presence or absence of the landslide could not be confirmed at this location.

### QlsB:

A smaller landslide was recognized northeast of QlsA, upslope of the European Village and beneath Colonial Drive, and occupies approximately 1¼ acres. The limits of this landslide, designated map symbol QlsB, are also depicted on Figure 5. One of our bucket auger borings drilled within the QlsB limits encountered landslide debris to a depth of 21 feet, underlain by hard competent bedrock materials. The basal rupture surface was observed to consist of a 1-inch thick clay gouge layer measured to strike north 30 east and dip 25 degrees to the northwest.

### QlsC:

A third possible landslide, designated map symbol QlsC, is located within the adjoining residential development just offsite at the southeast corner of the site. This landslide occupies an area of about half an acre and was recognized in the field and on aerial photographs. This landslide was not explored and is therefore designated a possible landslide that may underlie fill materials within the Project site.

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### QlsD:

A relatively large landslide feature is located in the north central portion of the Project site. This landslide, designated map symbol QlsD, occupies an area of about 15 acres just east and north of the landfill and south and uphill of the alluvial floor as depicted on Figure 5. The landslide was recognized on stereo-paired, aerial photographs and is best viewed on the 1952 flight.

Physiographically, the landslide is recognized as a well-pronounced geomorphic feature with a characteristic arcuate-shaped headscarp, near-level, mid landslide bench and a protuberant toe that descends to the alluvial-filled valley below. Past grading activities have extensively modified the landslide's original (pre-grading) condition over the years. This area of the Project site is currently used as a warehouse-maintenance facility. Although this landslide was mapped by others, we did not explore this landslide feature during this investigation and, therefore, cannot report on its exact limits and dimensions. QlsD will require exploration during site specific geotechnical investigations.

### **Bedrock**

The Project site is underlain by sedimentary bedrock units of the Topanga Formation consisting of well-bedded sandstone, siltstone and shale. These deposits are marine in origin derived from offshore shoal, turbidite and submarine fan deposits. The bedrock ranges, generally, from moderately hard to moderately soft, but as encountered in our explorations in the ridge area, is locally very hard and well cemented in layers as thick as 6 feet. Surface exposures are typically friable and moderately weathered. Gouged and sheared clay beds were observed along bedding between well-cemented sandstone layers.

Sandstone bedrock units are considered non-expansive. Expansion Index tests on samples of siltstone and shale units from the Mixed-Use Residential Area investigation varied from 12 to 54, indicating that the bedrock varies from non-expansive to a medium expansion potential.

The Topanga Formation is intruded locally by mafic volcanic dikes in the region. The intrusives are generally of a massive diabase composition. Our explorations and observations at the Project site did not encounter volcanic rock units but these units may be encountered during future grading operations.

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### **GEOLOGIC STRUCTURE**

Geologic structure at the Project site is exhibited by well-developed bedding planes within the Topanga Formation. Individual Topanga Formation units range from very thickly-bedded (3 to 8 feet) to thinly-bedded (2 to 4 inches). Faulting and folding in the geologic past related to uplift in this portion of the Santa Monica Mountains has warped the geologic structure into a broad, westerly plunging syncline. Bedding planes in the northeasterly portion of the Project site, in the area of the ridge along Barham Boulevard, dip from 20 to 38 degrees to the southwest. Alternatively, bedding planes in the west and southerly portion dip to the northwest from 18 to 40 degrees. Based upon data from our investigation, the synclinal axis trends approximately due west and plunges approximately 20 degrees near the location of the Central Warehouse. Bedding planes west and southerly of the warehouse comprise the southerly limb of the syncline while those north of the axis dip to the southwest. Due to the broad nature of the synclinal fold, the exact location of the fold axis could not be accurately determined but the approximate location and orientation of the fold axis is depicted on Figure 5.

Numerous inactive faults and shears (minor faults) were observed in our bucket auger borings and in surface exposures. These faults are late Miocene and Pliocene Age and are the result of local orogenic activity concurrent with uplift of the Santa Monica Mountains. These fault features are exhibited by offset bedding and dragged (folded) bedding planes and are common in the Topanga Formation. The faults and shears encountered appear to be randomly oriented and are generally considered discontinuous and do not display a preferred orientation. Evidence of recent activity was not observed during our site reconnaissance or review of aerial photographs. Previous reports by others do not indicate active faults at the Project site.

Fractures and joints are also common within the Topanga Formation. These joints, as encountered in our explorations, were observed to be widely spaced, tight and stained with iron and manganese oxides and infilled, locally, with carbonates and gypsum.

### **GROUNDWATER BASIN**

Groundwater storage is generally within the deep alluvial deposits that fill the valley floor under confined and unconfined conditions. Groundwater in the lower lot has been measured by others in the past to depths between 20 and 40 feet below the ground surface. Historically, the highest groundwater levels on the Project site have been within 10 feet of the ground surface adjacent to the Los Angeles River on the north side of the Project site (California Division of Mines and Geology 1999). These high water levels existed

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prior to the channelization of the Los Angeles River. Based on Project site data, and likely due to the channelization of the river and the control of surface runoff, the high groundwater level is not expected to rise above depths of 15 feet at the Project site.

Borings drilled within the bedrock in the upper graded plateau and within the eastern hills encountered water seepage at various depths. This water seepage is a result of surface infiltration perched within joints and fissures in the bedrock. During grading, temporary excavations and cut slopes may reveal occurrences of groundwater seepage in the natural soils or the bedrock requiring construction dewatering.

### GEOLOGIC HAZARDS

#### FAULTING & SEISMICITY

The Project site is not located within a currently established Alquist-Priolo Earthquake Fault (AP) Zone for surface rupture hazard and there are no known active faults present at the site. The closest AP Zone to the Project site is approximately 5 miles to the northeast. This zone is associated with the Verdugo fault (California Geological Survey, 1979).

The numerous faults in southern California include active, potentially active and inactive faults. Classification for these major groups are based upon criteria developed by the California Division of Mines and Geology (CDMG, now known as the California Geologic Survey) for the AP Zone Act program. By definition, an active fault has ruptured within Holocene geologic time (about the last 11,000 years). Active faults are not known to be located at the Project site and surface rupture from fault plane displacement propagating to the surface is therefore considered remote.

Potentially active faults are those faults that display latest movement during Quaternary Geologic time where Holocene activity cannot be demonstrated. The Quaternary includes the Holocene and Pleistocene Ages and represents the last 1.6 million years of geologic time. Potentially active faults are not considered an imminent fault rupture hazard but the potential cannot be completely dismissed. Inactive faults are those faults where the latest displacement is older than the Pleistocene (Ice Age) and are not considered a surface rupture hazard to the Project site.

The closest active fault to the Project site is the Hollywood fault located approximately 1½ miles to the southeast at the southern base of the Santa Monica Mountains. The Hollywood fault is generally poorly-

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defined near the surface and has been located based upon water well, oil well, and geophysical data, as well as near-surface trenching and drilling by numerous investigators. The Hollywood fault is considered active, based upon geomorphic evidence and fault trenching and drill hole correlation studies but has not yet been included within an Alquist-Priolo Earthquake Fault Zone by the State Geologist.

The Project site is approximately 1½ miles Northwest of the boundary of the Elysian Park Fold and Thrust Belt. The Elysian Park fault is actually a blind fault (i.e. A buried fault that does not extend to the surface) capped by a fold and thrust structure. The axial trend of the fold extends approximately 12 miles through the Elysian Park-Repetto Hills from about Silver Lake on the west to the Whittier Narrows on the east. The 1987 Whittier Narrows earthquake (magnitude 5.9) has been attributed to subsurface thrust faults, which are reflected at the earth's surface by a west-northwest trending anticline known as the Elysian Park Anticline, or the Elysian Park Fold and Thrust Belt. The subsurface faults that create the structure are not exposed at the surface and do not present a potential surface rupture hazard; however, as demonstrated by the 1987 earthquake and two smaller earthquakes on June 12, 1989, the faults are a source for future seismic activity. As such, the Elysian Park Fold and Thrust Belt should be considered an active feature capable of generating future earthquakes.

The active Mission Wells segment of the San Fernando fault zone is about 9 miles north of the Project site. Surface rupture occurred along the Tujunga, Sylmar, and Mission Wells segments of the San Fernando fault zone during the February 9, 1971 San Fernando earthquake. The San Fernando fault zone comprises a number of left lateral/reverse frontal faults bounding the southern margin of the San Gabriel and Santa Susana Mountains. This fault slipped on February 9, 1971, causing an earthquake of magnitude 6.4.

The Northridge Thrust fault is an inferred blind thrust fault that is considered the western extension of the Oak Ridge fault. This thrust fault is believed to be the causative fault of the January 17, 1994 Northridge earthquake. The Northridge Thrust is located beneath the majority of the San Fernando Valley. This thrust fault is not exposed at the surface and does not present a potential surface fault rupture hazard. However, the Northridge Thrust is an active feature that can generate future earthquakes.

The Oak Ridge fault is a blind thrust fault located beneath the Santa Susana Mountains approximately 17 miles northeast of the Project site. The fault associated with the 1994 Northridge earthquake is probably part of the Oak Ridge fault system, as it shares many of the characteristics of this fault. This blind thrust

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fault is known either as the Pico Thrust, named for the Pico Anticline (a geologic fold it is creating), or as the Northridge Thrust.

A list of known active faults and their distances from the Project site are indicated in Table 3, Major Faults Considered to be Active in Southern California.

**Table 3, Major Faults Considered to be Active in Southern California**

Fault	Maximum Credible Earthquake			Slip Rate (mm/yr)	Distance From Site (miles)	Direction From Site
Hollywood	7.0	(c)	RO	1.5	1½	SSE
Elysian Park Fold and Thrust Belt	7.1	(c)	RO	1.7	1½	SE
Santa Monica Mountains	7.2	(c)	RO	4.0	2	S
Verdugo	6.75	(d)	RO	0.5	5	NE
Northridge	6.9	(h)	RO	1.5	>5	NW
Newport-Inglewood Zone	7.0	(d)	SS	1.0	7	S
Raymond	6.7	(f)	RO	0.4	9	E
San Fernando	6.8	(g)	RO	5.0	9	N
Sierra Madre	7.3	(c)	RO	4.0	9	NE
Oak Ridge – Pico Thrust	6.7	(g)	RO	4.0	17	NW
Whittier	7.1	(b)	SS	3.0	18	SE
San Andreas (Mojave Segment)	8.2	(e)	SS	30.0	30	NE

- (a) Greensfelder, CDMG Map Sheet 23, 1974.
- (b) Blake, 1995
- (c) Dolan et al., 1995
- (d) Mualchin & Jones, 1992
- (e) OSHPD, 1995
- (f) Wesnousky, 1986
- (g) SCEDC
- (h) Peterson et al., 1996
- SS Strike Slip
- NO Normal Oblique
- RO Reverse Oblique

Site to fault distances measured using location of late Quaternary fault rupture map by Ziony and Jones, 1989 at a scale of 1:250,000.

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A list of known potentially active faults and their distances from the Project site are indicated in Table 4, Major Faults Considered to be Potentially Active:

**Table 4, Major Faults Considered to be Potentially Active**

Fault	Maximum Credible Earthquake			Slip Rate (mm/yr)	Distance From Site (Miles)	Direction From Site
	6.7	(e)	RO			
San Jose	6.7	(e)	RO	0.5	28	ESE
Chino	7.0	(d)	NO	1.0	36	SE
Duarte	6.7	(a)	RO	0.1	30	NE
Rialto-Colton	6.4	(h)	SS	n/d	54	E
Norwalk	6.7	(a)	RO	0.1	22	SE
Coyote Pass	6.7	(c)	RO	0.1	12	SE
Los Alamitos	6.2	(c)	SS	0.1	24	SE
MacArthur Park	6.1	(d)	SS	0.1	6	SW
Overland	6.0	(a)	SS	0.1	12	SW
Charnock	6.5	(a)	SS	0.1	10	SW
Santa Susana	6.9	(e)	RO	6.2	14	NW

- (a) Slemmons, 1979
- (b) Greensfelder, CDMG Map Sheet 23, 1974
- (c) Mark, 1977
- (d) Blake, 1995
- (e) Dolan et al., 1995
- (f) Mualchin & Jones, 1992
- (g) OSHPD, 1995
- (h) Wesnousky, 1986
- SS Strike Slip
- NO Normal Oblique
- RO Reverse Oblique
- n/d Not determined

Site to fault distances measured using location of late Quaternary fault rupture map at a scale of 1:250,000 as documented by Ziony and Jones, 1989

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Several earthquakes of moderate to large magnitude (greater than 5.3) have occurred in the southern California area within the last 60 years. A list of these earthquakes is included in Table 5, List of Major Historic Earthquakes. These epicenters are plotted relative to the Project site on Figure 6, Regional Seismicity Map.

**Table 5, List of Major Historic Earthquakes**

<b>Earthquake</b>	<b>Date of Earthquake</b>	<b>Magnitude</b>	<b>Distance to Epicenter (miles)</b>	<b>Direction to Epicenter</b>
Long Beach	March 11, 1933	6.4	43	SSE
San Fernando	February 9, 1971	6.6	19	NW
Whittier Narrows	October 1, 1987	5.9	16	SE
Sierra Madre	June 28, 1991	5.4	20	E
Big Bear	June 28, 1992	6.4	86	E
Landers	June 28, 1992	7.3	98	E
Northridge	January 17, 1994	6.7	12	W

It should be noted that major earthquakes have not been recorded within historic time on all of the faults considered to be active in southern California. Evidence of the fault's potential activity is based on the fault's rupturing materials younger than about 11,000 years and our historic records are limited to a few hundred years.

Surface traces of the regionally extensive Benedict Canyon fault have been mapped through the westerly portion of the Project site in the Studio Area. This fault is not considered active or potentially active but influences geologic structure regionally and juxtaposes bedrock units along the fault trace. The mapped surface traces of the Benedict Canyon fault is plotted on Figure 5.

The Project site is not exposed to a greater than normal seismic risk than other areas of southern California. However, based on the active and potentially active faults in the region, the Project site could be subjected to significant ground shaking in the event of an earthquake. This hazard is common to southern California and can be mitigated if the buildings are designed and constructed in conformance with applicable building codes and sound engineering practices.

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### **SECONDARY SEISMIC EFFECTS**

The site is located approximately 12 miles from the Pacific Ocean shoreline. As a result of this distance, tsunamis are not considered a significant hazard to the Project site. Large bodies of uncovered water such as reservoirs, lakes or ponds are not located above the Project site and hazards related to seiching are not considered a hazard to the Project site. The site is not located within a flood hazard zone as mapped by the County, the City or flood rate insurance maps. Therefore, geologic hazards related to flooding are not considered a significant hazard to the Project site.

### **SLOPE STABILITY**

The Project site is located within areas designated by the state geologist where previous occurrence of landslide movement or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacement to the event that mitigation would be required (California Geologic Survey, 1999). The bedrock consists of well-bedded Topanga Formation sandstone, siltstone and shale. Bedding within the Topanga Formation is well-defined and dips generally to the north, northwest and northeast and where the bedding is oriented toward the slope face, the slopes are subject to landsliding. Our review of aerial photographs and geomorphic analyses indicated features indicative of landsliding at four separate locations. These landslides are discussed above in the Landslide Deposits section.

Buttress fills, apparently placed to stabilize west-facing cut slopes during previous grading in the area of the QIsA landslide, are reported within the east central portion of the Project site. The reported locations and limits of these buttress fills are depicted on Figure 5, Geotechnical Map.

A slope stability hazard exists in the vicinity of the existing landslides and anywhere the bedding could be exposed, particularly the north and west-facing slopes. We have identified the areas of these hazards on Figure 7, Geotechnical Hazards Map.

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### **LIQUEFACTION**

Portions of the property are located within areas designated by the state geologist where historic occurrence of liquefaction or local geologic, geotechnical, and groundwater conditions indicate a potential for permanent ground displacement to the extent that mitigation would be required (California Geologic Survey, 1999). Liquefaction potential is greatest where the groundwater level is shallow, and loose sands or silts occur within a depth of about 50 feet or less. In general, liquefaction potential decreases as grain size and clay and gravel content increase. As ground acceleration and shaking duration increase during an earthquake, liquefaction potential increases.

The north side of the Project site adjacent to the Los Angeles River Flood Control Channel is underlain by loose to medium dense granular soils and the groundwater is potentially within 50 feet of grade. The soils in this area are susceptible to liquefaction. This potentially liquefiable zone varies from about 100 feet to over 800 feet south of the river and is within the non-engineered fill (nef) and the recent alluvium (Qal) as shown on Figure 3, Geotechnical Map.

The potential for seismic settlement resulting from liquefaction is estimated to vary from less than one inch to greater than one foot. The greatest amount of settlement would be expected to occur immediately adjacent to the river and would decrease to the south. We have identified the areas of liquefaction potential and have shown them on Figure 4, Geotechnical Hazards Map. Site specific geotechnical investigations, including detailed liquefaction studies, will be required for any new construction within the areas identified on Figure 4 as areas of liquefaction potential.

### **NON-ENGINEERED FILL**

The non-engineered fills may be weak and compressible, particularly with the addition of water. These fills are subject to settlement and are not suitable for support of foundations, slabs on grade, paving or new compacted fills. Cut slopes in these fills are subject to sloughing and failure because of their low shear strength.

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### **CLOSED LANDFILL**

The closed landfill is a deep, non-engineered fill with varying amounts of organic and inorganic debris. The landfill appears to have been constructed prior to the state's permitting and closing requirements. Similar to other non-engineered fills, the landfill is subject to settlement, made greater by the depth and decomposable organic matter. Methane gases are generated by the decomposition of the organic matter.

### **EXPANSIVE SOILS**

The clay soils within the natural alluvium and colluvium, within the fill soils and excavated bedrock are subject to expansion and shrinkage resulting from changes in the moisture content. Tests on samples of the clays indicate that the Expansion Index can range up to about 60, which is a medium expansion potential.

### **FLOODING AND INUNDATION**

The Project site is not located in a County or City of Los Angeles flood or inundation hazard zone. The Los Angeles River Flood Control Channel borders the northerly site limits but has been contained and concrete lined and is not considered a flood hazard with respect to the Project site. The Project site is not located in close proximity to large bodies of water and the potential adverse effects of seiching is unlikely.

### **Oil Wells**

According to maps prepared by the State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources, abandoned or active oil wells are not located within or near the Project site. The Project site is not located within the limits of a known oil field.

### **METHANE GAS**

The Project site is not located within a City of Los Angeles Methane Hazard Zone. In addition, the Project site is not located within a known oil field and oil or gas wells are not reported to be located within or near the site limits. However, methane gas may be present in the closed landfill in the central portion of the site. The methane may migrate beyond the closed landfill.

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### **SUBSIDENCE**

The Project site is not located within an area of known subsidence (ground surface settlement) associated with fluid withdrawal (groundwater or petroleum), peat oxidation, or hydrocompaction. Historically, the highest groundwater levels have been within 10 feet of the ground surface prior to channelization of the Los Angeles River. After channelization the historic high groundwater level is expected to be about 15 feet. Groundwater could be encountered within excavations that extend more than about 15 feet below ground surface and require dewatering.

If dewatering is required during construction, dewatering is not anticipated to lower groundwater across any substantial distance and any related settlement is expected to be minimal and localized within the area of construction. The settlement would occur quickly and be completed shortly after completion of the excavation. Any potential settlement related to long-term dewatering for building operation would be less than, and already accounted for in, the construction dewatering settlement. Recommendations for the efficient design of any required dewatering systems should be included in the site-specific geotechnical investigations and recommendations for new construction.

Subsidence is, therefore, not considered a significant impact to the Project site.

### **OTHER HAZARDS OR IMPACTS**

#### **SEDIMENTATION AND EROSION**

If the Mixed-Used Residential Area is annexed to the City of Los Angeles, it should be anticipated that it may be included within a City of Los Angeles designated Hillside Grading Area, requiring that the stability of all slopes be evaluated. The grading requirements as designated in the City or County building codes, as applicable, for drainage and planting of slopes should be followed. The differences in the building codes are presented in a following section, Variations In Building Codes.

In addition, grading, excavation, and other earth-moving activities could potentially result in erosion and sedimentation. For any grading performed in the “rain season”, generally November to April, provisions will need to be made to control erosion and an erosion control plan must be submitted to the appropriate building department.

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### **LANDFORM ALTERATION**

The planned grading within the Mixed-Use Residential Area of the Project site will excavate into an existing north-south trending ridge. The excavation will not, however, reduce the overall height of the ridge at its highest point. Runoff following rain periods is seasonal and limited to brief periods following heavy rains. The grading would not alter any significant canyons, ravines or outcrops. Therefore, no distinct and prominent geologic or topographic features would be adversely affected by the Project.

### **MINERAL RESOURCES**

There are no known economically extractable deposits of mineral resources such as building stone, clay or light-weight aggregate beneath the Project site. Therefore, the Project site is not anticipated to have an impact on mineral resources in the area.

### **COMPACTION CRITERIA**

The County of Los Angeles requires that all compacted fills be placed to a minimum of 90% compaction. The City of Los Angeles requirement depends on the soil type. Cohesionless sands are to be compacted to a minimum of 95% and cohesive silts and clays are to be compacted to a 90% minimum. Both agencies use the same maximum density standard, the ASTM D1557 method and other compaction criteria are comparable.

### **DRAINAGE AND BENCHING REQUIREMENTS**

The County of Los Angeles requires an 8-foot wide drainage terrace on all cut or fill slopes at 25-foot vertical intervals and a 20-foot wide terrace at the midpoint on all cut and fill slopes more than 100 feet in height. The City of Los Angeles also requires an 8-foot wide interceptor terrace on all cut or fill slopes at 25-foot vertical intervals, but requires a 30-foot wide terrace at the midpoint on all cut and fill slopes more than 100 feet in height.

### **SET-BACK REQUIREMENTS**

Both the City and County have a requirement for building setback at the toe of slopes equal to one-half the slope height; the County has a 20-foot maximum distance and the City has a 15-foot maximum distance. At

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the top of the slope, the City has a requirement that the horizontal distance between the face of the slope and the base of the building foundation be equal to one-third the slope height, but not more than 40 feet.

### **IMPACT OF CODE VARIATION**

The design for a building project must be in accordance with the applicable building code, depending upon the municipality in which the building project site is located. While there could be differences on the design and construction adherence to either code would mitigate any geologic hazard.

## **HAZARD MITIGATION**

### **GENERAL**

Each of the geologic hazards present on the Project site (Slope Stability, Liquefaction, Non-Engineered Fill, and Closed Landfill) are shown on Figure 7, Geotechnical Hazards Map. Mitigation of these hazards are discussed in this section. Foundation and grading requirements and water runoff infiltration are also discussed.

Comprehensive geotechnical investigations should be prepared for each project as that term is defined in the proposed City and County Specific Plans to the satisfaction of the applicable jurisdiction standard. Each of the hazards described in this report will need to be investigated in detail and recommendations will need to be developed prior to proceeding with design.

Geotechnical observation and testing will be required during the placement of new compacted fills, foundation construction, buttresses, stabilization fills, ground improvement and any other geotechnical-related construction for each project. The geotechnical firm performing these services will need to be approved by the City of Los Angeles, for work within the city limits.

### **SLOPE STABILITY**

A slope stability hazard is present for most west, northeast and north-facing cut slopes. The hazard could be mitigated by either reorienting the cut slopes, reducing the slope angle to the angle of the bedding or flatter, or by construction of buttress and stabilization fills. Reducing the slope angles would require ratios of about 3:1 (horizontal to vertical). There does not appear to be sufficient space to permit this alternative and we, therefore, recommend the use of buttress and stabilization fills. Site-specific geotechnical investigations to

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the satisfaction of the applicable jurisdiction's standards should be performed for design of all cut and fill slopes. Typical recommendations for design of buttress and stabilization fills are presented in a following section, Grading Requirements.

The natural slopes at the north-eastern portion of the Project site, where the Project site is adjacent to Barham Boulevard, are stable from deep-seated failures, but these slopes are steep with inclinations as steep as ½:1, up to about 50 feet in height, and are subject to rockfall hazards. This surficial stability hazard could be mitigated by construction of a slough wall and a rockfall catchment fence at the base of the slope adjacent to Barham Boulevard. The catchment fence should be located on top of the wall.

The slough wall should be at least four feet in height. There should be at least four feet of horizontal distance between the slough wall and the face of the slope to permit access by a small skid loader for periodic clearing. The slough wall should be designed to support a lateral pressure equal to the pressure developed by a fluid with a density of 50 pounds per cubic foot. A rock catchment fence should be placed on top of the slough wall for an additional 3 feet to attain a minimum height of 7 feet from the adjacent grade. There should be at least 8 feet of horizontal distance between the top of the fence and the adjacent slope.

This surficial stability hazard could also be mitigated with rock-netting placed over the face of the slope. The rock netting could be used alone or in conjunction with the slough wall and catchment fence.

### **LIQUEFACTION**

The liquefaction hazard is most prevalent within the natural alluvial deposits in the lower lot along the Los Angeles River Flood Control Channel. The location of the areas subject to liquefaction hazards are shown on Figure 7. In general, any areas where the hazard is defined as High, where there is the potential for more than about 4 inches of settlement resulting from liquefaction, will require mitigation for new construction. Mitigation could include ground improvement or deep foundations extending through the potentially liquefiable soils and structurally-supported floor slabs.

Areas with a Moderate potential of liquefaction, where there is between one and four inches of settlement potential, could be mitigated by special foundation design procedures, such as extra reinforcement and strengthening of building foundations and floor slab systems. Areas with low potential for liquefaction may not require any special foundation treatment or ground improvement.

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The liquefaction hazard can be mitigated by excavation and recompaction of the potentially liquefiable zone or by in-situ densification. Excavation and recompaction does not appear reasonable for all of the soils immediately adjacent to the river, because the zone extends well below the existing river channel and below groundwater. Site-specific liquefaction hazard studies will be required for new construction within the liquefaction hazard area.

### **EXPANSIVE SOILS**

Expansive soils with a medium expansion potential are present on the Project site. These soils present a hazard to lightly loaded concrete slabs on grade, where the slab can move vertically with changes in the soil's moisture content. This hazard can be mitigated by excavation and replacement of the expansive materials with a soil with a low or non-expansive potential. In general, it should be anticipated that one foot of non-expansive material will be required. The excavated materials can be used in the compacted fills below depths of one foot and removal from the Project site will not be required.

### **NON-ENGINEERED FILLS**

Non-engineered fills are not suitable for support of new fills, foundations, concrete slabs on grade, or paving. During construction, the non-engineered fills will need to be excavated, and replaced as compacted fill properly benched into suitable materials. The limits of the non-engineered fills to be removed and recompacted are shown on Figure 5. In general, most of the excavated materials can be reused in the compacted fills. The suitability of the materials will need to be confirmed during the comprehensive geotechnical investigation.

### **LANDFILL**

Any structures located over the landfill will require deep foundation extending through the landfill and into the underlying bedrock. Downdrag loads resulting from decomposition and settlement of the landfill will need to be added to the design loads on the piles.

Methane gas may be present in the landfill. The methane may also migrate beyond the limits of the landfill. Any new construction located within 1,000 feet of the landfill may require evaluation by a methane specialist and mitigation for methane gas pursuant to County requirements. In addition, if the Mixed-Use Residential Area is annexed into the City, pursuant to the City Municipal Code, the City may also require

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mitigation for methane gas for new construction where a methane intrusion hazard exists. A methane specialist should be retained prior to new construction to evaluate the methane hazard and to provide recommendations to mitigate any methane impact, consistent with the applicable County and City requirements.

### **FOUNDATION REQUIREMENTS**

#### **General**

New structures should be supported on foundations developing their support either within the bedrock or properly compacted fill. The capability of the existing engineered fills to support new foundations will need to be verified during each project's comprehensive geotechnical investigation. In areas of non-engineered fill and in the areas of the Landfill, deep foundations carried through the non-engineered fill could be used, or the non-engineered fill could be excavated and replaced with properly compacted fill and foundations could be established in the compacted fill.

In areas prone to liquefaction, if the hazard is not mitigated, foundations would need to be carried through the liquefaction potential zone, or deep foundations would be needed.

The limits of the bedrock, engineered fill and non-engineered fill are shown on Figure 5, Geotechnical Map.

Where proposed buildings are to be supported on spread footings in compacted fill, the bedrock should be overexcavated as necessary to achieve at least 3 feet of compacted fill beneath the bottoms of the footings. Any retaining walls planned around the property walls may also be supported on spread footings in either the compacted fill or the bedrock.

#### **Footings in Bedrock**

Spread footings carried at least 1 foot into the bedrock and at least 2 feet below the lowest adjacent grade or floor level can be designed to impose a net dead-plus-live load pressure of 10,000 pounds per square foot. A one-third increase in the bearing value can be used for wind or seismic loads.

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### **Footings in Compacted Fill**

Spread footings underlain by at least three feet of compacted fill and carried at least 2 feet below the lowest adjacent grade or floor level can be designed to impose a net dead-plus-live load pressure of 3,000 pounds per square foot. A one-third increase in the bearing value can be used for wind or seismic loads.

### **Pile Foundations**

There are a variety of pile foundations that could be used where it is necessary to carry foundation support through a weak or potentially liquefiable deposit or through the landfill. These options could include:

- Drilled cast-in-place pile foundations.
- Driven friction or end-bearing piles.
- Vibrated friction or end-bearing piles.
- Auger cast piles.
- Displacement auger-cast piles.

The presence of groundwater or potentially caving soils (such as the alluvium) may limit the use of conventional drilled cast-in-place piles. It is our understanding, that because of noise and vibrations associated with driven piles, the owner does not plan to use driven piles. The auger-cast piles and the displacement auger-cast piles could be used in a variety of soil and bedrock materials and may be an economical type of deep pile foundation without the disadvantages of excessive noise, vibration or damage to the channel walls. It may be possible to develop downward pile capacities of 150 to 250 kips for 16- to 24-inch diameter piles 40- to 50-feet in length.

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### **Site Coefficient and Seismic Zonation**

The structures located in the upper plateau portion of the site can be designed to resist earthquake forces following the 2008 Los Angeles City or Los Angeles County Building Code. The Site Classification may be assumed to be a Site Class C, Very Dense Soil and Soft Rock Profile.

The structures located in the lower plateau portion of the site can be designed to resist earthquake forces following the 2008 Los Angeles City or Los Angeles County Building Code. The Site Classification may be assumed to be a Site Class E, Soft Soil Profile.

The mapped maximum considered earthquake spectral response accelerations,  $S_s$  and  $S_1$ , should be taken as 1.515 and 0.600, respectively, according to the 2008 Los Angeles County Building Code. The site coefficients,  $F_a$  and  $F_v$ , may be determined for these spectral response acceleration values and for a Site Class C or E, accordingly.

### **GRADING REQUIREMENTS**

#### **General**

The placing of all fills will need to be properly engineered and constructed. All vegetation within the limits of grading will need to be removed and existing fills and any unsuitable soils will need to be excavated prior to fill placement.

Grading within the hillside areas will need to address the stability of the slopes. Where favorable bedding exists, the slopes could be constructed at a 2:1 (horizontal to vertical) inclination. If the bedding dips unfavorably out of the slopes, the slopes should either be flattened to the angle of the bedding (or flatter), or the slopes will require stabilization. The degree of stabilization will depend on the orientation of the bedding with respect to the final slope and the depth of the excavation. Where the bedding dips out of the slopes, buttress fills will be required. If the bedding is approximately parallel to the slopes, thinner stabilization fills will suffice. The design of the buttress or stabilization fills will need to be included to the satisfaction of the applicable jurisdiction in the comprehensive investigations prior to new construction in hillside areas.

## **Buttress and Stabilization Fills**

The actual dimensions of the buttress fills will need to be determined when the Planning Subarea elevations and the depth of any building subterranean construction are known. For planning purposes, the buttress fills should be constructed to a width equal to one-half the height of the slope, or to a minimum width of 20 feet. Backdrains will be required behind all buttress and stabilization fills. Compacted fill slopes may be constructed at 2:1. Slopes should be overfilled 5 horizontal feet and trimmed back to a compacted core.

Within the Mixed-Use Residential Area, buttress fills will be required on most of the west facing cut slopes. Stabilization fills will be required on most of the north-facing cut slopes. The buttress and stabilization fill design must also consider subterranean construction in front of these fills. Typical buttress fill details are shown on Figure 8, Typical Buttress Fill Design Criteria. Typical stabilization fill details are shown on Figure 9, Typical Stabilization Fill Design Criteria. The dimensions shown on these details will need to be determined during design.

## **Compaction**

Any required fill should be placed in loose lifts not more than 8 inches thick and compacted to the standard as determined by the ASTM Designation D1557 method of compaction. The fill will need to be compacted in accordance with the City or County of Los Angeles requirements as applicable. Cohesive fills should be compacted to 90%. Granular, non-cohesive soil should be compacted to at least 95%. Where deep fills are required a greater degree of compaction may be required to reduce the settlement of the completed fills.

We anticipate shrinkage factors of 10% and 15% when compacting the fill/alluvium to 90% and 95%, respectively. Similarly, bedrock will bulk 5% and 0% when excavated and recompacted to 90% and 95%.

## **Material for Fill**

The on-site excavated materials, less any debris or organic matter, can be used in required fills. However, because of their expansive characteristics, the on-site clayey soils should not be used within one foot of the subgrade for floor slabs, walks, and other slabs. Cobbles larger than 4 inches in diameter should not be used in the fill. Any required import material should consist of relatively non-expansive soils with an Expansion Index of less than 35. The imported materials should contain sufficient fines (binder material) so as to be

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relatively impermeable and result in a stable subgrade when compacted. All proposed import materials should be approved by the geotechnical consultant-of-record prior to being placed at the site.

### **Stockpiled Fill**

The grading for the Mixed-Use Residential Area may be performed in phases. If a phased development is planned, up to about 450,000 cubic yards of excavated material could be stockpiled on undeveloped portions of future phases. If the stockpile will remain in place after completion of adjacent developments, the exterior slopes of the stockpile should be treated as permanent slopes with drainage requirements consistent with the requirements of the City of Los Angeles or the County of Los Angeles, as applicable.

If the stockpiled fill is to be in place for less than one year or if the stockpile is less than 40 feet in height, the fill would not need to be compacted and tested, but the stockpiled material should be placed in lifts not more than two feet in thickness and rolled with heavy compaction equipment.

If the stockpiled fill is greater than 40 feet in height, the outer portion of the fill, with a width equal to at least the height of the fill, should be compacted to at least 90%. The interior core of the stockpile need not be compacted to the 90% minimum, but should at least be track-rolled with heavy equipment.

The side slopes of the stockpile fill, less than 40 feet in height, may be constructed as steep as 1½:1 (horizontal to vertical). Stockpile fill more than 40 feet in height should not be constructed steeper than a 2:1 slope inclination.

If the stockpiled fill were to be in place for less than one year and if the stockpile were less than 40 feet in height, the normal City requirements for rainy weather erosion protection should be sufficient. This means that the stockpile should be surrounded by sandbags and all runoff should be collected into approved storm water collection devices.

If the stockpile will be in place for more than one year or if the stockpile will be more than 40 feet in height, drainage terraces should be provided on all slopes. The terraces should be at least 8 feet in width and spaced no further than 25 feet apart vertically.

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### **WATER RUNOFF INFILTRATION AND BIO-SWALE**

Infiltration of site runoff water into compacted fills can have a long-term detrimental effect on the strength and compressibility of the compacted fills. The water can also have an adverse effect on the stability of the slopes and will need to be removed by subdrains for new buildings from behind building basement walls and retaining walls to prevent development of damaging hydrostatic pressures. Furthermore, the subsurface materials have a relatively low permeability and will not accept large quantities of runoff.

Vegetative swales/filter strips, where runoff is directed along a swale or across a vegetative surface for treatment, may result in partial retention and vegetative uptake and limited percolation of runoff. All vegetated treatment facilities should be constructed with underdrains and, if needed, liners to restrict infiltration to the underlying compacted soils (some areas may not need to include a liner as these soils will effectively act as a liner until perforated pipes are able to drain percolated waters). Collected and treated water should be either discharged to the storm drain systems or potentially used for irrigation elsewhere on the Project site.

### **RECLAIMED WATER TANK**

A reclaimed water tank is planned in the Mixed-Use Residential Area. The tank can be as large as 120 feet in diameter and 10 feet deep and of reinforced concrete or steel construction with up to 850,000 gallon capacity. The conceptual location is on the east side of the Project site at the top of a 150-foot high graded slope. If constructed at this location, the tank would be buried, with the top of the tank exposed and the base will be set back about 30 feet from the face of the slope. It is possible that the reclaimed water tank could be sited at other locations within the Mixed-Use Residential Area. The reclaimed water tank could also be smaller in size or consist of multiple tanks ranging from 25,000 gallons to 250,000 gallons.

The slope adjacent to the conceptual location is potentially unstable and will be stabilized with a buttress fill. The buttress fill will be equipped with a backdrain. The tank will be constructed at the top of the buttress fill. We recommend that the base of the tank consist of a reinforced concrete foundation and that the grading for the buttress extend beneath the entire limits of the tank. If these provisions are made, then this site would be acceptable for the tank.

Drainage should be provided around and beneath the tank. The drainage should consist of a perforated pipe behind the tank walls with gravel backfill and a subdrain beneath the base of the tank. The subdrain should

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consist of a layer of permeable gravel with drainage pipes. The drainage pipes and the wall drain should drain to an approved drainage device. With those provisions at the location planned, the tank will not adversely affect the stability of the slope. Because the tank is situated at the top of a high slope, we recommend that provisions be made to capture any leakage resulting from a tank rupture with that leakage directed to an appropriate collection system.

Alternative locations could include elsewhere on graded pads within the Project site either on or adjacent to the slopes or adjacent to the Los Angeles River Flood Control Channel. Other potential geologic hazards could include liquefaction, or the presence of non-engineered fills. If any geologic hazards at these potential sites are mitigated in accordance with the findings, conclusions and recommendations in this report, the locations would then be suitable for siting of the water tank. Detailed geotechnical recommendations will be needed prior to the tank's final design and construction.

Other subterranean reclaimed water tanks may be located in the Studio, Entertainment or Business Areas. These tanks would be 50,000 gallons or less in size and installed pursuant to regulatory requirements. Detailed geotechnical recommendations will be needed prior to the final design and construction of each tank.

### **PAVING**

The required thicknesses of paving and base will depend on the expected wheel loads and volume of traffic (Traffic Index or TI). Assuming that the paving subgrade will consist of the on-site or comparable soils with an R-value of 25 and compacted to at least 90% as recommended, the minimum recommended paving thicknesses are presented in Table 6, Recommended Paving Thicknesses.

**Table 6, Recommended Paving Thicknesses**

<b>Traffic Use</b>	<b>Traffic Index</b>	<b>Asphalt Paving</b>	<b>Base Course</b>
Parking	5.0	4 inches	4 inches
Drives	6.0	4 inches	8 inches
Street	7.0	5 inches	9 inches
Street	8.0	5 inches	12 inches

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The base course should conform to requirements of Section 26 of State of California Department of Transportation Standard Specifications (Caltrans), latest edition, or meet the specifications for untreated base as defined in Section 200-2 of the latest edition of the Standard Specifications for Public Works Construction (Green Book). The base course should be compacted to at least 95%.

### **HARDSCAPE**

The on-site clay soils are expansive and relatively impermeable. Irrigation water could become trapped within the upper soils of landscaped areas particularly if the landscaped areas are covered with permeable planting materials. This trapped water can move laterally beneath slabs, curbs and paving. We recommend that all concrete slabs on grade be underlain by at least one foot of non-expansive soil with an Expansion Index less than 35 to minimize the expansion potential. In addition, we recommend that consideration be given to providing subsurface cutoff walls between landscaped and hardscape areas. The cutoff walls could consist of a concrete-filled trench at least six inches wide and two feet deep. The cutoff walls should extend at least six inches below any adjacent granular non-expansive material or the paving base course. Drain lines would be desirable adjacent to the landscaping.

It should be noted that even with provisions to protect against movement, some movement could occur due to expansive soils. The geotechnical engineer-of-record should be provided with a copy of the hardscape and landscaping plans for review prior to final design.

In the grading section of this report, we recommend that in all areas requiring structural fill, the fill be compacted to at least 90%. In areas to be landscaped, the level of compaction could be reduced to 85%, but we suggest that this lower level of compaction be limited to the upper three feet to reduce the potential for areal settlement as the areas become watered. Compaction to at least 90% will still be required beneath planter walls, sidewalks, paving and hardscape.

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- LeRoy Crandall & Associates,** Project: Building 488, Crandall Job No. L90195.AC.
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- LeRoy Crandall & Associates,** Project: Crib Wall at Kemp Office, Crandall Job No. L91371.AEB.
- LeRoy Crandall & Associates,** Project: Earthquake, Crandall Job No. A-87362.
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## ATTACHMENT E

*NBC Universal Evolution Plan—Geotechnical Investigation for EIR  
March 2010  
Shannon & Wilson Project 06-030.1*

**SHANNON & WILSON, INC.**

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**Weber, F.H.**, and others, 1980, Earthquake Hazards Associated with the Verdugo Eagle Rock and Benedict Canyon Fault Zones, Los Angeles County, California: California Division of Mines and Geology, Open File Report 80-10, Chapters A and B.

**Yerkes, R.F.**, et al., 1965, Geology of the Los Angeles Basin, California – An Introduction, U.S. Geol. Survey Prof. Paper 420-A, 57p.

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## ATTACHMENT E

*NBC Universal Evolution Plan—Geotechnical Investigation for EIR  
March 2010  
Shannon & Wilson Project 06-030.1*

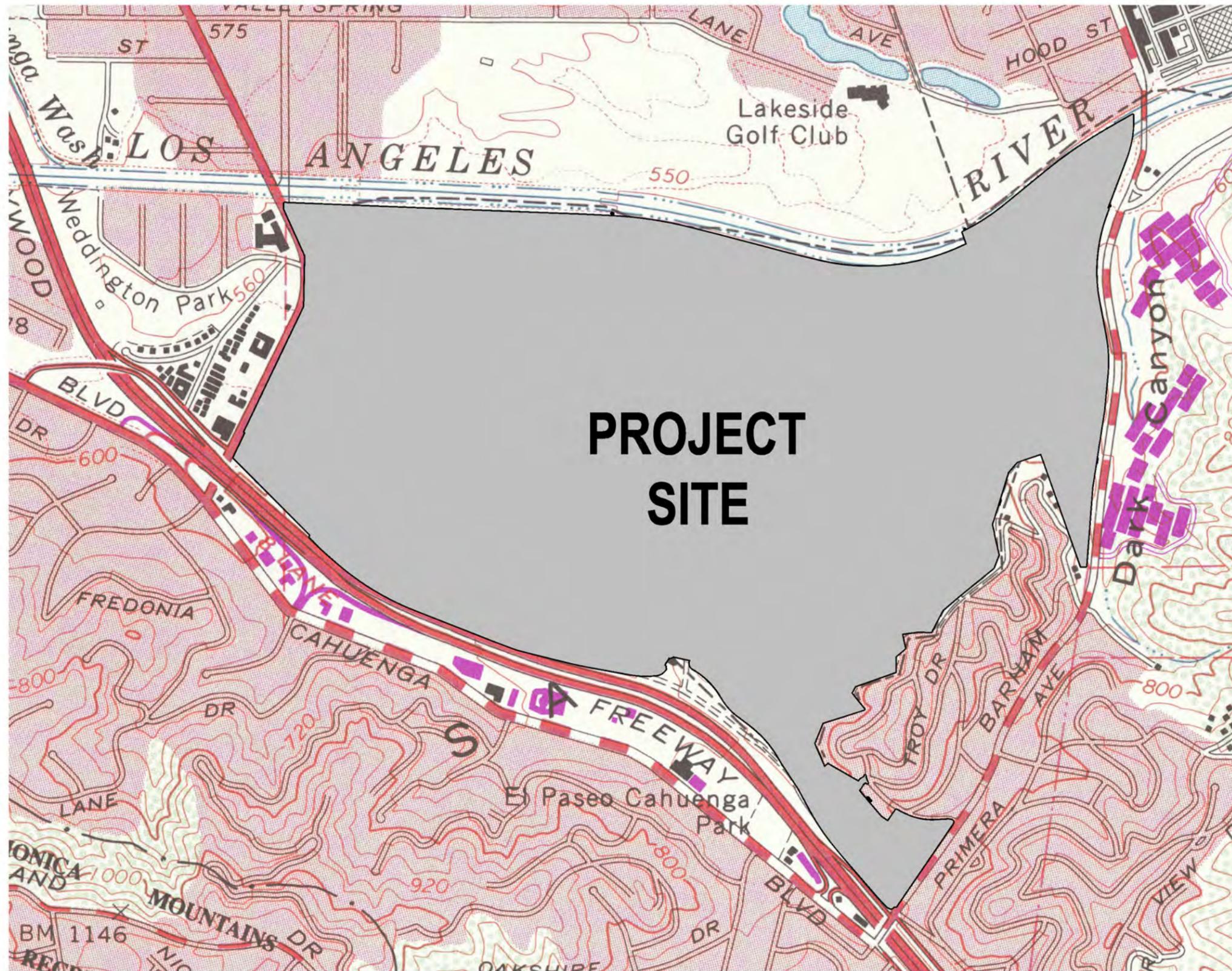
**SHANNON & WILSON, INC.**

### **AERIAL PHOTOGRAPHS**

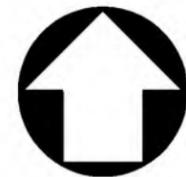
Stereo-paired, black and white aerial photographs were reviewed to evaluate geomorphic conditions that could indicate characteristic features associated with large scale landslides. A list of the photographs reviewed is presented below:

#### **AERIAL PHOTOGRAPHS**

<b>Photograph Date</b>	<b>Flight/Frame</b>	<b>Scale</b>
10/18/98	C127-24-54-55	1 inch = 2,000 feet
6/10/95	C113-24-236-237-235	1 inch = 2,000 feet
5/10/93	C88-23-229-230	1 inch = 2,000 feet
5/25/90	C81-8-28-29-27	1 inch = 2,800 feet
7/7/88	19291-92-93	1 inch = 2,200 feet
1/27/86	F-492-493	1 inch = 2,800 feet
5/12/79	FCLA-4-205-206	1 inch = 2,800 feet
11/7/76	76162-208-09-10	1 inch = 2,000 feet
4/20/72	107-12-17-18	1 inch = 4,000 feet
1/30/70	60-3-70-71-72	1 inch = 4,000 feet
3/4/69	25-16-71-72-73	1 inch = 1,000 feet
11/4/52	11-4K-151-152	1 inch = 1,666 feet
10/27/54	20K-43-44-45	1 inch = 1,666 feet



# PROJECT SITE



NBC Universal Evolution Plan	
<b>VICINITY MAP</b>	
March 2010	51-1-06030-001
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	<b>FIGURE 1</b>

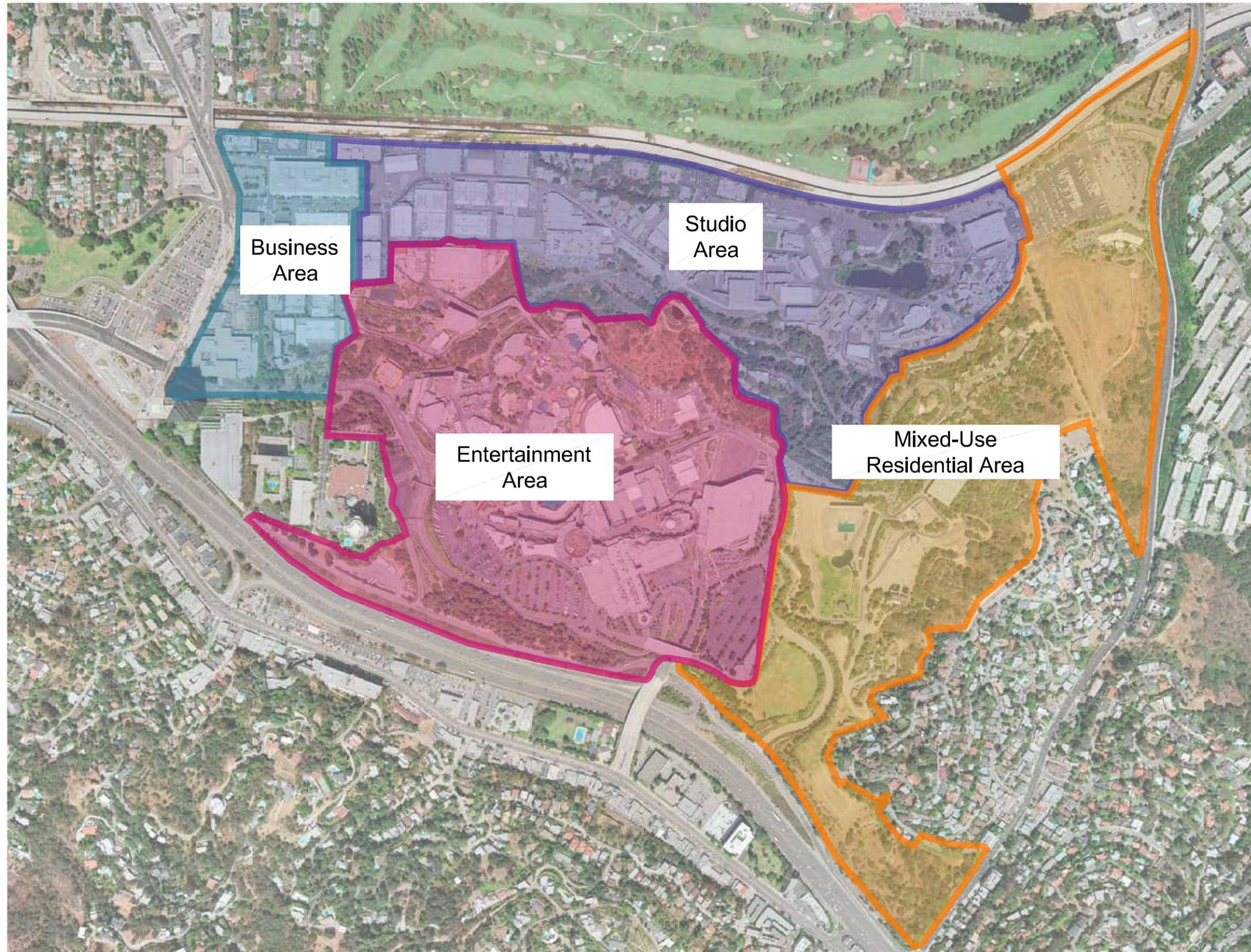
REFERENCE: TOPOGRAPHIC MAP BURBANK 7½' QUADRANGLE MAP BY USGS 1996



**LEGEND**

- Studio Area
- Business Area
- Entertainment Area
- Mixed-Use Residential Area
- Existing Universal Facilities

NBC Universal Evolution Plan	
<b>NBC UNIVERSAL EVOLUTION PLAN</b>	
March 2010	51-1-06030-001
SHANNON & WILSON, INC. <small>Geotechnical and Environmental Consultants</small>	<b>FIGURE 2</b>



NBC Universal  
Evolution Plan

**AREA DIAGRAM**

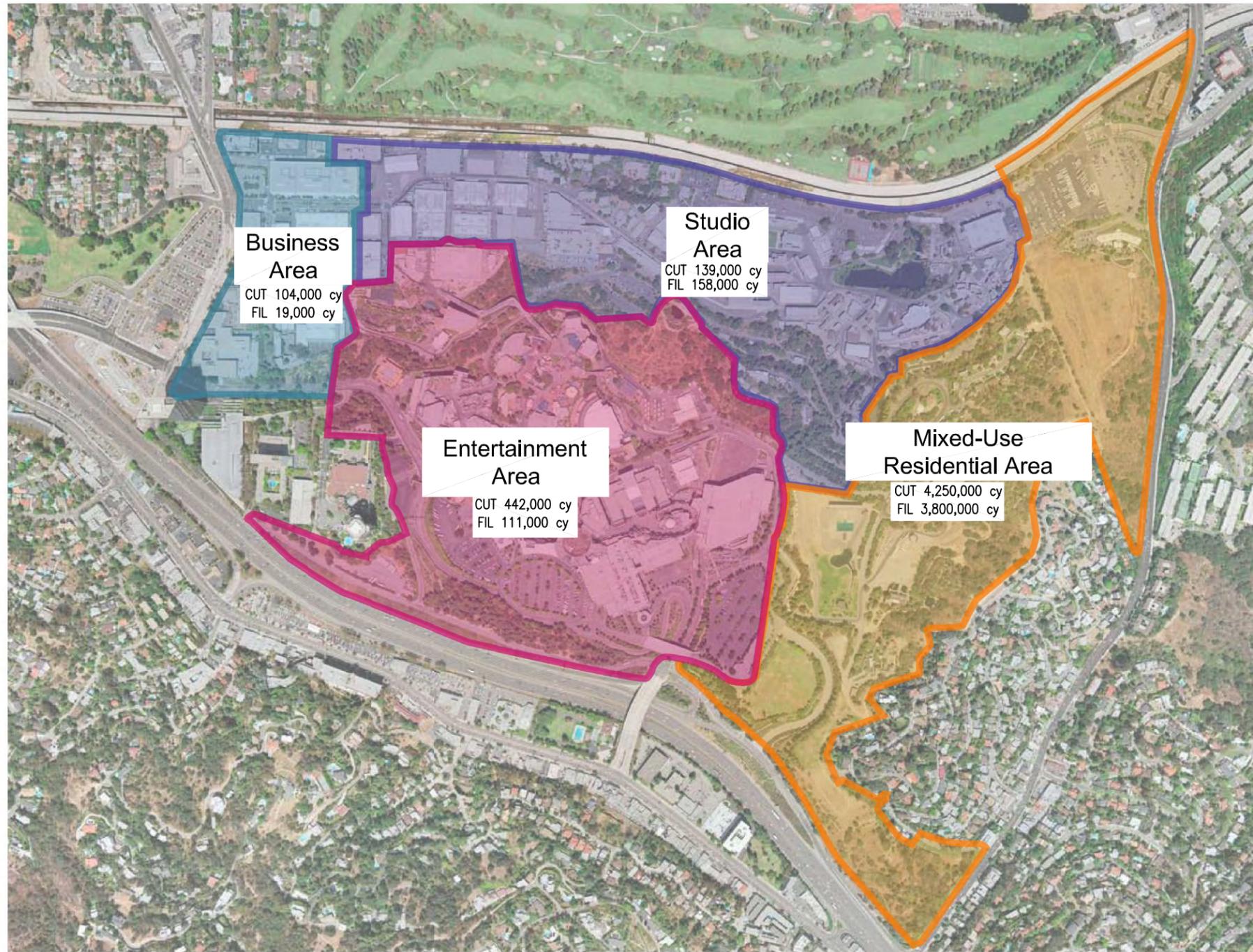
March 2010

51-1-06030-001

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

**FIGURE 3**





NBC Universal Evolution Plan	
<b>CONCEPTUAL GRADING PLAN</b>	
March 2010	51-1-06030-001
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	<b>FIGURE 4</b>



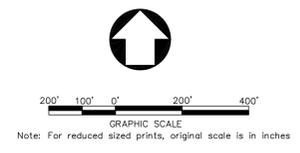
**EXPLANATION**

- GEOLOGIC UNITS**
- ef ENGINEERED FILL
  - nef NON-ENGINEERED FILL
  - Qal ALLUVIUM
  - col COLLUVIUM
  - Qls LANDSLIDE DEBRIS
  - Tt TOPANGA FORMATION  
interbedded sandstone, siltstone and shale
  - CLOSED LANDFILL CLOSED LANDFILL
- GEOLOGIC UNITS**
- GEOLOGIC CONTACT DASHED WHERE APPROXIMATELY LOCATED, DOTTED WHERE BURIED
  - BENEDICT CANYON FAULT (after Dibblee, 1991)  
Dashed where approximate, dotted where inferred
  - APPROXIMATE LIMITS OF LANDSLIDE DEBRIS
  - APPROXIMATE LOCATION AND PLUNGE OF SYNCLINAL FOLD AXIS
  - REPORTED LIMITS OF EXISTING BUTTRESS FILL
  - CREEP AFFECTED SLOPE

N 161500  
N 161000  
N 160500  
N 160000  
N 159500



E 179500    E 180000    E 180500    E 182000    E 182500    E 183500    E 184000    E 184500    E 185000



REFERENCE: TOPOGRAPHIC MAP BY EIR SEPTEMBER 19 2007



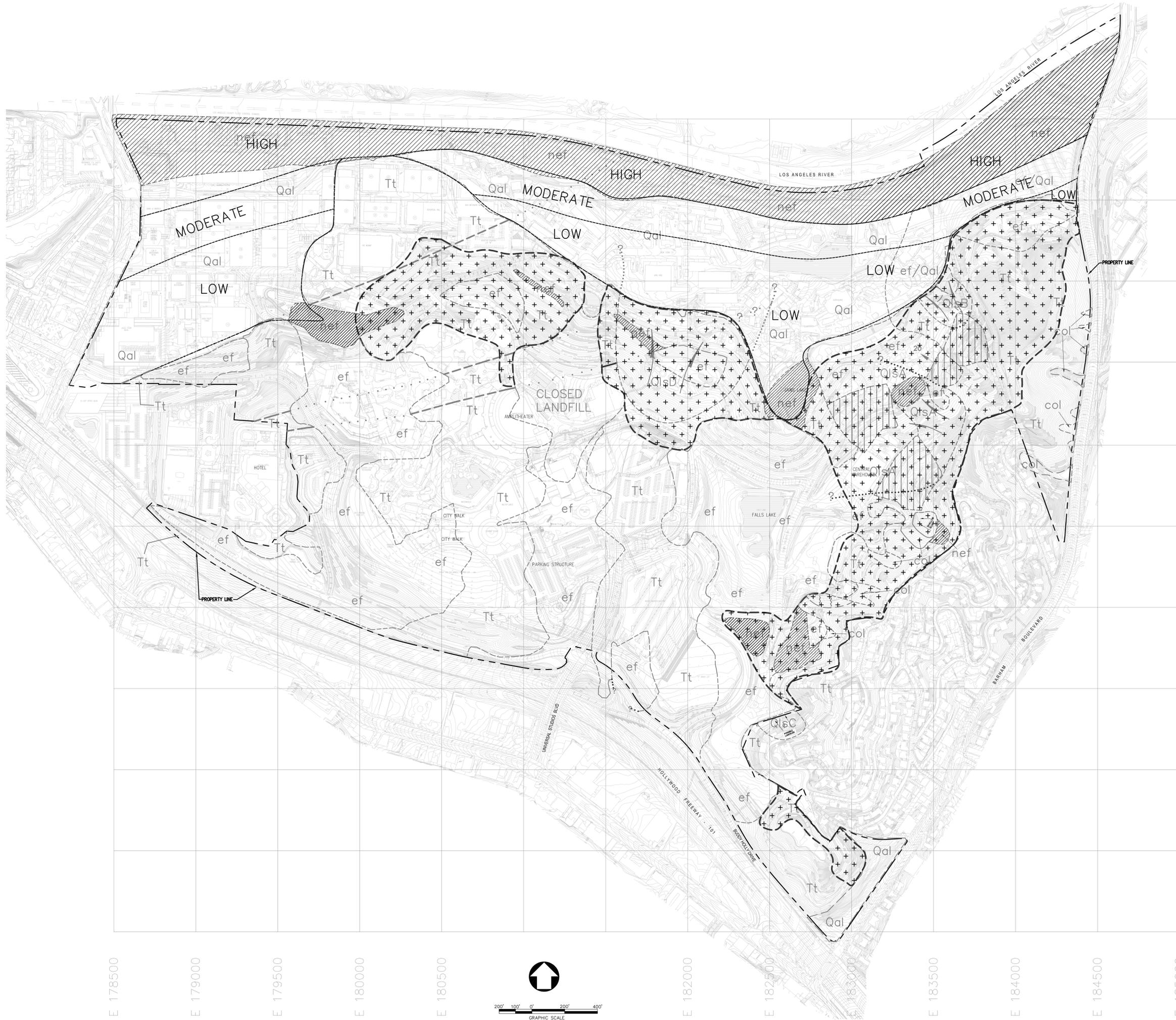
**EXPLANATION:**

- HISTORIC FAULT DISPLACEMENT
- HOLOCENE FAULT DISPLACEMENT WITHOUT HISTORIC RECORD

- YEAR M 8+
  - YEAR M 7-8
  - YEAR M 6-7
  - YEAR M 5-6
- APPROXIMATE EPICENTRAL AREA OF EARTHQUAKE

SCALE 1:750,000  
  
 SCALE IN MILES

NBC Universal Evolution Plan	
<b>REGIONAL SEISMICITY MAP</b>	
March 2010	51-1-06030-001
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	<b>FIGURE 6</b>



**EXPLANATION**

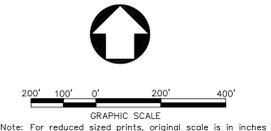
- GEOLOGIC UNITS**
- ENGINEERED FILL
  - NON-ENGINEERED FILL
  - ALLUVIUM
  - COLLUVIUM
  - LANDSLIDE DEBRIS
  - TOPANGA FORMATION  
interbedded sandstone, siltstone and shale
  - CLOSED LANDFILL

- GEOLOGIC UNITS**
- GEOLOGIC CONTACT DASHED WHERE APPROXIMATELY LOCATED, DOTTED WHERE BURIED
  - BENEDICT CANYON FAULT (after Dibblee, 1991)  
Dashed where approximate, dotted where inferred
  - APPROXIMATE LIMITS OF LANDSLIDE DEBRIS
  - APPROXIMATE LOCATION AND PLUNGE OF SYNCLINAL FOLD AXIS
  - REPORTED LIMITS OF EXISTING BUTTRESS FILL
  - CREEP AFFECTED SLOPE

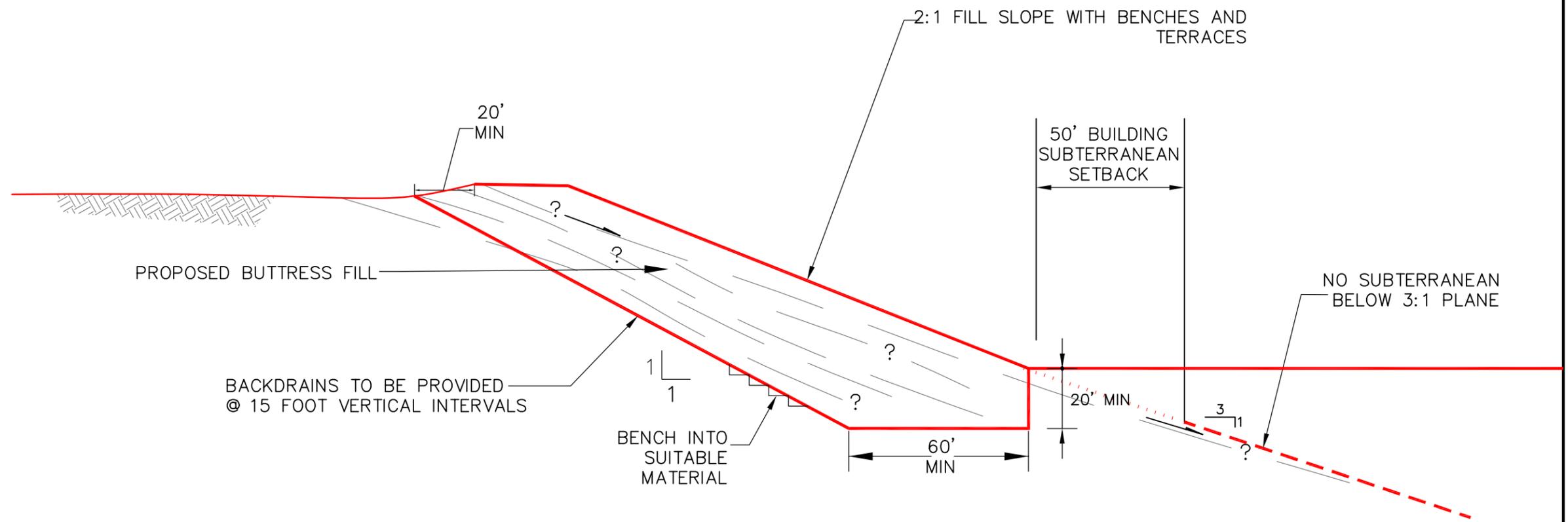
- GEOTECHNICAL HAZARDS**
- POTENTIAL SLOPE STABILITY HAZARD
  - LIQUEFACTION POTENTIAL ZONES  
HIGH  
MODERATE  
LOW
  - NON-ENGINEERED FILL REMOVALS

N 161000  
N 160500  
N 160000  
N 159500

E 178500 E 179000 E 179500 E 180000 E 180500 E 182000 E 182500 E 183000 E 183500 E 184000 E 184500 E 185000

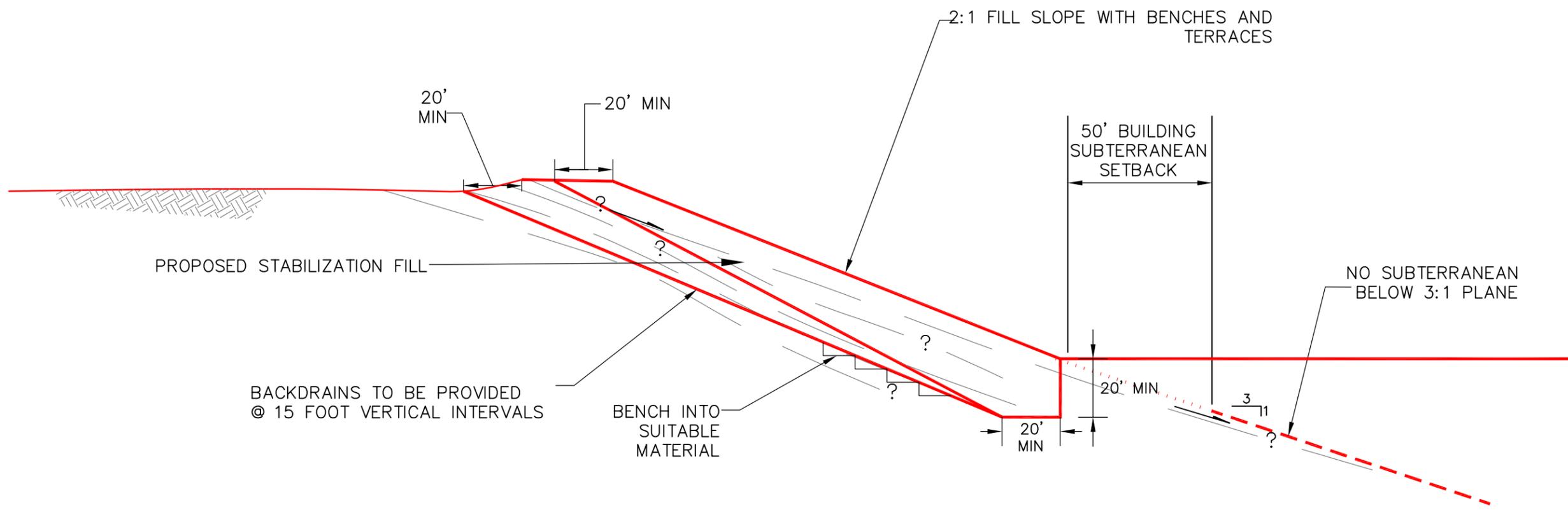


REFERENCE: TOPOGRAPHIC MAP BY EIR SEPTEMBER 19 2007



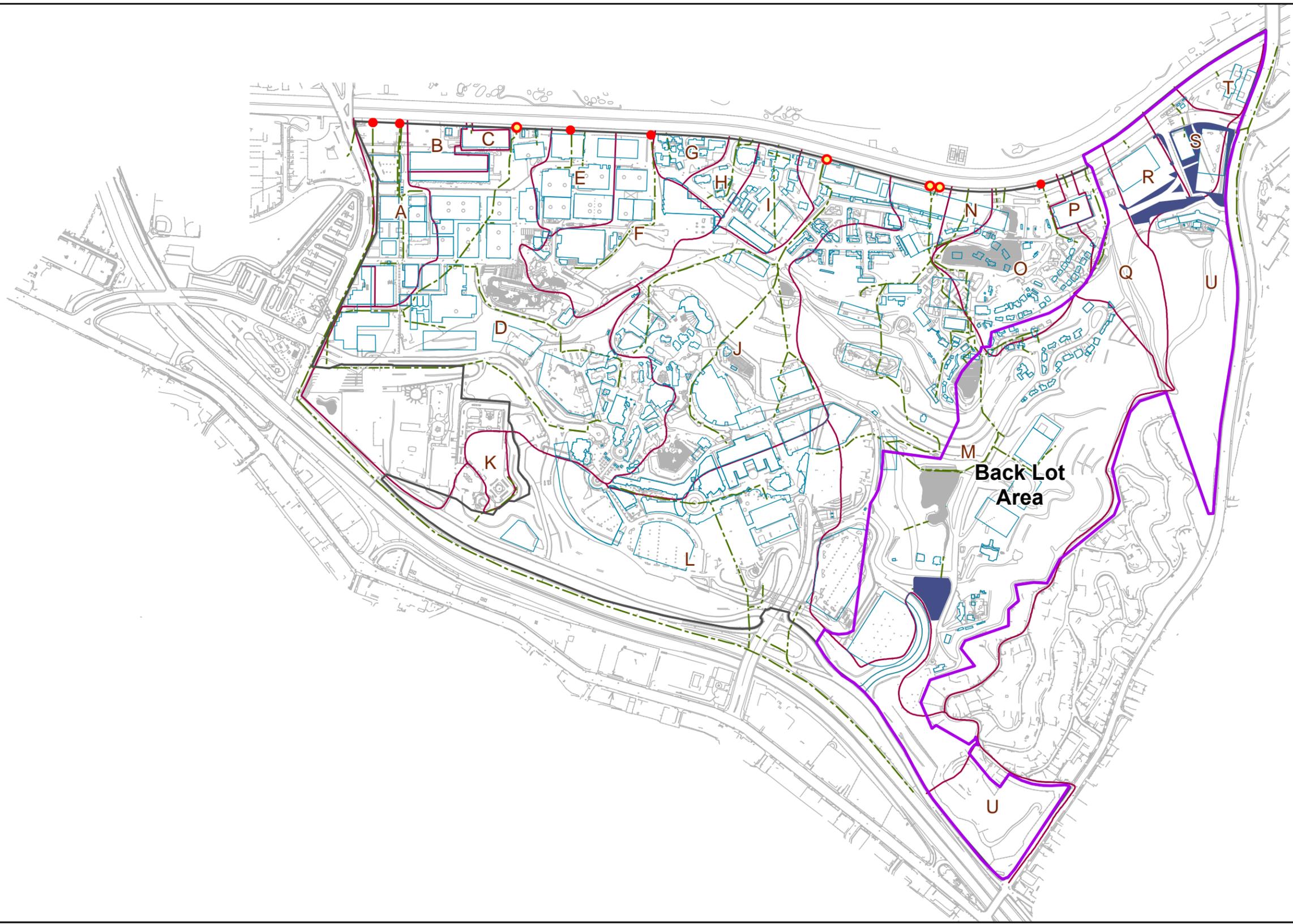
TYPICAL BUTTRESS FILL DESIGN CRITERIA  
SCALE: 1"=40'

NBC Universal Evolution Plan	
<b>TYPICAL BUTTRESS FILL DESIGN CRITERIA</b>	
March 2010	51-1-06030-001
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	<b>FIGURE 8</b>



TYPICAL STABILIZATION FILL DESIGN CRITERIA  
SCALE: 1"=40'

NBC Universal Evolution Plan	
<b>TYPICAL STABILIZATION FILL DESIGN CRITERIA</b>	
March 2010	51-1-06030-001
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	<b>FIGURE 9</b>

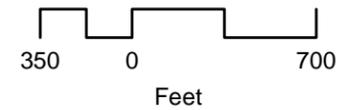


K:\30887\_ Universal\2012\Figure1\_Alternative10\_IDBMPs.mxd



**Legend**

- Backlot Boundary
- Bioretention Facility
- Property Boundary Line
- Storm Drain (18" or larger)
- Subwatershed
- Existing CDS Units
- Existing CDS Unit with Proposed Media Filter
- Commercial / Office Buildings



**NBC Universal Evolution Plan Project Drainage Areas**

**UNIVERSAL STUDIOS  
HISTORIC DISTRICT**

**Historic Preservation Plan**

Prepared for:

Universal City Studios LLLP, L.P.  
100 Universal City Plaza  
Universal City, CA 91608

Prepared by:

HISTORIC RESOURCES GROUP, LLC  
1728 Whitley Avenue  
Hollywood, CA 90028-4809

March, 2010

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## 1.0 STATEMENT OF PURPOSE

### 1.1 Purpose

In November of 2008, a Historical Resources Technical Report was prepared for Universal City Studios LLLP, L.P. (the "Applicant") to determine if historical resources were present within the Universal Studios property and assess any potential impacts to historical resources by the proposed NBC Universal Evolution Plan. The Technical Report identified forty (40) buildings and one (1) site of historic, cultural, and architectural significance as contributors to a potential Universal Studios Historic District ("Historic District") The Historic District's contributing and non-contributing resources are listed in Table 1.

The purpose of this Historic Preservation Plan (the "Plan") is two-fold:

- To provide appropriate guidance for the rehabilitation<sup>1</sup> of historic buildings, structures, and sites within the Historic District; and
- To establish basic criteria for new construction within the Historic District in order to maintain its historic character.

The Plan will serve as the framework for future repair, maintenance, and alteration and guide architects and designers in designing compatible new construction in the areas identified as potential sites for new buildings within the Historic District. Adjacent contributing buildings provide the design context for new buildings or additions. In general, the Plan does not require any particular type or style of new construction. Instead, the Plan encourages thoughtful, well-proportioned designs employing good quality materials that respect the historic context.

This document should be used in conjunction with the November 2008 Historical Resources Technical Report for Universal City, and technical reference materials, including the "Preservation Briefs" published by the National Park Service, which supplement this Plan.

### 1.2 Goals and Objectives

The objectives of the Plan are as follows:

- Preserve, maintain and rehabilitate buildings of historic, cultural and architectural importance, while ensuring their continued viability as components of a working Universal Studios by providing flexibility for operational requirements.
- Ensure that changes in the built environment within the Historic District respect its historic character.

---

<sup>1</sup> "Rehabilitation is defined by the National Park Service as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."

## ATTACHMENT G

- Respect historic circulation patterns, landscaping, and other features which establish the context of the built form of the Historic District through maintenance of existing features, replication of missing historic features, or the introduction of compatible new features.
- Foster awareness and appreciation of Universal Studios as an important historic resource.

**Table 1: Universal City Historic District Resources**

Building No.	Name	Construction Date	Resource Type	District Status
None	Backlot Site	c. 1915	Site	Contributor
2223	Stages 3 & 4	1916/1930	Stage	Contributor
2225	Sound Stages 16 & 17	1916/1930	Stage	Contributor
2228	Sound Stages 22, 23,	c. 1925	Stage	Contributor
2230	Sound Stage 1	c. 1960	Stage	Non-contributor
2243	Power House	c. 1920	Utility	Contributor
2250	Jack Webb	1940	Office	Contributor
2252	William Goetz Bldg.	1941	Office	Contributor
2263	Stages 5 & 6	1916/1938	Stage	Contributor
2265	Sound Stages 18, 19 and 20	c. 1928	Stage	Contributor
2268	Sound Stages 24 and 25	1939	Stage	Contributor
2282	Verna Fields Bldg.	1914/1957 /1960	Studio Services	Non-contributor
2315	Henry Mancini Bldg.	1928	Stage, post-production	Contributor
2333	Jack Foley Stage	1963	Stage	Non-contributor
2345	Sound Stage 12	1928	Stage	Contributor
2347	Sound Repair Shop	1959	Shop	Non-contributor
2353	Storage	1959	Storage	Non-contributor
3205	Power House	1964	Utility	Non-contributor
3212	Backlot Café	After 1964	Studio Services	Non-contributor
3213	Office	Post 1964	Office	Non-contributor
3225	Stage	c.1960	Stage	Non-contributor
3228	Stage	c. 1960	Stage	Non-contributor
3243	Stage	1964	Stage	Non-contributor
3250	Phantom Stage Storage	1939	Storage	Contributor

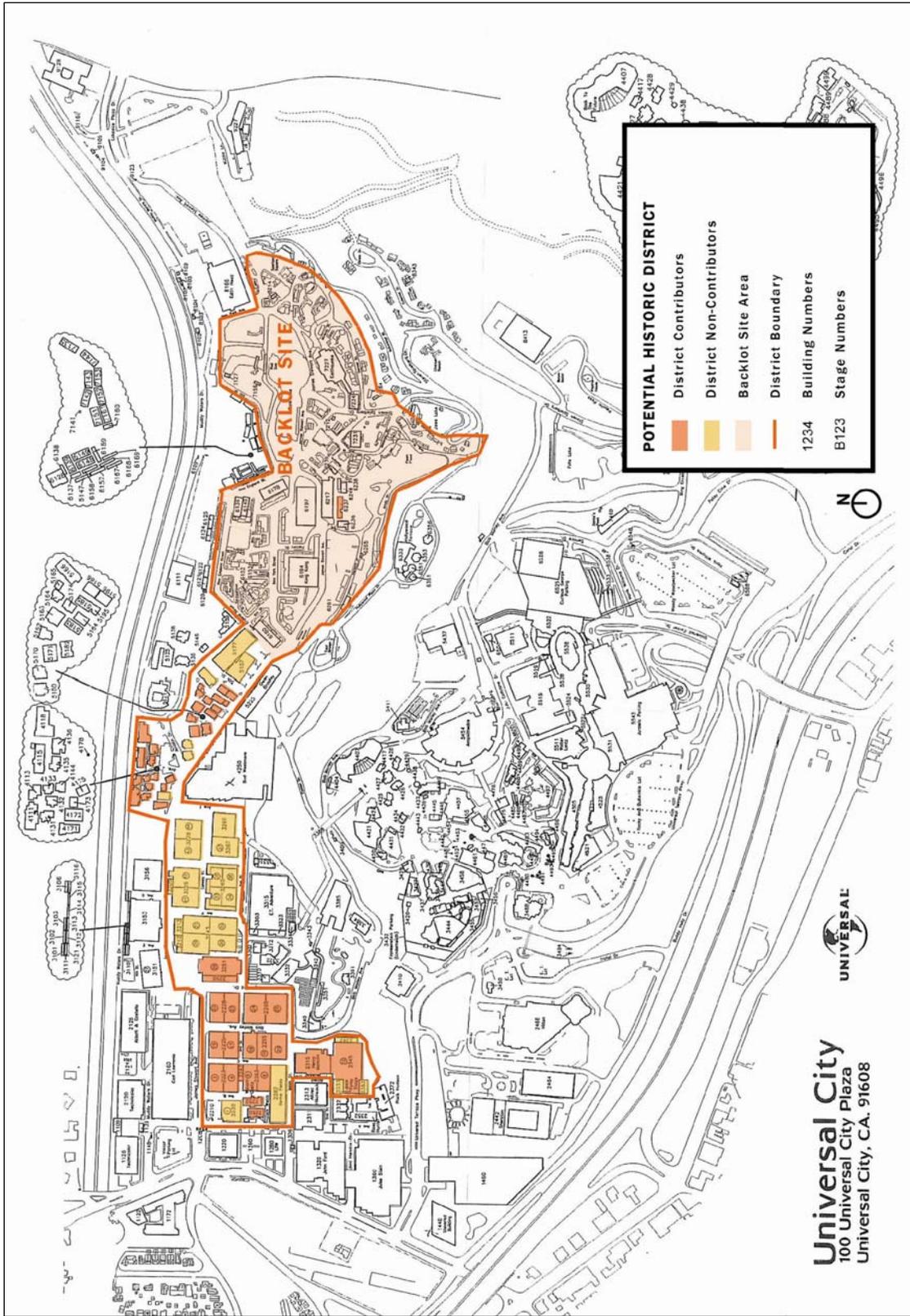
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<b>Building No.</b>	<b>Name</b>	<b>Construction Date</b>	<b>Resource Type</b>	<b>District Status</b>
3251	Sound Stage 28 ("Phantom Stage")	1924	Stage	Contributor
3265	Soundstages 33, 34, 35, and 36	1959	Stage	Non-contributor
3267	Soundstage 37	c.1970	Stage	Non-contributor
3269	Rehearsal Hall	c. 1970	Stage	Non-contributor
4111	Office Bungalow	1944 (81) c. 1950 (414)	Office/Service Bungalow	Contributor
4113	Office Bungalow	1941	Office/Service Bungalow	Contributor
4115	Office Bldg. C	1946	Office Building	Contributor
4118	Office Bldg. D	c. 1945	Office Building	Contributor
4131	Office Bungalow	1940	Office/Service Bungalow	Contributor
4132	Office Bungalow	1941	Office/Service Bungalow	Contributor
4133	Office Bungalow	1941	Office/Service Bungalow	Contributor
4135	Office Bungalow	1944	Office/Service Bungalow	Contributor
4136	Office Bungalow	c. 1940	Office/Service Bungalow	Contributor
4144	Office Bungalow	1940	Office/Service Bungalow	Contributor
4171	Office Bungalow	c. 1955	Admin. and Office	Contributor
4172	Office Bldg./ Dressing Room	1925 (portion)	Office/Service Bungalow	Non-contributor
4173	Office Bungalow	c. 1930	Office/Service Bungalow	Contributor
4175	Office Bungalow	c. 1925	Office/Service Bungalow	Contributor
5162	Office Bungalow	c. 1941	Office/Service Bungalow	Contributor
5163	Office Bungalow	c. 1950	Office/Service Bungalow	Contributor
5164	Office Bungalow	1940	Office/Service Bungalow	Contributor
5165	Office Bungalow	c. 1940	Office/Service Bungalow	Contributor
5166	Office	c. 1990	Office	Non-contributor
5170	Office Bungalow	c. 1960	Office	Non-contributor
5171	Office Bungalow	1954	Office/Service Bungalow	Contributor
5174	Office Bungalow	c. 1940	Office/Service Bungalow	Contributor
5177	Storage Building	c. 1965	Storage	Non-contributor
5180	Office	c. 1960	Office/Service	Non-

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<b>Building No.</b>	<b>Name</b>	<b>Construction Date</b>	<b>Resource Type</b>	<b>District Status</b>
	Bungalow		Bungalow	contributor
5182	Office Bungalow	c. 1955	Office/Service Bungalow	Contributor
5183	Office Bungalow	c. 1945	Office/Service Bungalow	Contributor
5184	Office Bungalow	1941	Office/Service Bungalow	Contributor
5185	Office Bungalow	1928 (106)	Office/Service Bungalow	Contributor
5186	Office Bungalow	1953	Office/Service Bungalow	Contributor
5187	Office Building	1964	Office Building	Non-contributor
5195	Office Bungalow	1926 (105)	Office/Service Bungalow	Contributor
5196	Office Bungalow	1953	Office/Service Bungalow	Contributor
6237	Film Vault	1946	Storage	Contributor

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## 2.0 DESCRIPTION OF DISTRICT RESOURCES

### 2.1 Introduction

The Historical Resources Technical Report identified forty (40) buildings and the backlot site as contributing resources to the Historic District. Buildings are categorized into property types identified as historically significant to the production of film on the site. Each type has its own method of construction and associated materials. With few exceptions, most of the contributing buildings are functional in nature and are not representative of any particular architectural style.

The Universal Studios backlot site is an area of open space adjacent to the motion picture production facilities where large-scale, semi-permanent sets were built for outdoor filming. Backlots were defining features of the leading film studios from the film industry's formative years and the Studio Era. While all studios maintained an area containing outdoor sets, not all of these were considered "backlots" in the traditional sense. The outdoor sets at studios such as Paramount and Warner Bros., were centrally located on the studio property with little separation between administrative and production facilities. Other studios maintained studio "ranches" at another location. The term "backlot" as used in this report, specifically identifies separate but adjacent facilities, exclusively dedicated to outdoor filming. In this sense, the Universal Studios backlot is the only remaining studio backlot in Southern California. The Twentieth Century-Fox backlot was sold off around 1960 and developed as Century City. The MGM (now MGM/Sony) backlot was sold off in the mid-1970s. Warner Bros., which never had a traditional backlot, did acquire the nearby Columbia ranch in the early 1990s for outdoor filming use. This land, however, is at a separate location and has no historic association with Warner Bros.

No buildings were found to be individually significant architecturally. Instead, the overall location, relationship of uses, and circulation, give the complex its significance due to its association with the development of the motion picture industry in the United States.

### 2.2 Property Types

Eight property types were identified as historically significant. They are: stages, theaters, studio service buildings, utilities, storage buildings, film vaults, office buildings, and office/service bungalows. While all building types are represented within the Historic District, representatives of five types have retained sufficient integrity to qualify as contributors to the Historic District.

#### 2.2.1 Architectural Styles

The Historic District contains contributing buildings constructed between 1912 and 1958. They are largely vernacular buildings that are not representative of any one architectural style. Stages, utilities, and storage structures are utilitarian buildings devoid of stylistic elements or decorative detailing. Office buildings tend to be more architecturally expressive, displaying elements of Period-influenced vernacular styles.

The collection of office/service bungalows, historically used as offices for producers, writers, directors, actor's dressing rooms, and services were constructed on a

## ATTACHMENT G

residential model. These buildings display aspects of Period Revival, Moderne, and Minimal Traditional architectural styles reflective of Southern California residential neighborhoods prior to 1960.

### 2.2.2 Stages

The stages within the Historic District are clustered in the northwestern corner of the Applicant's property. There are nine (9) contributing buildings of this property type within the Historic District. All were designed in a functional, utilitarian style devoid of decorative detailing and have been modified or re-configured over the years.



Stages 24 and 25  
Building No. 2268



Stages 5 and 6  
Building No. 2263

<b>Building Numbers:</b>	2223, 2225, 2228, 2230, 2263, 2265, 2268, 2345, 3251,
<b>Construction Method:</b>	Reinforced concrete and/or wood frame with stucco exterior
<b>Character-defining Features:</b>	Large, rectangular masses of two or more stories Windowless facades Protruding entrance bays Recessed entry doors Trussed roof systems

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## 2.2.3 Office Buildings

Four (4) contributing buildings to the Historic District are classified as office buildings due to their historic use and similar construction type. All of these are vernacular, two-story buildings with stucco exteriors. Some office buildings display the decorative detailing of architectural styles popular in Southern California in the 1930s and 1940s. Others are more utilitarian with minimal architectural detailing. While the interiors have often been modified many times over the years, the buildings retain their basic exterior detailing.



Jack Webb Office Building  
*Building No. 2250*



William Goetz Office Building  
*Building No. 2252*

<b>Building Numbers:</b>	2250, 2252, 4115, 4118
<b>Construction Method:</b>	Reinforced concrete or wood frame with stucco exterior
<b>Character-defining Features:</b>	Two-story, rectangular massing Steel frame, divided-light casement windows; wood sash, multiple light windows Front entry surrounds with pilasters and pediments Recessed entry doors

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## 2.2.4 Office/Service Bungalows

The majority of contributing buildings within the Historic District are single-story bungalows historically used as offices, actor's dressing rooms, or for service functions. Twenty-four (24) buildings of this type are considered contributors to the Historic District. Most are vernacular buildings that display the detailing of residential architectural styles popular in Southern California from the 1930s through the 1950s. While the interiors have often been modified many times over the years, the buildings retain their basic exterior detailing.



Office Bungalow  
*Building No. 4144*



Office Bungalow  
*Building No. 5185- 5195*

**Building Numbers:**

4111, 4113, 4131, 4132, 4133, 4135, 4136, 4144,  
4171, 4173, 4175, 5162, 5163, 5164, 5165, 5171,  
5174, 5182, 5183, 5184, 5185, 5186, 5195, 5196

**Construction Method:**

Wood frame with stucco exterior

**Character-defining Features:**

One-story, rectangular massing

Steel frame, divided-light casement windows; wood frame, divided-light casement windows; wood double-hung sash windows

Front entry surrounds with pilasters, pediments

Metal awnings

Fixed wooden shutters

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### 2.2.5 Utilities

Film studios in the years prior to World War II maintained utility functions to provide the power, heating, cooling, and water necessary to support film production. The Historic District includes a Power House dating from the early 1920s.



Power House  
*Building No. 2243*

<b>Building Number:</b>	2243
<b>Construction Method:</b>	Reinforced concrete with stucco exterior
<b>Character-defining Features:</b>	Large, two-story rectangular mass  Façade characterized by protruding vertical piers and recessed bays  Windowless facade  Gable roof with shallow eaves

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### 2.2.6 Film Vault

The need to house film required the construction of specialized structures designed for film storage. Film vaults were constructed of concrete with heavy metal doors due to the volatile nature of the nitrate film stocks used prior to 1950. The Historic District includes one contributing facility dedicated to film storage.



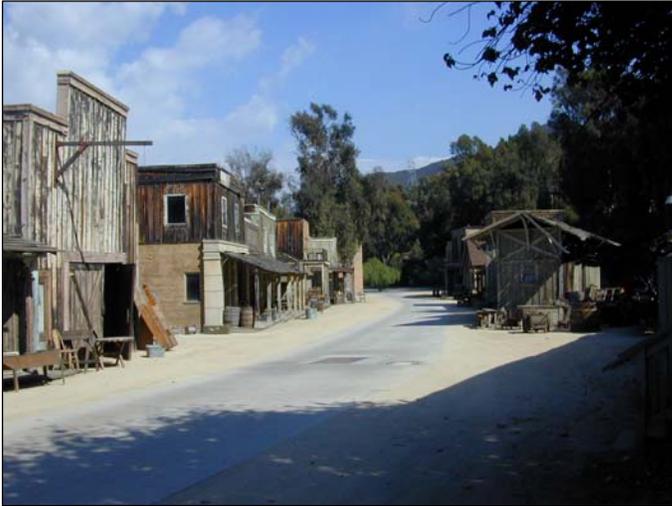
Film Vault  
*Building No. 6237*

<b>Building Numbers:</b>	6237
<b>Construction Method:</b>	Reinforced concrete with metal panel doors
<b>Character-defining Features:</b>	Concrete, rectangular massing Utilitarian, windowless façade Specialized, heavy metal doors

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## 2.3 Backlot Site

A backlot site is defined as the area adjacent to the production and administrative facilities where large-scale, semi-permanent sets were built for outdoor filming. The backlot site within the Historic District holds important associations with the activity of film making and its contours and features have been shaped by film making activity over time.



Backlot Site  
*Western Street*

### Character-defining Features:

Location in the northeastern portion of the studio district

Circulation pattern of streets, roads, and trails

Large scale sets recreating different streetscapes and locations arranged along key segments of the circulation system

Setting of hills, hillsides, and valleys

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### 3.0 GUIDELINES FOR REHABILITATION, MAINTENANCE, & REPAIR

#### 3.1 General Principals of Rehabilitation

The Secretary of the Interior has established standards for the preservation of historic properties. The Secretary of the Interior's Standards and Guidelines for Rehabilitating Historic Structures<sup>2</sup> (the "Standards"), have been widely used to guide Federal, State, and local agencies in carrying out their historic preservation responsibilities.

According to the Standards, rehabilitation is "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural value." The Standards are attached as **Appendix A**.

The Plan's guidelines for rehabilitation, maintenance, repair, and alteration within the Historic District are based, in part, on the Standards and include the following principles:

- i Where maintenance, repair, and alteration of contributing buildings is required, such rehabilitation should respect the historic significance and architectural character of the structure.
- ii The ability of the site to continue as a working studio is of utmost importance, therefore, these guidelines shall be applied in a manner which provides for operational flexibility.
- iii Where new uses are required, adapt contributing buildings for reuse, if feasible and appropriate to the historic integrity of the structure.
- iv Replacement of contributing structures for the same use shall only occur where it is not feasible to upgrade and/or expand a contributing building for continued use.

#### 3.2 Pre-Rehabilitation Assessment

Prior to commencing rehabilitation on any contributing building, the following guidelines should be followed:

- i Identify, retain, and preserve features that are important in defining the overall historic character of the building as it appeared during the period of significance. These features may include, but are not limited to, walls and surface finishes, railings, windows, doors, steps, and porches.
- ii Evaluate the overall condition of the material to determine whether repairs to features are necessary.

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<sup>2</sup> Codified in 36 Code of Federal Regulations 67.

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- iii Clean materials only when necessary to halt deterioration or remove heavy soiling.
- iv If necessary, obtain rehabilitation treatments for specific materials prior to commencing any work.

### 3.3 Exterior Materials

#### 3.3.1 Concrete

Exterior features as well as exterior surfaces that remain from the period of significance are important in defining the historic character of the building.

Buildings which have concrete exteriors may exhibit the following conditions: impact damage at building corners; cracks; damage due to spalling; damaged ornamentation of friezes and columns; peeling paint; inappropriate patching methods. Where maintenance, repair or alteration of concrete is to be performed, the guidelines below should be followed.

##### **Guidelines for Concrete:**

1. Repair walls and other features where there is evidence of deterioration such as spalling, damp walls, or damaged concrete.
2. Sandblasting shall not be used to prepare or clean exterior masonry.
3. Repair masonry or concrete features by patching, piecing-in, or consolidating the masonry. Repair may also include the limited replacement in kind, or with compatible substitute material, of those extensively deteriorated or missing parts of masonry features when there are surviving prototypes, such as plaster brackets.
4. Install new masonry or concrete features such as steps or door pediments when the historic feature is completely missing. This should be an accurate reconstruction using historical, pictorial, and physical documentation when available. If documentation is not available, this may be a new design that is compatible with the size, scale, material, and color of the historic building.
5. It is recommended, but not required, that the building be repainted with colors that are historically appropriate to the building and the Historic District.

##### **References:**<sup>3</sup>

*Preservation Brief 1: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings*

*Preservation Brief 6: Dangers of Abrasive Cleaning to Historic Buildings*

<sup>3</sup> Preservation Briefs are available at the National Park Service website:  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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*Preservation Brief 15: Preservation of Historic Concrete: Problems and General Approaches*

*Preservation Brief 16: The Use of Substitute Materials on Historic Buildings Exteriors*

*Preservation Brief 23: Preserving Historic Ornamental Plaster*

*Preservation Brief 37: Appropriate Methods of Reducing Lead-Paint Hazards in Historic Housing*

### 3.3.2 Stucco

Exterior features (cornices and door pediments, window architraves, brackets and railings) as well as exterior surfaces and their treatment (modeling, tooling, bonding patterns, joint size, and color) are important in defining the historic character of the building.

Buildings which have stucco exteriors may exhibit the following conditions: impact damage at building corners; cracks; damage due to spalling; damaged ornamentation of friezes and columns; peeling paint; inappropriate patching methods. Where maintenance, repair or alteration of stucco is to be performed, the guidelines below should be followed.

#### **Guidelines for Stucco:**

1. Repair walls and other features where there is evidence of deterioration such as spalling, damp walls, or damaged stucco.
2. Sandblasting shall not be used to prepare or clean exterior stucco.
3. Repair stucco by removing the damaged material and patching with new stucco that duplicates the old in strength, composition, color, and texture.
4. Repair may also include the limited replacement in kind, or with compatible substitute material, of those extensively deteriorated or missing parts of features when there are surviving prototypes, such as plaster brackets.
5. Install a new feature such as door pediments or friezes when the historic feature is completely missing. This should be an accurate reconstruction using historical, pictorial, and physical documentation when available. If documentation is not available, this may be a new design that is compatible with the size, scale, material, and color of the historic building.
6. It is recommended, but not required, that the building be repainted with colors that are historically appropriate to the building and the Historic District.

#### **References:**<sup>4</sup>

*Preservation Brief 1: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings*

*Preservation Brief 6: Dangers of Abrasive Cleaning to Historic buildings*

<sup>4</sup> Preservation Briefs are available at the National Park Service  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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*Preservation Brief 16: The Use of Substitute Materials on Historic Buildings Exteriors*

*Preservation Brief 22: The Preservation and Repair of Historic Stucco*

*Preservation Brief 23: Preserving Historic Ornamental Plaster*

*Preservation Brief 37: Appropriate Methods of Reducing Lead-Paint Hazards in Historic Housing*

### 3.3.3 Wood

Some buildings within the Historic District have wood elements such as wood frame windows, pilasters, pediments, fixed shutters, and rafters.

Wooden features may exhibit the following conditions: deteriorating material, sealing, paint, eaves, or trim due to weathering. Where maintenance, repair or alteration of wood is to be performed, the guidelines below should be followed.

#### **Guidelines for Wood:**

1. Evaluate the overall condition of the wood to determine the extent of protection and maintenance required.
2. Repair wood features by patching, piecing-in, consolidating, or otherwise reinforcing the wood using recognized preservation methods. Repair may also include the limited replacement in kind, or with compatible substitute material, of those extensively deteriorated or missing parts of features where there are surviving prototypes such as brackets, moldings, or sections of siding.
3. Design and install a new wood feature such as a cornice or doorway when the historic feature is completely missing. This should be an accurate restoration using historical, pictorial, and physical documentation. Where documentation does not exist, a new design that is compatible with the size, scale, material, and color of the historic building may be used.
4. Apply compatible paint coating systems following proper surface preparation. Sandblasting shall not be used to prepare or clean historic wood exterior elements. Paint shall match existing surface thickness.
5. It is recommended, but not required, that the building be repainted with colors that are historically appropriate to the building and the Historic District.

#### **References:**<sup>5</sup>

*Preservation Brief 6: Dangers of Abrasive Cleaning to Historic Buildings*

*Preservation Brief 10: Exterior Paint Problems on Historic Woodwork*

*Preservation Brief 13: The Repair of Historic Wooden Windows*

*Preservation Brief 16: The Use of Substitute Materials on Historic Building Exteriors*

<sup>5</sup> Preservation Briefs are available at the National Park Service  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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### 3.3.4 Architectural Metals

Some buildings within the Historic District have elements of architectural metal such as cast iron, steel, copper, aluminum, and zinc. These features include façade elements, columns, canopies, windows, stairways, rails, doors, and hardware.

Architectural metal features may exhibit weathering and corrosion. Where maintenance, repair or alteration of metal is to be performed, the guidelines below should be followed.

#### **Guidelines for Architectural Metals:**

1. Identify, retain, and preserve architectural metal features and their finishes and colors. Metal features include columns, capitals, window hoods, canopy cladding or fascia, or stairways that are important in defining the overall historic character of the building.
2. Clean architectural metal, when necessary, with gentle nonabrasive cleaning methods to remove corrosion. Sandblasting shall not be used to clean historic metal surfaces.
3. Apply appropriate paint or other coating systems after cleaning in order to decrease the corrosion rate of metals or alloys.
4. Repair architectural metal features by patching, splicing, or otherwise reinforcing the metal. Repairs may also include the limited replacement in kind, or with a compatible substitute material, of those extensively deteriorated or missing parts of features when there are surviving prototypes such as porch balusters, steel sash windows, or porch cresting.
5. Design and install a new architectural metal feature such as an entry door or sheet metal cornice when the historic feature is completely missing. It may be an accurate reconstruction using historical, pictorial, and physical documentation; or be a new design that is compatible with the size, scale, material, and color of the historic building.
6. If originally painted, it is recommended, but not required, that the architectural metals be repainted with colors that are historically appropriate to the building and the Historic District.

#### **References:**<sup>6</sup>

*Preservation Brief 16: The Use of Substitute Materials on Historic Building Exteriors*

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<sup>6</sup> Preservation Briefs are available at the National Park Service  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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## 3.4 Exterior Features

### 3.4.1 Doors, Entrances, and Porches

Doors, entrances, and porches are often the principal features of historic buildings, particularly when they occur on primary elevations. Their functional and decorative features, such as the type of door, steps, balustrades, and entrances or porches are extremely important in defining the overall historic character of a building. Their retention, protection, and repair should always be carefully considered when planning any maintenance or alteration work.

The current inventory of entry doors varies per building. Stage doors, secondary or utility doors are generally solid panel wood or metal clad.

Doors and porches are subject to weathering and deterioration as are their associated attachments, flashing and hardware. Where maintenance, repair or alteration of doors, entrances, and porches is to be performed, the guidelines below should be followed.

#### **Guidelines for Doors, Entrances and Porches:**

1. Identify, retain, and preserve entrances and their functional and decorative features that are important in defining the overall historic character of the building such as doors, transoms, sidelights, pilasters, entablatures, columns, balustrades, and stairs.
2. Protect and maintain the masonry, wood, and architectural metal that comprise entrances and porches through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and re-application of protective coating systems, replacement of broken glass, and replacement of deteriorated sealants or glazing compounds.
3. Repair entrances and porches by reinforcing the historic materials. Repair will also generally include the limited replacement in kind, or with compatible substitute material, of those extensively deteriorated or missing parts of repeated features where there are surviving prototypes such as balustrades, cornices, entablatures, columns, sidelights, and stairs.
4. Design and construct a new entrance or porch if the historic entrance or porch is completely missing. It may be a reconstruction based on historical, pictorial, and physical documentation; or a new design that is compatible with the historic character of the building.
5. Design and install additional entrances or porches where required for the new uses in a manner that preserves the historic character of the building. In general, such alterations should be limited to non-character defining elevations. New entrances and porches shall be compatible and may be of contemporary design provided that they do not destroy character-defining features. To the extent feasible, new entrances and porches shall be reversible.

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### **References:**<sup>7</sup>

*Preservation Brief 10: Exterior Paint Problems on Historic Woodwork*

*Preservation Brief 27: The Maintenance and Repair of Architectural Cast Iron*

*Preservation Brief 44: The Use of Awnings on Historic Buildings: Repair, Replacement and New Design*

### **3.4.2 Windows**

The type and size of window openings are important in defining the overall historic character of a building. Their retention, protection, and repair should always be carefully considered when planning rehabilitation work.

Wood sash, wood multi-light casement, steel multi-light casement, awning, and fixed metal windows are all represented within the Historic District. Double-hung, casement or fixed wood windows are typical of the smaller residential scale structures. Some windows feature decorative wood shutters.

Metal openings are subject to corrosion, while wood windows or doors may wear out from hard use, warping, or settling. Glazed openings may shatter. Where maintenance, repair or alteration of windows is to be performed, the guidelines below should be followed.

#### **Guidelines for Windows:**

1. Identify, retain, and preserve historic window features that are important in defining the overall historic character of the building. Such features include frames, sash, muntins, glazing, sills, heads, hoodmolds, and exterior shutters.
2. Protect and maintain the wood and architectural metal, which comprise the window frame, sash, muntins, and surrounds through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and re-application of protective coating systems.
3. Make windows weathertight and improve thermal efficiency by re-caulking and replacing or installing weatherstripping.
4. Design and install new windows when historic windows (frame, sash, and glazing) are completely missing, have been replaced with non-original materials, or are too deteriorated to repair. The replacement windows shall be an accurate reconstruction using in-kind materials based on historical, pictorial, and physical documentation.
5. Replace glass with non-reflective glass to match historic configuration. Double-glazing is permitted if it is not reflective or solar glass.

### **References:**<sup>6</sup>

*Preservation Brief 3: Conserving Energy in Historic Buildings*

*Preservation Brief 9: The Repair of Historic Wooden Windows*

<sup>7</sup> Preservation Briefs are available at the National Park Service  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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*Preservation Brief 13: The Repair and Thermal Upgrading of Historic Steel Windows*  
*Preservation Brief 44: The Use of Awnings on Historic Buildings: Repair, Replacement and New Design*

### 3.4.3 Roofs

The roof, with its shape (flat, gabled, or shed), features, size, color and patterning of materials (wood shingles, composition) is a contributing factor in defining the building's overall historic character. In addition to the design role it plays, a weathertight roof is essential to the preservation of the entire structure. Thus, protecting and repairing the roof is a critical aspect of a rehabilitation project.

Several different types of roofs exist in the Historic District today. The most common pitches are flat, gabled, shed, and hipped. Coverings include wood shingles, asphalt shingles, composition roll roofing, and red tile. Where maintenance, repair or alteration of roofs is to be performed, the guidelines below should be followed.

#### **Guidelines for Roofs:**

1. Protect and maintain a roof by cleaning and refinishing coping, cleaning the gutters and downspouts, and replacing deteriorated flashing. Roof sheathing should also be checked for proper venting to prevent moisture condensation and water penetration, and to insure that materials are free from insect infestation.
2. Provide adequate anchorage for roofing material to guard against wind damage and moisture penetration.
3. Repair a roof by reinforcing the historic materials which comprise roof features, including cornice lines, exposed rafter tails, brackets, and soffits. Replacement or repairs should be in-kind, or with compatible substitute material. When replacing the roof, remove existing membrane down to wood decking. Inspect exposed decking and replace deteriorated wood members.
4. Install mechanical service equipment on the roof so that they are inconspicuous from the public right-of-way and do not damage or obscure character-defining features.
5. Repair broken gutters and downspouts. If repair is not possible, replace in kind to match existing. Re-solder broken joints. Where missing, replicate historic gutters and downspouts or provide compatible new gutters and downspouts.

#### **References:**<sup>8</sup>

*Preservation Brief 4: Roofing for Historic Buildings*

*Preservation Brief 19: The Repair and Replacement of Historic Wooden Shingle Roofs*

*Preservation Brief 30: The Preservation and Repair of Historic Clay Tile Roofs*

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<sup>8</sup> Preservation Briefs are available at the National Park Service  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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### 3.5 Health and Safety Code Compliance

It is often necessary to make modifications to an historic building so that it can comply with current health, safety and code requirements. Such work needs to be carefully planned and undertaken so that it does not result in a loss of interior or exterior character-defining spaces, features, and finishes.

#### Guidelines for Code Compliance

1. Identify the historic building's character-defining spaces, features, and finishes so that code-required work will not result in their damage or loss.
2. Comply with health and safety codes, including seismic codes and barrier-free access requirements, in such a manner that character-defining spaces, features, and finishes are preserved to extent feasible.
3. Use of the current edition of the California Historical Building Code.
4. New structural or seismic reinforcement members, including anchor bolts, shall be hidden from view wherever possible.

#### **References:**<sup>9</sup>

*Preservation Brief 32: Making Historic Properties Accessible*

*Preservation Brief 37: Appropriate Methods of Reducing Lead-Paint Hazards in Historic Housing*

*Preservation Brief 41: The Seismic Retrofit of Historic Buildings: Keeping Preservation in the Forefront*

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<sup>9</sup> Preservation Briefs are available at the National Park Service  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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## 3.6 Additions and Relocation

### 3.6.1 Additions

Additions to buildings can change their historic appearance. Therefore, an exterior addition should be considered only after it has been determined that the new use cannot be successfully met by altering non-character-defining interior spaces. In designing an addition, consideration should be given to the new use and the appearance of other buildings in the historic areas of the Historic District.

#### **Guidelines for Additions:**

1. New additions should be designed and constructed so that the exterior character-defining features of the historic buildings are not radically changed, obscured, damaged, or destroyed in the process of rehabilitation. To the extent feasible, new additions shall be reversible.
2. New design should always be compatible yet clearly differentiated so that the addition does not appear to be historic.
3. Design for the new work may be contemporary or may reference design motifs from the historic building.
4. The new design should be compatible in terms of mass, materials, relationship of solids to voids, and colors.

#### **References:**<sup>10</sup>

*Preservation Brief 14: New Exterior Additions to Historic Buildings: Preservation Concerns.*

### 3.6.2 Relocations

If retention of a contributing building at its present site is not feasible, relocation of the structure to another appropriate location within the studio lot shall be considered. Historically, there is a precedent for the relocation of structures both to and within the lot. While relocation of historic structures is often inappropriate to individual buildings in a community, there is strong justification for this option in the context of movie studio operations.

#### **Guidelines for Relocation:**

1. Relocate the building in an appropriate setting in order to retain its integrity of design, materials, feeling and association.

<sup>10</sup> Preservation Briefs are available at the National Park Service  
<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

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2. A relocated structure should still have an orientation, setting and general environment that is comparable and compatible, to the extent feasible, with the property's significance.

### 3.7 Documentation Procedures

Before undertaking a project to alter, relocate, or demolish any contributing building, or the backlot site, a consultant who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History and/or Historic Architecture shall first conduct a review of the impact of such action on the Historic District and the extent to which such action conforms to the provisions of the Plan.

Prior to any alteration, relocation, or demolition of any contributing building or the initial alteration, relocation, or demolition of the backlot site, an Historic Structures Report will be prepared. The report shall document the significance and physical condition of all contributing buildings and the backlot site through photographs, text, and existing drawings.

One original copy of the documentation as specified below shall be assembled and offered to each of the following:

- a) One set shall be sent to the Southern California Information Center at California State University Fullerton.
- b) One set shall be offered to and, if accepted, deposited in the archives of the Los Angeles Conservancy.
- c) One set shall be offered to and, if accepted, deposited in the archives of Hollywood Heritage.
- d) One set shall be offered to and, if accepted, deposited in the archives of the City of Los Angeles Office of Historic Resources.
- e) One set shall be offered to and, if accepted, deposited in the Central Library of the Los Angeles Public Library.

#### **Guidelines for Documentation:**

Documentation shall include:

1. A brief written historic and descriptive report completed in narrative format, including an architectural data form for each contributing building
2. A site plan showing the location of the building. This site plan shall include a photo key.
3. A sketch floor plan shall accompany each architectural data form.

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4. Large format (4" x 5" negative or larger) photographs in accordance with Historic American Buildings Survey (HABS) guidelines. Views shall include contextual views, all exterior elevations, detailed views of significant exterior architectural features, and interior views of significant historical architectural features or spaces (if any).
5. Field photographs (35 mm) based on HABS guidelines. Views should correspond to those in the large format photographs.
6. The report shall include available historic photographs and historic or current plans.
7. In lieu of measured drawings, the overall setting of the Historic District, the backlot site, and any contributing buildings to be demolished may be recorded using digital photography, scanned photographs, and imagery to establish a digital documentation database.

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## 4.0 GUIDELINES FOR NEW CONSTRUCTION

### 4.1 Introduction

As Universal City evolves within the NBC Universal Evolution Plan, its built form and open space will be altered by new construction. The integrity of the Historic District can be retained through the application of criteria established for the specific features and function of this site.

This section provides criteria for new construction within the Historic District and has the following purposes and uses:

- To ensure that new construction within the Historic District is compatible with the historic character of the Historic District and its contributing resources;
- to ensure that the integrity of the Historic District is maintained;
- to mitigate any potential impact on the Historic District from new construction to a level of insignificance under the CEQA; and
- to be used by planners, architects, designers, owners, and users as a reference to successfully integrate new buildings, landscape, circulation and any other additions within the Historic District while meeting the functional and programmatic requirements of continued, adaptive, and new uses within the Historic District.

*The Secretary of the Interior's Standards for Rehabilitation (the Standards) provide general guidelines for treating a range of historic resources. Standards 9 and 10 are written for additions to existing buildings. Therefore, they are relevant to an approach for new construction within historic districts, and provide the underlying principals for the criteria provided here. Standards 9 and 10 are as follows:*

*New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. (Standard 9)*

*New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. (Standard 10)<sup>11</sup>*

For the purposes of this section, the Historic District has been divided into three areas in order to respond more fully to the variety of contributing resources and character-defining features contained within the Historic District. These three areas are the Frontlot, the Midlot, and the Backlot. Specific guidelines for each area are contained in the following pages.

The exigencies of motion picture and television production may necessitate modifications and/or alterations to contributing buildings within the Historic District that do not conform to the guidelines set forth in the Plan. There is historic precedent for the modification of buildings in the Historic District to accommodate motion

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<sup>11</sup> The Secretary of the Interior's Standards for Rehabilitation & Guidelines for Rehabilitating Historic Buildings, U.S. Department of the Interior, National Park Service, Cultural Resources, Preservation Assistance Division, Washington, D.C. 1992

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picture and television productions. Modifications to contributing buildings that may not conform to the Plan guidelines are permitted provided that: (a) the building is documented prior to modification; and (b) the building is rehabilitated to its condition prior to modification within twenty-four (24) months after the completion of the production-related use of the contributing building.

### 4.2 New Construction: Frontlot

#### 4.2.1 Overview of the Frontlot

The Frontlot comprises the western portion of the Historic District and represents Universal Studio's historic core. Dominated by stage buildings, the Frontlot contains the largest buildings within the Historic District. Existing uses are primarily technical support functions such as a Foley stage, editing facilities, and dressing rooms, as well as office buildings.

In addition to providing production and support facilities for film and television, the Frontlot is currently an important part of the Universal Studios Hollywood Studio Tour. Large-scale promotional signage affixed to various building facades is an integral part of the Tour.

#### 4.2.2 Contributing Resources and Character-defining Features

##### *Stage Buildings*

The Frontlot contains twenty-seven (27) buildings of which thirteen (13) are classified as contributing resources. Nine (9) of the contributing resources located in the Frontlot area are stage buildings. These are buildings 2223, 2225, 2228, 2230, 2263, 2265, 2268, 2345, and 3251. The stage buildings are generally wood and/or steel framed structures with exterior walls finished by conventional painted sand finish cement plaster (stucco). They are typically aggregated into clusters of two or four buildings separated by proportionately narrow circulation spaces used for vehicular access and parking aprons. The existing color patterns in this area are simple, neutral field colors on large plain surfaces, with dark accents at the bottom skirts and openings (doors and windows).

Character-defining features:

1. Functional design, devoid of decorative features.
2. Rectangular footprint.
3. Tall walls without articulation of levels.
4. Flat or low pitched roofs.
5. Flat parapets or simple eaves without wide overhangs.
6. Exposed structural system elements such as trusses, columns, and beams.
7. Membrane roofs.
8. Painted cement plaster and metal panel walls.
9. Few openings; characteristic openings are large doorways for stage loading, personnel doors, and small windows for occasional office spaces.
10. Painted wood or ferrous metal doors and windows.
11. Unscreened and unburied electrical system equipment and distribution.
12. Unscreened HVAC and plumbing systems equipment and distribution, on the ground, at walls, and on roofs.

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13. Neutral field colors with darker accent colors associated with functional features or uses (e.g., skirts, trim, doors, windows).
14. Functional, efficient lighting sources and fixtures.

### ***Utility Buildings***

The Power House, building 2243, is a contributing resource. This purely functional concrete structure is contiguous with two stage buildings and is consistent with the utilitarian, industrial pattern that characterizes the stages.

### ***Office Buildings***

Two of the contributing resources located in the Frontlot area are office buildings. Buildings 2250 and 2252 are two-story, wood frame buildings with painted smooth-troweled cement plaster (stucco) finish. Their proportions, doors, windows, and trims have aspects of the American Colonial Revival architectural style. Both building 2250 and 2252 were relocated from another location to their current pads. The relocation of buildings is understood as a defining characteristic of motion picture studios and is a character-defining feature of the Historic District, primarily for smaller buildings.

Character-defining features:

1. Residential and small office character with modest decorative details.
2. Rectangular footprint.
3. Low scale.
4. Flat or low pitched roofs.
5. Flat parapets.
6. Structural system not expressed.
7. Membrane roofs.
8. Painted cement plaster walls.
9. Openings for doors and window in residential scale.
10. Residential scaled porches with gabled roofs, pediments, and wood posts.
11. Fixed louvered wood shutters at windows.
12. Painted wood or ferrous metal divided light doors and windows.
13. Screened and hidden electrical system equipment and distribution.
14. Screened HVAC and plumbing systems equipment and distribution.
15. Neutral field colors with light trim colors and dark doors and sash.
16. History of building relocation.

### ***Circulation and Open Space***

Spaces between and around most of the buildings within the Frontlot provide for circulation and flexible use rather than light, air and amenities. The utilitarian and flexible needs of the Frontlot requires that open space also be used for loading, staging, temporary storage, and other activities that support production, in addition to circulation. Because of these requirements, open space between buildings is in general characterized by utilitarian paving and plants that are limited to small areas of ground cover, ornamental shrubs and trees. The regular arrangement of large rectangular buildings forms a grid pattern.

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Character-defining features:

1. Rectangular grid pattern of open space between stages.
2. Linear open spaces that are proportionally narrower than building heights at the stages.
3. Utilitarian paving (e.g., asphaltic concrete, uncolored gray concrete without patterns and insets).
4. Minimal or no landscape at stages.
5. Landscaping, including sod, shrubs, planting beds, and trees at offices.
6. Functional, efficient lighting sources and fixtures.
7. Unscreened HVAC, electrical, and plumbing equipment and distribution.

### ***Setting***

The edges of the different areas of the lot do not have consistent edge conditions. The different areas have different characteristics; however, the transitions are abrupt.

Character-defining features:

1. Movie studio building types and uses.
2. Juxtaposition of different areas of building types adjacent to each other at circulation spaces without visual buffers, screens, and transitions from one area to another area.

### **4.2.3 General Criteria for New Construction within the Frontlot**

- a. Comply with height limits, land use, and other provisions in the proposed Universal Studios Specific Plan, including alterations and additions.
- b. Select sites for new construction within the Frontlot that minimize loss of historic character by retaining and recalling the list of character-defining features.
- c. Locate new construction within the Frontlot so as to retain the pattern and limits of existing circulation spaces and building pads.
- d. The character of new buildings shall substantially recall the character of adjacent predominant building types, such as large rectangular footprints with tall, flat, unarticulated walls adjacent to sound stages.
- e. Retain multi-purpose hardscaped spaces between buildings, except adjacent to office buildings.
- f. Signage and promotional graphics, of any quantity, scale, at any location (ground, wall, monument, tower, roof), design (flat, three dimensional), media, lighting source, static, or dynamic, is allowed.
- g. Construct attached exterior additions built as signage, film sets or for studio tour functions in such a manner that they are reversible and do not result in substantial loss of the physical integrity of a contributing building.

# ATTACHMENT G

## 4.3 New Construction: Midlot

### 4.3.1 Overview of the Midlot

The Midlot is the central portion of the Historic District and is composed primarily of bungalows. "Bungalow" is the common studio term for smaller buildings designed and constructed in a residential style built to accommodate office uses. Studio bungalows are found in a variety of styles, configurations, and materials.

Within the Historic District, Bungalows are predominantly aggregated into clusters of small buildings organized around surface parking lots and some landscape features. The western-most cluster is bounded by the River Road to the north and is sited at a lower elevation than the eastern-most cluster. The change in grade defines the two clusters. The form and architectural style of the bungalow buildings, their clustered arrangement, and their landscaping, recall the general characteristics of a twentieth-century Los Angeles residential neighborhood.

The Studio Tour passes by the Midlot, but in general does not enter the area or utilize any of its spaces and buildings directly for attractions and promotion.

### 4.3.2 Contributing Resources and Character-defining Features

#### *Office/Service Bungalows*

The Midlot contains thirty-three (33) buildings of which twenty-six (26) are contributing resources. Twenty-four (24) of the contributing resources located in the Midlot area are office bungalows. These are buildings 4111, 4113, 4131, 4132, 4133, 4135, 4136, 4144, 4171, 4173, 4175, 5162, 5163, 5164, 5165, 5171, 5174, 5182, 5183, 5184, 5185, 5186, 5195, and 5196. All are single-story, wood-framed structures with wood or stucco finishes and an eclectic variety of architectural details that includes elements of American Colonial Revival, Moderne, and Minimal-Traditional styles.

Character-defining features include original window and door openings; steel, divided light casement windows; wood sash windows; front porches with pediment roof and wood columns; decorative wood door surrounds; wood fixed shutters; and decorative cornices. All contributing bungalows were relocated from another location to their current sites. The relocation of buildings is understood as a defining characteristic of motion picture studios and is a character-defining feature of the Historic District.

Character-defining features:

1. Residential and small office character with modest decorative details.
2. Rectangular footprint.
3. Low scale.
4. Flat or low pitched roofs.
5. Overhanging eaves; open or boxed.
6. Structural system in general not expressed
7. Membrane or composition shingled roofs.
8. Painted cement plaster walls.
9. Openings for doors and window in residential scale; corner windows.

## ATTACHMENT G

10. Residential scaled porches with gabled or flat roofs, pediments, and wood posts.
11. Painted wood or ferrous metal divided light doors and windows.
12. Screened and hidden electrical system equipment and distribution.
13. Screened HVAC and plumbing systems equipment and distribution.
14. Neutral field colors with light trim colors and dark doors and sash.
15. History of building relocation.
16. Minimal, wall-mounted signage, used for building number, wayfinding, and identification of occupants.

### ***Office Buildings***

Two of the contributing resources located in the Midlot area are office buildings (Buildings 4115 and 4118). Both are two-story, wood frame buildings with smooth troweled cement plaster cladding. Character-defining features include original window and door openings; steel, multi-light casement windows; front porches with pediment roof and wood columns; wood fixed shutters; and decorative cornices. Both building 4115 and 4118 were relocated from another location to their current sites. The relocation of buildings is understood as a defining characteristic of motion picture studios and is a character-defining feature of the Universal Studios Historic District.

### **4.3.3 General Criteria for New Construction within the Midlot**

- a. Comply with the proposed height limits, setbacks, land uses and other provisions in the proposed Universal Studios Specific Plan, including alterations, additions, and new buildings.
- b. Select sites for new construction within the Midlot that minimize loss of historic character by retaining and recalling the list of character-defining features.
- c. Locate new construction within the Midlot so as to retain the pattern and scale of existing circulation spaces, decentralized and building-associated parking areas, and informally arranged building pads.
- d. Retain landscaped open spaces, including turf and trees; the retention of shrubs and planting beds is optional.
- e. Graphics and signage are allowed. This type of signage may be two or three dimensional, illuminated, and animated. Such signage may be attached to building walls, but shall not extend beyond building wall corners and eaves, or cover windows and doors. Such signage may be freestanding, but shall not exceed the height or width of immediately adjacent buildings as measured from the highest finished grade of such buildings.
- f. Construct attached exterior additions built as film sets or for studio tour functions in such a manner that they are reversible and do not result in substantial loss of the physical integrity of a contributing building.
- g. Hide or screen HVAC, electrical, and plumbing equipment and distribution.
- h. Exterior lighting shall be low-intensity, hidden in landscaping (e.g., tree-mounted), at or below eye-level with a low cut-off to eliminate visibility of direct lighting sources except for luminaries with diffusing screens wall-mounted at exterior doors or on posts at exterior pedestrian walkways.

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- i. Existing buildings that were previously moved may be moved again to form new building groups that add compatible new construction while retaining the character-defining features listed for the Midlot.

### 4.4 New Construction: Backlot

#### 4.4.1 Overview of the Backlot

The Backlot comprises the eastern portion and the largest land area of the Historic District. The entire studio, including the Historic District, serves as a shooting location according to need and fit. The Frontlot stage buildings are purpose-built for interior production. Midlot buildings are built for office functions. The Backlot is primarily used for exterior shooting and attractions constructed as part of the studio tour. Accessory uses in this area include technical support, film vaults, storage, toilets, and dressing rooms.

Sets are arranged along irregular linear (street or road-like) and nodal (plaza or courtyard-like) spaces that are designed for shooting films. The arrangements in general create a number of distinct visual environments that represent particular times and places. In some cases the sets are shallow facades with an unfinished rear. In other cases accessory uses are placed in buildings behind the set facades. Studio tour attractions are also placed in purpose-built structures that are disguised as functional structures that resemble technical support or stage buildings.

The Backlot topography in general slopes upward from north to south. The topography has more slope than the other zones in the Historic District. The topography is utilized in the arrangements of sets, open spaces, and the studio tour routes.

The built fabric of the Backlot does not materially represent the history of this portion of the Historic District. The reconstruction, refinishing, and modification of sets is characteristic of film production and set pieces have been continually reconstructed throughout the Studio's history. Major fires, most recently in 1990 and 2008, have also destroyed substantial portions of the Backlot sets which were reconstructed or replaced as needed. Set reconstruction will continue to meet current market demand. These changes are a constant in the history of the Backlot and an essential characteristic of the studio business.

The evolution of the Backlot includes a consistent pattern of the major open spaces, linear and nodal, among the sets and accessory buildings.

#### 4.4.2 Contributing Resources and Character-defining Features

##### *Circulation*

The major open spaces, linear and nodal, which appear as a circulation pattern of streets, roads, and trails that connect and delineate sub-areas within the Backlot and provide access to storage and support facilities, are character-defining. These spaces have been graded, re-aligned, and re-paved many times, but the basic circulation diagram is substantially intact from Universal Studio's historic period.

## ATTACHMENT G

### **Sets**

The use of the Backlot in part for sets is a character-defining feature of the Historic District.

### **Film Vault**

The Backlot contains a film vault (building 6237) that is a contributing building to the Historic District. The film vault is a two story, utilitarian building of steel and concrete construction. Character-defining features of the film vault include the simple, utilitarian articulation of the facades, original door openings, second story cantilevered steel walkway, and exposed exterior system pipes.

#### **4.4.3 General Criteria for New Construction within the Backlot**

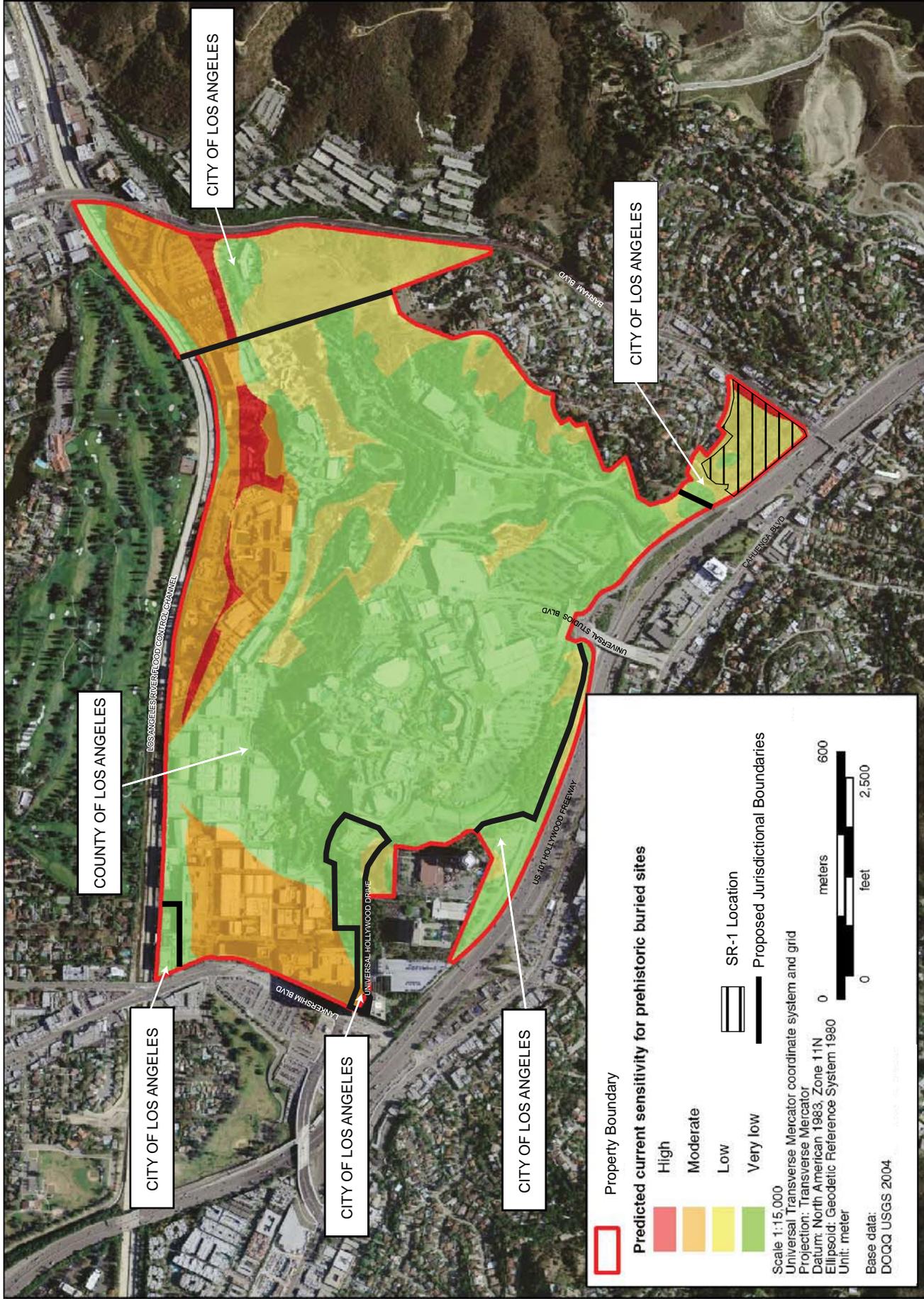
- a. Comply with the proposed height limits, setbacks, land uses and other provisions in the proposed Universal Studios Specific Plan, including alterations, additions, and new buildings.
- b. Substantially retain the historic circulation diagram, linear and nodal. This diagram is currently found in streets, roads, and trails.
- c. Repair, replace, redesign, dress, and landscape sets as needed for production or attractions.
- d. Integrate new construction for tour attractions into set environments or finish to resemble stage buildings.
- e. Where feasible, use accessory buildings and other uses as set pieces along character-defining circulation spaces. This can be implemented by landscaping, topography, and designing the exterior of accessory buildings to appear as part of a set.
- f. Signage for any purpose is allowed, including promotion. Signage should be integrated into sets and attractions to the extent feasible. There is no limitation as to size, scale, medium, illumination, or any other characteristic. This does not limit the use of any building identification, safety, or code-required signage.
- g. Retain the general topography to the extent feasible.

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### APPENDIX A

#### The Secretary of the Interiors Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.



**Property Boundary**

**Predicted current sensitivity for prehistoric buried sites**

- High
- Moderate
- Low
- Very low

**SR-1 Location**

**Proposed Jurisdictional Boundaries**

Scale 1:15,000

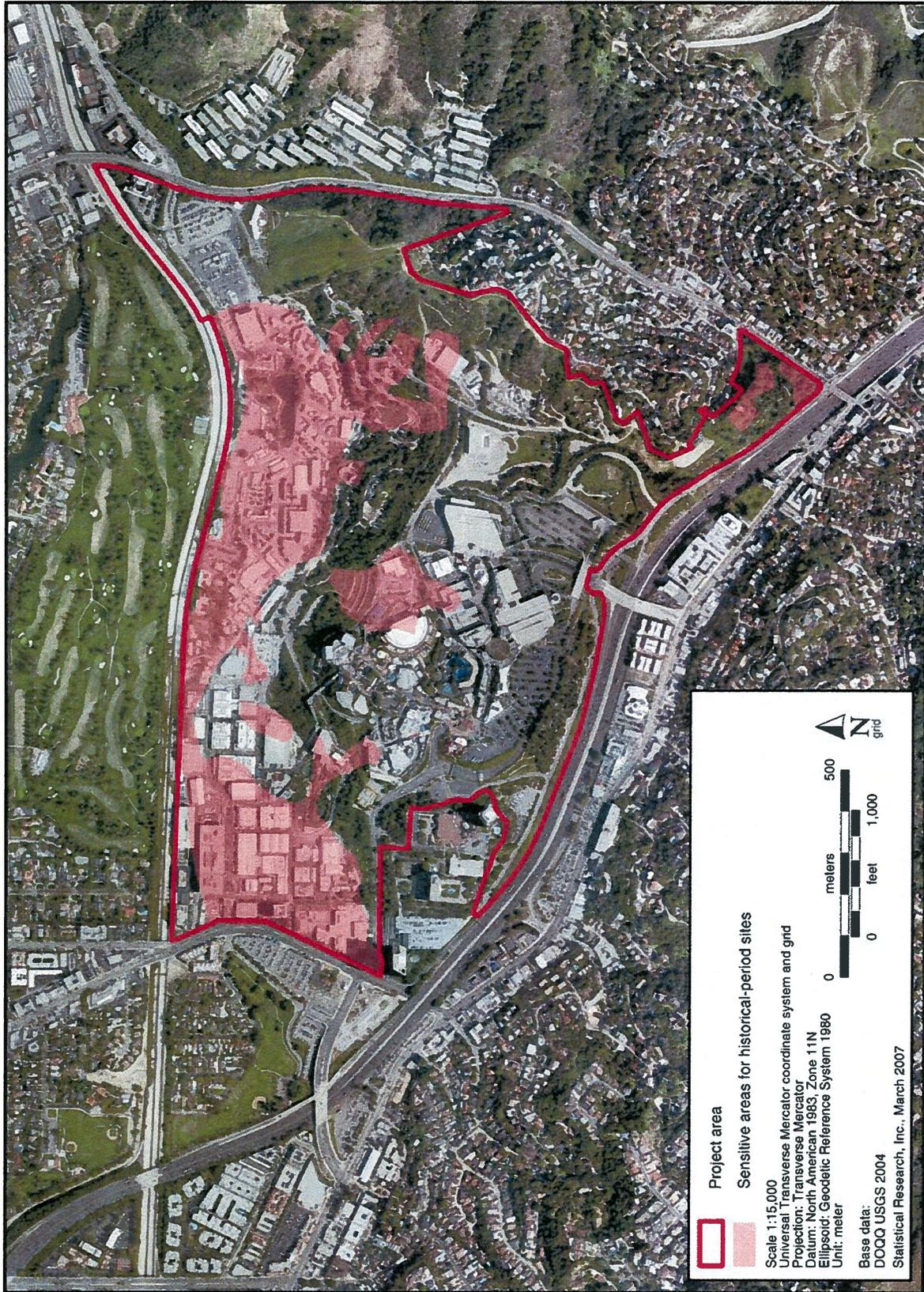
Universal Transverse Mercator coordinate system and grid  
 Projection: Transverse Mercator  
 Datum: North American 1983, Zone 11N  
 Ellipsoid: Geoidetic Reference System 1980  
 Unit: meter

Base data: DOQQ USGS 2004

0 600 meters  
 0 2,500 feet

Source: Statistical Research, Inc., March 2010; Matrix Environmental 2012.





Source: Statistical Research, Inc., March 2010.



**matrix**  
 environmental



**Attachment I**  
 Predicted Sensitivity of  
 Project Site for Historic Period Sites